

TC Document

I. Basic Information for TC

▪ Country/Region:	REGIONAL
▪ TC Name:	Support the design and implementation of key digital interventions for COVID-19 in Latin America and the Caribbean
▪ TC Number:	RG-T3730
▪ Team Leader/Members:	Bagolle, Alexandre (SCL/SPH) Team Leader; Tejerina, Luis R. (SCL/SCL) Alternate Team Leader; Almeida Oleas, Natalia (LEG/SGO); Bermudez Plaza, Neili Carolina (SCL/SPH); Nelson, Jennifer A (SCL/SPH); Park, Mihwa (SCL/SPH)
▪ Taxonomy:	Research and Dissemination
▪ Operation Supported by the TC:	.
▪ Date of TC Abstract authorization:	11 Jun 2020.
▪ Beneficiary:	IDB's borrowing member countries
▪ Executing Agency and contact name:	Inter-American Development Bank
▪ Donors providing funding:	Japan Special Fund(JSF)
▪ IDB Funding Requested:	US\$750,000.00
▪ Local counterpart funding, if any:	US\$0
▪ Disbursement period (which includes Execution period):	24 months (execution period included)
▪ Required start date:	August 2020
▪ Types of consultants:	Individuals consultants and firms
▪ Prepared by Unit:	SCL/SPH-Social Protection & Health
▪ Unit of Disbursement Responsibility:	SCL-Social Sector
▪ TC included in Country Strategy (y/n):	N/A
▪ TC included in CPD (y/n):	N/A
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Social inclusion and equality

II. Objectives and Justification of the TC

- 2.1 **General background.** On March 11, the Director-General of the WHO declared the outbreak of a novel coronavirus, COVID-19 Public Health Emergency of International Concern, as a pandemic, due to its rapid spreads across the world. As of June 29, 2020, there are more than 10,100,000 confirmed cases of COVID-19 in the world, with more than 500,000 deaths. In Latin America and the Caribbean, over 2,400,000 confirmed cases of COVID-19 have been reported.¹ The number of cases, deaths, and affected countries are expected to continue to rise and the potential health and economic impact of COVID-19 on Caribbean territories can be devastating for the region.
- 2.2 When COVID-19 hit the countries in Latin America and the Caribbean (LAC), very few countries were ready with information systems in place to detect, prevent, and respond with quality and timely data to inform decision making.² The Global Health Security

¹ SPH calculations based on European CDC data

² See LAC Digital health Response to COVID-19 in Social Digital: <http://socialdigital.iadb.org/en/covid-19>

(GHS) Index³ is the first comprehensive assessment of global health security capabilities in 195 countries across six domains: prevent, detect, respond, health, norms and risk. Globally, the index revealed that international preparedness for epidemics and pandemics remains very weak. In LAC, 8 countries are among the least prepared, and no LAC country is in the most prepared category (NTI & Johns Hopkins Center for Health Security, 2019). Among LAC countries, Ecuador has one of the highest death rates per 100,000 inhabitants in LAC and the country is ranked 45 out of 195 countries in the GHS Index. A total of 5,150 cases and 126 deaths have been registered in El Salvador and the country is ranked 65 in the GHS Index. Even though only 23 cases and 2 deaths have been registered in Belize, the country is ranked 135 in the GHS Index and is among the countries with the lowest capabilities to respond to public health crises.

- 2.3 **Evidence on the use of digital health solutions during public health emergencies.** In the response to the COVID-19, digital health solutions can play a central role. Lessons learned from digital interventions during public health emergencies such as Ebola, Cholera, MERS, COVID-19, and other crisis, show that access to quality information was the most frequently encountered challenge among WHO's Health System Challenges of Digital Health Interventions. Evidence shows that during a public health emergency, having technological systems in place that provide timely and accurate information is a key aspect of the health response (Park et al. 2020). Among digital health solutions that can contribute to the response to COVID-19 and other public health emergencies, telehealth solutions are particularly promising. These solutions can contribute to support health systems to cope with an uncontrolled and exponential demand during public health emergencies. For instance, teleconsultations are a safe and effective way to assess suspected cases and guide the patient's diagnosis and treatment, minimizing the risk of disease transmission (PAHO, 2020). Telemedicine can allow for specialists to provide quality care in hard to reach areas without trained personnel by supporting provider-to-provider teleconsult or directly to patients. Studies on physicians, especially those in training-learning relationships have shown important results such as shortened diagnosis time, faster and better patient management, improving accuracy of triage, increased confidence and reduced amount of unnecessary procedures (Deldar, Bahaadinbeigy, & Tara, 2016). Evidence suggests that provider-to-provider telemedicine may improve health worker performance, reduce the time for clients to receive appropriate care or follow-up, and decrease length of stay among individuals visiting the emergency department (WHO, 2019).
- 2.4 **Experiences in the region regarding the use digital health solutions during the COVID-19 crisis.** In the region, some countries such as Uruguay, Brazil, and Costa Rica were able to build on existing systems to support their national responses and integrate telemedicine, tools to interact with the population, and tools for epidemiologic intelligence. Likewise, Argentina developed chatbots to answer questions and provide information on COVID-19 to citizens, and Colombia launched an informative platform to follow up with the evolution of COVID-19 in the country and launched an app to track COVID-19. At the regional level, an example of successful use of telehealth solutions is the project *Extension for Community Healthcare Outcomes* (ECHO), that contributed to the response to COVID-19 in Uruguay. The ECHO methodology⁴ uses

³ See: <https://www.ghsindex.org/>

⁴ The ECHO methodology is based on four main elements: (i) Use Technology to leverage scarce resources; (ii) Share Best practices to reduce disparity; (iii) Case-based learning to master complexity; and (iv) Web-based Database to Monitor Outcomes breaks. The methodology seeks to break down the walls between specialty and primary care. It

proven adult learning techniques and interactive video technology, to connect groups of community providers with specialists at centers of excellence in real-time collaborative sessions. These collaborative sessions, called *teleclinics*, are designed around case-based learning and mentorship. During teleclinics local workers, services providers, and specialists work together in a collaborative and horizontal manner to provide better health services to the population. This telehealth methodology with low technological requirements is particularly suitable for countries with low levels of development in technological infrastructure. There are currently 389 ECHO Hubs around the world, in both developed and developing countries, and the IDB's Social Protection and Health Division (SCL / SPH) is currently supporting ECHO projects in Jamaica and Uruguay.

- 2.5 **Lessons learned.** The Bank's experience in telehealth in the region shows that it is necessary to work simultaneously on technology aspects along with issues related to the care model, the design of processes and the implementation of change management strategies with patients and health professionals. For instance, in Honduras,⁵ the Bank is supporting the co-creation of a telehealth model and telehealth processes in order to better inform the investment in technology. This technical cooperation will take into account this lesson learned considering that components 1 and 2 will work simultaneously on the aspects of technology, processes and change management related to telehealth issues. The lessons learned from the implementation of the ECHO project in the region⁶ show the need to have local champions on the ground and strong coordination mechanisms between the academy and health service providers. This aspect will be key in the framework of the implementation of the teleclinics under component 2 of the technical cooperation.
- 2.6 **Challenges.** LAC countries face short and medium-term challenges in the use of digital solutions in the context of responses to public health emergencies. Firstly, in the short term, there is a need to facilitate the exchange of experiences, good practices, and the use of recognized technological solutions to face the COVID-19 crisis. In countries such as Belize, Ecuador or El Salvador, which have increasing number of cases and deaths due to COVID-19 (see ¶2.2) and a limited capacity of the health system to meet this increasing demand, the use of proven and successful telehealth solutions may be a key component of the national response to the pandemic. For this, it is necessary to define use cases, design models and processes of telehealth care, pilot and adapt existing telehealth solutions and promote the creation of a toolkit that allows replicating telehealth experiences at the regional level and the exchange of good practices between countries. Due to its low technological requirements and its high impacts on the quality of health services, the scaling up of the ECHO model in these three countries is particularly promising.
- 2.7 Secondly, for the medium term, it is necessary to ensure the sustainability of the digital solutions that are implemented and to strengthen the countries' capacity to respond to future health emergencies. For this, it is necessary to develop tools that adequately define the total cost of implementation and installation of technological solutions, also

links expert specialist teams at an academic 'hub' with primary care clinicians in local communities - the 'spokes' of the model. Together, they participate in weekly teleECHO™ clinics, which are like virtual grand rounds, combined with mentoring and patient case presentations.

⁵ In the framework of the Reformulation Proposal for the 3815 / BL-HO; 4518 / BL-HO; and 4449 / BL-HO programs to fund the Immediate Health Response (RISP-HO).

⁶ In the framework of the ATN/OC-17167-UR "Digital Platform for the Development of Communities of Practice in Health".

known as total cost of ownership (TCO).⁷ Having a clear dimensioning of medium-term costs is a key factor of sustainability and reinforces the capacity of countries to make informed decisions regarding technological development in health (McConalogue, E., Davis, P., Connolly, R., 2019). It is also necessary to create tools to evaluate digital solutions and assess whether a given technology is adapted to the national context. Many solutions from the private sector and other regions rushed to market, however, the ability to harness and adapt these solutions, especially at scale, remains a challenge.

- 2.8 The sustainability of technological solutions in health also depends on their impact in terms of inclusion and inequality. Certain technological solutions tend to be more inclusive and contribute to reduce access gaps to health services while others can contribute to increase the digital divide making large scale implementation less sustainable (Azzopardi-Muscat and Sørensen, 2019). Moreover, the perceptions and attitudes of users and patients towards technological solutions can accelerate or slow down their sustainable adoption. In this context it is necessary to develop tools to measure the digital health divide in countries and to measure the knowledge, perceptions, and attitudes of users towards the use of digital tools for healthcare and public health emergencies.
- 2.9 Finally, to respond to future public health emergency it is necessary to strengthen regional surveillance in the medium term. Currently there are no automated reported mechanisms at the regional level to detect outbreaks. More often, instead of harnessing existing digital data sources to automatically extract or share information, this data is collected in parallel, bespoke systems or Excel, effecting data quality, comparability, and timeliness. In this context, it is necessary to design a regional epidemiologic surveillance information system.
- 2.10 **General objective.** The general objective of this Technical Cooperation (TC) is to support the sustainable implementation of digital health solutions to improve the region's response to COVID-19 and future public health emergencies. In doing so, this TC will fund the development of tools, technical studies, pilots, and learning materials to foster the region's ability to respond to current and future public health emergencies using sustainable digital health solutions. To respond to short term challenges (see ¶ 2.5) the TC will foster the use of specific digital interventions, including a pilot of telemedicine interventions for COVID-19 patients and displaced primary healthcare patients; and a scale-up of Project ECHO COVID-19 in three countries.⁸ To respond to medium term challenges (see ¶ 2.7, 2.8, and 2.9), the TC will support the design of tools for sustainable implementation of Digital Health Interventions for COVID-19 in LAC and improve the countries' capacity to respond to future pandemics. Furthermore, in order to align with regional and global best practices in global health, this project will

⁷ TCO is defined as a calculation method that considers all costs related to the implementation of a technology, beyond the purchase price. In addition to the entry costs, the TCO considers the costs that arise during the different phases of the project life cycle (acquisition, start-up, operation, maintenance and closure) and typically includes acquisition costs, energy costs, costs of installation, maintenance costs, repairs, updates, personnel and training costs, liquidation costs, among others.

⁸ The countries were selected based on the following criteria: (i) they are countries with a low capacity to respond to health emergencies according to the GHS Index; (ii) they are countries where key local actors were identified both in the academy and in the network of providers to support the implementation of the ECHO methodology and / or with previous successful experience in the implementation of this methodology.

directly coordinate with the Pan American Health Organization (PAHO) and Project ECHO COVID-19.⁹

- 2.11 **Strategic Alignment.** This TC is consistent with the Second Update to the Institutional Strategy (UIS) (AB-3190-2) as it is strategically aligned with the development challenge of: (i) Social Inclusion and Equality, by supporting the regional inter-governmental collaboration to explore regionally integrated efforts to address common health problems. The TC will also contribute to the Corporate Results Framework 2020-2023 (GN-2727-12) by supporting the strengthening of health institutions in the region. In addition, the TC is squarely aligned with the following priority actions set out in the Health and Nutrition Sector Framework Document (GN- 2735-7) by: (i) improving population health by supporting countries' efforts to strengthen their preparation and response capacity to address public health emergencies through fostering greater efficiency in the mobilization, pooling, and use of resources and strengthening key sector management capacities, health intelligence, and intersectoral coordination; and (ii) strengthening partnerships and promoting joint actions in supporting systems for health surveillance and control of public health events with PAHO.

III. Description of activities/components and budget

- 3.1 The TC will be divided into three components: Component 1 will fund the use of telehealth tools during COVID-19, Component 2 will fund the scale-up of Project ECHO for COVID-19, and Component 3 will fund the creation of a Toolkit for sustainable implementation of Digital Health Interventions for COVID-19 and future public health emergencies in LAC.
- 3.2 **Component 1. Use of Telehealth tools during COVID-19 in Belize (US\$200,000).** This component will fund the design, pilot, and evaluation of telehealth solutions for COVID-19 patients or displaced primary care patients and create a toolkit for replication at the regional level. In particular, this component will fund the following activities: (i) application of a readiness assessment tool for telehealth. This tool will be used to assess the national context regarding telehealth, its level of readiness, and identify areas for improvement; (ii) identification of prioritized use cases for telehealth, such as follow up on patients in quarantine, follow up of pregnant women and well-child visits, or follow up of chronically ill patients during the pandemic; (iii) Design of processes and workflows for each identified use cases, defining the role of the different actors, their needs, their responsibilities, their relations, the technology that will be used, among other; (iv) Pilot of telehealth solutions based on international best practices, and the identified use cases and designed workflows; and (v) Creation of a toolkit for replication at the regional level. All findings will be packaged and shared with the rest of the region to support cross-country learning. The Belizean case will be used to define use cases and design processes, but the lessons learned, and tools created under this component will be used at the regional level.
- 3.3 **Component 2. Implementation of Project ECHO for COVID-19(US\$250,000).** This component will fund the implementation of ECHO hubs in three countries (Belize, Ecuador, and El Salvador) using the standard ECHO intervention based on teleclinics. Teleclinics will focus on specific topics including areas such as COVID-19, infectious diseases; infection control occupational health; family and community medicine; medical psychology; palliative care; and Oncological gynecology. In particular this component will finance: (i) training activities to promote the adoption of the ECHO

⁹ For example, it will work in coordination with the RG-T3621 to promote the exchange of experiences and good practices in the use of telemedicine and other digital tools in national responses to COVID-19 and to future health emergencies.

methodology; (ii) the implementation of teleclinics; (iii) design and delivery of courses, creation of reusable multimedia materials and best practice manuals focused on the new reality of COVID-19; (iv) activities to strengthen the capacities of frontline health teams; and (vi) activities to promote cross-learning and cooperation between ECHO hubs in LAC, among others.

3.4 Component 3. Toolkit for sustainable implementation of Digital Health Interventions for COVID-19 and future public health emergencies (US\$300,000).

This component will finance the creation of tools to support the sustainability of the digital health solutions implemented to respond to COVID-19 and improve the countries' capacity to respond to future pandemics. In particular this component will finance: (i) the design and implementation of a tool to calculate total cost of ownership of digital solutions; (ii) the design of a tool to evaluate digital solutions in specific national contexts, (iii) definition of a methodology and studies to measure the digital health divide in LAC countries; (iv) the development of tools to measure the knowledge, perceptions and attitudes of users towards the use of digital tools for healthcare and public health emergencies; and (v) Finally, this component will fund the design and technical specifications of a regional epidemiologic surveillance information system for current and future pandemics, including a toolkit for the exchange and integration of healthcare information systems for public health emergencies.

3.5 Sustainability. Sustainability aspects are central to this TC. All activities financed by the TC will lead to the development of tools, guides, and manuals to promote the exchange of experience at the regional level. The installation of ECHO's teleclinics in component 2 will create sustainable telehealth methodologies and procedures that will allow to respond to health problems beyond COVID-19. Likewise, component 3 of the TC focuses on the development of tools to support the sustainable implementation of digital solutions such as the design of a tool to calculate total cost of ownership and a tool to evaluate digital solutions in health. These tools will support LAC countries to make informed decisions regarding investment in digital health solutions.

3.6 The total cost of this TC will be US\$750,000 which will be financed by the Japan Special Fund (JSF). The execution and disbursement period will be 24 months.

Indicative Budget (US\$)

Component	Component and Activities	Total IDB/JSF Fund	Total Funding
Component 1. Use of Telehealth tools during COVID-19	Application of a telehealth assessment tool	30,000	30,000
	Identification of prioritized use cases for telehealth	150,000	150,000
	Design of processes and workflows		
	Pilot of telehealth solutions		
	Creation of a toolkit for replication at the regional level	20,000	20,000
Component 1. Sub-total		200,000	200,000
Component 2. Implementation of Project ECHO for COVID-19	Training activities	230,000	230,000
	Implementation of teleclinics		
	Design and delivery of courses		
	Activities to strengthen the capacities of frontline health teams		
	Activities to promote cross-learning	20,000	20,000
Component 2. Sub-total		250,000	250,000

Component 3. Toolkit for sustainable implementation of Digital Health Interventions for COVID-19 and future public health emergencies	Design and implementation of a tool to calculate total cost of ownership	100,000	100,000
	Design of a tool to evaluate digital solutions in health	30,000	30,000
	Development of a methodology to measure the digital health divide	40,000	40,000
	Development of a methodology to measure perceptions and attitudes of users towards the use of digital tools	30,000	30,000
	Design and technical specifications of a regional epidemiologic surveillance information system	100,000	100,000
Component 3. Sub-total		300,000	300,000
Total cost		750,000	750,000

- 3.7 All the products financed by this TC will include toolkits, guides and manuals that will be usable and replicable for all the countries in the region. If activities in one of the participating countries are required, the team will obtain the country's no objection before the start of the activities.
- 3.8 All knowledge products derived from this TC will be Bank's intellectual property. Knowledge products will be published through the Bank's web page and other means accounted for in the indicative budget.

IV. Executing agency and execution structure

- 4.1 The Technical Cooperation will be executed by the Bank through the SCL/SPH division. The assigned project team leader will be responsible for project supervision. The bank will execute due to its regional character and the Research and Development nature of this TC. This execution structure will ensure cross-country learning and alignment with SPH Digital Health Strategy. Since 2017, SCL/SPH has been developing and implementing a strategy¹⁰ to develop tools and processes to facilitate and improve the design of digital projects in the health sector, including during the response to the COVID-19 pandemic. These tools have already been implemented in ten countries and the results have been used for the design of projects and have positioned the bank as an important technical partner in this area. SCL/SPH actively collaborates with the Pan American Health Organization (PAHO) in the digital agenda and supports PAHO's Regional Plan of Action for Strengthening Information Systems for Health (IS4H) 2019-2023¹¹ endorsed by member states in October 2019.
- 4.2 **Procurement.** The Bank will contract individual consultants, consulting firms, and non-consulting services in accordance with the Bank's current procurement policies and procedures: (i) the individual consultants will be hired in accordance with the guidelines set out in the AM-650; (ii) the procurement process for consulting firms for services of an intellectual nature will follow the Bank Policy for the Selection and Contracting of Consulting Firms for Bank-executed Operational Work (GN-2765-4) and the related Operational Guidelines (OP-1155-4); and (iii) the procurement of logistics services and other services other than consulting will follow the Bank Corporate Procurement Policy (GN-2303-28). The UDR will be in Headquarters.

¹⁰ See: https://publications.iadb.org/publications/english/document/Approach_to_Digital_Transformation_Guidelines_and_Recommendations.pdf

¹¹ See: <https://www.paho.org/ish/index.php/en/is4h-in-guyana/12-is4h-stories/74-plan-of-action-for-strengthening-information-systems-for-health-2019-2023>

- 4.3 **Monitoring and Evaluation.** The project's development objective, outcome and outputs indicators will be monitored by the IDB according to the Results Matrix of the TC. A project evaluation report will be done within six (6) months after project completion and will include results, lessons learned and critical success factors.
- 4.4 **Visibility of JSF.** In keeping with Annex 1 of the April 2016 Operating Guidance for the JSF, once the TC is approved, a joint press release will be issued by the Bank and Government of Japan through the Japanese Embassy of the participating Countries. The press release will include the financial contribution from the Government of Japan and provide a summary of the project objective and activities of the TC that will address COVID-19 in the participating countries.

V. Major issues

- 5.1 There is a risk that the tools developed do not generate adequate ownership on the side of teams that will be in charge of design and execution of projects. Particular emphasis will be put to have team leaders as collaborators of any tool that is designed and tested and to make sure that their input is built into the design. At the local level, technical counterparts and partners will be identified to support the implementation and adoption of tools and solutions funded by the TC.

VI. Exceptions to Bank policy

- 6.1 No exceptions to Bank policies are foreseen.

VII. Environmental and Social Strategy

- 7.1 According to the Environmental and Safeguards Compliance Policy (OP-703), Indigenous Peoples (OP-765), and Gender Equality (OP-270), this TC is classified as category "C". The TC will not finance infrastructure or civil works. The proposed interventions are expected to cause minimal to no negative impacts. See filters [SPF](#) and [SSF](#).

Required Annexes:

[Results Matrix_48079.pdf](#)

[Terms of Reference_3942.pdf](#)

[Procurement Plan_2658.pdf](#)