AUDITOR GENERAL'S DEPARTMENT OF JAMAICA

Effectiveness of Jamaica's institutional framework in enabling a strong and resilient national public health system

Performance Audit Report

Ministry of Health and Wellness (MoHW)

'A better Country through effective audit scrutiny'

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This report was prepared by the Auditor General's Department of Jamaica for presentation to the House of Representatives.

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Auditor General's Overview

The Auditor General's Department (AuGD) of Jamaica is a member of the International Organization of Supreme Audit Institutions (INTOSAI). INTOSAI provides support to Supreme Audit Institutions (SAIs) in member countries to conduct audits of the implementation of the Sustainable Development Goals (SDGs), using a collaborative approach. This is one such audit launched by the INTOSAI Development Initiative (IDI) focusing on SDG 3.d "Strong and Resilient National Public Health Systems". I accepted the invitation from the IDI for Jamaica to participate in this collaborative initiative and included as part of the AuGD's strategic audit plan, the audit of the effectiveness of Jamaica's institutional framework in enabling a strong and resilient national public health system.

The World Health Organization (WHO) defines health system as consisting of all organizations, people, and actions whose primary intent is to promote, restore and maintain health. The WHO also asserts that the resilience of such a system is determined by its capacity to effectively respond to emergencies while maintaining core functions, a condition that is accepted internationally. Vision 2030 Jamaica National Development Plan (NDP) published in 2009, highlighted the challenges faced by the public health system and the actions to improve the delivery of public healthcare, consistent with health-related indicators of the SDGs. In this regard, the onset of the Novel Coronavirus in 2019 (Covid-19) brought into sharp focus the vulnerability of Jamaica's public health system and the risks posed by public health emergencies.

The audit was therefore considered timely as we sought to assess the extent to which Jamaica's institutional framework has progressed since 2009, in building a strong and resilient public health system. The audit took into consideration the health-related targets of the NDP, the indicators of the SDGs, and the requirements of the International Health Regulations - IHR (2005), particularly the country's ability to detect and respond to national and global health risks. This report concluded that Jamaica's progress towards strengthening its public health system has been slow, exacerbated by the Covid-19 pandemic. Hence, more needs to be done if the country is to achieve the NDP health-related targets to improve the resilience of the public health system by year 2030.

Thanks to the management and staff of the Ministry of Health and Wellness (MoHW) for the cooperation and assistance provided to the audit team and all other agencies and stakeholders, who participated in focus group discussions and provided valuable feedback to enable the delivery of this audit report.

Pamela Monroe Ellis, FCCA, FCA
Auditor General

This report contains our findings on our review of the effectiveness of Jamaica's institutional framework in enabling a strong and resilient national public health system.

Summary

Vision 2030 Jamaica National Development Plan (NDP), the country's policy framework, which was published in 2009, includes health-related targets and strategies to improve the public health system to achieve National Outcome No.1 – A Healthy and Stable Population. This National Outcome is aligned to the targets and indicators for public health contained in the global 2030 Sustainable Development Goal (SDG) 3 – Good Health and Well-being. The Vision 2030 NDP, together with Jamaica's adaptation of the SDGs in 2015, provides the course of actions to improve Jamaica's public health systems and put the country in a position to comply with the obligations under the World Health Organization (WHO) International Health Regulations (IHR) 2005. The aim is to implement systems as part of a global initiative to identify, report and respond to public health threats.

The unprecedented challenges of the Novel Coronavirus in 2019 (COVID-19) brought into focus, similarly for other countries, the limited ability of the institutional capacity of the country's public health system to effectively respond to public health emergencies. We conducted a performance audit to assess the adequacy of Jamaica's institutional capacity to withstand threats to the country's health security from public health emergencies. Consistent with the WHO criteria, we defined the resilience of the public health system by the effectiveness of existing mechanisms to manage health emergencies, while delivering normal healthcare services. The audit therefore assessed the extent to which Jamaica's institutional framework is progressing to enable a strong and resilient public health system[1]. This was necessary given that the health-related targets of Vision 2030 NDP, the indicators of the SDGs, and the requirements of the IHR (2005), outline how the country should enable its institutional capacity to detect and respond to national and global health risks.

The audit reviewed and assessed the process in achieving the health-related objectives outlined in Vision 2030 NDP, to build resilience in the public health system. Part One introduces the study topic, whilst parts two, three and four contain the audit findings. Part Two includes findings on the legal and policy framework to enable a strong and resilient public health system. Part Three focuses on coordination to implement the strategies for improving healthcare institutional capacity to respond to public health emergencies, while Part Four addresses efforts to identify resource gaps and establishing a financing strategy. The summary of the findings is detailed below:

[1] The United Nations Development Programme (UNDP) capacity development for disaster risk reduction refers to institutional arrangement as the policies, systems, and processes that countries use to organize and manage their national development policies and objectives.

Major Issues

Legal & Policy Framework

- Legal and policy frameworks in place to build a resilient public health system.
- Vision 2030 NDP incorporates Jamaica's public healthcare policy framework.
- Range of emergency operational plans, policies, protocols, and manuals are in place to respond to various diseases.
- No repository where public healthcare administrators can access updated versions of operational policies, protocols, and manuals.
- Absence of assessment and documentation of lessons learnt from health emergencies.

Infrastructure Capacity

- Hospital bed capacity and doctor/nurse-to-population densities impacting the resilience of the public health system.
- Poor planning for preventative and corrective maintenance of health facilities.
- Health system strengthening programme to improve health facilities impacted by delays in implementation and funding gaps.
- Health facilities are working in silos due to the absence of an integrated information system to facilitate the sharing of critical information such as patients' records.
- Slow implementation of actions to improve healthcare service to the vulnerable in emergencies.

Health Financing Strategy

- Although the Government allocated $359 billion between 2016-17 and 2020-21 to fund public health, resource gap remains a challenge.
- Jamaica health expenditure to GDP ratio over the period 2015-2019 has remained below PAHO recommended benchmark of six percent
- Jamaica health financing strategy needs strengthening taking into consideration the guidance provided by the WHO on health financing strategies in building health systems resilience.

What we found

The Government established a legislative structure for public health and has set the foundation to build a resilient public health system by outlining the policy framework, in the Vision 2030 National Development Plan (NDP), to strengthen the healthcare system. However, over the years, Jamaica's public health system has been impacted by resource constraints impeding the ability of the MoHW and other key stakeholders to effectively implement the health-related actions in the NDP, thereby hindering the progress of the health system resilience.

National framework and regulations supporting the public health system

1. **Jamaica's Public Health Act, which was passed by Parliament in 1985, is the legislative framework for public health in Jamaica.** The Public Health Act is supported by the National Health Services Act of 1997 and other dated health-related legislations. With the passing of the National Health Services Act, the Government decentralized the public health system by establishing four Regional Health Authorities (RHAs) to manage healthcare services in their respective region. Although the management of public healthcare delivery is decentralized to the RHAs, which are responsible for the operational management of public hospitals and health centres, the Ministry of Health and Wellness (MoHW) is responsible for providing the policy and strategic direction, and oversight. Therefore, MoHW and RHAs, and related agencies constitute the public health system and are responsible for public healthcare delivery in Jamaica[2]. An important factor in building health systems resilience to achieve Universal Health Coverage (UHC) and Universal Access to Health (UAH) is to ensure that effective laws governing public health are in place. MoHW makes the systematic review and updating of health laws, regulations, and policies a strategic priority, and is considering updating some of the supporting legislations[3].

2. **The overarching goal of the Vision 2030 Jamaica NDP is to secure a better future for Jamaica, by year 2030 – with one of the primary national outcomes being to achieve a healthy and stable population[4].** The NDP along with the Medium-Term Socio-Economic Policy Framework (MTF) demonstrated a whole-of-government approach by identifying the agencies designated to coordinate the activities and establishing targets, aimed at building the resilience of the public health system[5]. The NDP and MTF represent a good starting point in planning for the strengthening of the public health system and coincide with the need for awareness of the capacities and risks of the health system and coordinating resources for effective management of risks. These are among the core attributes in the WHO toolkit for assessing health systems resilience.

[2]Agencies of the MOHW: Pesticides Control Authority; National Health Fund; Government Chemist; National Public Health Lab; National Blood Transfusion Service Jamaica; National Family Planning Board; National Council on Drug Abuse.

[3] Vision for Health 10-year Strategic Plan 2019-2030

[4] NDP Published in 2009

[5] The MTF translates the Vision 2030 NDP from a plan to action.

The NDP identified under resourced facilities, aging infrastructure, quality of service delivery, over-burdening of emergency rooms and secondary healthcare institutions, and shortage of health personnel as major challenges, which impaired the ability of public health institutions to deliver the required healthcare services. The aim of the NDP health-related targets is to improve the delivery and resilience of public healthcare in Jamaica. MoHW, in most cases, was named as the lead agency to organize the implementation of the key health-related actions, being the entity primarily accountable for healthcare. At the same time, the MTF covers a 3-year period, which builds on previous MTFs and enables the Government to use evidence to determine what needs to be done in the medium-term to stay on course towards achieving the 2030 goals. However, to date, only five of the 36 required actions or 13 per cent have been achieved, 20 or 55 per cent were partially achieved and 11 or 30 per cent were not achieved for the latest period 2018 to 2021.

Years	Source Documents Reviewed	No. of actions	Implementation Progress		
			✔	⚠	⛔
2012 - 2014	PIOJ MTF Progress Report	33	2	21	10
2015 - 2018	Documents provided by MoHW	57	10	18	29
2018 - 2021	Documents provided by MoHW	36	5	20	11
✔ Achieved	⚠ Partially Achieved	⛔ Yet to be Achieved			

3. **In 2017, MoHW developed a 10-year Strategic Plan, titled 'Vision for Health 2030' to fast track the achievement of Vision 2030 NDP health-related targets.** The plan, which emphasises a project for health system strengthening was tabled in Parliament in 2019. MoHW indicated that given the onset of the Covid-19 pandemic in 2020, little progress had been achieved in implementing the strategic actions under the plan to rehabilitate critical health infrastructure to aid in achieving the goal of making reliable and modern infrastructure available for health service delivery. The construction and rehabilitation of key health infrastructures was not properly scoped at first resulting in further delays. The MoHW indicated that it has recently reviewed the strategic plan and is in the process of also revising some of the actions, which will be incorporated in its corporate plan for 2023-24 to 2026-27. Accordingly, MoHW will need to take quick and decisive actions if Jamaica is to achieve the NDP health-related targets to improve the resilience of the public health system by year 2030.

Infrastructure and Infostructure capacity to support health system resilience

4. **The resilience of Jamaica's public health system continues to be challenged by low hospital bed capacity ratios and low doctor and nurse to patient densities, which limit the capacity to adequately respond to public health emergencies.** Data obtained from the Pan American Health Organization (PAHO) Core Indicators Portal, a dashboard on countries' hospital beds per 1,000 population, suggested that, in 2021, Jamaica had 1.68 hospital beds available for every 1,000 persons in the population. MoHW in its 10-year Strategic Plan listed bed occupancy rate among the challenges affecting the public health system and acknowledged that "hospital bed rates relative to population size are low, but largely function at excess capacity". In addition, MoHW did not demonstrate that it tracked doctor-to-population and nurse-to-population density in the public health sector to know whether doctors and nurses were sufficiently available to address the

healthcare needs of the population. Our analysis of population data and the number of doctors and nurses in the public health system revealed a density of 9.0 doctors and 18.1 nurses per 10,000 population, representing a combined density ratio of 2.71 doctors and nurses per 1,000 population. This is below the SDG index threshold of 4.45 skilled health workers (doctor and nurse/midwife) per 1,000 population, recommended by the WHO[6]. Further, public healthcare resilience is threatened by the reportedly high attrition of healthcare workers.

5. **The MoHW's 10-year strategic plan sought to identify, upgrade, and improve key health infrastructure and establish new facilities to increase capacity, improve efficiency and meet the demands of the population.** Whereas the strategic plan underscored the Government's commitment towards improving service delivery and building resilience, its ability to deliver on its objectives was dependent on the availability of financial resources. To inform the financing requirement of the infrastructure upgrade, MoHW developed a "high-level cost estimation" of US$50 million to support the expansion of three hospitals and the renovation and construction of 10 health centres. In November 2018, the IDB approved a US$50 million five-year loan facility to finance the strengthening of the public health system along with a US$11.4 million investment grant from the European Union (EU). MoHW indicated that the loan facility for the health system strengthening programme was significantly behind schedule, because of the lack of proper design of the programme, the significant time spent to define the scope and develop a proper budget, and the outbreak of the Covid-19 pandemic[7]. The initial estimate was subsequently revised to US$148.5 million with MoHW completing detailed design and specification works for only four of the 13 health facilities. This revised estimate created a financing gap of US$87 million, which could further slow the implementation of the health system strengthening programme if funding is not identified in a timely manner. The Government proposed to finance the gap, but given the time limitations, any further delay in implementation could prevent the achievement of the NDP health-related targets by year 2030.

6. **Health facilities are working in silos creating fewer opportunities to build synergies among public health facilities in the sharing of information such as patients' records, prescription drugs, medical equipment, and sundry items.** Hospitals across the four regions use the Patient Administration System (PAS), which operates in silos, therefore do not foster integration to allow for real-time sharing of information to create efficiency in supporting a resilient public health system. The National Health Fund (NHF) committed $80 million to finance a pilot electronic Patient Administration System (ePAS); however, the planned 2017-18 system rollout did not materialize. After spending $30 million on the ePAS, MoHW shifted strategic focus to implement the information system for health Plan of Action 2017-2021, which contains 25 strategic lines of actions for information system management and governance, data management and information technologies, knowledge management and sharing and innovation. MoHW completed eight of these strategic actions, 12 were in progress and five were yet to be started. Also, there were administrative weaknesses in how MoHW and RHA's handled preventative and corrective maintenance of public health facilities and medical equipment and patients' complaints, which are critical to the effective delivery of healthcare services. Facilities and equipment maintenance

[6] WHO's 2016 paper on the health workforce requirements for universal health coverage and the SDGs.
[7] Source: Letter dated May 16, 2022, from MoHW to PIOJ

programme varied across the four RHAs, as each RHA developed their own programme, given that MoHW did not set standards to ensure consistency. Further, complaints are handled separately by MoHW, RHAs and health facilities, underscoring the lack of cohesiveness in the management of complaints to aid in the planning of strategies to improve the public health system.

Strategic Actions		No. Activities	Implementation Progress		
No.	Strategic Line of Action		✔	⚠	⛔
1	Information system management and governance	11	4	6	1
2	Data management and information technologies	12	4	6	2
3	Knowledge management and sharing	1	-	-	1
4	Innovation	1	-	-	1
Total		25	8	12	5
✔ Achieved	⚠ Process started	⛔ Yet to be Achieved			

7. **Although the Government allocated $359 billion between 2016-17 and 2020-21 to fund public health, the resource gap remains a challenge, underscoring the need for the development and implementation of an effective financing plan, supported by government policies.** According to the World Bank data, Jamaica's health expenditure in relation to Gross Domestic Product (GDP) averaged 3.82 per cent for years 2015 to 2019, which is 2.18 percentage point below PAHO's recommendation of six per cent to achieve UHC and UAH. Whereas Jamaica's health expenditure to GDP ratio increased marginally to 3.98 in 2019 from 3.56 in 2015, the ratio fluctuates over the period. Consistent with the WHO's reference guide in developing a health financing strategy, MoHW outlined a strategy in its Vision for Health 10-year Strategic Plan to increase and improve health financing for equity and efficiency. MoHW linked five strategic outcomes to 13 strategic actions for health financing of which 10 were classified as work-in-progress, while work on the remaining three has not started. The WHO emphasizes that a coherent and well aligned strategy for health financing can play a key role in building resilience in the public health system. This is necessary to ensure consistency in increasing funding to the public health system to achieve the international benchmark ratio for health expenditure to GPD.

Policies and plans at the sub-national level to foster integration for health system resilience

8. **The MoHW has not completed the emergency healthcare policy.** Nonetheless, MoHW developed a Health Disaster Management Manual, which outlined the operational framework for emergency and disaster management for the health sector and indicated that this document serves as the national emergency healthcare plan for Jamaica. However, MoHW recognized the need for a national policy but attributed the delay in developing the policy to the broad consultation that is required. The national policy would provide guidelines for healthcare in fostering consistency in service delivery across public healthcare facilities and serve as a reference point for the development of healthcare plans.

9. **MoHW prepared management plans and protocols in response to previous public health emergencies such as the Zika and Chikungunya viruses.** However, we found no evidence that MoHW did an assessment and documented the lessons learnt from these health emergencies and incorporated post-event reviews to aid in responding to future health emergencies. An evaluation of the lessons learnt from the Covid-19 pandemic has not yet been conducted. MoHW indicated that a "formal assessment and documentation of the lessons learnt and how these lessons learnt from the Covid 19 pandemic are to be implemented to effectively prepare and respond to future health emergencies has not been undertaken". An important element of health system strengthening is the application of the lessons learnt from global and country experiences during public health emergencies. The WHO guidance indicated that health systems can learn from emergency experiences and improve their capacity to prevent, prepare for and respond better to future emergencies.

10. **Government policy allows all Jamaicans, including vulnerable groups, to access public healthcare services mostly free of cost at the point of service delivery contributing to the country being able to attain Universal Access to Health (UAH)[8].** Another key component is identifying and maintaining a database of vulnerable groups to provide a targeted approach in serving the needs of those who are most vulnerable. The NDP and Vision 2030 Jamaica Social Welfare and Vulnerable Groups Sector Plan 2009-2030 identified inadequacies in the infrastructure for delivering social welfare services that must be addressed to ensure equitable approaches are used to address the needs of the most vulnerable. The Sector Plan identified nine vulnerable groups in the population. Among the actions to better serve these vulnerable groups were the development and strengthening of the database of vulnerable groups and welfare beneficiaries by identifying vulnerable groups and their specific needs. As detailed in **Appendix 9**, we did not obtain information to assess the status of the actions targeting vulnerable groups.

Promoting health system resilience in monitoring and evaluation

11. **Insufficient information prevented our assessment of the performance of the Central Health Committee.** The Public Health Act states that the function of the Central Health Committee "is to advise the Minister and the Local Board, on such matters connected with public health as they think fit, and on any aspect of that subject referred to them by the Minister or the Local Board, as the case may be, for advice". Given the potentially sensitive nature of the work of the committee, we would not expect that information would necessarily be made public, hence we sought to rely on the internal records. However, due to the absence of records, for example the minutes of meetings or reports, required under the Committee's terms of reference, we were unable to determine the Committee's effectiveness in carrying out its responsibilities. We found no evidence that the Committee provided the necessary advisory support to the Minister and or the Local Board.

[8] The United Nations Department of Economic and Social Affairs describe the vulnerable in society as "people living in poverty and other vulnerable situations, including children, youth, persons with disabilities, people living with HIV/AIDS, older persons, indigenous peoples, refugees and internally displaced persons and migrants."

What Should be done

Better coordination and resource planning using a Whole-of-Government Approach (WGA)

- Better coordination is urgently required among key stakeholders, particularly MoWH and MoFPS, to implement the health-related actions under Vision 2030 NDP to build the capacity and the resilience of the public health system and to achieve the targets by year 2030. The MoHW indicated that it has reviewed the Vision for Health 10-year strategic plan and is in the process of also revising some of the actions for inclusion in its corporate plan for 2023-24 to 2026-27. However, greater emphasis needs to be placed on ensuring that the targets and timelines are realistic and achievable, resources are accurately estimated and funding agreed, and systems in place for monitoring and measuring progress against targets.

Learning from experience to adapt and improve

- Going forward, MoHW should incorporate post-event reviews to aid in its response and recovery efforts by properly documenting and analysing lessons learnt from health emergencies and use the information to adapt and transform the public health system.

Address administrative weaknesses

- There is an urgent requirement for MoHW and RHAs to fix the administrative weaknesses identified in the handling of preventative and corrective maintenance of public health facilities and medical equipment and managing patients' complaints, which are critical to the effective delivery of healthcare services.

Part One

Understanding Health Systems Resilience

Background

1.1 Jamaica is vulnerable to external shocks such as global disease outbreaks and natural disasters, which could have significant impact on the public health system due to the country's geographical location and the openness of the borders to trade and travel. The coronavirus (COVID-19) pandemic has created an extraordinary public health emergency for Jamaica, forcing the Government to make significant financial adjustments to accommodate extraordinary spending to ensure that the public health system could respond effectively to the pandemic. The unprecedented challenges of the pandemic brought into focus the strength and resilience of countries' public health system to effectively respond to public health emergencies. Recognising this, the World Health Organization (WHO) released a position paper on building health systems resilience towards Universal Health Coverage (UHC) and health security during COVID-19 and beyond[9]. According to the WHO, *"this requires an integrated approach to building and rebuilding health systems that serve the needs of the population, before, during and after public health emergencies".* This encompasses four global efforts in building the capacities of public health systems and helps bolster the implementation of the International Health Regulations, IHR (2005), and the achievement of the health-related Sustainable Development Goals (SDGs) (**Figure 1).**

Figure 1 Integrated approach to building and rebuilding health systems

1. Essential public health functions that improve, promote, protect, and restore the health of all people.
2. Building strong primary health care as a foundation for bringing health services closer to communities.
3. All-hazards emergency risk management that strengthens the ability of countries to prevent and tackle health emergencies and can surge to meet the additional health security demands imposed by health emergencies.
4. Engaging the whole-of-society so that all sectors work together towards a common goal of health for all.

Source: World Health Organization (WHO)

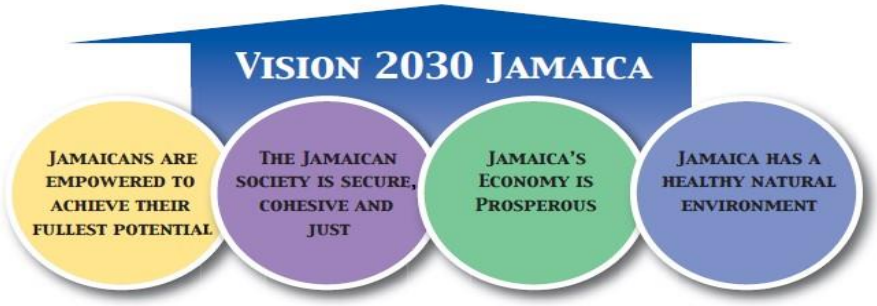
1.2 In 2007, Jamaica agreed to the IHR (2005), a global health security framework with legally binding regulations, aimed at advancing the capability of countries to respond to public health threats. The aim of the IHR (2005) is to prevent, protect against, control, and provide a public health response to international spread of diseases. The IHR (2005) comprises 24 indicators linked to 13 core capacities, which Jamaica has an obligation to comply with to identify, report and respond to public health threat. The WHO health systems resilience toolkit summarizes health systems resilience as "the ability of all actors and functions related to health to collectively mitigate, prepare, respond and recover from disruptive events with public health implications, while maintaining the provision of essential functions and services and using experiences to adapt and transform the system for improvement". WHO identified six core attributes expected of a resilient health system.

[9] WHO/UHL/PHC-SP/2021.01

- Awareness of the capacities and risks of the health system
- Mobilization and coordination of resources for effective management of the risks
- Self-regulation through informed decision-making in response to threats
- Adaptation as necessary to withstand adverse conditions
- Provision of the range and quality of services needed in all contexts
- Identification and utilization of lessons learned

Vision 2030 Jamaica National Development Plan (NDP)

1.3 In 2009, the Government implemented the Vision 2030 National Development Plan, which includes a comprehensive review and awareness of the capacities and risks of the public health system. The development plan contains the national strategies and expected outcomes in achieving the four national goals to "make Jamaica the place of choice to live, work, raise families, and do business".



1.4 The improvement of healthcare in the public sector is featured prominently in the targets and indicators of Vision 2030 NDP, notably with commitments to improve the country's public health institutional capabilities to achieve National Outcome No. 1 "A Healthy and Stable Population" and Goal 1 - Jamaicans are empowered to achieve their fullest potential **(Figure 2)**.

Figure 2 Vision 2030 Jamaica NDP Goal 1, National Outcome No. 1- National Strategies

1. Maintain a stable population
2. Strengthen disease surveillance, mitigation, risk reduction and the responsiveness of the health system
3. Provide and maintain an adequate health infrastructure to ensure efficient & cost-effective service delivery
4. Strengthen and emphasize the primary health care approach
5. Strengthen the Health Promotion Approach
6. Establish and implement a sustainable mechanism for supporting human resources
7. Support national food security
8. Introduce a Programme for sustainable financing of health care

Source: Vision 2030 Jamaica NDP – Goal 1, National Outcome No. 1- National Strategies

Adoption of the 2030 Agenda for Sustainable Development Goals (SDGs)

1.5 Jamaica's adoption of the SDGs in 2015 emphasizes the country's commitment to the goals of Vision 2030 NDP. Of note, the targets and indicators for the SDGs are aligned to the strategic priorities of Vision 2030 NDP. The SDGs provide an integrated roadmap for sustainable development by outlining 17 global goals, with set targets and indicators for achievement by all United Nations member states. The targets and indicators for public health are featured in SDG 3, Good Health, and Well-being **(Figure 3)**.

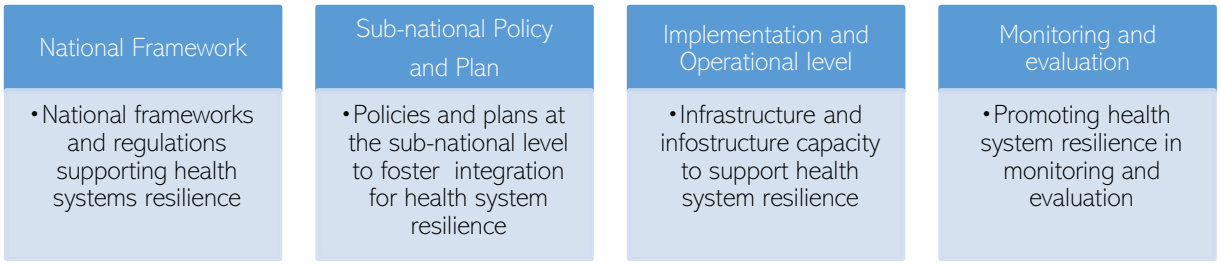
Figure 3 The 17 Sustainable Development Goals (SDGs)

Source: Sustainable Development Goals

Rationale for the audit, objective, scope, and methodology

1.6 Given the threats of public health emergencies on the country's health security, the overall objective of the audit is to assess the adequacy of Jamaica's institutional capacity to ensure the resilience of the public health system. The WHO asserts that health systems consist of all organizations, people, and actions whose primary intent is to promote, restore and maintain health; and, indicated that the resilience of such a system is determined by its capacity to effectively respond to emergencies while maintaining core functions. The audit assessed the extent to which Jamaica's institutional framework is progressing to building a strong and resilient public health system, in the context of the health-related targets of Vision 2030 NDP, the indicators of the SDGs, and the requirements of the IHR (2005), particularly the country's ability to detect and respond to national and global health risks. Consistent with the guidance from the WHO health systems resilience toolkit, the audit focused on the four key areas shown in **Figure 4**.

Figure 4 Health system resilience - Key audit focus



Source: AuGD's Audit Study Plan

1.7 The audit forms part of a collaborative initiative launched by the International Organization of Supreme Audit Institutions (INTOSAI) Development Initiative (IDI), which provides support to supreme audit institutions (SAIs) in member countries in the conduct of high-quality audits of the implementation of the SDGs. The IDI launched the collaborative audit focusing on SDG 3.d "Strong and Resilient National Public Health Systems" consistent with the WHO position paper on building health systems resilience towards UHC. We also considered how the audit would contribute to the wider strategic aims of the Auditor General's Department **(Figure 5)**.

Figure 5: In scoping the study, we considered how the audit would contribute to the achievement of the Auditor General's Department (AuGD) wider strategic aims by:

a) Assisting the Government of Jamaica with useful recommendations that will aid in improvements in the delivery of public healthcare.
b) Targeting coverage of the AuGD's Audit Themes, governance, resource management and accountability to aid in achieving the AuGD's vision of promoting a better country through effective audit scrutiny of Government operations; and,
c) Providing assurance to Parliament and the public on the efficiency, effectiveness, and economy of the operations of Government ministries, departments and agencies (MDAs).

Source: AuGD's Audit Study Plan

1.8 We planned and conducted our audit in accordance with the Government Auditing Standards, which are applicable to Performance Audit, as well as standards issued by INTOSAI. In this regard, the audit team gained knowledge of the study topic by reviewing internal and external information, conducting interviews with management and staff of MoHW and other stakeholders including focus groups, as well as performed walkthroughs, inspection of documents, and analytical reviews. We conducted risk assessments and developed issue analyses with the questions, which the audit sought to answer to form our opinions and conclusions. We conducted fieldwork, between November 2021 and June 2022, to gather sufficient and appropriate audit evidence on which we based our conclusions.

The key players in Jamaica's health system

The World Health Organization (WHO) defines health systems as consisting of all organizations, people, and actions whose primary intent is to promote, restore and maintain health. The key players in Jamaica's health system are:

Part Two

Legal and Policy Framework to enable a Strong & Resilient Public Health System

At A Glance

Systems and practices	Criteria	Major Highlights	Assessment Against Criteria
Effective public health legislations	Putting in place effective laws governing public health which foster resilience in the public health system to achieve UHC and UAH.	The legislative framework for public health is supported by the Health Services Act of 1997 and other dated health-related legislations. Meanwhile a critical mechanism established under the Public Health Act to monitor the state of public health and provide direction for continuous improvement was not functioning as intended.	⚠
Policymaking, planning and implementation of action plans	Harmonizing and aligning health systems strengthening efforts in policymaking, planning and their implementation, monitoring and evaluation.	Vision 2030 Jamaica NDP harmonizes and guides the planning for health system strengthening; however, implementation of health-related targets and strategies to improve the public health system to achieve National Outcome No. 1 – A Healthy and Stable Population is moving slowly due to poor coordination among implementing agencies and the absence of a sustainable strategy for health financing.	⚠
Health service plans, policies, protocols, and manuals	Developing and implementing health service plans, policies, protocols, and manuals to mitigate the disruptive impact of public health emergencies.	MoHW prepared a range of emergency plans, policies, protocols, and manuals to guide its response to various diseases; however, neither the MoHW nor RHAs maintained a repository where public healthcare administrators can access updated versions of these documents. Further, MoHW has not completed the emergency healthcare policy.	⚠
Inclusiveness of relevant stakeholders in health system strengthening	Ensuring multisectoral action, engagement, and participation to build health systems resilience, including relevant sectors, public and private, at all levels.	The inclusiveness of relevant stakeholders in the health system strengthening is demonstrated in the Vision 2030 NDP, which identified the agencies responsible to coordinate activities to execute the strategies reflecting a 'Whole-of-Government Approach (WGA)'.	☑
Lessons learnt, evaluation and post-event reviews	Incorporating evaluation of health systems resilience attributes in post-event reviews and ensuring lessons learnt are being implemented.	MoHW is yet to conduct an assessment and document the lessons learnt from past health emergencies and incorporate post-event reviews to aid in responding to other health emergencies.	⛔

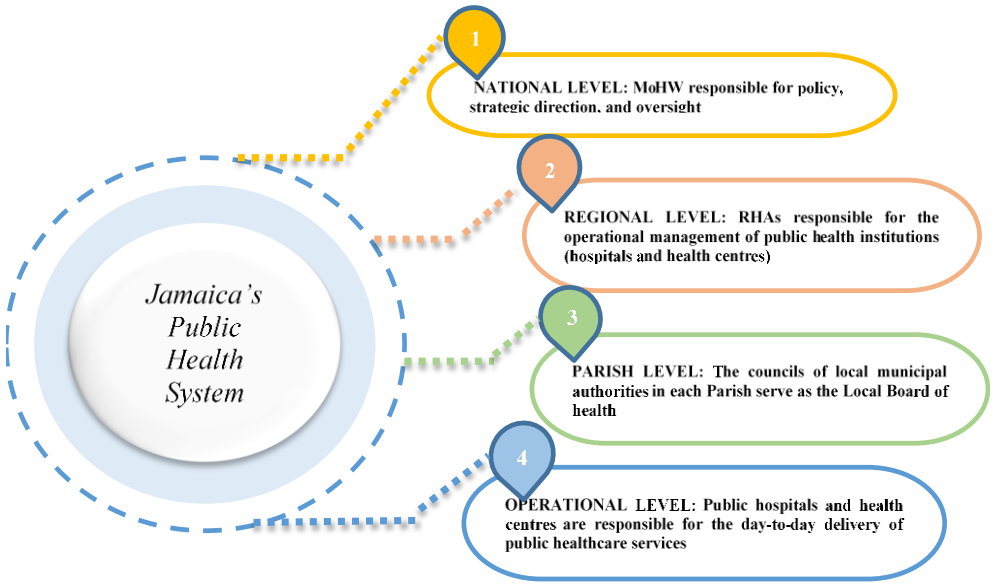
☑ Criteria met ⚠ Criteria partially met ⛔ Did not meet criteria

The legal framework for public health is aided by the Public Health Act and other legislations

2.1 An important factor in building health systems resilience to achieve Universal Health Coverage (UHC) and Universal Access to Health (UAH) is to ensure that effective laws governing public health are in place. Jamaica's Public Health Act, which was passed by Parliament in 1985, is the legislative framework for public health in Jamaica. The Public Health Act is supported by the National Health Services Act of 1997 and other dated health-related legislations.

2.2 The Ministry of Health and Wellness (MoHW) is responsible for ensuring the provision of quality health services and to promote healthy lifestyles and environmental practices at the national level. With the passing of the National Health Services Act in 1997, the Government decentralized the public health system by establishing four Regional Health Authorities (RHAs) to manage healthcare services in their respective region. Although the management of public healthcare delivery is decentralized to the RHAs, which are responsible for the operational management of public hospitals and health centres, MoHW is responsible for providing the policy and strategic direction, and oversight. Therefore, MoHW, RHAs, and related agencies constitute the public health system and are responsible for public healthcare delivery in Jamaica[10] **(Figure 6)**.

Figure 6 :The Structure of Jamaica's Public Health System



Source: AuGD's analysis of Jamaica's Public Health System

[10]Agencies of the MOHW: Pesticides Control Authority; National Health Fund; Government Chemist; National Public Health Laboratory; National Blood Transfusion Service Jamaica; National Family Planning Board; National Council on Drug Abuse.

Mechanism established to monitor the state public health was not functioning as intended

2.3 In establishing the structure of the public health system, the Public Health Act mandates the portfolio minister for health to appoint a Central Health Committee consisting of the Chief Medical Officer, the Director of Veterinary Services (or nominee) and other appointees. In addition, the councils of local municipal authorities, as constituted under the Parish Councils Act, are to serve as the Local Board of health in each Parish. The Central Health Committee serves as an advisory committee, thereby responsible to monitor the state of public health, provide direction for the continuous improvement of public health and advise the Minister and the local boards on matters concerning public health **(Figure 7)**. The Central Health Committee is required to meet at least quarterly, maintain records and minutes of all meeting and deliberations and provide annual reports, in keeping with the Committee's Terms of Reference.

Figure 7: Responsibilities of the Central Health Committee

The Central Health Committee shall: -

- Advise the Minister of Health and Local Board of health on developments critical to maintaining the health of the population
- Coordinate the contributions from various regulatory agencies and bodies in improving environmental and public health conditions
- Monitor the state of public health and provides direction for continuous improvement of public health
- Co-opt individuals, companies, and organizations for consultations as required
- Make proposals, request presentations or investigations on matters deemed critical to public health and the environment

Source: The Terms of Reference of the Central Health Committee Ministry of Health 2003

2.4 However, whereas the Minister appointed the Central Health Committee, MoHW could not demonstrate the effectiveness of the Committee in carrying out its advisory role due to the absence of records, for example the minutes of meetings or reports. We requested the minutes and/or reports of the Central Health Committee for period April 2016 to March 2021. However, we were only provided with a letter dated March 2022, from the Chairman of the Central Health Committee advising the Minister on matters relating to the Covid-19 pandemic[11]. The establishment of the Committee was in accordance with the legislative requirement; however, no evidence was provided that the necessary advisory support to continuously improve the effectiveness of the public health system, through coordination of stakeholders and monitoring of the health system was performed. The non-performance of the Central Health Committee, which has impaired the effectiveness of the Public Health Act, is highlighted in **Table 1.**

[11] The Chief Medical Officer is the Chairman of the Central Health Committee

Table 1 Analysis of the Roles and Functions of the Central Health Committee, April 2016 to March 2021

No.	Administrative Procedures	Outputs	Expectation	Outcome	Status
1	Meet at least quarterly or at such time determined by the Chairman to transact business and take decisions	Quarterly meetings	20	0	⛔
2	Develop a prioritize plan of work for each calendar year	Workplans	5	0	⛔
3	Produce an annual report	Annual Reports	5	0	⛔
4	Maintain records and minutes of all meetings and deliberations	Meeting minutes	20	0	⛔

☑ Achieved ⚠ Partially Achieved ⛔ Not Achieved

Source: The Terms of Reference of the Central Health Committee Ministry of Health 2003

Vision 2030 NDP incorporates Jamaica's public healthcare policy framework

2.5 In 2009, the Government conducted a review of Jamaica's public health system as part of developing the country's national development plan (Vision 2030 Jamaica NDP). The development plan is the policy framework, which assessed and identified major challenges affecting the health system and developed strategies to address the issues. This is a good starting point in planning for the strengthening of the public health system, which coincides with the need to be aware of the capacities and risks of the health system, one of the core attributes in the WHO toolkit in assessing health systems resilience. Another core attribute of health systems resilience is the coordination of resources for effective management of risks. This was demonstrated in the Vision 2030 NDP, which identified the agencies responsible to coordinate the activities to implement the key actions to achieve the national strategies under National Outcome No. 1, A Healthy and Stable Population" reflecting a 'whole-of-government approach'. **Figure 8** details the major issues and challenges that must be addressed to achieve improvements in the public health system. The issues and challenges included under-equipped facilities, aging infrastructure, and insufficient staff, which impaired the ability of public health institutions to deliver the required healthcare services.

Figure 8: Vision 2030 Jamaica NDP: Some of the major issues and challenges that must be addressed to achieve improvements in our health system:

1. Under-resourced Facilities and Aging Infrastructure
2. Growth in Chronic and Lifestyle Diseases
3. Overburdening of the Emergency Rooms and Secondary Health Care Institutions
4. Quality of Service Delivery
5. Uneven Distribution of Tertiary Care Institutions
6. Environmental Risks
7. Shortage of Health Personnel
8. Food and Nutrition
9. HIV/AIDS and STDs

Source: Vision 2030 Jamaica NDP

2.6 MoHW, in most cases, was named as the lead agency to organize the implementation of the key actions to address these challenges. MoHW was responsible for implementing 22 of the strategies in **Appendix 1** within years 1 to 3 (2009 to 2012), following the publication of the NDP in 2009. The initial actions were critical to strengthening the public health system; among these, was the requirement to strengthen disease surveillance, mitigation, risk reduction and the responsiveness of the health system. The Planning Institute of Jamaica (PIOJ) Medium Term Socio-Economic Policy Framework (MTF) outlines the actions to be achieved over 3-year intervals whilst, the MTF progress report details and tracks the progress of the key actions to be achieved under Vision 2030 NDP. We reviewed the last available MTF progress reports dated 2012-2014 and information provided by MoHW on the progress of the actions to achieve the sector strategies outlined in the MTF and found little progress in implementing the required actions to improve the state of the public health system **(Table 2** and detailed in **Appendix 2)**. For example, whereas RHAs undertook works to refurbished and expand public health facilities, much more needs to be done to improve the infrastructure of public health facilities.

Table 2 Progress Report Summary 2012-2021

Years	Documents Reviewed	No. of actions	Implementation Progress		
			✔	⚠	⛔
2012 - 2014	PIOJ MTF Progress Report	33	2	21	10
2015 - 2018	Documents provided by MoHW	57	10	18	29
2018 - 2021	Documents provided by MoHW	36	5	20	11

✔ Achieved ⚠ Partially Achieved ⛔ Yet to be Achieved

Source: AuGD's analysis of the MTF progress reports 2012- 2021

MoHW develops strategic plan to achieve NDP health-related actions but execution slow

2.7 In December 2017, the Pan American Health Organization (PAHO) conducted a review of Jamaica's public healthcare delivery system on the request of MoHW. The aim was to make recommendations for the restructuring of the public healthcare system to enable a sustainable healthcare system to achieve the strategic policy priorities of the MoHW and to inform a ten-year strategic plan for the health sector. The PAHO report highlighted some weaknesses in the healthcare system and made recommendations aimed at strengthening primary and secondary healthcare, governance of MoHW and RHAs, improving health financing and refining and aligning the health system regulatory framework **(Figure 9)**.

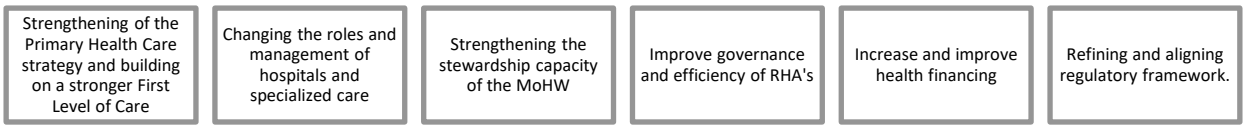


Figure 9 PAHO Assessment of the Public Healthcare Delivery Services in Jamaica, December 2017

International evidence and experience suggest:	
1.	That independent of the type of governance arrangement, there is a need for strong stewardship by the Ministry of Health in policy definition, regulation, and monitoring and evaluation of the whole health system.
2.	A strong first level of care is the backbone of a people-centered health care system, and the integration of the health services is a necessary move, especially in decentralized systems.
3.	In health systems that are largely decentralized, it is important to be aware of health inequities produced by differences in resources, knowledge, and competencies between the different regions.
4.	Decentralized structures facilitate the active participation of communities in health systems' governance.
Local Evidence suggests:	
5.	That the key challenges of the Jamaican health system arise mainly from the lack of an aligned vision and inadequate mechanisms to effectively steer and govern the health system.
6.	Fragmentation of the health services, with weak alignment of stakeholders and the need for strengthening communication.
7.	A hospital-centred model of care with ineffective integration of the different levels of care and the priority health programs
8.	The key findings of the review of plans, reports and assessments outline challenges related to access to data on health trends and to health system monitoring and evaluation.
9.	Moreover, strategic plans since 2009, emphasizes the need to reinforce the First Level of Care (FLC), address the Non-Communicable Diseases (NCD), injuries, and mental health prevention and control, ensuring that these are sustained by health promotion and intersectoral interventions.
10.	It is notable, that these weaknesses and recommendations are repeatedly stated in consultant reports and the Ministry of Health Annual Reports. This situation is also reflected in the interviews with stakeholders from all levels expressing that "there is no lack of plans, many of which start off with strong and well-planned implementation, and they tend to wane with time when confronted with obstacles". This weakness in implementation is then attributed, by respondents, to a lack of resources, of appropriate human resources for health and leadership at all levels, insufficiently supported by an organized strategy.
11.	Incongruent and duplicated legislation. National Health Service Act and the Public Health Legislation with overlapping functions and poor definition of roles.

Source: Extract: PAHO 2017 Report on Assessment of the Public Healthcare Delivery Services in Jamaica

2.8 Arising from the PAHO 2017 report, MoHW developed a 10-year Strategic Plan titled 'Vision for Health 2030' to achieve Vision 2030 NDP National Outcome No. 1 – A Healthy and Stable Population. The plan, which was tabled in Parliament in 2019, emphasised a project for health system strengthening and articulated the strategic goals, strategic outcomes, and strategic actions required to ensure the achievement of Vision 2030 NDP health-related targets. Strategic goal two of the 10-year strategic plan is aimed at strengthening the stewardship capacity of MoHW to improve leadership and governance to achieve UAH and UHC[12]. Two of the strategic actions of MoHW's 10-year strategic plan are to update and modernize health policies, legislation and regulations and strengthen institutional regulatory capacity for the enforcement of health polices and laws.

[12] MoHW Vision for health 2030, 10-year strategic plan 2019-2030: Goal 2 - The stewardship capacity of the Ministry of Health & Wellness is strengthened to improve leadership and governance to achieve Universal Access to Health and Universal Health Coverage

2.9 The establishment of the 10-year Strategic Plan is a positive move in the right direction and the implementation becomes an urgent requirement, given Jamaica's vulnerability to global disease outbreaks and natural disasters due to our geographical location and the openness of our borders to trade and travel. More so, in a context where the COVID-19 pandemic brought into focus the limitations of the country's public health system to respond to public health emergencies and given that only eight years remain for Jamaica to achieve the health-related goals under the Vision 2030 NDP. MoHW indicated that little progress has been achieved in implementing the actions in the 10-year strategic plan, given the onset of the Covid-19 pandemic in 2020 **(Table 3** and **Appendix 3)**. Given the time limitations any further delay in implementation could prevent the achievement of the NDP health-related targets by year 2030.

Table 3 Vision for Health 2030 10-Year Strategic Plan 2019- 2030 Implementation Progress

Strategic Goals		No. Strategic Outcomes	No. Strategic Actions	Implementation Progress		
No.	Goal			✔	⚠	⛔
1	Safeguarding access to equitable, comprehensive, and quality health care	2	10	0	8	2
2	The stewardship capacity of the ministry of health and wellness is strengthened to improve leadership and governance to achieve universal access to health and universal health coverage	5	22	1	15	6
3	Increased and improved health financing for equity and efficiency	5	13	0	10	3
4	Ensuring human resources for health is sufficient in numbers and competencies aligned to the model of care and committed to the mission	5	22	0	3	19
5	Social participation and health promotion to address the social determinants of health	2	7	0	1	6
6	Making reliable and modern infrastructure available for health service delivery	2	4	1	3	0
Total		21	78	2	40	36

✔ Achieved ⚠ Partially Achieved ⛔ Yet to be Achieved

Source: AuGD analysis of the implementation of MoHW's 10-year Strategic Plan 2019-2030

MoHW's Disaster Manual forms part of the national framework for disaster management

2.10 The first two requirements for MoHW, under the National Disaster Action Plan, was the development of a national policy on emergency healthcare and to formulate a national emergency healthcare plan. MoHW developed a Health Disaster Management Manual, which outlined the operational framework for emergency and disaster management for the health sector and indicated that this document serves as the national emergency healthcare plan for Jamaica[13]. However, MoHW recognised the need for a national policy and indicated that the delay is owing to the broad consultation that is required. The national policy would serve to provide guidelines for healthcare in fostering

[13] MoHW Procedures Manual No. 7 Disaster Management Manual: issued January 1, 1989 (updated January 2021) outlines the procedures at the national, regional, parish and hospital levels for the health sector, before, during and after disasters and other health emergencies.

consistency in service delivery across public healthcare facilities and serve as a reference point for the development of healthcare operational plans.

2.11 The National Disaster Action Plan, developed by the Office of Disaster Preparedness and Emergency Management (ODPEM), outlined a multi-sectorial approach by establishing how various Ministries, Departments and Agencies (MDAs) should coordinate in the operational management of emergencies, with the MoHW leading the health planning sub-committee, which is responsible for health-related emergencies **(Appendix 4)**[14]. The National Disaster Action Plan outlined nine requirements of the health planning sub-committee in preparing for health emergencies. Our review of the Health Disaster Management Manual revealed no evidence on the mechanism used by the MoHW to ensure the achievement of six of the requirements; therefore, we were not able to assess the progress of these functions (**Table 4).**

Table 4 Health Planning Sub-committee pre-disaster functions

No.	Functions	Progress
1	Develop a National policy on Emergency Health Care	⛔
2	Formulate a National Emergency Health Care Plan for slow and rapid onset of emergencies; to review and update this plan as necessary	✔
3	*Ensure coordination between the National Emergency Health Care Plan and the Ministry of Health Disaster Plan	✔
4	Identify and prioritize resources for responding to natural and man-caused disasters, e.g., hurricane and environmental pollution	⚠
5	Review and monitor all national programmes impinging on emergency health care	⚠
6	Maintain a current listing of available resources, human and material	⚠
7	Bring to the attention of the National Disaster Committee potential problem areas which might affect emergency Health care management	⚠
8	Develop mass casualty management plans, training programmes and simulations to satisfy all aspects relating to Health matters in the event of a national disaster	⚠
9	Assist in preparing, participating in, and assessing joint annual exercises with all response services of the NEO, and submit after action reports to the Director ODPEM	⚠

Note: *MoHW Procedures Manual No. 7 Disaster Management Manual comprises the National Emergency Health Care Plan and the Disaster Plan

✔ Achieved ⚠ Could not be assessed ⛔ Not Achieved

Source: National Disaster Action Plan for Jamaica 1997

2.12 In addition, the Manual stipulates the establishment of the MoHW Disaster Management Committee, which is responsible to carryout various functions to maintain a state of readiness for emergencies and disasters in the public health sector. Some of the functions of the Disaster Management Committee are highlighted in **Figure 10.** One of the functions is to "review and ensure that Regional Health Disaster, Parish Health Disaster and Hospital Disaster Management Committees have clear and

[14] Jamaica's Disaster Risk Management (DRM) Act, 2015, establishes the Office of Disaster Preparedness and Emergency Management (ODPEM) to advance disaster preparedness and emergency management in Jamaica. The DRM Act Section 5(2)(c)(I) – It shall also be the duty of the Office (ODPEM) to initiate, coordinate, inspect, evaluate, and support the development of a National Disaster Risk Management Plan as the document that articulates the overall framework for disaster risk management in Jamaica, and details the processes and actions critical for effective identification, assessment, transfer, reduction, prevention, and mitigation of risk.

well-defined plans with which they are fully familiar". In keeping with the health disaster management manual, RHAs, Parish Medical Officers, and hospitals' Chief Executive Officers developed disaster management plans at their respective levels and submitted these to MoHW. However, we found no evidence that the plans at the regional, parish and hospital levels were reviewed and endorsed by the Committee in ensuring their adequacy and consistency with the national health disaster manual. This represents a break down in the monitoring and evaluation mechanism to ensure the effectiveness of the framework that would enable a strong and resilient public health system.

Figure 10 MoHW Disaster Management Committee Functions

• To maintain a state of readiness for emergencies and disasters in the health sector.
• To ensure the implementation of all actions before, during and after emergencies and disasters, for health island wide.
• To review and ensure that Regional Health Disaster, Parish Health Disaster and Hospital Disaster Management Committees have clear and well-defined plans with which they are fully familiar.
• To ascertain that all health personnel know and understand the Emergency and Disaster Management Plans and Standard Operating Procedures and that they are ready to fulfil their assigned roles at short notice.
• To ensure that health information systems for disaster management island wide are developed, maintained and ready to be utilised for relevant emergencies and disasters.
• To ensure that the required supplies of pharmaceutical, medical sundries and kits, equipment and supplies are available for nationwide distribution.
• To mount appropriate health promotion and education programmes for the public for emergency and disaster management for health.

Source: MoHW Disaster Management Manual (updated January 2021)

MoHW did not have inclusiveness of policies at the operational level

2.13 The development of policies to manage healthcare delivery is essential in enabling a resilient public health system. We sought to determine the extent to which MoHW developed policies to foster cohesiveness at all levels in responding to public health emergencies. MoHW prepared a range of emergency plans, policies, protocols, and manuals to guide its response to various diseases; however, neither the MoHW nor RHAs maintained a repository where public healthcare administrators can access updated versions of these documents **(Figure 11)**. The MoHW maintains a register of policies, plans, protocols, and manuals on its website; but the register did not include all documents developed by the MoHW and has not been updated since December 2014. In addition, the website does not provide linked access to the documents listed in the register. We could not determine the extent to which these plans, policies, protocols, and manuals were effectively integrated into the healthcare delivery system at the operational level to ensure consistency in service delivery.

Figure 11 MoHW Health Risks and Emergency Plans

1. National Polio Outbreak Preparedness and Response Plan - Updated on October 31, 2016
2. Emergency Vector Control Programme Outbreaks and Natural Disasters – 2012
3. Ebola Preparedness and Response Plan - Prepared: September - October 2014 Revision 1 - November 2014
4. Aircraft Hijack Plan - 1998/03/01
5. Integrated Management Strategy for Dengue Prevention and Control in Jamaica - May 30 to June 1, 2012
6. Ministry of Health Zika Virus Preparedness and Response Plan - May 2015 Revision 4: March 2016
7. Dengue Fever Clinical Management Protocol - December 2019 – Revision 1
8. Ministry of Health Cholera Management – 1992
9. Disaster Risk Management Manual Contingency Plan #2 Mass Casualty Incident
10. Emergency Operational Centre (MOHW EOC) Standard Operating Procedures - Updated 2021
11. Malaria Clinical Management Protocol (Draft 2) - January 2013
12. Ministry of Health Procedures Manual No. 7 Disaster Management Manual – Updated January 2021
13. Draft Measle Protocol - May 2, 2018
14. Mass Rescue Operations Plan Ministry of Health Standard Operating Procedures - January 2018
15. Zika Virus Infection Clinical Management Protocol – Paediatrics – 2015
16. National Mass Rescue Operations Plan Marine Environment
17. Chikungunya Preparedness and Control Plan - May 19, 2014

Source: MoHW records

Absence of assessment and documentation of lessons learnt from health emergencies

2.14 An important element of health system strengthening is the application of the lessons learnt from global and country experiences during public health emergencies, such as the COVID-19 pandemic. According to the WHO toolkit, "resilient health systems can learn from emergency experiences and improve their capacity to prevent, prepare for and respond better to future emergencies. This requires documentation of the lessons learnt and follow-up actions to apply the identified lessons".

2.15 Although MoHW prepared management plans and protocols in response to previous public health emergencies such as the Zika and Chikungunya viruses, we found no evidence that MoHW did an assessment and documented lessons learnt from these health emergencies and incorporated post-event reviews to aid in responding to future health emergencies. An evaluation of the lessons learnt from the Covid-19 Pandemic has not yet been conducted by MoHW. MoHW indicated that a "formal assessment and documentation of the lessons learnt and how these lessons learnt from the Covid 19 Pandemic are to be implemented to effectively prepare and respond to future health emergencies has not been undertaken". However, MoHW noted that an Intra-Action Review of the Covid-19 pandemic was to be completed in October 2022 with support from the PAHO and WHO.

Jamaica's IHR (2005) State Party Annual Reporting rating lacks evidence of proper assessment

2.16 Considering its obligations under the International Health Regulations (2005), to identify, report and respond to public health threats, MoHW appointed a committee as the IHR (2005) National Focal Point (NFP) in Jamaica[15]. This IHR Committee is to coordinate the national emergency and disaster response and establish, operate, and maintain a national public health emergency response plan. The members of the IHR Committee are the MoHW's representatives on the multi-sector Stakeholder Advisor Group (SAG). Jamaica, through the IHR Committee and Stakeholder Advisory Group (SAG), reports annually to the WHO on the achievements of the 24 indicators and 13 core capacities under the IHR (2005). This is based on the completion of a self-assessment questionnaire, which is scored based on views shared at meetings at the SAG. Jamaica's self-assessment as of October 2021 indicated that the country has achieved on average 87 per cent of the core capacities, suggesting that the country is doing well in meeting the IHR (2005) obligations, however, no evidence was provided on how the scores were derived **(Appendix 5)**.

2.17 Whereas the SAG convenes meetings, although not on a quarterly basis as required by the TOR, the IHR Committee has not convened the required monthly meetings since being established in July 2013. MoHW provided the minutes of the SAG meetings but not all the IHR (2005) capacities were discussed at these meetings. In the meetings, the members of the IHR committee only stated whether they believe the indicators are being achieved without the provision of adequate evidence. Therefore, we were unable to determine the extent to which the IHR Committee carries out its function in **Figure 12**, to effectively provide advice on the mandatory and required functions of the IHR NFP and the basis of assessing the country's achievements of the IHR (2005) obligations **(Appendix 5).** Of note, the minutes of the SAG meeting held February 8, 2021, recorded a discussion on the scoring for the State Party Self-Assessment Report (SPAR), however, the scores as per the discussion differed from the scores submitted in the SPAR Annual Reporting to the WHO.

[15] The International Health Regulations (2005) is a World Health Organization (WHO) global health security framework with legally binding regulation, aimed at advancing the capability of countries to respond to public health threats. The IHR (2005), comprises 24 indicators linked to 13 core capacities. The aim of the IHR (2005) is to prevent, protect against, control, and provide a public health response to international spread of disease.

Figure 12 Key functions of the International Health Regulations (IHR) Committee

- Developing key working documents for the coordination of the IHR NFP.
- Developing technical documents through literature review and stakeholder consultations.
- Review reports from relevant sectors, including those responsible for surveillance and reporting, points of entry, public health services, clinics and hospitals and other government departments.
- Assessment of the existing surveillance and response capacity, identify areas for improvement/development.
- Ensure and support the maintenance of national public health emergency response plan.
- As part of multidisciplinary/multi-sectoral team, respond to events that may constitute a public health emergency of international concern.
- Consolidate inputs from relevant sectors and conduct collaborative risk assessments regarding public health events, risks, and public health emergencies of international concern (in keeping with Annex 2 of the IHR (2005)).
- Guide the analysis of national public health events and risks.
- Participate in the rapid response; including activation of the response; determining the parameters of the response; provide legal advice to the response; monitoring and evaluating the response.
- Advise on the provision of public health messages.
- Participate when required in the communications with the WHO IHR Contact Points.
- Review and make recommendations for the revision of laws.
- Provide legal advice in the implementation and administration of the IHR.
- Dissemination of information to relevant sectors.
- Engagement of stakeholders.
- Review the preparedness of the IHR NFP and make recommendations for the improvement.
- Monitor the progress made in assessment, planning and establishment of IHR (2005) capacities and complete reports periodically to the WHO IHR Contact Points.
- Review recommendations and documentations of the WHO/PAHO, CARPHA and any other relevant international and national body and make decisions as to the implementations.

Source: Ministry of Health IHR (2005) Committee Terms of reference for Jamaica's National IHR Focal Point

Part Three

Strategies for Improving Healthcare Infrastructure Capacity to Respond to Public Health Emergencies

At A Glance

Systems and practices	Criteria	Major Highlights	Assessment Against Criteria
Access and adequacy of hospital infrastructure in the public health system	Ensure health facilities are adequate and accessible to support normal healthcare services and increased demand during health emergencies.	PAHO data, between 2016 and 2021, indicated that Jamaica has on average1.71 hospital beds available per 1,000 population. The aim of MoHW's 10-year Strategic Plan is to establish new and upgrade existing health infrastructure to increase capacity and improve efficiency to meet the demands of the population.	⚠
Health workforce adequacy	Health workforce is adequate in quantity and quality to offer normal healthcare services, while meeting surges and changes in demand caused by health emergencies.	RHA's data showed that Jamaica has a density of 9.0 doctors and 18.1 nurses per 10,000 population, representing a combined density ratio of 2.71 doctors and nurses per 1,000 population. This is below the minimum density ratio of 4.45 skilled health worker (doctor and nurse/midwife) to 1,000 population recommended by the WHO for UHC and the SDG. Meanwhile, public healthcare resilience is threatened by high attrition of healthcare workers.	⚠
Integrated information systems	Establish integrated health information systems for effective healthcare delivery and to access imperative data to monitor and measure the impact of health risks and the effectiveness of interventions.	The absence of an integrated information system resulted in health facilities working in silos leading to fewer opportunities to create synergies among public health facilities in the sharing of critical information such as patients' records. The rollout of a pilot electronic Patient Administration System (ePAS) by 2017-18 did not materialize as MoHW shifted strategic focus to implement the information system for health Plan of Action 2017-2021.	⚠
Vulnerable and marginalized groups in all settings	Identify and maintain a database of vulnerable groups and implement policies to enable access to healthcare.	Public healthcare services are provided mostly free of cost to all Jamaicans at the point of service delivery to increase access to vulnerable groups for UAH. Whereas Vision 2030 Jamaica Social Welfare and Vulnerable Groups Sector Plan 2009-2030 identified nine vulnerable groups in the population and noted inadequacies in addressing the needs of these groups, we did not obtain information to assess the status of the actions targeting these vulnerable groups.	⚠

✔ Criteria met ⚠ Criteria partially met ⛔ Did not meet criteria

Jamaica's public health system comprises a network of hospitals and health centres

3.1 The World Health Organization (WHO) indicated that "preparing for, preventing, detecting and responding rapidly to epidemics starts with strong primary healthcare and public health systems". One key feature of a strong public health system is the access and adequacy of public health facilities to serve the population. Data obtained from MoHW indicated that the network of public health facilities consists of 24 hospitals, 327 health centres and 495 public pharmacies **(Figure 13)**. The public health system is supported by 11 private hospitals. The PIOJ indicated that "public sector hospitals provide over 95 per cent of hospital-based care while the private sector dominates the pharmaceutical and diagnostic services and provides approximately 50 per cent of the ambulatory care through a network of general physicians and specialists, private laboratories, pharmacies, and hospitals".

Figure 13 The number of hospitals per parish and region

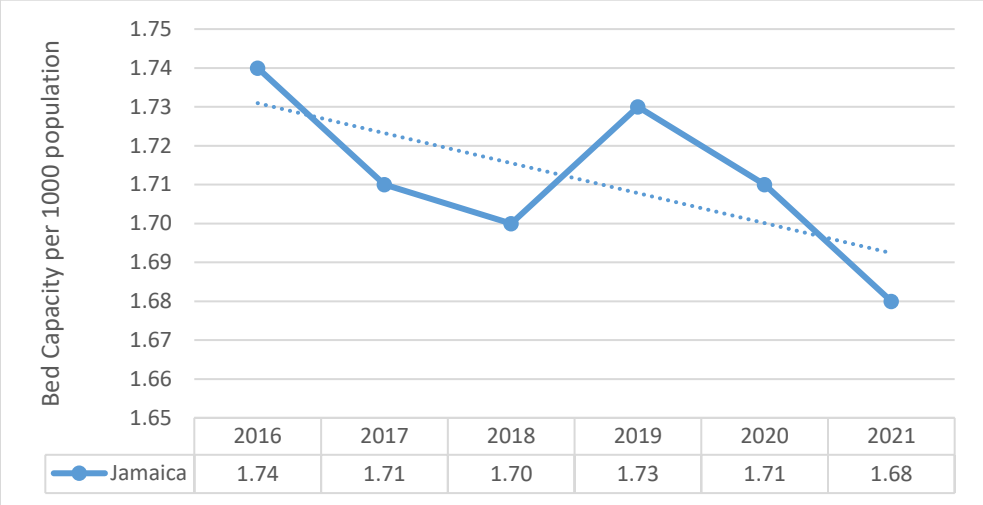
Regional Health Authorities (RHA)	No. of Public hospitals	Population (STATIN 2019)	Standard Bed Capacity RHAs	Operational Bed Capacity RHAs	(+) Increase/ (-) Decrease in bed capacity
South East Regional Health Authority	11	1,277,686	634	733	+99
Southern Regional Health Authority	5	590,743	2,196	2,300	+104
Western Regional Health Authority	4	492,600	656	667	+11
North East Regional Health Authority	4	373,065	543	550	+7
Total	24	2,734,094	4,029	4,250	+221

Source: AuGD's analyses of MoHW and STATIN data

Limited bed capacity in public hospitals to adequately respond to health emergencies

Data obtained from the Pan American Health Organization (PAHO) Core Indicators Portal, a dashboard on countries bed capacity per 1,000 population, revealed that, in 2021, Jamaica had 1.68 hospital beds available for every 1,000 persons in the population **(Figure 14)**. The data showed that Jamaica's bed capacity averaged 1.71 beds per 1,000 population between 2016 and 2021, which is the last available data for Jamaica on PAHO's Core Indicators Portal. Jamaica's bed capacity per 1,000 population was reduced to 1.68 beds in 2021 from 1.74 in 2016.

Figure 14 Jamaica's bed capacity ratio 2016-2021



Source: AuGD's analyses Core Indicators Dashboard PAHO/EIH Open Data

3.2 Data obtained from MoHW's policy and procedures manual indicated that the standard bed capacity at the 24 public hospitals island-wide totalled 5,179. MoHW in its 10-year Strategic Plan listed bed occupancy rate among the challenges affecting the public health system and acknowledged that "hospital bed rates relative to population size are low, but largely function at excess capacity" suggesting that beds in some hospitals exceeded hospitals' capacity. We noted that spaces were created at three public hospitals to accommodate 81 additional beds between 2016-17 and 2020-21. The number of hospital beds in operation, between 2016-17 and 2020-21, averaged 5,016 each year, suggesting that some hospitals are operating with fewer beds than its standard capacity further compounding the issue of bed shortages, given the low ratio of bed capacity per 1,000 population. During that period, the data suggests that hospitals were either operating above or below the standard bed capacity with an average 164 beds deemed non-functional at some point in time. In some cases, hospitals add additional beds to existing spaces creating overcrowding or had non-functional beds resulting in bed shortages **(Table 5)**.

Table 5 Hospital bed capacity per 1,000 Population

RHA	No.	Parishes	No. of Hospitals	Avg. Population (2016 – 2019)	*Standard Bed Capacity	Increase in Bed Capacity (Expansion)	Avg Operational Beds (2016/17-2020/21)	Bed Capacity (–/+)	Hospital Operational Bed per 1,000 Population (ratio)
SERHA	1	Kingston	4	90,232	1,887	0	1,756	-131	19.46
	2	St. Andrew	4	572,174	779	0	677	-102	1.18
	3	St. Catherine	2	519,853	477	0	483	6	0.93
	4	St. Thomas	1	94,298	129	0	117	-12	1.24
SRHA	5	St. Elizabeth	1	151,729	100	0	144	44	0.95
	6	Manchester	1	191,497	220	0	251	31	1.3
	7	Clarendon	3	246,993	314	0	370	56	1.5
WRHA	8	Westmoreland	1	149,071	164	26	188	24	1.3
	9	Hanover	1	71,999	38	22	51	13	0.7
	10	St. James	1	190,395	417	0	315	-102	1.7
	11	Trelawny	1	77,937	111	33	113	2	1.4
NERHA	12	St. Ann	1	176,130	271	0	283	12	1.6
	13	St. Mary	2	114,792	177	0	172	-6	1.5
	14	Portland	1	81,057	95	0	96	1	1.2
Total			24	2,728,157	5,179	81	5,016	-164	2.57

Note: *Standard bed capacity refers to the number of beds each hospital was built to accommodate

Source: MoHW policy and procedures manual for the referral and transfer of patients May 2016

3.3 Our research did not identify any international best practice for bed capacity based on population to assess the adequacy of hospital beds in Jamaica's public health facilities. However, MoHW's data indicated an average hospital beds ratio per every 1,000 population of 2.57 as at October 2021, suggesting an improvement in hospital bed capacity ratio (1.7 bed/per 1,000 population) reported by PAHO in 2021. With only 2.57 beds available in public hospitals for every 1,000 persons, MoHW recognised that more needs to be done to improve the hospital bed capacity ratio, given concerns about overcrowding and bed shortages in public hospitals[16]. Further, the provision of free health care would also influence resources available in the delivery of public healthcare.

3.4 Of note, adding more beds is not the only solution to improving hospital bed availability. There are social cases in public hospitals where patients have been released but remain in hospitals occupying beds, because they have been abandoned by their families and have nowhere else to go. As at March 2022, MoHW reported 310 of these social cases in hospitals across the country, but MoHW and RHA's are challenged in their efforts to solve this complex issue[17]. In preparing for Jamaica's health system resilience, addressing social issue like this can create some improvements in bed availability.

[16] MoHW Vision for Health 10-year strategic plan 2019-2030: Hospital bed rates relative to population size are low, but largely function at excess capacity

[17] Efforts includes: Holding family members accountable to take care of their relatives, investigate social cases who are occupying needed beds to determine the capacity of their next of kin to care for them, take court action to compel those persons to assume responsibility for their family members and transfer them to an appropriate facility when assessed as infirmed.

3.5 The aim under Goal 1 and Strategic Outcome 1.2 of the 10-year Strategic Plan is for the modernization of all hospitals, specialized care centres and support services to provide efficient and quality services. Among the strategic action to achieve this goal and strategic outcome is for MoHW to identify, upgrade and improve key infrastructure in hospitals and support facilities and establish new facilities to increase capacity, improve efficiency and meet the demands of the population **(Appendix 3)**.

3.6 Consistent with Goal 1 and Strategic Outcome 1.2 of the 10-year Strategic Plan, MoHW prepared a Plurennial Expenditure Plan (PEP) to inform a US$50 million investment loan proposal to the Inter-American Development Bank (IDB) for a health system strengthening programme. The PEP highlighted design and specification plans to support the expansion of three hospitals, renovation, and construction of 10 health centres, and the maintenance and supply of new medical equipment for these facilities at a cost of US$40.155 million **(Table 6)**. MoHW asserted that the programme aimed at strengthening the health system is a new approach to public health, one that emphasises resilience building.

Table 6 Component 1: Public health system infrastructure upgrade

Item	Location of facilities/medical equipment/design and specification plans	Description of Works	Budgeted Fees (US$'000)	Start Date	Finish Date	Period for completion
1	Spanish Town Hospital	Two new buildings and improve infrastructure	15,120	Mar 2023	Mar 2025	24 months
2	May Pen Hospital	Extension of hospital	3,477	May 2023	Sept 2024	16 months
3	St. Ann's Bay Hospital	Extension of buildings	1,850	June 2023	May 2025	24 months
4	Greater Portmore HC	Resident extension and services two ambulances	4,240	Mar 2023	June 2024	16 months
5	St. Jago HC	Building extension, equipment		April 2023	July 2024	16 months
6	May Pen West HC	Extension of hospital	-	May 2023	Sept 2024	16 months
7	Chapelton HC	Refurbishment of emergency and outpatient services	-	June 2023	Mar. 2024	10 months
8	Mocho HC	Expansion, refurbishing, new ambulance	-	June 2023	Mar. 2024	10 months
9	St. Anns Bay HC	Imaging ICU & HD	-	July 2023	Sept 2024	15 months
10	Old Harbour HC	New building	4,145	Mar 2023	June 2024	16 months
11	May Pen East HC	New building	-	May 2023	June 2024	14 months
12	Brown's Town HC	New building	-	June 2023	Dec 2024	19 months
13	Ocho Rios HC	New building	-	June 2023	Dec 2024	19 months
14	Medical Equipment	Maintenance and supply of new medical equipment	7,630	Nov 2023	July 2025	33 months
15	Other associated cost as per PEP	Design and specification plans for hospital, health centers	3,693	Not available	Not available	Not available
Total			40,155	-	-	-

Source: MoHW Health System Strengthening Programme Project Status Report May 2022

3.7 MoHW did not prepare a detailed project design plan outlining the scope of the programme, which is an important pre-requisite to properly estimate its financing needs. However, MoHW developed what it called a '*high-level cost estimation'* and approached the IDB for loan financing of US$50 million. In November 2018, the IDB, in agreement with the Government, approved the US$50 million loan facility to finance the strengthening of the public health system, under three components. The loan contract contained a non-reimbursable grant for US$11.4 million to be provided by the European Union (EU), bringing the total financing under the arrangement to US$61.4 million[18] **(Table 7)**.

Table 7 Strengthening of the public health system financing

Components	IDB loan funds $'000	EU Grant $'000	Total $'000
Component 1: Construction, expansion, upgrade of three hospitals and 10 health centres and the maintenance and purchasing of new hospital equipment.	40,155	11,141	51,296
Component 2: ICT upgrade and purchase of new software and hardware equipment for 105 health facilities to support the design and implementation of a digitised Information Health System supported by new digital and information protection policies and plans.	7,500	59	7,559
Programme Administration and evaluation fees: Project vehicle, evaluation and audit fees, project execution unit, IDB fees.	2,345	224	2,569
Total Loan and Investment Grant Funds	50,000	11,424	61,424

Source: IDB loan contract document

3.8 The disbursement period under the arrangement was five years from the effective date of December 7, 2018, with expectation that final designs for the facilities would be completed within the first year of the project. Of the US$50 million available under the loan facility, IDB disbursed US$9.6 million, of which the Government spent US$8.6 million as at September 2022. MoHW spent US$2.6 million to carry out infrastructure upgrade works of which it reportedly paid US$230,000 to a project management company to carry out preconstruction design and specification drawings on the three hospitals and 10 health centres under component one. After which, the cost for the renovation for one of the three hospitals was revised to US$45.1 million, US$30 million more than the initial high-level estimate of US$15.1 million as shown in **Appendix 7**[19]. Similarly, the initial estimate of US$4.1 million to construct four new health centres increased by US$13 million to US$17 million, underscoring the need to properly scope the programme, to accurately estimate the financing needs. Further, MoHW did not conduct a detailed assessment to determine the number and type of medical equipment required to support the infrastructure upgrade as high-level estimates were also used in ascertaining these costs. As such, the estimate submitted to IDB of US$7.6 million was far less than the US$18 million now required to purchase equipment under the programme **(Appendix 7)**.

[18] IDB Loan Contract: Support for the Health System Strengthening Programme for the Prevention and Care Management of Noncommunicable Diseases

[19] Spanish Town Hospital

3.9 MoHW has only been able to complete design and specification works for four of the 13 health facilities as of September 2022, after which the total estimates increased to US$148.5 million. This created a financing gap of US$87.1 million, given the initial estimate of US$50 million for which investment loan financing was approved by IDB, along with the US$11.4 million investment grant from the EU **(Table 8)**. As such, MoHW indicated that "significant counterpart financing is required in order to realise all the outputs of the programme".

Table 8 Funding requirement for the Health System Strengthening Programme

Category	Preliminary Estimates IDB Loan US$'000	EU Grant US$'000	Total Approved US$'000	Funding Gap US$'000	Total amount required US$'000
Component 1:	40,155	11,141	51,296	67,597	118,893
Component 2:	7,500	59	7,559	2,202	9,761
Programme administration and evaluation fees	2,345	0	2,345	2,167	4,512
Component 3: Expansion of project scope		0	0	15,140	15,140
IDB administrative fee	0	224	224	0	224
Total	50,000	11,424	61,424	87,106	148,530

Source: MOHW Project Steering Committee project restructuring proposal May 2022

3.10 In May 2022, MoHW brought the issue of the funding gap to the attention of the Planning Institute of Jamacia (PIOJ), with a view to facilitate discussion with MoFPS and IDB to request an extension of the loan facility. MoHW indicated that the loan for the health system strengthening programme was significantly behind schedule, because of the lack of proper design of the programme, the significant time spent to define the scope and develop a proper budget, and the outbreak of the Covid-19 pandemic[20].

3.11 Subsequently, in a letter dated July 29, 2022, to IDB, MoFPS requested modification to the loan contract, the investment grant, and the provision of a three-year extension to the implementation period. MoFPS also proposed that the programme be restructured and implemented into two phases at a cost of US$148.5 million – Phase 1 costing US$116.7 million and Phase 2 costing US$31.8 million. The Government therefore proposed to finance the US$87.1 million gap, which represents more than half (59 per cent) of the total revised estimates **(Table 9)**. Having to rescope and reschedule the project, MoHW said it is also revising some of the actions in its 10-year strategic plan, which will be incorporated in the corporate plan for 2023-24 to 2026-27. Accurately scoping and estimating the cost of the programme and securing the full funding are fundamental principles in project management, in ensuring the timely completion of the works, within the scope and budget. This is necessary for the MoHW to achieve the goal to strengthen the public health system by year 2030. Whereas MoHW strategic priority is to expand public health infrastructure to increase the number of hospital beds, as part of its health system strengthening programme, it did not articulate a target for hospital bed capacity ratio.

[20] Source: Letter dated May 16, 2022, from MoHW to PIOJ

Table 9 Funding for the Health System Strengthening Programme

Proposed Phases	Revised Estimates US$'000	Source of Funding		GoJ Funding %
		IDB Loan & Grant US$'000	GoJ US$'000	
Phase 1	116,710	61,424	55,286	47
Phase 2	31,820	-	31,820	100
-	148,530	61,424	87,106	59

Source: AuGD analysis of information provided by MoHW

Inconsistency in MoHW maintenance programmes to support public health care resilience

3.12 Preventative and corrective maintenance of health facilities and medical equipment is critical for effective delivery of healthcare services. This involves periodic inspections of health facilities and medical equipment, reporting on their conditions, and conducting routine maintenance activities to prevent any costly unplanned downtime or unexpected failures. By creating an effective preventative maintenance plan, public health facilities can better provide patients with efficient healthcare services. We found that asset inventory is maintained manually across RHAs, which does not allow for sharing of information on the availability of assets within hospitals, especially medical equipment, which is critical to healthcare resilience. MoHW identified insufficient funds as the root cause for poorly maintained medical equipment[21].

3.13 Whereas MoHW developed policies for medical equipment, electro-mechanical and built environment and electrical maintenance, which are essential to establishing the framework for maintenance of health facilities and equipment; these documents remain in draft. Consequently, as shown in **Table 10**, the maintenance programme varied across the four RHAs, as each RHA developed their own programme, given that MoHW did not set standards to ensure consistency.

Table 10: Description of RHAs maintenance programme

No.	Maintenance Programme	SERHA	SRHA	WRHA	NERHA
1	Maintenance Policy	⚠	⚠	⚠	⚠
2	Standard Operating Procedures	✓	✓	✓	✓
3	Facilities Register	⛔	⚠	⛔	⛔
4	Maintenance work plan/Operational Plan (Annual)	✓	✓	✓	✓
5	Routine Inspection Reports	✓	✓	⚠	✓
6	Preventative Maintenance Schedule	✓	✓	✓	✓
7	Corrective Maintenance Schedule	✓	✓	✓	✓

✓ Criteria Met ⚠ Criteria Partially Met ⛔ Criteria Not Met

Source: AuGD's Analysis

[21] MoHW Vision for health 10-year strategic plan pg. 25

3.14 Whereas RHAs conducts some inspections of health facilities and prepared operational and work plans, RHAs did not provide evidence of maintenance registers with information on the physical condition, functionality and cost requirement for the maintenance and repair of its facilities and medical equipment. MoHW and RHAs are required by law to maintain registers for all fixed assets recording, among other things, the quantities and location of the assets, cost of acquisition, estimated useful lives and estimated time for replacement, details of repairs, upgrades, and enhancements[22]. However, we found that the fixed asset registers in several instances were not being maintained and updated with the minimum requirements, which may impair the effectiveness of RHA's maintenance programme to support the resilience of the public health system to ensure efficient healthcare services.

An integrated health information system is necessary to build public health system resilience

3.15 Given that the management of healthcare service delivery is decentralized across the four RHAs, the implementation of a single national integrated health information system is another key component in building resilience in Jamaica's public health system. An integrated health information system will support real-time sharing of information on, for example, patient, inventory, and fixed asset records among health facilities to better manage healthcare services at all levels. This is important for access and efficient use of resources across public health facilities. Hospitals across the four regions currently use the Patient Administration System (PAS), which operates in silos, therefore do not foster integration to allow for real-time sharing of information to create efficiency in supporting a resilient public health system.

3.16 In July 2014, MoHW commenced implementation of a pilot project for an electronic Patient Administration System (ePAS), at three health facilities, aimed at connecting public health facilities to information on patient records **(Figure 15)**. The National Heath Fund (NHF) committed $80 million to the pilot project. The completion date for the project was March 2016, with a view to rollout the system nationally thereafter. However, we gleaned from the final ePAS project report that due to continued delays in the procurement of ICT equipment, the project completion date was extended three times to July 2016, October 2016 and then December 2016. MoHW reportedly received $30 million, which was fully expended as of January 2017. The ePAS project was never rolled out to the planned 27 targeted sites by 2017-18, as MoHW shifted strategic focus to implement the information system for health Plan of Action 2017-2021.

Figure 15 Electronic Patient Administration System (ePAS) Objectives

1. To demonstrate universal patient data availability, the provision of quality health data and personal health information protection through the implementation of the national electronic Patient Administration System (ePAS).
2. To provide the secure, robust and scalable ICT infrastructure to support universal access and high availability for the ePAS.
3. To provide capacity building and support for the transition to hybrid (paper and electronic) Health Records.
4. To provide ethical and transformational supports for the adoption and implementation of the ePAS and other technologies.

Source: ePAS project report (Final - January 2017)

[22] Financial Administration and Audit (FAA) Act, Financial Instructions Version 1 Section 8.7.7

3.17 The information system for health Plan of Action 2017-2021 included the implementation of the digitised and integrated health information system at all levels within the public health system. This information system for health plan of action contains strategic line of actions for information system management and governance, data management and information technologies, knowledge management and sharing and innovation. Our analysis as shown in **Figure 16**, and detailed in **Appendix 8**, reveals that MoHW started to implement the activities under its Plan of Action 2017-2021. Of the 25 strategic actions identified, MoHW completed eight, 12 were in progress and five were yet to be started.

Figure 16 Information System for Health (IS4H) Plan of Action 2017-2021 Implementation Progress summary

Strategic Actions		No. Activities	Implementation Progress		
No.	Strategic Line of Action		✔	⚠	⛔
1	Information system management and governance	11	4	6	1
2	Data management and information technologies	12	4	6	2
3	Knowledge management and sharing	1	-	-	1
4	Innovation	1	-	-	1
Total		25	8	12	5

✔ Achieved ⚠ Process started ⛔ Yet to be Achieved

Source: AuGD analysis of the implementation of MoHW's Information System for Health (IS4H) Plan of Action 2017-2021

3.18 Further, the financing of US$7.5 million for the implementation of the integrated health information system, which is included in the plan of action, was supported under Component 2 of the IDB loan agreement. Funds under this component was also earmarked to provide for the recruitment and training of staff, public education campaigns, strengthening of telehealth, telemonitoring and telemedicine capacity, as well as the development of digital health and information protection policies and plans[23].

3.19 This is consistent with MoHW's strategic outcomes in its 10-year Strategic Plan to strengthen the national health information system by establishing the legislative and information communication technology infrastructure frameworks to enable and support a sustainable information system for public healthcare. As shown in **Figure 17**, MoHW started implementing the digitised electronic health platform by spending US$3.9 million for the design of the digitised health ecosystem and US$2 million for programme administration and evaluation. MoHW indicated that the system is expected to be completed by December 2023, with roll out of the new electronic health record system at all public health facilities continuing in 2024 (**Appendix 6**). However, the funding gap of US$87 million for the strengthening of the public health system includes US$2.2 million for the implementation of the integrated health information system, which could slow the implementation process if funding is not identified in a timely manner.

[23] Telehealth, Telemonitoring, Telemedicine: the delivery of healthcare services and the exchange of medical and non-clinical information remotely using electronic communication technologies, such as video conferencing and telephone.

Figure 17 Integrated Health Information System, Project Status (May 2022)

ITEM	Phase	Status	Next Step
Phase 1 ICT infrastructure			
MoH datacenter installed at ego	1	98%	Testing and commissioning
Installation and testing of MPLS and LAN	1	100%	-
Computer and laptops	2	Over 1200 procured	Deployment initiated
Wan connectivity	2	35%	-
Cabling	2	25%	-
AWS service	2	-	-
Digital Health Policies	-		
Draft EHR policy	-	100%	Submitted to MoHW for approval and implementation
Draft e-prescription policy draft	-	100%	''
Draft telehealth policy	-	100%	''

Source: MoHW Project Status Document (May 2022)

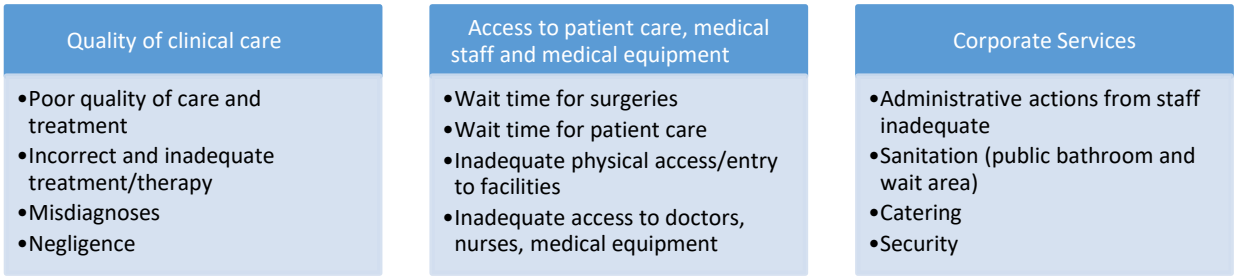
Absence of a coordinated approach for the effective management of patient complaints

3.20 Data on patients' complaints could also be used to improve public health service delivery if it is collated, analysed, and used in decision making. We expected MoHW to put in place an effective mechanism to allow for patients to report complaints and a process for managing, tracking, and reporting on the status and outcomes of all complaints. The investigation and enforcement branch, within MoHW, is responsible for investigating complaints from patients and their families through the implementation of an effective complaints management system where complaints are thoroughly investigated and resolved, routinely monitored, and evaluated for continual improvement. The complaints data could be used to identify trends in system failure and inform regulations, policy, and protocol changes. MoHW indicated that complaints are facilitated through face-to-face interactions, telephone, emails, social media platforms, media and can be directed through MoHW, RHAs and health facilities.

3.21 Whereas MoHW developed a Complaints Management System Manual and Toolkit that outlines the procedures for handling complaints, it did not have a central database where all complaints received via the various channels are recorded, collated, investigated, and analysed to aid in effective decision making. Therefore, there was no coordinated approach in receiving and analysing complaints. For example, complaints are handled separately by MoHW, RHAs and health facilities, underscoring the lack of cohesiveness in the management of complaints to aid in the planning of strategies to improve the public health system. Further, MoHW did not include a feature on its website that is accessible to the public to report complaints, which would feed into a central database. Consequently, MoHW was unable to provide complete data for complaints received over the five period 2016-17 to 2020-21, their outcomes and status to aid in a complete analysis of complaints received at all health facilities.

3.22 Our analysis, which was limited to complaints made directly to MoHW, between April 2017 and March 2019, showed that MoHW received 1,686 complaints about service quality, access to healthcare, professional conduct, and communication among others. We found that the top three categories of complaints related to quality of clinical care, access to patient care and corporate services (**Figure 18).**

Figure 18 Three most frequent category of complaints at public health facilities

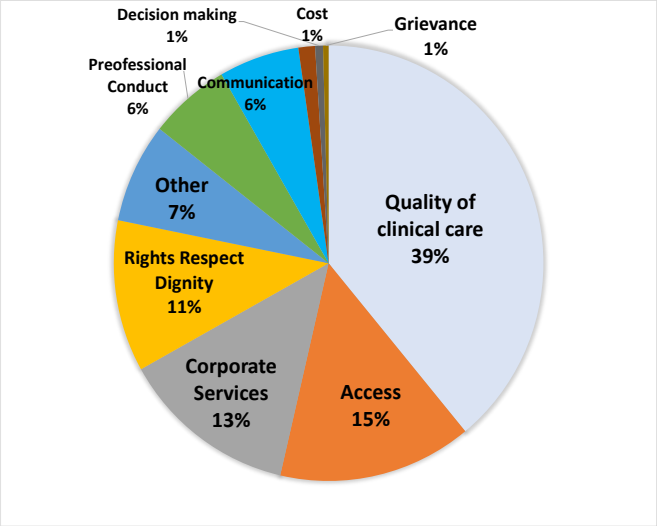


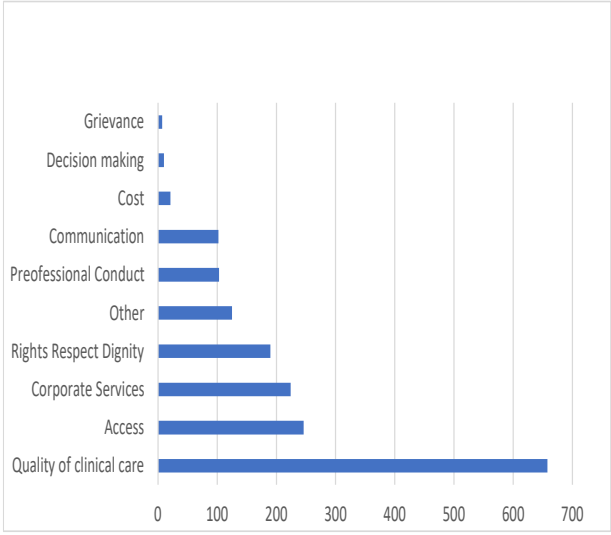
Source: MoHW quarterly complaints report 2017-18 to 2018-19

3.23 The data showed that of the 1,686 complaints, 658 (39 per cent) were in relation to the quality of clinical care, 246 (15 per cent) related to access to patient care, medical staff, and medical equipment, while 224 (13 per cent) related to corporate service inadequacies **(Figure 19)**. MoHW indicated that it would commence the process for the development and commissioning of a complaints management system database by the financial year 2024-25, as part of an action plan to improve the effective management of complaints[24]. Lesson learnt through the complaints management system could improve decision making in addressing stakeholders concerns and aid in the development of strategies geared towards building a resilient health system.

[24] MoHW Complaints Management System Audit Report, December 2021

Figure 19 MoHW category of complaints at public health facilities, 2017-18 to 2018-19





Nature of Complaints	SERHA	NERHA	WRHA	SRHA	UHWI (public)	Private facilities/ other	Medical Review Panel (MRP)	Public health facilities	UHWI (Pvt)	Total
Quality of clinical care	190	108	88	80	71	28	93	0	0	658
Access	137	42	29	23	9	3	3	0	0	246
Corporate Services	85	28	18	27	24	30	0	6	6	224
Rights respect dignity	88	23	21	48	6	4	0	0	0	190
Professional conduct	41	13	3	14	9	23	0	0	0	103
Communication	46	10	14	11	20	1	0	0	0	102
Cost	9	2	3	3	0	4	0	0	0	21
Decision making	8	0	1	0	0	0	1	0	0	10
Grievance	6	0	1	0	0	0	0	0	0	7
Other	37	17	11	20	3	33	0	1	3	125
Total	**647**	**243**	**189**	**226**	**142**	**126**	**97**	**7**	**9**	**1,686**

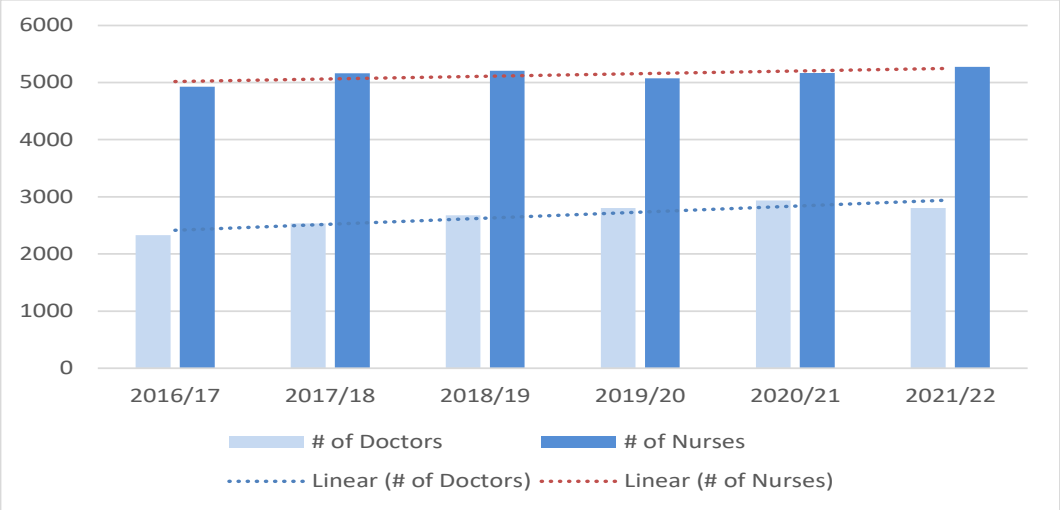
Source: MoHW quarterly complaints report 2017-18 to 2018-19

Public healthcare resilience is threatened by low skilled health worker density and attrition

3.24 Maintaining a team of trained and experienced public healthcare professionals is essential to healthcare delivery, but attrition poses a major threat to the resilience of the public health system. We compiled data obtained from the four RHA's, which showed that as of March 2022 a total of 5,273 nurses and 2,805 doctors were employed in Jamaica's public health system, increasing from 4,926 (seven per cent) and 2,330 (20 per cent) in 2016 respectively **(Figure 20)**. Although anecdotal information suggests that public healthcare staffing numbers are insufficient to handle normal patient load, more in cases of public health emergencies, a reassessment to determine the required staff establishment is yet to be finalized and approved by the MoFPS. The last approved establishment for RHAs was in 2012. In addition,

whereas MoHW did not set standards for nurse-to-patient staffing ratio in public hospitals, it indicated that it is guided by the California nurse-to-patient ratios, which encouraged nurse-to-patient ratios ranging between one nurse to one patient (1:1) and one nurse to six patients (1:6), based on the intensity of care.

Figure 20 Nurses and doctors in the public health system for the period 2016-17 – 2021-22



Source: AuGD analysis of MoHW human resource information

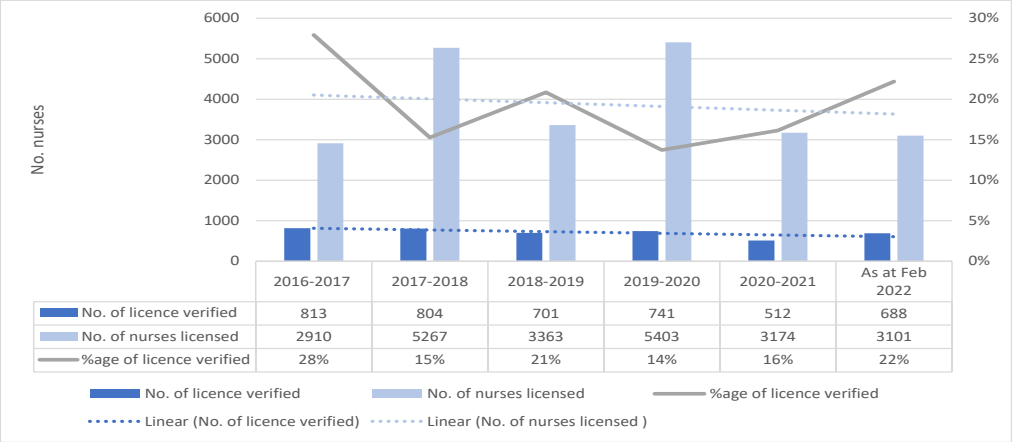
3.25 MoHW did not demonstrate that it tracked of doctor-to-population and nurse-to-population density in the public health sector to know whether doctors and nurses were sufficiently available to address the healthcare needs of the population. However, we analysed data obtained from RHAs, which indicated a density of 9.0 doctors and 18.1 nurses per 10,000 population, representing a combined density ratio of 2.71 doctors and nurses per 1,000 population. This is below the minimum density ratio of 4.45 skilled health worker (doctor and nurse/midwife) to 1,000 population recommended by the WHO in a 2016 paper on the health workforce requirements for universal health coverage and the Sustainable Development Goals[25]. The failure of MoHW to assess doctor and nurse density, impaired its ability to effectively set targets and plan for the number of nurse and doctors needed to address healthcare needs of the population. During our focus group discussion health professionals reported shortages in doctors and nurses, which is being made worse by the frequent migration by these public healthcare practitioners.

3.26 We obtained information from the Nurses Association of Jamaica (NAJ), which indicated that 1,514 nurses resigned from the public health system between 2019 and 2021. No data on nurse's resignation was available prior to 2019. Data obtained from the Nursing Council of Jamaica (NCJ) indicated that 23,218 nurses were licensed by the NCJ over the period April 2016 to February 2022. However, the data also showed that overseas recruiters requested verification of licence from NAJ for 4,259 nurses in

[25] The resulting "SDG index threshold" of 4.45 doctors, nurses, and midwives per 1,000 population was identified as an indicative minimum density representing the need for health workers.

both the private and public sectors, between April 2016 and November 2021. We were not able to disaggregate the numbers between the public and private sectors. Nonetheless, the number of licenses verified as a percentage of the number of nurses licensed reduced in 2019-20, most likely due to the Covid-19 pandemic, but has shown an upward trend since, suggesting that nurses are seeking employment overseas **(Figure 21)**.

Figure 21 Nurses licensed for the period, 2016-17 to 2020-21



	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	As at Feb 2022
No. of licence verified	813	804	701	741	512	688
No. of nurses licensed	2910	5267	3363	5403	3174	3101
%age of licence verified	28%	15%	21%	14%	16%	22%

Source: Nursing Council of Jamaica

3.27 With the migration of nurses, Jamaica's healthcare system is facing challenges maintaining experienced nurses to offer normal healthcare services, more in instances of health emergencies. Although MoHW and RHAs are aware of this challenge, minimal effort has been made to monitor the extent of the problem by implementing an effective system to track migration numbers, measure the impact, especially on the public health system, and implement effective strategies to address the issue to build resilience in the public healthcare system.

3.28 MoHW acknowledged in its 10-year Strategic Plan 2019-2030 that the public health system is encountering challenges with migration, lack of health professionals and unequal distribution of health professionals in rural and urban areas. As such, policy recommendations were developed in the short term to deepen existing bilateral arrangements for inward migration to meet human resource needs; while in the long run, improve remunerations and career development, human resource management and training. Consistent with the policy recommendations, MoHW indicated that it sought to foster technical cooperation with countries for recruitment purposes to fill human resource gaps; as well as continue to collaborate with overseas partners to accommodate training and development of staff for critical areas.

Slow implementation of actions to improve healthcare service to the vulnerable

3.29 Since April 2008, public healthcare services are provided mostly free of cost to all Jamaicans, at the point of service delivery, with the aim to increasing access to vulnerable groups in keeping with the objective of Universal Access to Health (UAH). The United Nations Department of Economic and Social Affairs describes the vulnerable in society as "people living in poverty and other vulnerable situations, including children, youth, persons with disabilities, people living with HIV/AIDS, older persons, indigenous peoples, refugees and internally displaced persons and migrants." The vulnerable in society are those most susceptible to experience the greatest adverse impact when a country experiences health emergency, underscoring the need to build the resilience in the public health system to deliver healthcare services, which cater to the needs of the most vulnerable. Vision 2030 Jamaica Social Welfare and Vulnerable Groups Sector Plan 2009-2030 identified nine vulnerable groups in the population **(Figure 22)**.

Figure 22 Vulnerable Groups in Jamaica

Source: Vision 2030 Jamaica Social Welfare and Vulnerable Groups Sector Plan 2009-2030

3.30 Jamaica's NDP details the major issues and challenges that must be addressed to ensure that equitable approaches are used to address the needs of the most vulnerable. Some of the issues and challenges included inadequate legislation, inadequate infrastructure for delivering social welfare services and inadequate systems to target the vulnerable **(Figure 23)**.

Figure 23 Some of the major issues and challenges that must be addressed to ensure the SDGs principle" leave no one behind":

1. Inadequate infrastructure for delivering Social Welfare Services
2. Inadequate legislation
3. Unsustainable Public Sector Pension Scheme
4. Low level of participation in National Insurance Scheme (NIS)
5. Inadequate systems of targeting the vulnerable
6. Inadequately resourced and managed system of welfare delivery
7. Inadequate development in rural areas
8. Discrimination
9. Poor communication to the vulnerable on available benefits
10. Need for greater personal responsibility

Source: Vision 2030 Jamaica NDP National Outcome No. 3

3.31 The Sector Plan referred to a task force report, which also identified inadequate coverage of the vulnerable. The inadequacies mentioned were, Beneficiary Identification System under-selects some vulnerable persons, absence of a system to proactively identify the vulnerable, size of vulnerable population not known, low awareness of social welfare programmes among the vulnerable, lack of a "vulnerable persons" database, and absence of an integrated cohesive system. These noted challenges and inadequacies served as an impairment to the public healthcare system delivering the required healthcare services to the vulnerable population.

3.32 One of the priority sector strategies, under National Outcome No. 3, is for the country to "develop and strengthen the database of vulnerable groups, and welfare beneficiaries" by identifying vulnerable groups and specific needs and develop a national register of persons benefiting from social welfare. The sector plan also outlines various specific actions to address the inadequacies, with the development and implementation of an integrated system with a central database on all beneficiaries (disaggregated by appropriate categories) and involving automatic referrals to other relevant programmes and databases as a major action to be achieved by 2009-10. As shown in **Figure 24** and detailed in **Appendix 9**, MoHW did not provide sufficient information for us to assess the status of the actions relating to health.

Figure 24 Health-related actions aimed at vulnerable groups

Strategic Goals		No. Strategic Outcomes	No. Specific Actions	Status
No.	Goal			
1	A society in which the vulnerable population is identified and included in the social support system (government, private sector, NGOs, FBOs, family support etc.)	1	1	⚠
2	A society that adequately meets the basic needs of vulnerable persons	2	10	⚠
3	A social welfare programme which is delivered in a professional manner that maintains people's sense of dignity and value	1	1	⚠

✔ Achieved ⚠ Could not be assessed ⛔ Not Achieved

Source: Vision 2030 Jamaica Social Welfare and Vulnerable Groups Sector Plan 2009-2030

Part Four

Health Financing Strategy in Building Health System Resilience

At A Glance

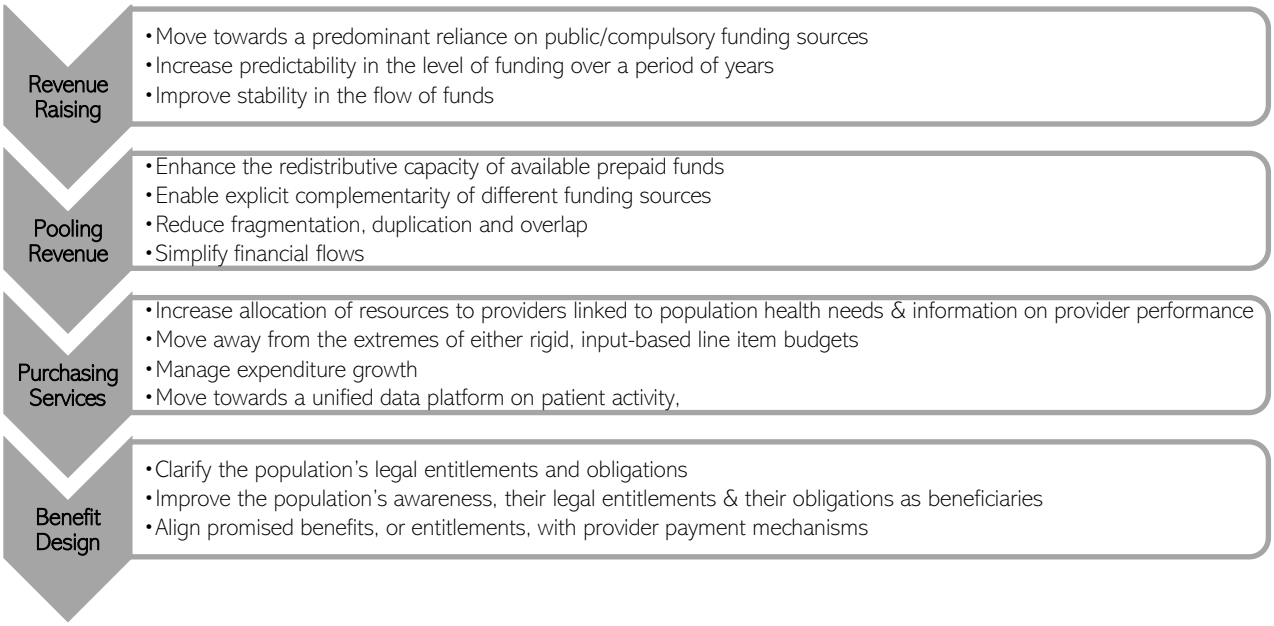
Systems and practices	Criteria	Major Highlights	Assessment Against Criteria
Sustainable health system financing strategy	Integrate health system financing strategy with health system development plan.	Consistent with the WHO's reference guide in developing a health financing strategy, MoHW outlined a strategy in its Vision for Health 10-year Strategic Plan to increase and improve health financing for equity and efficiency. MoHW linked five strategic outcomes to 13 strategic actions for health financing of which 10 are classified as work-in-progress, while work on the remaining three has not started.	⚠
Addressing financial gaps	Ensuring availability and access to funds to address the foundational gaps in health systems in achieving resilience.	Although the Government allocated $359 billion between 2016-17 and 2020-21 to fund public health, resource gap remains a challenge underscoring the need for the development and implementation of an effective financing plan consistent with the WHO reference guide for developing a national health financing strategy and supported by government policies. According to the World Bank data, Jamaica's health expenditure in relation to Gross Domestic Product (GDP) averaged 3.82 per cent for years 2015 to 2019, which is 2.18 percentage point below PAHO's recommendation of six per cent to achieve UHC and UAH.	⚠
Contingency funding	Making contingency funds available and quickly accessible for utilization in addressing emergencies.	The government made significant budgetary adjustments to accommodate contingency spending to mitigate the impact of the Covid-19 pandemic.	☑

☑ Criteria met ⚠ Criteria partially met ⛔ Did not meet criteria

Jamaica's health financing strategy needs strengthening

4.1 The World Health Organization (WHO) emphasizes that a coherent and well aligned strategy for health financing can play a key role in building resilience in public health systems. WHO's reference guide for health financing strategy outlines the policy areas and related sub-functions necessary for developing a comprehensive financing strategy. The policy areas consist of measures for revenue raising, pooling, purchasing, benefit design, and overall system architecture and governance **(Figure 25)**[26]. These measures should not be developed in isolation; in that, it requires integration with health system development plan and implemented over a period.

Figure 25 Health financing sub-functions and policy areas

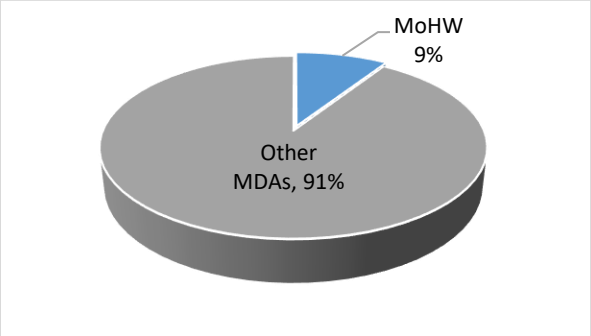


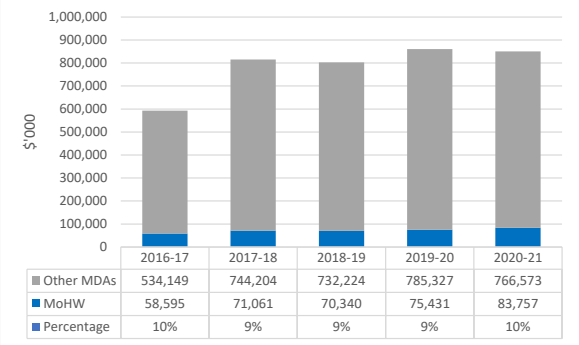
Source: Developing a National Health Financing Strategy: A reference guide- World Health Organization

4.2 Public healthcare in Jamaica is predominantly financed by taxes through the consolidated fund. The Government, over the period 2016-17 to 2020-21, allocated on average nine per cent of the annual national budget to MoHW for public healthcare. The total allocation over the five-year period was $359 billion **(Figure 26)**. The allocation increased by 43 per cent moving to $84 billion in 2020-21 from $59 billion in 2016-17.

[26] Developing a National Health Financing Strategy: A reference guide - WHO

Figure 26 MoHW Budget Allocation, 2016-17 to 2020-21





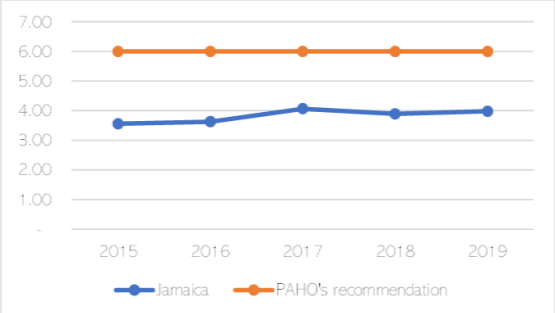
Details	2020/21 $'000	2019/20 $'000	2018/19 $'000	2017/18 $'000	2016/17 $'000	Totals $'000
MoHW Budgeted Amounts	82,579,947	76,320,038	71,011,913	72,180,400	60,350,079	362,442,377
Less AIA	-744,000	-2,819,926	- 2,423,329	- 2,784,096	- 3,256,662	-12,028,013
Net total	81,835,947	73,500,112	68,588,584	69,396,304	57,093,417	350,414,364
Bellevue Hospital	1,860,122	1,866,613	1,695,436	1,614,894	1,465,057	8,502,122
Government Chemist	60,584	64,205	55,606	49,599	36,218	266,212
MOHW Total Allocation	**83,756,653**	**75,430,930**	**70,339,626**	**71,060,797**	**58,594,692**	**359,182,698**

Source: Estimates of Expenditure 2016-17 to 2020-21

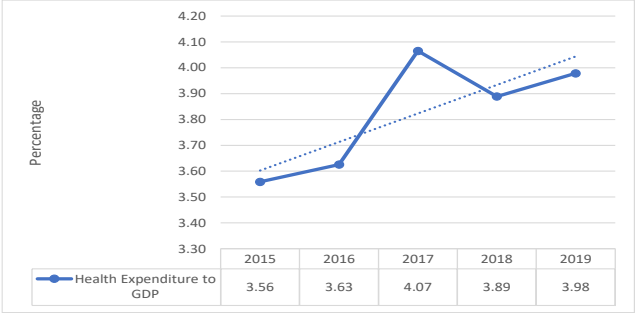
4.3 Although the Government allocated $359 billion between 2016-17 and 2020-21 to fund public health, the resource gap remains a challenge. According to the World Bank data, Jamaica's health expenditure in relation to Gross Domestic Product (GDP) averaged 3.82 per cent for years 2015 to 2019, which is 2.18 percentage point below PAHO's recommendation of six per cent to achieve UHC and UAH. Whereas Jamaica's health expenditure to GDP ratio increased marginally to 3.98 in 2019 from 3.56 in 2015, the ratio fluctuates over the period **(Figure 27)**. This underscores the importance of health financing strategies to ensure consistency in funding the public health system to achieve the international benchmark ratio for health expenditure to GPD.

Figure 27 Analysis of Jamaica's Health Expenditure

Gap between Jamaica's health expenditure to GDP and PAHO's benchmark



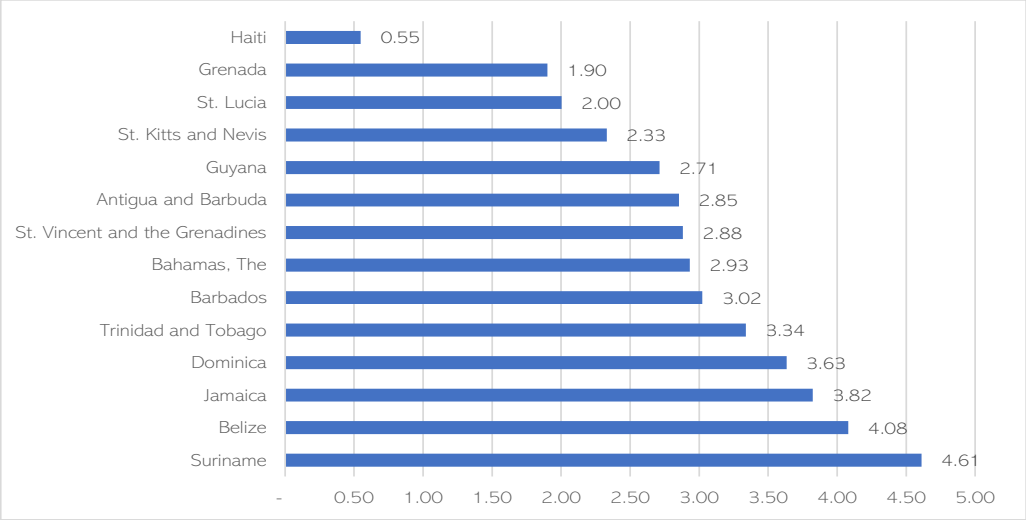
Jamaica's health expenditure to GDP, 2015 - 2019



Source: Data obtained from the world bank website and PAHO

4.4 Jamaica's average health expenditure to GDP over the period ranked the third highest among 14 Caribbean countries as shown in **Figure 28**. Consistent with stakeholder views, MoHW in its 10-year strategic plan admitted that, like other countries, Jamaica faces a health financing dilemma; that is, the resource gap between demand for healthcare services and cost to provide those services versus the available resources. Therefore, developing a sustainable health financing strategy is critical for Jamaica to close the resource gap to ensure the resilience of the public health system.

Figure 28 CARICOM member states and Jamaica's health expenditure as a percentage of GDP



BENCHMARK: Jamaica's public health expenditure as a percentage of Gross Domestic Product (GDP) ranks third among fourteen Caribbean countries at an average rate of 3.82 per cent, between 2015 and 2019, but is below PAHO's recommendation of 6 per cent.

Source: Data was obtained from the world bank website for Jamaica and other Caribbean islands

4.5 Consistent with the WHO's reference guide in developing a health financing strategy, MoHW included a goal in its Vision for Health 10-year Strategic Plan to increase and improve health financing for equity and efficiency. As shown in **Appendix 3** (Strategic Goal 3), MoHW linked five strategic outcomes to 13 strategic actions for health financing of which 10 are classified as work-in-progress, while work on the remaining three has not started. One of the strategies is to advocate for increase in the amount of funds provided to the public health sector to ensure Government expenditure on health reaches the international benchmark of six per cent of GDP.

4.6 In December 2021, MoHW prepared a Draft Discussion Paper and Conference Primer to "*explore the health challenges facing Jamaica, the policy priorities and developed plans to address them, resource requirements and the need for a strategy that allows the Government to finance these health priorities in a more sustainable manner. The goals are to move Jamaica closer to the benchmark of 6 percent of Gross Domestic Product (GDP) in government spending on health care, and to achieve universal health coverage".*

Appendices

Appendix 1: Vision 2030 National Development Plan National Strategies and Key Actions Extract

National Strategies and Key Actions	Responsible Agencies
1-1 Maintain a stable population	
▪ Support healthy lifestyle	MoHW
▪ Implement programmes to reduce maternal mortality	MoHW
▪ Implement programmes to reduce infant mortality	MoHW
1-2 Strengthen disease surveillance, mitigation, risk reduction and the responsiveness of the health system	
▪ Control and/or eliminate communicable diseases such as Malaria	MoHW, MFPS
▪ Strengthen the current national response to HIV/AIDS by scaling up prevention services and access to treatment for persons living with HIV	MoHW, MFPS
1-3 Strengthen the Health Promotion Approach	
▪ Introduce and implement Tobacco Control Legislation	MoHW
▪ Build healthy zones in communities	MoHW, NGO CBO
▪ Introduce Emergency Crisis and Outreach Teams at the Parish level and acute services at each Regional Hospital	MoHW
▪ Strengthen community-based approach to mental health	MoHW, FBO, CBO
▪ Strengthen the Workplace Wellness Programme	MoHW, FBO, OPM
▪Build capacity and communications skills to deliver information on reproductive and other health issues to service providers, parents and caregivers	MoHW
1-4 Strengthen and emphasize the primary health care approach	
▪ Upgrade primary health care facilities	MoHW
▪ Introduce a policy enabling support to primary health care including such areas as mental health, oral health and the provision of emergency contraceptive pills in health centres	MoHW, NFPB
▪ Rationalize the service time in health centres	MoHW
▪ Expand and improve integration of family planning, maternal and child health, sexual and reproductive health and HIV/AIDS into primary health care	MoHW, NFPB
▪ Ensure that the care pathway is defined	MoHW
1-5 Provide and maintain an adequate health infrastructure to ensure efficient and cost-effective service delivery	
▪ Develop the National Health Information System	MoHW, CITO
▪ Strengthen research knowledge and management capability and introduce a continuing programme of research and knowledge management	MoHW
1-6 Establish and implement a sustainable mechanism for human resources	
▪ Review the competencies and skills in the health sector	MoHW
1-8 Support national food security	
▪ Reinforce the national infant feeding policy	MoHW
▪ Design a public information campaign	MoHW, MA
1-10 Introduce a programme for sustainable financing of health care	
▪ Establish a mechanism for investigating various financing options and making recommendations	MoHW, MFPS

Source: Vision 2030 Jamaica NDP

Appendix 2: Medium Term Socio-Economic Policy Framework (MTF)

MTF 2012-2015

No.	Priority Strategies and Actions	Responsible Agency	Progress Results
14	Strengthen surveillance systems for effective response to emerging and re-emerging health conditions	MOH/Private Health Institutions	⚠
15	Operationalize outbreak investigation and response mechanism	MOH/Private Health Institutions	⚠
16	Strengthen Malaria surveillance island-wide in primary and secondary-care facilities and the general community	MOH	☑
17	Re-develop the Health Information System (HIS) to include the National Surveillance Information System	MOH	⛔
18	Pilot a diabetic retinopathy screening programme to detect diabetic eye disease at an early stage and delay onset of diabetic eye disease	MOH	⛔
19	Improve Health Centres to standard of offering wide range of diagnostic and treatment services	MOH	⚠
20	Strengthen maternal and child health: i. Plan and implement the European Union MDG 4 and 5 Project -five High Dependency Units (HDU) to be established ii. Train nurses and clinicians in Neonatology	MOH/ Private Sector	⚠
21	Establish a new children's hospital in Western Jamaica	MOH	⛔
22	Establish a framework for behaviour change programmes targeting alcohol, tobacco cessation, reduction of salts, fats and sugars and increasing physical activity and the consumption of fruits and vegetables	MOH	⚠
23	Review relevant manuals and protocols for health promotion	MOH	⚠
24	Establish a Physical Activity Taskforce to finalize a National Plan for promotion of physical activities and begin implementation phase	MOH, MOE, MOAF, private sector, NGOs	⚠
25	Review the Healthy Lifestyle Policy including the policy framework for promotion of healthy families	MOH	⚠
26	Undertake development and implementation of the National Strategic Plan for NCDs	MOH	⚠
27	Develop a National Health Promotion and Education Plan for NCDs and CDs	MOH	⛔
28	Refurbish health care facilities	MOH	⚠
29	Define service delivery for primary health care (PHC)	MOH	⚠
30	Increase access of ophthalmic services to diabetics in the primary health care centres	MOH	⚠
31	Strengthen human resource capacity to deliver a renewed PHC service	MOH	⚠
32	Develop and implement programme to ensure seamless transition through the care pathway for persons with diabetic eye disease	MOH	⛔
33	Conduct an assessment of the ideal numbers and types of personnel needed in the context of international and national obligations	MOH	⚠
34	Conduct migration study of all categories and levels of health workers	MOH	⚠
35	Develop the manpower plan for the sector: if. Complete the Five–year training plan (Nursing) ii. General training for all staff (Capacity building)	MOH	☑
36	Develop HR information system: i. Implement HRMIS training and use	MOH	⛔
37	Strengthen leadership training throughout the health sector, including leadership and governance in the eye health system	MOH	⚠
38	Strengthen the eye health data management system including the use of the health information system for use in managing planning and evidence-based policy development	MOH	⚠
39	Strengthen client complaint mechanism for reporting and resolution of complaints including revision of manual/ policy and customer service training	MOH	⚠
40	Improve use of the Service Level Agreement mechanism	MOH	⚠
41	Strengthen mechanism for the referral/linkages system	MOH	⛔

No.	Priority Strategies and Actions	Responsible Agency	Progress Results
42	Promote re-establishment of District Health Management Teams	MOH	⛔
43	Complete the development of a paper on health financing options	MOH	⚠
44	Revise User Fees for User Fees gazette	MOH	⚠
45	Complete the development of a universal coverage roadmap	MOH	⛔
46	Support the development of health and wellness/medical tourism	MOH	⛔

MTF 2015-2018

No.	Priority Strategies and Actions	Responsible Agency	Progress Results
38	Establish and maintain implementation of the national non-communicable diseases (NCD) registry on priority conditions such as cancer, cardiovascular disease, diabetes, chronic kidney disease and asthma	MOH, NHF	⚠
39	Develop a national health research policy	MOH, NHF, PIOJ, STATIN, Essential National Health Re-search Committee	⛔
40	Develop a 10-year national survey plan for health	MOH, NHF, PIOJ, STATIN, Essential National Health Research Committee	⛔
41	Develop a national health research agenda	MOH, NHF, PIOJ, STATIN, Essential National Health Research Committee	☑
42	Prioritize research areas and partner with key stakeholders in research design and implementation	MOH	⚠
44	Develop a National Health Information System (NHIS) policy	MOH, PIOJ, STATIN, RGD	⛔
45	Implement the NHIS Strategy and Action Plan	MOH, PIOJ, STATIN RGD	⛔
46	Establish a policy and legislation for personal health information protection	MOH	⚠
47	Develop strategic and action plan for implementation of Personal Health Information Protection policy and legislation	MOH	⚠
48	Establish mechanisms (e.g., MOUs) to allow the sharing of information across sectors and agencies	MOH NHF	⛔
49	Implement the tracking of patient utilization (of health services) through the GOJ Health Card platform	MOH NHF	☑
50	Develop national mechanisms for assessment of the capacity for analysis, synthesis and validation of health data	MOH, STATIN	⛔
51	Establish three cancer and diseases registries	MOH	⚠
52	Revise and operationalize a complaints mechanism to meet ISO standards documentation	MOH	☑
53	Develop and operationalize a National Customer Service Policy	MOH	⛔
54	Develop standards for building health facilities in accordance with the national building code	MOH	⛔
55	Develop standardized equipment lists to type and specification (bio-medical)	MOH	⛔
56	Complete the feasibility assessment and plan to establish a new children's hospital in Western Jamaica	MOH	⚠
57	Commence implementation of the plan to establish a new children's hospital	MOH	⚠

No.	Priority Strategies and Actions	Responsible Agency	Progress Results
58	Commence implementation of the MOU for upgrading the University Hospital of the West Indies	MOH, UWI	⛔
59	Revisit the Manpower Needs Assessment in light of primary health care renewal, cancer care, non-communicable diseases, centres of excellence and prepare a Manpower Plan	MOH, RHAs and Agencies	⚠
60	Develop and operationalize a Migration Policy for Health Personnel (staff retention)	MOH, RHAs and Agencies	⛔
61	Enhance the HR Management Information System • Implement HRMIS training	MOH, RHAs and Agencies	⛔
62	Develop and operationalize a Staff Welfare Policy	MOH, RHAs and Agencies	⛔
63	Establish a human resource observatory for health	MOH, RHAs and Agencies	⛔
64	Strengthen the mechanisms to recruit staff through use of recruitment standards	MOH	⛔
65	Review and consolidate existing governance arrangements (Head of Agency meetings, inter alia)	MOH	⛔
66	Establish and operationalize a risk management framework for the MOH and its departments and agencies	MOH	☑
67	Develop and operationalize a 10-year strategic plan and a 3-year operational plan for health	MOH, IDB	⚠
68	Develop and pilot a model for integrated people-cantered health service delivery, commencing in the Southern Region	MOH, SRHA	⛔
69	Develop and operationalize the Universal Access to Health and Universal Health Coverage Roadmap	MOH, NHF	⚠
70	Develop and operationalize a National Quality Assurance Framework for Health	MOH	⛔
71	Promote a "Health in All Policies" approach within the national development programme	MOH	⚠
72	Develop a regulatory framework for engagement and partnerships between stakeholders in health	MOH	⛔
73	Establish a coordinated reporting system for private care providers	MOH	⛔
74	Develop a comprehensive regulatory and health investment framework	MOH	⛔
75	Integrate health care programmes offered by the Jamaican Diaspora into the National Health System	MOH	⛔
76	Streamline financing flows for maximum protection of clients	MOH	⛔
77	Begin transition of the National Health Fund (NHF) into the National Health Insurance Programme (NHIP) to facilitate universal health coverage (UHC)	MOH	⛔
78	Develop an asset management database (bio-medical)	MOH	⚠
79	Continue the implementation of primary health care renewal: • Finalize implementation of activities to fully operationalize the first four centres of excellence • Continue the process for the re-establishment of the District Health Management Team • Conduct at least one clinical audit per parish for primary health care facilities each year	MOH	⚠
80	Commence the pilot of the diabetic retinopathy screening programme in primary care in the Southern and Southeast regions	MOH, International NGOs – HelpAge International, CCB (Caribbean Council for the Blind), Cuba Eye-Care Programme	☑

No.	Priority Strategies and Actions	Responsible Agency	Progress Results
81	Review the proposal on "Redesigning the Health System in Jamaica" regarding secondary care: • Align with current epidemiological and demographic changes	MOH	⛔
82	Develop a programme of action for secondary care renewal	MOH	⛔
83	Update the plan for strengthening accident and emergency services	MOH	⛔
84	Continue the programme to strengthen accident and emergency services in the main secondary and tertiary care hospitals	MOH	⚠
85	Conduct at least one clinical audit per secondary care facility each year	MOH	⚠
86	Develop the National Strategic Plan for Eye Care	MOH	☑
87	Assess national eye care services using the WHO Eye Care Service Assessment Tool (ECSAT)	MOH	⚠
88	Finalize and implement the Patient Referral Policy and Procedural Manual	MOH	☑
89	Implement the referral system related to centres of excellence	MOH	⛔
90	Sensitize health personnel to the needs of disabled and aged clientele • Develop and implement a training programme for staff in sign language (level one) • Improve access to health facilities for the physically challenged	MOH	⚠
91	Improve access to health facilities for the physically challenged – retrofit buildings etc.	MOH	⛔
92	Re-establish and make operational the Nuclear Medicine Unit at UHWI for cancer treatment, in partnership with the International Atomic Energy Agency	MOH	⚠
93	Establish two Linear Accelerator Radiation Treatment Centres	MOH, NHF, Chase Fund	☑
94	Complete the transfer of pharmacy services to the National Health Fund (NHF)	MOH	☑
95	Continue implementation of the GOJ Health Card	MOH	☑

MTF 2018-2021

No.	Priority Strategies and Actions	Responsible Agency	Progress Results
5	Continue implementation of the National Integrated Strategic Plan for SRH13 and HIV14 2014-201915 and develop plan for the period 2020-2025	MOH/NFPB	⚠
6	Develop an Integrated Sexual and Reproductive Health Policy16	MOH/NFPB	⚠
7	Develop protocol and toolkit for the reduction of teenage pregnancy	MOH/NFPB	⛔
8	Develop a National Transition Plan for the HIV Response	MOH/NFPB	⛔
9	Engage in process to achieve elimination validation certification for mother-to-child transmission of HIV	MOH/NFPB	⛔
10	Advance research and policy focus on the sexual health of the elderly	MOH, Mona Ageing and Wellness Centre	⛔
48	Develop Health Research Policy and continue implementation and dissemination of the Health Research Agenda	MOH	⚠
49	Establish an effective governance mechanism for Health Research	MOH	⚠
50	Finalize/ further develop the National NCD registry framework within a phased implementation plan	MOH	⛔
51	Develop a Repository of National Health Research	MOH, Health TWG	⛔
52	Implement the Disaster Risk Reduction Plan for the health sector	MOH	⛔

No.	Priority Strategies and Actions	Responsible Agency	Progress Results
53	Strengthen core capacities (country) in keeping with the International Health Regulations (IHR)	MOH	⚠
54	Develop policies to address NCD risk factors	MOH, MOEYI	☑
55	Expand the Jamaica Moves Programme	MOH	☑
56	Advance implementation of the recommendations of the National Food Industry Task Force	MOH	⚠
58	Advance implementation of the Adopt-A-Clinic Initiative	MOH	☑
59	Advance implementation of extended opening hours in health centres	MOH	⚠
60	Strengthen the Emergency Response Plan	MOH	⚠
61	Enhance the quality of emergency medical care through: - Expansion of the public EMS system - Standardization of emergency triage	MOH	⚠
62	Develop and expand specialist facilities to address chronic non-communicable and other diseases	MOH	⚠
63	Develop the legislative, policy and strategic framework for mental health care and service delivery	MOH	⚠
64	Continue the Programme for the Reduction of Maternal and Child Mortality (PROMAC)	MOH	☑
65	Implement a resilience building programme in the health sector (which factors climate change considerations)	MOH	⚠
66	Construct and/or upgrade hospitals and health centres a) Establish a new Children's Hospital and upgrade (expand and rehabilitate) five key hospitals b) Improve the infrastructure of selected primary health care facilities	MOH	⚠
67	Develop plans for human resource capacity development and training of health personnel	MOH, RHAs	⚠
68	Advance implementation of bi-lateral and other agreements for the training of health personnel	MOH	⚠
69	Complete and implement a 10-year strategic plan and a 3-year operational plan for health	MOH	⚠
70	Develop and operationalize the Universal Access to Health and Universal Health Coverage Roadmap	MOH	⚠
71	Establish and operationalize a risk management framework for the MOH and its departments and agencies	MOH	☑
72	Develop and operationalize a National Quality Assurance Framework for Health	MOH	⛔
73	Develop Information Systems for Health National Policy	MOH	⚠
74	Develop National E-Health (Digital Health) Architecture	MOH	⛔
75	Develop Personal Health Information Protection Policy Provisions	MOH	⛔
76	Develop the Climate Change Adaptation Plan for Health	MOH	⛔
77	Strengthen the Mosquito Control and Research Programme	MOH/UWI	⚠
78	Develop and implement the National Health Insurance Scheme	MOH/NHF	⚠

☑ Achieved ⚠ Partially Achieved (improvements needed) ⛔ Yet to be Achieved

Appendix 3: Vision for Health 2030 10-Year Strategic Plan 2019 – 2030

STRATEGIC GOAL 1- SAFEGUARDING ACCESS TO EQUITABLE, COMPREHENSIVE AND QUALITY HEALTH CARE

Strategic Outcome 1.1- Strengthened Primary Care facilities through implementation of the Standard Comprehensive Essential Benefits Package in a revised and renewed Primary care model in all Health Centres and Health Departments by 2030.

No.	Strategic Actions	Progress Results
1	Develop an essential benefit package that meets the identified needs of the population based on epidemiological and environmental profiles and in line with the social and economic forecast.	⚠
2	Transform structures and functions of health centres and health departments to effectively serve as the gateway to modern health services, procure the necessary equipment and new technologies, including green technologies and safe health facilities standards, and increasing their capacity to respond to population needs and demands	⚠
3	Reorganize primary health care centres to a three-tiered system (community, district and comprehensive) with strengthened and streamlined referral and linkage systems that offers a more equitable and a higher level of care/services based on demographic and health needs than the existing five-tiered system	⚠
4	Create new and expand existing national programmes that encourage community-based involvement in health care provision.	⚠

Strategic Outcome 1.2- All hospitals, specialized care centres and support services are modernized to provide efficient and quality service in an aesthetically pleasing environment.

No.	Strategic Actions	Progress Results
1	Identify, upgrade and improve key infrastructure in hospitals and support facilities to improve efficiency and meet the demands of the population including the establishment of Centres of Excellence for mental health, cardiology, neurology, oncology and nephrology.	⚠
2	Establish new facilities to increase capacity and meet new demands of the population. This includes the building of the Child and Adolescent Hospital in Western Jamaica	⛔
3	Develop and implement a transformation plan for hospitals and support services in line with modern technology and management standards	⛔
4	Implement telemedicine to improve access to health care.	⚠
5	Strengthen management competencies and the adoption of modern tools for management of hospital and allied services through training and recruitment and development of continued education programme.	⚠
6	Develop and implement a quality assurance programme to assess and support the delivery of health services in all public facilities	⚠

STRATEGIC GOAL 2- THE STEWARDSHIP CAPACITY OF THE MINISTRY OF HEALTH & WELLNESS IS STRENGTHENED TO IMPROVE LEADERSHIP AND GOVERNANCE TO ACHIEVE UNIVERSAL ACCESS TO HEALTH AND UNIVERSAL HEALTH COVERAGE

Strategic Outcome 2.1- Effective Stewardship and Governance of the Health Sector at all levels.

No.	Strategic Actions	Progress Results
1	Improve the capacity to implement the Essential Public Health Functions	⚠
2	Update and modernize health policies, legislations and regulations	⚠
3	Strengthen institutional regulatory capacity for the enforcement health polices and laws	⚠
4	Implement an effective and sustainable mechanism for the systematic review and updating of health, policies, laws and regulations	⛔
5	Enhance institutional regulatory mechanism for the registration and licensing of health professionals and health services providers	⛔
6	Implement a Monitoring and Evaluation Framework throughout the MOHW, its departments and agencies	⚠
7	Implement a Risk Management Framework and Strategies throughout the MOHW, its departments and agencies	⚠
8	Within the framework of the Health in All Policies (Hip) approach, improve partnerships with other government ministries, communities, non-governmental organizations, civil society and international community.	⛔

Strategic Outcome 2.2- Efficient and effective organizational and management structure of the public health system

No.	Strategic Actions	Progress Results
1	Modernize and restructure the Ministry of Health & Wellness through the Public Sector Modernisation Programme	⚠
2	Implement an effective and sustainable mechanism for the systematic strengthening of management and leadership capacity in the MOHW and introduction of programmes for the continuous development of new technical competencies	⚠
3	Rationalization of the structure of the Regional Health Authorities	⛔
4	Develop and implement a Customer Service Improvement Plan throughout the public health sector	⛔
5	Establish effective Service Level Agreements and ensure that they are systematically monitored to drive accountability, quality and performance	☑
6	Develop and implement a Public Private Partnership Strategy throughout the MOHW, its departments and agencies	⚠

Strategic Outcome 2.3- Evidenced –based policy, planning, implementation, monitoring and evaluation

No.	Strategic Actions	Progress Results
1	Institutionalise results-based planning and budgeting and align to MOHW strategic goals with formalized mechanisms for prioritization during the ten-year execution of Vision for Health 2030	⚠
2	Institutionalize Health Technology Assessment	⚠
3	Develop and implement a funded Health Research Agenda to generate evidence to guide policymaking and monitoring and evaluation	⚠
4	Systematic publication on the performance of the health system.	⛔
5	Strengthen institutional capacity to ensure the availability of accurate health data for analysis and decision making	⚠

Strategic Outcome 2.4- Strengthened National Health Information Systems

No.	Strategic Actions	Progress Results
1	Effective implementation of the MOHW's Plan of Action for Information's Systems for Health (IS4H)	⚠

Strategic Outcome 2.5- Full implementation of the eight core capacities20 of the International Health Regulations and full compliance with legal requirements for reporting to the mandatory notification systems.

No.	Strategic Actions	Progress Results
1	Strengthen surveillance	⚠
2	Compliance with legal requirements	⚠

STRATEGIC GOAL 3- INCREASED AND IMPROVED HEALTH FINANCING FOR EQUITY AND EFFICIENCY

Strategic Outcome 3.1- Strong advocacy for the increase in the amount of funds provided to the public health sector to ensure government expenditure on health is 6% of GDP.

No.	Strategic Actions	Progress Results
1	Engagement for the mobilize additional resources from new and alternative general revenue sources	⛔
2	Support the introduction/Establishing of a National Health Insurance Scheme	⚠
3	Establish systems to improve the collection from patients with private health insurance	⛔

Strategic Outcome 3.2- Improved efficiency of how funds provided to the public health sector is allocated and utilized for the delivery of health care services.

No.	Strategic Actions	Progress Results
1	Establishing a performance based budgetary allocation mechanism in the public health sector	⚠
2	Strengthening of MOHW's stewardship of the health sector, oversight, transparency, accountability and interventions to reduce wastage of financial resources;	⚠
3	Strengthening the systems for financial management, budgeting, auditing, planning, monitoring and evaluation	⚠

Strategic Outcome 3.3- Increased allocation of funds to the first level of care (primary care) to at least 30% of the budget for the public health sector

No.	Strategic Actions	Progress Results
1	Incrementally apportioning more of the funds from any new revenue sources to the FLC;	⛔

Strategic Outcome 3.4- Consolidate the number of GOJ sponsored public insurance schemes to optimize efficiency

No.	Strategic Actions	Progress Results
1	Progressively unifying/pooling all GOJ sponsored public insurance schemes for equity and economies of scale	⚠
2	Coordinating and harmonizing the benefits and contributions across all GOJ sponsored public insurance scheme	⚠

Strategic Outcome 3.5- Introduction of a Package of services/Benefit Package guaranteed to all resident Jamaicans without user fees at the point of service in the public health sector

No.	Strategic Actions	Progress Results
1	Package of services defined and approved for delivery within the public health system	⚠
2	VEN List for Pharmaceuticals are aligned to the service delivery package.	⚠
3	Supply chain management for all services are aligned with service package to ensure effective and efficient delivery of health care	⚠
4	Establishing national systems of health intervention and technology assessment, to support cost reduction and the improvement in efficiency and effectiveness within health facilities.	⚠

STRATEGIC GOAL 4- ENSURING HUMAN RESOURCES FOR HEALTH SUFFICIENT IN NUMBER AND COMPETENCIES ALIGNED TO THE MODEL OF CARE AND COMMITTED TO THE MISSION

Strategic Outcome 4.1- Capacity for National Strategic planning and management of the HRH

No.	Strategic Actions	Progress Results
1	Develop a new and comprehensive HRH policy and action plan for the Standard Provisions of the health system	⛔
2	Establishment of HRH planning mechanism to increase capacity for short- medium- and long-term planning, monitoring and evaluation.	⛔
3	Strengthen Ministry of Health & Wellness capacity to proactively plan and manage the supply, mix, demand and distribution of health human resources	⛔
4	Continuously update model projections for national health workforce requirements based on the changing health needs of the country and aligned with new models of care.	⛔
5	Develop and implement short, medium and long term plans to improve Jamaica's supply and deployment of health human resources through a combination of recruitment, retention, education, and training strategies and labour market policies.	⛔
6	Establish a network of key stakeholders in order to establish national health education and training priorities and implement changes.	⛔
7	Conduct annual process of reviews of existing national, health and HRH policies, identify gaps and revise or develop new policies as necessary	⛔
8	Foster an organizational culture that supports the implementation of revised policies and systems through leadership of senior management	⛔

Strategic Outcome 4.2- National HRH plan for the public health sector aligned to model of care.

No.	Strategic Actions	Progress Results
1	Implement the revised HRH deployment and utilization plan for the public health sector as per the new model of care.	⛔
2	Reduce rate of migration of clinical staff resulting from implementation of retention policies in the MOHW	⛔
3	Develop policies for regular, timely sharing of HRH planning data from within and outside MOHW to support planning	⛔

Strategic Outcome 4.3- Equitable distribution of health workers across the island based on local needs.

	Strategic Actions	Progress Results
1	Review regulation and enforcement of remote area policies and systems and identify barriers	⛔
2	Collect, analyse, and update distribution data of sanctioned and filled posts disaggregated by location, cadre, gender, and ethnicity	⛔
3	Enhance the utilization of population-based metrics to allocate resources across regions by establishing an IT system for planning purposes	⛔

Strategic Outcome 4.4- Improved Health Worker Performance

No.	Strategic Actions	Progress Results
1	Foster a positive labour environment that motivates employees to work efficiently	⚠
2	Introduction of new human resource categories in the staff cadre in line with changes in the governance schemes, delivery model and the package of services and that facilitate patient safety and improved relations with the clinical staff	⚠
3	Appointment of a technical team to conclude the preparation of the career development and promotion plan	⛔
4	Plan Prepare and implement an Employee Climate Survey to update and better understand workers' needs and motivations, especially in the rural area	⚠
5	Career development and promotion plan completed, and first measures implemented	⛔

Strategic Outcome 4.5- Training and education programmes that are consistent with the new model of care

No.	Strategic Actions	Progress Results
1	Form alliances with public and private institutions that provide educational and training programmes for HRH.	⛔
2	Prepare an inventory of skills of all clinical and non-clinical staff working under the umbrella of the Ministry of Health & Wellness	⛔
3	Execute training in Compassionate Care in order to improve the relationships between staff and patients	⛔

STRATEGIC GOAL 5- SOCIAL PARTICIPATION AND HEALTH PROMOTION TO ADDRESS THE SOCIAL DETERMINANTS OF HEALTH

Strategic Outcome 5.1- Persons and families empowered and engaged in managing their own health.

No.	Strategic Actions	Progress Results
1	Prioritization of health promotion and education so that individuals and families participate in higher levels of preventative action to take responsibility for their health	⛔
2	Modernized National Framework for community participation	⛔
3	Development and implementation of a plan for the promotion of health literacy in communities to empower individuals to make better health choices	⛔
4	Development and implementation of a comprehensive plan for the promotion of healthy lifestyle programmes in the special settings – schools, communities, and workplace, utilizing the 5 pillars of health promotion	⚠

Strategic Outcome 5.2- Strengthened health systems through advocacy for the implementation of health in all policies (Hip) approach across all sectors in government.

No.	Strategic Actions	Progress Results
1	Development and implementation of a Strategic Framework for Addressing Social Determinants of Health	⛔
2	Build the capacity of the Ministry of Health & Wellness to engage other sectors of government through leadership, partnership, advocacy, and mediation to achieve improved health outcomes.	⛔

3	Build institutional capacity to support health professionals in acquiring the requisite knowledge and skills around the Hip approach.	⛔

STRATEGIC GOAL 6- MAKING RELIABLE AND MODERN INFRASTRUCTURE AVAILABLE FOR HEALTH SERVICE DELIVERY

Strategic Outcome 6.1- Establish standards for construction and maintenance of health facilities in keeping with international best practices and ensure that they are observed.

No.	Strategic Actions	Progress Results
1	Develop standards for secondary care facilities in keeping with international best practice.	⚠
2	Develop standards for resilient and climate adapted facilities through the application of intervention aimed at reducing the vulnerability of the facilities and their impact on the environment	⚠

Strategic Outcome 6.2- Provide and Maintain an Adequate Health Infrastructure to Ensure Efficient and Cost-Effective Service Delivery.

No.	Strategic Actions	Progress Results
1	Advocating for the fiscal space for capital investment in order to retool the public health sector	✔
2	Rehabilitating Critical Health Infrastructure o Dedicate more resources to operations and maintenance of health facilities o Identify resource gap and potential sources of funding for operations and maintenance of health infrastructure o Integrate specific training on maintenance and/or maintenance plans into contracts for critical health infrastructure o Review/strengthen/modify the levels of responsibility and authority within the MOHW for the effective management of medical equipment. o Provide the overarching framework for the development of operating/preventive maintenance/replacement procedures, which, when implemented, will ensure that the established equipment performance standards are consistently achieved. o Review and modify/ strengthen the existing mechanisms for monitoring and reporting on the performance of medical equipment, including the mechanisms to ensure accountability by those charged with the responsibility for managing medical equipment.	⚠

✔ Achieved ⚠ Partially Achieved ⛔ Yet to be Achieved

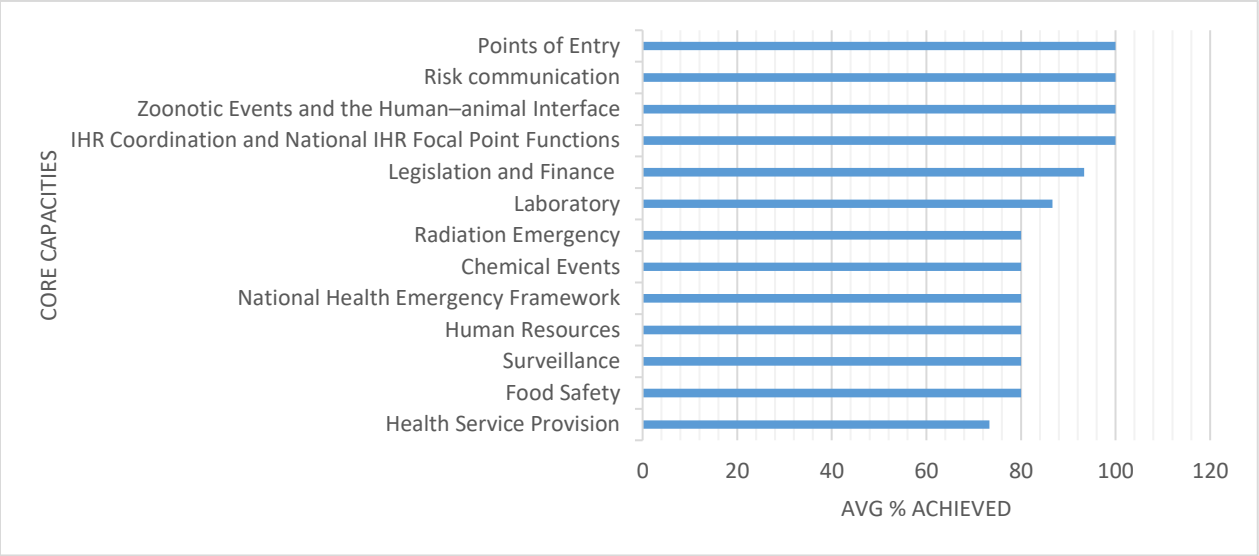
Source: Vision 2030 Jamaica NDP and MoHW

Appendix 4: Multisectoral approach to National Emergencies – Structure and roles of the National Disaster Sub- Committees

1. ADMINISTRATION, FINANCE AND THE PUBLIC SERVICE COMMITTEE	2. DAMAGE ASSESSMENT, RECOVERY AND REHABILITATION SUB-COMMITTEE
The Administration, Finance and the Public Service sub-committee is jointly chaired by the MoFPS and the ODPEM. It is this Committee's responsibility to: • Properly equip disaster management agencies • Ensure adequate staffing of disaster management agencies • Fund emergency activities such as the provision of relief assistance • Provide assistance in the National Emergency Operations Centre (NEOC)	The Ministry of Transport and Mining and the ODPEM jointly chair this sub-committee, which is divided into two entities: Damage Assessment and Recovery and Rehabilitation. The Ministry, through the National Works Agency (NWA), oversees the Damage Assessment component while the Recovery and Rehabilitation component is overseen by the Planning Institute of Jamaica (PIOJ). This sub-committee is responsible for: • Conducting damage assessment after a disaster • Coordinating restoration activities to restore services and institutions after a disaster • Providing assistance in the National Emergency Operations Centre (NEOC)
3. EMERGENCY OPERATIONS, COMMUNICATIONS AND TRANSPORT SUB-COMMITTEE	**4. PUBLIC INFORMATION AND EDUCATION SUB-COMMITTEE**
The Jamaica Fire Brigade (JFB) and the ODPEM jointly chair the Emergency Operations, Communications and Transport sub-committee. It is this sub-committee's responsibility to do: • Rescues and evaluations • Law enforcement • Establish and maintain communication links • Coordinate transportation for emergency response	The Jamaica Information Service (JIS) and the ODPEM jointly chair the Public Information and Education sub-committee. This subcommittee comprises representatives from partner agencies as well as media and communications managers who contribute to the effectiveness of the ODPEM's various public education programmes. It this sub-committee's responsibility to: • Disseminate disaster management information. • Conduct training exercises.
5. WELFARE/SHELTER AND RELIEF CLEARANCE SUB-COMMITTEE	**6. HEALTH PLANNING SUB-COMMITTEE**
The Ministry of Labour and Social Security (MLSS) and the ODPEM jointly chair the Welfare/Shelter and Relief Clearance sub-committee. It is this sub-committee's responsibility to: • Establish and maintain the National Shelter Programme. • Coordinate the clearance and distribution of relief supplies.	The Ministry of Health and Wellness chairs this sub-committee along with the ODPEM. It is this sub-committee's responsibility to coordinate Emergency Health.

Source: ODPEM website

Appendix 5: Jamaica's Self-Assessment Annual Reporting on the implementation of The International Health Regulations as of October 2021



Source: WHO e-SPAR State Party Annual Report updated October 28, 2021

Appendix 6: Functions of the IHF National Focal Point

Source: Standard Operating Procedures for International Health Regulations (IHR) National Focal Point (NFP) for Jamaica- Draft February 2017

Appendix 7: Works for which additional funds is required by MOH

Description	Works to be carried out	Preliminary Estimates (US$'000)	Revised Estimates (US$'000)	Gap (US$'000)
Spanish Town Hospital -upgrade to Type A hospital	• 100 bed clinical ward • Outpatient building • Surgical unit • Clinical Support unit	15,120	45,173	30,053
May Pen Hospital	Construct new outpatient block	3,477	3,995	518
St Ann's Bay Hospital	• Construct New Outpatient Block	1,850	3,995	2,145
Health Centres: Old Harbour, May Pen East, Ocho Rios, Browns Town	Construct four new health centres	4,145	17,097	12,952
Health Centres: St. Jago Park, Greater Portmore, May Pen West, Chapelton, Mocho, St. Ann's Bay	Renovate and extend existing health centres	4,240	9,324	5,084
Hospitals and health facilities	Pre-construction activities	0	7,073	7,073
Hospitals and health facilities	Medical Equipment	7,630	18,001	10,371
Hospital and health facilities	Administrative furniture	0	3,540	3,540
Hospital and health facilities	Design and implementation of the digitised Electronic Health Record system	1,150	4,000	2,850
Program administration and evaluation fees	Salary for project execution unit, motor vehicle, monitoring and audit fees (10% of loan amount)	2,345	4,512	2,167
	Improve management, quality, and efficiency of health services	7,500	9,702	2,202
Expansion of project scope:	ICT infrastructure, consultancy, inflationary increases due to pandemic	2,543	10,694	8,151
EU Grant		11,424	11,424	0
Total		61,424	148,530	87,106

Source: AuGD analysis of MoHW project restructuring proposal document May 2022

Appendix 8: Information Systems for Health Plan of Action 2017-2021 – Timeline and Status

1. Information System management and governance		Time for completion	Status
Governance Structure		June 2021	⚠
2.1.1	Establish National Governance Structure to guide IS4H development		
IS4H Human Resource			
2.1.2	Develop IS4H Functional Model for MOHW	June 2018	☑
2.1.3	Conduct Assessment of MOHW and Regional Health Authority IS4H Structures	December 2019	☑
Health Data Protection			
2.1.4	Develop draft Code of Practice for Personal Health Information Protection (PHIP) based on the National Data Protection Bill of the Government of Jamaica	December 2019	☑
2.1.5	Establish the governance mechanism and Policy Guidelines for Personal Health Information Protection (PHIP) for Public Sector Health Facilities	March 2020	☑
2.1.6	Develop Privacy Program for public health facilities	June 2021	⚠
2.1.7	Review and adopt national IS4H Policy	November 2020	⚠
National IS4H Strategy			
2.1.8	Refresh National IS4H Strategy	January 2021	⚠
2.1.9	Develop National EHR vision, strategy, and business case	November 2019	⚠
Telehealth Policy and Strategy			
2.1.10	Develop telehealth national strategy, policy, and clinical protocol	November 2020	⚠
Change Management			
2.1.11	Establish Change Management and Communication Strategy	June 2021	⛔
2. Data Management information technologies			
National ICT Infrastructure			
2.2.1	Establish the National Health Data Centre	July 2020	⚠
National eHealth (Digital Health) Architecture			
2.2.2	Develop national conceptual Digital Health Architecture Blueprint	July 2020	☑
2.2.3	Design DRAFT National Digital Health Blueprint and Business, Information and Technical Architectures	June 2021	⛔
2.2.4	Conduct consultations on National EHR Business, Information and Technical Architectures	March 2021	⛔
2.2.5	Establishment of the infostructure that enables (semantic) interoperability through defining the "little data" specifications in an open platform ecosystem	January 2021	⚠
2.2.6	Health Indicator Compendium	December 2017	☑
Procurement, design, and implementation of eHealth applications (EHR, Telehealth and mobile health)			
2.2.7	Electronic Health Records Platform Definition	March 2020	☑
2.2.8	Develop, issue, and evaluate a Request for Information (RFI) as a tool for Market Sounding for HER solution(s)	November 2019	☑
2.2.9	Develop, issue, and evaluate a Terms of Reference (RFP) to select EHR solution(s) vendors	December 2020	⚠
2.2.10	Launch Telemonitoring Model for Chronic Care	March 2020	⚠
2.2.11	Telehealth/Telemedicine Pilot Project Charter	May 2021	⚠

2.2.12	Chronic Care Mobile App	December 2020	⚠
3. Knowledge management and sharing			
2.3.1	Latin American Study	Delayed indefinitely due to Covid 19	⛔
4. Innovation			
4.1	To establish a model for sustainability regarding the investments for IS4H	Timeline to be determined	⛔

☑ Achieved ⚠ Process started ⛔ Yet to be achieved

Appendix 9: Health-related actions aimed at the Vulnerable groups

Goal 1: A society in which the vulnerable population is identified and included in the social support system (government, private sector, NGOs, FBOs, family support etc.)			
Outcome 1.1: A formal social welfare system which provides coverage for its vulnerable population.			
Strategy: Increase awareness of the availability and eligibility criteria of social assistance programmes			
Specific Actions	Timeframe	Responsible MDAs	Status
Undertake public Education/awareness campaign through various points of contact/ media *(on programmes and services for vulnerable groups)*	Ongoing	MLSS in collaboration with other agencies e.g., SDC, FBOs, MOHE,	⚠
GOAL 2: A Society that adequately meets the basic needs of vulnerable persons			
Outcome 2.3: A citizenry that demonstrates social responsibility for its vulnerable members.			
Strategy: Strengthen the capacity of families to care for their vulnerable members			
Specific Actions	Timeframe	Responsible MDAs	Status
Develop a supporting framework, to enable families to provide effective care and protection for their members especially the vulnerable	2009/10	MOHW	⚠
Review existing legislation relating to the family		MOJ MLSS MOHW	⚠
Enforce the assumption of responsibilities and the protection of rights of all members of the family specially the vulnerable	2009/10	MLSS MOJ MOHW	⚠
Outcome 2.4: Expanded range of programmes to meet practical and strategic needs of various vulnerable groups			
Provide access to counselling and self-development initiatives (including counselling for drug abusers)		MOH/MLSS	⚠
Train community heath aids to periodically visit, monitor and provide in-home care for persons with these conditions that are restricted in mobility		MoHW	⚠
Develop a registry of persons in Extreme circumstances and a mechanism for monitoring and quick response		MOHE / Local Authorities/MLSS	⚠
Strengthen the Ministry of Health and Environment's monitoring and evaluation mechanism.		MOHE / Local Authorities/MLSS	⚠
Establish recuperative care facilities to assist with the management of these conditions.		MOHE / Local Authorities/MLSS	⚠
Monitor the health condition of these individuals both for those in residential care and those at home (using community health aids) and establish guidelines for appropriate response.		MOHE / Local Authorities/MLSS	⚠
Develop a mechanism to facilitate access and easy referral for persons with these condition to the Basic social services and other institution			⚠
Goal 3: A social welfare programme which is delivered in a professional manner that maintains people's sense of dignity and value.			
Outcome 3.1 An effective, efficient, transparent, and objective delivery system for social welfare services and programmes			
Develop and implement an integrated system with a central database on all beneficiaries (disaggregated by appropriate categories) and involving automatic referrals to other relevant programmes and databases		MLSS, Local Authorities in collaboration with MOE, MOH, Fos Cos, Nos etc.)	⚠

✔ Achieved ⚠ Could not be assessed ⛔ Not Achieved

Acronyms and Abbreviations

AuGD	Auditor General's Department
COVID-19	Coronavirus 2019 Pandemic
EIH	Department of Evidence and Intelligence for Action in Health
DRMA	Disaster Risk Management Act
ePAS	electronic Patient Administration System
EOC	Emergency Operational Centre
EU	European Union
FCA	Fellow Chartered Accountant
FCCA	Fellow Member of Association of Chartered Certified Accountants
FLC	First Level of Care
GOJ	Government of Jamaica
GDP	Gross Domestic Product
HC	Health Centre
HIS	Health Information System
IS4H	Information System for Health
IDB	Inter-American Development Bank
IHR	International Health Regulations
INTOSAI	International Organization of Supreme Audit Institutions
IDI	INTOSAI Development Initiative
MTF	Medium Term Socio-Economic Policy Framework
MDAs	Ministries, Departments and Agencies
MoFPS	Ministry of Finance and the Public Service
MoHW	Ministry of Health and Wellness
NDP	National Development Plan
NFP	National Focal Point
NHF	National Health Fund
NHIS	National Health Information System
NIS	National Insurance Scheme
NCD	Non-Communicable Diseases
NGO	Non-Government Organization
NERHA	North East Regional Health Authority
NAJ	Nursing Association of Jamaica
NCJ	Nursing Council of Jamaica
ODPEM	Office of Disaster Preparedness and Emergency Management
PAHO	Pan American Health Organisation
PAS	Patient Administration System
PIOJ	Planning Institute of Jamaica
PEP	Plurennial Expenditure Plan
PHC	Primary Health Care

RHAs	Regional Health Authorities
SERHA	South East Regional Health Authority
SRHA	Southern Regional Health Authority
SAG	Stakeholder Advisory Group
SPAR	State Party Self-Assessment Annual Report
STATIN	Statistical Institute of Jamaica
SAI	Supreme Audit Institutions
SDGs	Sustainable Development Goals
TOR	Terms of Reference
CARICOM	Caribbean Community and Common Market
UAH	Universal Access to Health
UHC	Universal Health Coverage
UHWI	University Hospital of the West Indies
WRHA	Western Regional Health Authority
WGA	Whole-of-Government-Approach
WB	World Bank
WHO	World Health Organisation

List of Figures and Tables