

TC Document

I. Basic Information for TC

▪ Country/Region:	JAMAICA
▪ TC Name:	Evaluation of the viability of the hospital infrastructure expansion in Jamaica
▪ TC Number:	JA-T1211
▪ Team Leader/Members:	Perez Cuevas, Ricardo Enrique (SCL/SPH) Team Leader; Astorga, Ignacio Jose (SCL/SPH); Benedettelli, Veronica (VPC/FMP); Brown, Nicole (CCB/CJA); Guerra, Martha M. (SCL/SPH); Mendoza Benavente, Horacio (LEG/SGO) Benedettelli, Veronica (VPC/FMP); Brown, Nicole (CCB/CJA); Guerra, Martha M. (SCL/SPH); Henriquez Cortez, Carlos Alberto (INE/INE); Mendoza Benavente, Horacio (LEG/SGO)
▪ Taxonomy:	Operational Support
▪ Operation Supported by the TC:	JA-L1049
▪ Date of TC Abstract authorization:	05 May 2022
▪ Beneficiary:	Ministry of Health and Wellness Jamaica
▪ Executing Agency and contact name:	Inter-American Development Bank
▪ Donors providing funding:	OC SDP Window 2 - Social Development(W2E)
▪ IDB Funding Requested:	US\$200,000.00
▪ Local counterpart funding, if any:	US\$0
▪ Disbursement period (which includes Execution period):	30 months
▪ Required start date:	October 2022
▪ Types of consultants:	Individual consultants and consulting firms
▪ Prepared by Unit:	SCL/SPH-Social Protection & Health
▪ Unit of Disbursement Responsibility:	CCB/CJA-Country Office Jamaica
▪ TC included in Country Strategy (y/n):	Yes
▪ TC included in CPD (y/n):	Yes
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Social inclusion and equality; Institutional capacity and rule of law

II. Description of the Associated Loan

- 2.1 This Technical Cooperation (TC) project reinforces the implementation of the investment loan JA-L1049 (4668/OC-JA, US\$50 Million) "Support for the Health Systems Strengthening for the Prevention and Care Management of Non-Communicable Diseases Programme" (HSSP). The objective of HSSP is to contribute to population health improvements in Jamaica by strengthening comprehensive policies for the prevention of chronic non-communicable disease (NCD) risk factors and improving access to an upgraded and integrated primary and secondary health network in prioritized areas, with an emphasis on more efficient and higher quality chronic disease management.
- 2.2 The MOHW designed the two HSSP components to upgrade health facility infrastructure, introduce digital technology, improve the organization of healthcare services, and enhance quality and efficiency of care for NCDs. The population of Clarendon, St. Ann, and St. Catherine parishes, particularly those with chronic diseases, will benefit from improved access to a renovated network of health services.

- 2.3 **Component 1: Organization and consolidation of integrated health services.** This component funds the upgrade and expansion of Spanish Town, St. Ann's Bay, and May Penn hospitals. The government selected these hospitals based on their strategic role within the network of national hospitals and a supply and demand analysis. Evaluation of the physical conditions of these facilities signaled critical gaps. The financing covers (i) building and engineering designs; (ii) hospital upgrades according to contracted plans and designs; (iii) procurement of medical and imaging equipment, including computerized tomography machines; (iv) the installation of industrial-style laundry machines; (v) construction and supervision services; and (vi) the design and implementation of a corrective and preventive equipment maintenance program.
- 2.4 **Component 2: Improvement of management, quality, and efficiency of health services.** This component funds the implementation of the chronic care model (CCM), the digitalization of health services, and the Fourth Jamaica Health and Lifestyle Survey. Implementing the CCM involves developing and establishing care pathways and protocols for NCD care, change management, and process improvements. It also entails implementing social marketing strategies for behavior change to promote a healthy lifestyle among NCD patients and the population at risk. Introducing digital health technology will advance the Information Systems for Health (IS4H) initiative, which encompasses the design and application of the IS4H National Policy. It sets the foundation for a digital health ecosystem that incorporates an electronic health record platform. In particular, the IS4H plan will strengthen the telehealth, telemedicine, and telementoring capabilities of the MOHW. The Fourth Jamaica Health and Lifestyle Survey will provide up-to-date estimates of population health indicators in Jamaica across critical public health issues.

III. Objectives and Justification of the TC

- 3.1 The general objective of this TC is to analyze the impact that the infrastructure expansion at Spanish Town Hospital (STH) will have on the viability of its capacity to deliver inpatient services, availability of specialized health personnel, and operating costs. The specific objectives are to (i) diagnose and assess current management practices and design an action plan to improve STH capacity; (ii) quantify current supply and demand gaps in outpatient, inpatient, and surgical services and propose strategies to reduce the gaps; (iii) quantify current and future health personnel needs of STH; and (iv) estimate the economic impact of STH upgrades and propose a standardized cost measurement to inform policy decisions related to budgeting within the hospital.
- 3.2 STH serves St. Catherine Parish inhabitants (522,057), which represent about 18% of Jamaica's population. It delivers services in pediatrics, orthopedics, obstetrics and gynecology, general medicine, and general surgery. Furthermore, it provides dietary counseling and delivers physiotherapy, renal care, colposcopy, and other diagnostic services. The hospital also has a pharmacy and day care services.
- 3.3 However, the growing demand for hospital services is straining the delivery capacity of STH. Between 2012 and 2017, STH had 18,000 yearly admissions; most (44%) were for obstetric care. General medicine and surgical services are overwhelmed; their respective bed occupancy rates are 87.5% and 95.7%, with an average stay of 5.8 days. These data indicate that STH has reached its supply capacity limits. Furthermore, the hospital has outdated laboratory and x-ray facilities and equipment, reducing its diagnostic service capabilities.

- 3.4 STH upgrades are expected to address current hospital service shortages in St. Catherine Parish. The MOHW has completed the building and engineering designs required to begin construction. Furthermore, the MOHW has defined the necessary medical and diagnostic equipment for the hospital. The previous analysis identified the need for additional services. Therefore, STH will add two medical specialties—neurology and nephrology—and several surgical specialties, such as urology, ophthalmology, and otorhinolaryngology, as well as oral and maxillofacial surgery. In addition, STH will renovate the Accident and Emergency (A&E) department. The upgrades also include new diagnostic and imaging equipment to enhance the hospital's diagnostic capacity. STH will incorporate echocardiography, computerized tomography scan, microbiology, and endoscopy services. It will also renovate the radiology department.
- 3.5 The STH infrastructure upgrades will expand ambulatory and inpatient general medical services and establish new surgical services. The renovated STH will add 150 beds to the existing inventory of 403 beds. The technical plans include construction of a new six-story building, with the A&E and radiology departments on the ground floor; an ambulatory care unit, medical records storage facility, and pharmacy on the first floor; a surgical block with six operating suites, an endoscopy unit, and a central sterile services department on the second floor; a laboratory and 23-bed ward on the third floor; another 23-bed ward, an intensive care unit (9 beds), and a high dependency unit on the fourth floor; and two wards—with 23 and 21 beds, respectively—on the fifth floor.
- 3.6 Given the investments in infrastructure and new medical, surgical, and digital equipment at STH, further health service analyses are needed to optimize these improvements. The rationale is as follows: (i) to ensure that STH reaches its objectives around increased accessibility, efficiency, safety, and quality, it will need to define a suitable managerial model; (ii) the changes in the supply and demand for outpatient, inpatient, and surgical services are expected to increase the delivery of diagnostic services, ambulatory visits, admissions, and surgeries; (iii) the increase in hospital beds and new medical and surgical specialties will require recruiting additional health personnel, including doctors, nurses, aides, technicians, and administrative staff; (iv) the expected service surge will prompt the need for additional diagnostic, therapeutic, and surgical supplies; and (v) healthcare delivery costs and operating expenses are expected to rise. Thus, it is justifiable to measure the viability of STH; that is, the hospital's ability to function as intended and succeed. This TC will finance analytical studies to determine: (i) a suitable managerial model; (ii) the projected increase in the supply and demand for outpatient, inpatient, and surgical services; (iii) health personnel needs; and (iv) economic analysis to estimate the additional financial resources needed to deliver services at a level that corresponds with expected demand.
- 3.7 **Strategic alignment.** This TC is consistent with the Second Update of the Institutional Strategy (AB-3190-2) since it is aligned with the development challenges of social inclusion and equality by improving the delivery of healthcare services and by expanding coverage, access, and quality of healthcare. The TC is also congruent with the cross-cutting theme of Institutional Capacity and Rule of Law by strengthening institutional capabilities in administering, evaluating, and monitoring outcomes of development projects to improve health systems. Moreover, the TC is aligned with the indicators on health service beneficiaries of the Corporate Results Framework 2020-2023 (GN-2727-12). The TC is also consistent with the lines of action in the

Health Sector Framework Document (GN-2735-12) that (i) address fiscal and financial sustainability and (ii) improve the organization and quality of healthcare service delivery and support healthcare service integration. The TC is also aligned with the IDBG Country Strategy with Jamaica 2016–2021 (GN-2868), which is still in effect, as it contributes to the strategic objective of improving the public health system and focuses on the strategic area that reinforces human capital protection and development. Lastly, the TC is aligned with the objectives of the Ordinary Capital Strategic Development Program (OC SPDs) (GN-2819-14) by strengthening efforts made by public institutions to be more effective and efficient in social programming, targeting, and project execution.

IV. Description of Activities/Components and Budget

- 4.1 The Government of Jamaica has requested TC funds to support the following four components to assess STH viability.
- 4.2 **Component 1: Support to improve hospital management (US\$40,000).** The aim of this component is to provide technical support to the MOHW to enhance the management of the new STH. It entails funding technical studies to analyze current hospital management practices and propose an improved managerial model. This management analysis will comprise six domains: (i) clinical management; (ii) clinical support management; (iii) non-clinical support management; (iv) asset management (e.g., use of beds, offices, surgical rooms); (v) financial management; and (vi) governance, including reviewing the organizational chart, roles, and manager functions, as well as coordination of activities. This management analysis will validate accessibility, efficiency, safety, and quality of care for tracer conditions, such as acute complications of diabetes, critical cardiovascular events, and waiting times for programmed elective surgeries. The expected output will be the completed diagnostics and assessments based on current hospital management practices and the identification of areas of improvement. The expected result is the proposed action plan to improve STH management.
- 4.3 **Component 2: Estimate of the expected improvements in supply and demand of hospital services (US\$40,000).** This component aims to quantify the current supply¹ and demand² gaps in outpatient, inpatient, and surgical services, and design strategies to reduce such gaps through the hospital upgrades. This component will finance two key subcomponents. (i) The first subcomponent is modeling supply—the production of services—and demand over the last ten years and a 10–15-year projection of future demand, accounting for the STH supply capacity improvements. The demand analysis will include wait times for elective surgeries—from specialist assessment to treatment—and other pertinent indicators of unmet demand, such as surgery and diagnostic procedure cancellations or disruptions in the continuity of hospital care for patients admitted in the A&E department. The analysis will also ascertain STH

¹ The supply of healthcare includes curative and preventative services and treatments provided by the healthcare system, thereby excluding informal and social care.

² The demand for healthcare is the level of use where the perceived marginal health benefit of care is equal to the marginal cost of accessing care. Below this point, benefits outweigh costs and individuals will continue to consume healthcare services. The demand for healthcare depends on the perceived benefits and costs of patients and health care professionals. Benefits and costs are a function of factors such as health status, distance from providers, demographic characteristics, health literacy, etc. Source: Rodriguez I, et al., Need, demand, supply in health care: working definitions, and their implications for defining access. Health Economics, Policy, and Law (2021). doi:10.1017/S1744133121000293.

production patterns, such as hospital discharges, bed rotations, elective and emergency surgeries, deliveries, emergency visits, and appointments for specialized ambulatory services. The analysis will characterize the STH healthcare network (hospitals and clinics) and it will consider the effect of the COVID-19 pandemic. (ii) The second subcomponent involves developing strategies to reduce the gap in supply and demand and defining specific indicators to monitor progress. For instance, improving the appointment system would contribute to reducing wait times and surgery delays or cancellations. The expected output for this subcomponent will describe trends in service delivery and the magnitude and characteristics of the gap between supply and demand of medical services. The expected result will be a proposal of strategies to bridge this gap, which will define the indicators to track following the STH upgrades.

- 4.4 **Component 3: Quantification of health personnel required to staff the new STH (US\$60,000).** The specific aim of this component is to quantify the new STH's additional needs in health personnel to ensure appropriate service delivery. This component will finance analysis of: (i) the healthcare labor market in Jamaica; and (ii) quantitative and qualitative aspects of STH's health workers, such as their professional and technical profiles, age, and sex, as well as the compatibility of this workforce with the type and volume of services offered at STH. It will also cover personnel management strategies, such as contracting processes, the distribution of clinical and managerial tasks, retention strategies, and performance evaluation methods. Finally, the analysis will comprise the working environment, absenteeism, turnover, and the relative contribution of the hospital's human resources to the STH's health network. In addition, the study will determine the future composition of health staff, considering the hospital expansion and introduction of new services. The expected output is a description of the current health human resources at STH and an updated health staff composition under the new STH. The expected result will be a strategic plan for STH to achieve an appropriate and well-distributed health personnel.
- 4.5 **Component 4: Economic analysis of hospital upgrades (US\$60,000).** The specific aim of this component is to estimate the economic impact of STH upgrades. The funding under this component will be directed toward economic analyses to quantify healthcare delivery costs and operating expenses associated with managing STH under the new scheme of services. The study will examine the production costs of medical and surgical services, such as the average costs of critical care, surgeries, diagnostic procedures, and consultations. Initially, the study will analyze the budget of the past five years and estimate future costs and operating expenses. This analysis should include personnel, medications, and supplies associated with medical and surgical procedures and treatments. Then, the study will consider non-clinical services, such as food, laundry, uniform, linens, cleaning, security, hospital waste management, and transportation. Finally, it will incorporate electricity, water, gas, oxygen, the new six-story building, medical equipment, digital technology, equipment and infrastructure maintenance, and other expenses. In particular, the analysis will explain cost variations based on changes in service provision, management, and organization; it will also consider the size and technology of the new facility. The expected output is the economic analysis of the hospital upgrades. The expected result is a proposal to standardize cost measurements within STH and improve cost information to inform policy decisions related to budgeting.

- 4.6 The total cost of this TC will be US\$200.000, which will be financed by the OC SDP Window 2 – Social Development (W2E). There will be no local counterpart resources. The execution and disbursement period will be 30 months.

Indicative Budget (US\$)

Component	Description	IDB/W2E	Total Funding
1. Support to improve hospital management	This component will analyze current hospital management practices and propose an improved managerial model.	40,000	40,000
2. Estimation of expected improvements in supply and demand of hospital services	This component will quantify the current gap between supply and demand of hospital services and design strategies to reduce this gap.	40,000	40,000
3. Quantification of health personnel required for the upgraded STH	This component will analyze the current availability of health personnel and existing gaps and determine future projected requirements and strategies for staffing the new STH.	60,000	60,000
4. Economic analysis of hospital upgrades	The analysis comprises estimating healthcare delivery costs and operating expenses associated with managing the upgraded hospital.	60,000	60,000

- 4.7 The TC will be supervised by the Social Protection and Health División (SCL/SPH). The Unit responsible for contracting and disbursements will be the Bank Country Office in Jamaica (CCB/CJA). No supervision costs would be need for this operation.

V. Executing Agency and Execution Structure

- 5.1 The TC will be Bank-executed by CJA/SPH. The executing agency will be the IDB through SCL/SPH as per the letter of request from the Government of Jamaica. The Bank is the direct responsible entity for selecting and hiring all the consultancies, as well as supervising activities and accepting any product generated through the defined consultancies. Furthermore, the Bank executes this TC due to shortages in technical capacity and personnel to supervise the implementation of the components. Through this TC, the MOHW is receiving support to strengthen its capacity to implement the Health Systems Strengthening Program Loans 4668/OC-JA & 5110/OC-JA (JA-L1086) and the investment grant GRT/ER-17830-JA (JA-G1005). SPH has extensive expertise in implementing and evaluating improvements of health systems in the Latin American and Caribbean regions. The Bank has been supporting the HSSP program through the TC projects JA-T1141 (ATN/OC-16573-JA), JA-T1152 (ATN/OC-16789-JA), and JA-T1177 (ATN/OC-17804-JA). Further, the Bank is financing the construction and strengthening of secondary and tertiary care hospitals in Brazil 3703/OC-BR (BR-L1408), Bolivia 4612/BL-BO, 4612/BL-BO-1, 4612/BL-BO-2 (BO-L1198), Honduras 4713/BL-HO (HO-L1199), Nicaragua 3696/BL-NI (NI-L1095), and El Salvador 3608/OC-ES, 3608/OC-ES-1, 3608/OC-ES-2 (ES-L1095).
- 5.2 All activities to be executed under this TC have been included in the Procurement Plan (see annex IV) and will be contracted in accordance with Bank policies as follows: the contracting of consultants, as established in regulations AM-650, and the contracting of logistics and other non-consulting services in accordance with policy GN-2303-28.

- 5.3 Under the Bank's execution, the financial management of the TC will follow internal financial procedures and hence no external auditing services will be contracted. There are no conditions required prior to disbursement and the project does not foresee any reimbursement of expenses.

VI. Major issues

- 6.1 The main risks of this TC project are the following: (i) Governance of the project: this risk arises from the management mechanism established for the project within STH, the roles and responsibilities assigned to participate in the different studies, the designed decision-making scheme, and the collaboration mechanisms established between the Bank and STH authorities with mediation by the MOHW; (ii) Planning of the project: acceptance from STH authorities, collaboration of key personnel, and data availability are crucial to accomplishing the programmed activities and deliverables. STH authorities should engage in the analytical work, provide the data needed for the studies, and participate in the construction of the initiatives to ensure the viability of the upgraded STH. Enhanced communication and coordination among the MOHW, STH authorities, and the IDB will be useful to mitigate this risk. The TC will closely coordinate with the MOHW to ensure the implementation of this project.

VII. Exceptions to Bank policy

- 7.1 There are no exceptions to the Bank's policies.

VIII. Environmental and Social Strategy

- 8.1 This TC falls under the Environmental and Social Policy Framework (ESPF) and since it will not finance any environmental and social studies, there will be no environmental and social requirements.

Required Annexes:

[Request from the Client - JA-T1211](#)

[Results Matrix - JA-T1211](#)

[Terms of Reference - JA-T1211](#)

[Procurement Plan - JA-T1211](#)