

TC ABSTRACT

I. Basic Project Data

▪ Country/Region:	BARBADOS/CCB - Caribbean Group
▪ TC Name:	Technical Support for Monitoring and Evaluation of the Digital Transformation of the Queen Elizabeth Hospital.
▪ TC Number:	BA-T1092
▪ Team Leader/Members:	BAUHOFF, SEBASTIAN (SCL/SPH) Team Leader; TEJERINA, LUIS R. (SCL/SPH) Alternate Team Leader; NELSON, JENNIFER A (SCL/SPH) Alternate Team Leader; VANESSA CURRAN (SCL/SPH); SARA VILA SAINTETIENNE (LEG/SGO)
▪ Taxonomy:	Research and Dissemination
▪ Number and name of operation supported by the TC:	N/A
▪ Date of TC Abstract:	30 Jan 2023
▪ Beneficiary:	Republic of Barbados
▪ Executing Agency:	INTER-AMERICAN DEVELOPMENT BANK
▪ IDB funding requested:	US\$125,000.00
▪ Local counterpart funding:	US\$0.00
▪ Disbursement period:	36 months
▪ Types of consultants:	Not applicable
▪ Prepared by Unit:	SCL/SPH - Social Protection & Health
▪ Unit of Disbursement Responsibility:	SCL/SPH - Social Protection & Health
▪ TC included in Country Strategy (y/n):	No
▪ TC included in CPD (y/n):	No
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Social inclusion and equality

II. Objective and Justification

- 2.1 This Technical Cooperation (TC) has two objectives: (i) to provide support and gather necessary data for the monitoring and evaluation of the digital transformation of the Queen Elizabeth Hospital (QEH) using innovative tools for measuring adoption, use and improvements in quality and efficiency; and (ii) to explore linkages between the primary and hospital care.
- 2.2 There is little evidence on digital transformation of hospitals in Latin American and the Caribbean and, specifically, on how such transformation impacts the experience of patients and staff. For example, digital transformation could impact how patients transit through the hospital (from making appointments and admission, to discharge); the interaction of patients with staff; the patient experience and satisfaction; and the knowledge that patients have at discharge (for example, for follow-up care or instructions on how to manage their condition). Similarly, staff (from surgeons to nurses and technicians to administrative staff) need to effectively use digital tools and this may change how they spend their time on patient care or administrative tasks. Overall, digital transformation may also reduce idle time, delays in obtaining relevant information, and delayed discharges. In this way, digital transformation may improve efficiency and patient outcomes.
- 2.3 There is also little evidence on how much hospital-level care could be avoided with better primary care. This is particularly important for countries such as Barbados that have a high burden of Noncommunicable diseases (NCDs) and have limited capacity

for hospital care. Improved management of NCDs could improve patient agency and health, reduce unnecessary and costly hospitalizations, and free up capacity at QEH.

- 2.4 It is also unclear what changes to the primary care system may be needed to reduce avoidable hospitalizations. Improved management of NCDs may require improved processes and protocols at primary care clinics, and possibly additional staff or training. There may also be scope for staff and patients to make use of new digital tools to facilitate management and self-management of NCDs, including integrated electronic medical records (also linked to hospital records), patient-facing apps for behavior change and self-monitoring, and improved systems for renewing prescriptions and scheduling routine visits.
- 2.5 The Inter-American Development Bank (IDB) is currently providing support to Barbados through a grant from the European Union (BA-G1006) named Modification of the Public Sector Modernization Programme (4920/OC-BA) and Supplementary Nonreimbursable Investment Financing "Digital Transformation of the Queen Elizabeth Hospital" which will fund activities such as an Electronic Health Record (EHR) system, cybersecurity, and change management to improve quality and efficiency of the hospital's services.
- 2.6 This TC will study several of the potential benefits of digital transformation of health in a Caribbean setting. This is critical due to the lack of information in developing countries on digital health to inform the correct implementation of such projects. This TC project is also ideally situated to examine linkages between the primary and hospital sectors, and to inform potential policy actions in primary care especially regarding NCDs management.
- 2.7 This TC will help in the design and implementation of studies such as a time and motion analysis to study the use of time of medical personnel in the QEH before and after the implementation of an EHR system. It will also quantify the prevalence of Ambulatory Care Sensitive Conditions (ACSC) and examine ways to improve primary care of these conditions to reduce avoidable hospitalizations.

III. Description of Activities and Outputs

- 3.1 **Component I: Digital transformation of the Queen Elizabeth Hospital.** This component will fund a study of the experience of patients admitted to QEH and a study of the time use of hospital/clinic staff. The first study will examine how the digital transformation project changes the patient journey and the patient flow through patient journey studies (also called "patient shadowing") in which trained enumerators accompany patients from admission to discharge (Trebbles et al., 2010) at QEH. The second study will conduct time-and-motion studies of hospital personnel.
- 3.2 **Component II: Linkages between primary and hospital care.** This component will fund a study to quantify the prevalence of ACSC at QEH to motivate improvements of NCD management at the primary care level. This component will also fund a study to understand why patients with ACSC experience acute events that lead to hospitalization at QEH. The product will be a short report describing the context and drivers of such hospitalizations, along with suggestions for reducing them.

IV. Budget

Indicative Budget

Activity/Component	IDB/Fund Funding	Counterpart Funding	Total Funding
Digital transformation of the Queen Elizabeth Hospital	US\$87,500.00	US\$0.00	US\$87,500.00
Linkages between primary and hospital care	US\$37,500.00	US\$0.00	US\$37,500.00

Total	US\$125,000.00	US\$0.00	US\$125,000.00
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V. Executing Agency and Execution Structure

- 5.1 In agreement with the IDB's Operational Guidelines for Technical Cooperation Products (GN-2629-1), this TC will be executed by the IDB since it is a research and development TC.
- 5.2 The IDB will be the executing agency for this TC since it is a research and development TC and the technical expertise to implement it adequately is in the IDB's senior specialists. Moreover, the IDB will make sure that lessons learned become public goods to be used by other countries in the region.

VI. Project Risks and Issues

- 6.1 An important risk for this TC project is that the studies and the project for the digital transformation of the QEH could be stopped due to unforeseen events such as the recent hack of the hospital, which stopped all non-essential activities for two months. It is difficult to foresee such events, but the IDB will work to provide support in such situations (as it was in the case of the hack) to get the hospital back to speed with minimal interruptions.

VII. Environmental and Social Classification

- 7.1 The ESG classification for this operation is "undefined".