

PLAN OF OPERATIONS
LINE OF ACTIVITY FOR INNOVATION PROTOTYPES RG-O1676
DELEGATION OF AUTHORITY TO COUNTRY OFFICES¹

JAMAICA
(JA-T1190)

I. GENERAL INFORMATION

Title	Telehealth and Consultation in Jamaica		
Executing Agency:	MD Link Ltd.		
Focus Area:	Knowledge Economy		
Project Beneficiaries:	5,000 persons with pre-existing health conditions and persons over 60 years will be directly impacted by the project. Also 30,000 persons registered on the MDLink platform.		
Financing:	IDB Lab Cooperation:	US\$ 150,000	59%
	Counterpart:	US\$105,000	41%
	TOTAL PROJECT BUDGET:	US\$ 255,000	100%
Execution and Disbursement Period:	15 months of execution and 18 months of disbursement.		
Objective:	The objective of this project is to design and test a scalable model for telemedicine to digitally screen COVID-19 at-risk groups such as those with pre-existing conditions and the elderly.		
Environmental and Social Impact Review	This operation was screened and classified as required by the IDB's safeguard policy (OP-703) on April 23, 2020. Given the limited impacts and risks, the proposed category for the project is C.		
Project Team	Terry-Ann Segree (DIS/CJA), Svante Persson (LAB/DIS), Sudaney Blair (CCB/CJA), Ricardo Perez (SCL/SPH), Daisy Ramirez (FML/LAB)		
Unit responsible for disbursements	CJA		

¹ Delegation of authority for approval of TC Prototype operations up to US\$150,000 is established under MIF-GN-123

II. BACKGROUND AND JUSTIFICATION

A. Problem Description

- 2.1 Jamaica is facing the double burden with non-communicable diseases (NCDs) on the rise while communicable diseases remain a concern, which puts additional burden on the healthcare system. The health centers have limited ability to manage non-communicable diseases patients and struggle to fulfil their role in providing the necessary level of care. Almost 60% of patients bypass the health centers inappropriately to attend hospital accidents and emergency (A&E) departments for routine primary care. Therefore, a high proportion of non-urgent cases generates overcrowding and long waiting times in the A&E departments. With the current COVID-19² pandemic, these behavioral patterns of Jamaicans could put the health system under severe stress, as critically ill persons will increase the demand for care at these facilities, and people needing primary care will seek other alternative healthcare services.
- 2.2 Jamaica has a nationwide public healthcare system that offers universal coverage free of charge, however, this system has significant constraints. The Ministry of Health and Wellness has 300 health centers that are within ten walking miles from communities and 24 hospitals. On average, the country has 0.5 medical doctors and 1.7 nurses per 1,000 people. The rate of medical doctors and nurses is below the WHO recommendation of 2.5 medical staff per 1,000 people to provide adequate coverage with primary care interventions³. Jamaica has a two-tiered system whereby the public sector is primarily involved in primary care, public health and hospital care (94% of the country's hospital bed capacity) while the private sector mainly provides outpatient services (75% of all outpatient care) and pharmaceuticals (82% of all sales).⁴
- 2.3 This disease is especially concerning for Jamaica as, elderly people, and those with underlying medical conditions such as cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious symptoms should they contract COVID-19. Jamaica's 2015 census reported that 12.6% of the population are 60 years and over. Further, over the last ten years the top three leading causes of death in Jamaica are stroke, diabetes, heart disease⁵. The national response to the COVID-19 virus outbreak in Jamaica, has resulted in social distancing measures such as closing schools and non-essential services, and requiring persons to remain at home and away from public spaces. In addition, and more importantly, persons who believe they are infected are instructed not to visit the public hospitals and medical facilities without calling ahead to avoid the risk of contagion. The country is not prepared for this pandemic and therefore the health facilities and systems are under severe stress. Several doctors' private offices have also closed, and public transport service has been limited. Given these circumstances, a telehealth option, that uses telecommunications and virtual technology to deliver health care outside of traditional health-care facilities is a more efficient way to manage this untenable situation.

² 2.3 Coronavirus disease (COVID-19) is an infectious disease caused by a new virus. The disease causes respiratory illness (like the flu) with symptoms such as a cough, fever, and in more severe cases, difficulty breathing.

³ World Health Organization

⁴ NHF Annual Report

⁵ Jamaica Institute for Health Metrics and Evaluation 2019 – healthdata.org

- 2.4 Currently, the primary care clinics are unable to adequately respond to the demand for primary care, as some of these facilities are only accepting Covid-19 cases. Moreover, the measures of social distance might be a barrier for patients older than 65 that have a chronic condition and cannot leave their homes. As more cases are confirmed the government-imposed restrictions on citizens, the level of fear and concern among the citizens rise. Many persons are uncertain and concerned but they cannot leave home to seek help to (a) determine the nature of their current illnesses, especially those with flu symptoms (b) deal with their anxieties (c) manage elderly persons in their care (d) have prescriptions refilled (e) safely get medical care. There is therefore an urgent need for citizens to be able to access online medical assistance to cope with the instances related to possible COVID-19 cases by allowing citizens to do digital screening. Therefore, the project aims to increase the supply of healthcare using a telemedicine platform to pre-screen for COVID-19 to reduce the number the at-risk groups who seek medical attention at the already overburdened healthcare system.
- 2.5 MDLink is an innovative online medical platform that allows patients to connect with locally registered doctors, without having to leave their homes; over a secure platform via: text, audio, video by using their phone or computer, patients will be able to get guidance about whether they need to be seen or tested for COVID-19 instead of showing up unannounced at the emergency room or doctor's office. MDLink allows patients to avoid contaminated medical facilities such as medical offices, clinics and hospitals for the following reasons: minor health conditions, prescription refills for chronic illnesses such as diabetes, hypertension, arthrosis, among others.

III. THE INNOVATION PROPOSAL

A. Description of the Solution being Tested

- 3.1 **Project Objective.** The objective of this project is to design and test a scalable model for telemedicine to digitally screen COVID-19 at-risk groups such as those with pre-existing conditions and the elderly. The model will be built on the foundation of the Health Insurance Portability and Accountability Act (HIPAA)⁶, and will be enhanced to focus on reducing the exposure of these at-risk groups.
- 3.2 **Proposed innovative solution.** First, this project will allow MDLink to enhance its existing platform by launching a telehealth COVID-19 solution integrating the use of artificial intelligence (AI), and tele-triage with monitored referrals. This solution will provide a screening test for COVID-19 and integrate the model of care into the existing telemedicine platform. The platform will be further enhanced to include categorization of various messages related to the screening results and the actions required by the patient. This will be sent to each patient upon completion of the test. Further, as the platform will contain patient's information, it will be upgraded to use industry standards on security and encryption and ensure that it is HIPAA Compliant⁷ to ethically collect, store and use data on patients. For information related to the screening, prior to a person agreeing to take the test, the patient will be required to provide permission to share their data with the

⁶ Established national standard for sensitive patient data protection. Companies that deal with protected health information (PHI) must have physical, network, and process security measures in place and follow them to ensure HIPAA Compliance.

⁷ Health Insurance Portability and Accountability Act of 1996 (HIPAA)

Ministry of Health should the results be deemed as a high probability for COVID-19. It is essential to strengthen the data privacy and sustainable linkages between the doctors and other entities in the health industry such as insurance companies, pharmacies, labs and radiology units. MDLink will partner with FLOW Jamaica (telecommunication company), to zero-rate the app, making it accessible to public and private sector without a data plan.

- 3.3 Secondly, the project will design a pilot and implement the AI COVID Screening test. This solution will be free to the general public to do self-screening at home with a goal of reducing anxiety, overcrowding at hospitals and the spread of the virus. The platform's algorithm will categorize persons and send them automatic notifications based on their determined risk for exposure. Should a person be deemed "clear" the system would recommend that they continue to practice social distancing, practice proper hygiene and retest in another 14 days or as the situation changes. Persons who are deemed to have some level of exposure or risk, will be automatically referred to a doctor on the platform, with an applicable fee applied for consultation.
- 3.4 All doctors on the MD Link platform are registered with the Medical Counsel of Jamaica⁸ and are licensed to provide medical advice and medical treatment in Jamaica. The doctor will assess the patient to determine if further medical attention is required. Should hospitalization or face-to-face medical intervention be required, the doctor will contact the patient by phone to inform him/her of the diagnosis and recommendation. Further, the doctor will notify the Ministry of Health and the hospital/healthcare center of the symptoms and arrival of patient to the facility.
- 3.5 Finally, all project participants, MDLink and all other entities involved in project execution will respect the digital privacy and security principles⁹ to which the IDB adheres. This includes responsible practices in collecting and using individual data, due consideration to sensitivities around the data they have collected, being transparent about how data will be collected and used, minimizing the amount of personal identifiable and sensitive information collected, creating and implementing security policies that protect data and uphold individuals' privacy.

B. Description of the Beneficiaries

- 3.6 The main beneficiaries of this project will be: (i) 30,000 persons registered on the MD Link platform; and (ii) the population of Jamaica who will be able to access the platform and self-assess their exposure to COVID-19. This includes women who in many cases are the only contributors to income generation and based on the current statistics of the persons infected so far, 80% are women; and persons over 60 years old who are deemed to be at risk, represents 18% of the population. Further, Jamaica has a sizeable population of persons with pre-existing conditions, based on data collected on MDLink, 80% of the persons registered have pre-existing conditions that reduce their chance of effectively fighting the disease and will benefit from the project.

⁸ <https://jamaicamedicalcouncil.org/>

⁹ <https://digitalprinciples.org/principle/address-privacy-security/>

IV. THE PROTOTYPE EXECUTION STAGES

- 4.1. Following the guidelines set out in the document for the creation of the Innovation Prototype Activity Line (RG-01676) this project will be implemented with the following three stages:

A. Definition Stage: 1 month

- 4.1. The technical parameter for the prototype were defined prior to the approval of the project which include the adjustment of the digital platform (app) to include AI COVID-19 self-screening. The MDLink Platform (Website, iOS and Android App) enhancement will entail the addition of (i) AI screening tool/ chatbot; (ii) Tele-triage and referral system; (iii) Data Security/ HIPAA compliance; (iv) Real-time insurance processing; and (v) Reporting. Once the platform is enhanced, the solution will be tested with a small group of persons, selected through demographic disaggregation of the existing persons registered on MDLink platform who are from the COVID-19 epicenter in Jamaica. This is to increase the likely outcome of persons being able to be successfully integrated through the entire model of care being offered on the platform. Upon validation of the process and system, the project will undertake an aggressive communication and marketing campaign in order to reach the intended audience test the enhanced AI screening and integrated model of care across Jamaica. The project will also conduct a final evaluation of the activities and impact of the project after the implementation stage have been successful concluded. Further, the parameter for the prototype will include MDLink building partnerships towards a collaborative and integrated model of care, which includes: (i) an agreement with the Ministry of Health and Wellness (MOHW) to share data. This will be facilitated through collaboration with the IDB Social Protection and Health Division (SPH) in understanding the needs of the MOHW towards compilation of the case study during the evaluation phase.
- 4.2. In order to deliver the parameters defined above, the Executing Agency will undertake the following procurement of services: (1) a software technical provider to “Design and Development of the COVID-19 MDLink Health Project”, the scope of work is detailed in Appendix VI (A). The provider identified is Unicore Online Limited who will be single sourced to provide the software technical expertise required under the project. The consultant will design, develop and deploy a web-based online system that will utilize artificial intelligence as well as interconnectivity with the necessary medical institutions, to allow for an efficient A.I. COVID-19 screening and tele-triage solution. The consultant will enhance the data security and digital network between pharmacies, insurance agency, labs, hospitals, COVID-19 testing centers, and COVID-free hospitals. Unicore Online is an amazon webservice that provides software, web and mobile app development. The company is recognized as a preferred developer and they were the developers that built the MDLink platform. The company has been in operation for nine years and have six staff employed to the team. Unicore has the ability to rapidly build, deploy and deliver software solutions as seen in its recent engagement the Government of Jamaica under the Tourism Enhancement Fund to build an ordering system for purchasing managers to buy goods from farmers bridging the gap in the COVID-19 fallout to assist farmers with the sale of products. Unicore has also worked with established entities such as, J Wray and Nephew Ltd, to build a database, mobile app and website for the campaign called “Campari Xperience”. The app and website had the ability for consumers to enter codes for a chance to win a trip to Trinidad carnival 2018. The database had a structured set of

data codes that corresponded with over 30,000 numbers we generated and placed them on scratch cards we distributed across Caribbean countries.

- 4.3. A (2) Communication and Marketing provider whose scope of work is detailed in Appendix VI (B) “Design and Implementation of a Communication and Marketing programme for COVID-19 MDLink Health Project”. The marketing consultant will be procured through a process of advertising and at least three comparable proposals will be assessed by MDLink and its Advisory Board. The evaluation and selection criteria will be submitted to IDB Lab, along with the contract for engagement. MDLink will hire a marketing company to: (i) create an online communication strategy to include social media marketing, email marketing and radio marketing; (ii) develop content for communication, this includes, creative artwork, info video-production, and general content development for dissemination; and (iii) manage the social media page for MDLink to respond to queries and provide information where necessary; and (iv) prepare case study and disseminate knowledge products of the project.
- 4.4. The completion of the Definition Stage will require 1 month.

B. Implementation Stage: 14 months

- 4.5. The Executing Agency with support from the technical providers will execute the following activities during the Implementation Stage: Phase 1 - (a) Enhancement of digital platform (app) to include AI COVID-19 screening with HIPPA security and data collection capabilities; (b) test the proposed solution with a small group of persons, an initial 1,000 users testing will be conducted, randomly selected from the existing patient data (from location with high concentration of cases), to complete the self-assessment. The process of testing include: (i) launching of self-testing; (ii) message categorization and notification for likely exposure to COVID-19; (iii) referral for MDLink doctor; (iv) referral for prescription script; and, (v) data analysis for patients broken down into symptoms and recommendation. The successful completion of the system design will be upon: (i) sign-off of User Acceptance Test (UAT), (ii) the training of MDLink team to administer the platform; (iii) submission of documentation, manuals and codes. This phase is expected to be completed within 4 months at which point the platform will go-live.
- 4.6. Phase 2 – Marketing and communication Programme which include: (i) Create and implement a public education and awareness campaign to inform all Jamaicans of the benefits of using the AI self-screening test, telemedicine, while promoting the message of social distancing; (ii) develop and implement communication campaign specifically to create a shift towards telemedicine solution targeted at persons over 60 years and person with pre-existing health challenges; (iii) Conduct an evaluation of all strategic campaigns/initiatives after the initial period of implementation; (iv) Produce periodic reports on the performance/effectiveness of the campaign.
- 4.7. Phase 3 – This phase will be implemented in parallel to Phase 1 and 2. Under this phase, MDLink will build partnerships towards a collaborative and integrated model of care, which includes: (ii) partnerships with pharmacies to accept digital prescriptions; (iii) partnership with delivery company to provide delivery of medication to persons who are most at risk; (iv) telecommunication company to zero rate the app; and (v) insurance company to supplement / reduce payment burden of patients. MDLink will communicate with its registered doctors on the inter-connectivity of the COVID-9 patient screening and the

MDLink platform. MDLink will provide continuous training to its doctors throughout the life of the project as they onboard new doctors.

- 4.8. The implementation Stage will be executed within 14 months.

C. Evaluation and Knowledge Dissemination Stage: 3 months

- 4.9. At the end of the project, a final report or case study on key outcomes, impact achieved and acquired learning will be presented, to be disseminated between identified stakeholders of public and private sector, through a virtual results dissemination workshop. This will be done with the support of the Marketing and Communication Consultant. The evaluation report will include (i) symptom tracker per parish; (ii) # of patients directed to COVID testing; (iii) % patients with chronic illnesses directed to COVID testing; (iv) Demographic of highly suspicious COVID patients; (v) number of patients successfully treated on the telehealth platform; (vi) number of users directed to stay at home compared to referrals. The evaluation will also assess the commercial viability of the model - such as breakeven point, and percentage of prescriptions that are filled etc. The data analysis will be conducted by MDLink and the case study and knowledge products will be design and produced by the marketing and communication firm. This includes presenting the project results to the team within MOHW who are responsible for the developing the framework for telemedicine in Jamaica and the development of a digital platform.

- 4.10. The completion of the Evaluation Stage will require 3 months.

D. Project Results and Impact:

- 4.11. The expected project results are: (i) 5,000 patients using MDLink self-screened for COVID-19 (gender disaggregated); (ii) 20% of patients over 60 years using MDLink (gender disaggregated); (iii) 1,000 referrals to MDLink doctors resulting from self-screening with MDLink; (iii) 30,000 at-risk persons using the MDLink telemedicine solution in Jamaica (gender disaggregated); and (iv) percentage of benefiting individuals (MDLink users) are women.

V. EXECUTION AGENCY AND ARRANGEMENTS FOR EXECUTION:

A. Executing Agency

- 5.1. MDLink is an innovative online telehealth company that allows patients to be diagnosed and treated online via its platform (website & app). MDLink was launched in Jamaica in 2017 with a mission to increase access to affordable healthcare throughout the Caribbean region and Latin America. It is the first of its kind in the region and has helped over 10,000 patients access affordable healthcare. The MDLink governance structure currently has Dr. Che Bowen as the President, Founder, CEO and 100% shareholder of MDLink Ltd. An advisory board is in place inclusive of chairman- Dr. Michael Banbury, Chief Operations Officer- Dr. Kevin Henry, Chief Technology Officer – Mr. Howard Britton, Company Secretary -Ms. Keela Foote. MDLink is the leading telehealth company in the region with ample knowledge of the local healthcare system, and the most experience in diagnosing and treating patients online in Jamaica and the region. The platform has seen an exponential growth in the number of doctors which stands at 200 and there are 10,000 patients registered on the platform. The MD Link platform provides the ideal tool to assist

in the fight against COVID-19 given its current roster of patients who will be assisted in the pre-screening of COVID-19.

B. Implementation Mechanism

- 5.2. MDLink, as Executing Agency, has the financial capacity and technical structure to execute the project activities and manage the resources effectively and efficiently. MD Link will be responsible for providing progress reports on project implementation and hire a project manager to coordinate project activities. MDLink will utilize its Advisory Board to assist in providing oversight for the project and will coordinate with the Ministry of Health. The Executing Agency will procure two consultancies towards the execution of the project, a developer, (i) Unicore Online Limited to design, develop and deploy digital COVID-19 testing supported by AI, and (ii) a consultancy to assist with: (a) the communication and marketing program, and (b) the case study development and knowledge dissemination of the model.

VI. ALIGNMENT WITH IDB GROUP, SCALABILITY, AND RISKS

A. Alignment with IDB Group

- 6.1. This Prototype TC project is aligned with the objectives defined in the IDB Business Plan Lab 2019-2021 in the thematic area of Knowledge Economy, which supports technology-driven impact companies. The project is a related operation of the, “Proposal for the Creation of a technical Cooperation “Sandbox”. Line of Activity for Innovation Prototypes” (RG-O1676). Further, it is aligned to the guideline of immediate public health response established in the Proposal for the IDB Group’s Response to the COVID-19 Pandemic Outbreak (GN-2996). It also contributes to Sustainable Development Goal 8 of fostering sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all through diversification, technological modernization and innovation. The project is aligned with the objectives of JA-L1049 “Support for the Health Systems Strengthening for the Prevention and Care Management of Non-Communicable Disease Programme” and the project team will collaborate with the SPH Division on existing portfolio of loan operations and technical cooperation projects that are introducing digital technology for the delivery of healthcare services in primary care clinics and hospitals.

B. Scalability

- 6.2. The growth plan of MDLink is focused on marketing and building strategic partnerships throughout the Jamaican healthcare ecosystem. MDLink will leverage their access, affordability and scalability to expand and maintain patients. The necessary strategic partnerships include but are not limited to insurance agencies, large employee base companies, telecommunication companies, labs, pharmacies, clinics, hospitals, banks. The more persons with access to telehealth services, the more could help to flatten the COVID-19 curve. MDLink currently earns its fees from doctor and specialized consultations. A partnership with an insurance company will provide a strategic alignment to launch the platform in other countries across the region. As MDLink refines its business model in Jamaica, it will undertake its regional integration strategy to onboard doctors from outside of Jamaica. This includes contacting each countries National Medication Counsel

to validate the authenticity of doctors. MDLink will also explore having Jamaican doctors registered in other countries to provide cross-border patient care solution.

C. Risks

- 6.3. The main risks identified for this prototype are related to the nature of piloting new technologies: 1. Platform errors or limitations to provide the intended functionalities. 2. Low adoption of the platform by patients in rural communities and the elderly. 3. Data protection issues and potential cyberattacks. In order to mitigate the first risk, Unicore Online Limited, entity that will be procured to enhance the platform, will incorporate global software development practices to customize the application to the local needs. Regarding the second risk, MDLink will partner with the local telecommunications company to zero rate the app. Further, a marketing campaign to adequately engage the target audience, particularly the elderly, will aid with the overall promotion and adoption of the application. To mitigate the third risk, Unicore Online Limited will also be required to provide data protection while the system is enhanced, and the platform will be built on the Principles for Digital Development endorsed by IDB Group.
- 6.4. **Special conditions and exceptions.** This project has been designed under the new framework of IDB Lab's Innovation Prototypes Line of Activity (RG-O1676). Therefore, this operation incorporates specific agile procedures as described in the document that include: (i) executing the project through a maximum of three service delivery contracts; (ii) approval by delegated authority; and (iii) conduct direct contracting to Unicore Online Limited to design the enhancement and test the digital platform.

VII. SUMMARY BUDGET

- 7.1. The project has a total cost of US\$255,000, of which US\$150,000 (59%) will be provided by IDB Lab, and US\$105,000 (41%) by the counterpart. The detailed budget can be found in Annex II.

Project Categories	IDB Lab	Counterpart	Total
1. Definition	25,000	0	25,000
2. Implementation	115,000	50,000	165,000
3. Evaluation & Knowledge Dissemination	10,000	10,000	20,000
Project Administration	0	45,000	45,000
Grand Total	150,000	105,000	255,000
% of Financing	59%	41%	

VIII. COMPLIANCE WITH MILESTONES AND REPORTING ARRANGEMENTS

- 8.1. **Disbursement by Results.** The Executing Agency will adhere to the IDB standard disbursement Lab according to the results set out in the "Operational Guidelines for Milestone Management and Financial Supervision for IDB Lab Technical Cooperation Projects." Monitoring will be carried out in accordance with the performance and risk management policies (compliance with milestones) set out in these Operational Guidelines. Project disbursements will depend on verification of milestone achievement (Annex III). These milestones will be verified using their means of verification, which will be agreed between the EA and the IDB Laboratory. Achieving the milestones does not

relieve the EA of the responsibility to achieve the indicators of the logical framework and project objectives.

- 8.2. Project Monitoring.** The project will be associated with the RG01676 Line of Activity. It will be supervised by IDB Lab Specialist based in the Jamaica Office and executed in coordination with the project team for RG-01676.
- 8.3. Financial Management.** Disbursements will be made in accordance with the Financial Management Guidelines for IDB Lab-funded projects (OP-273-12) of 2 July 2019 or future updates. No advances of funds are considered, IDB Lab will pay directly to supplier.
- 8.4. Project Status Reports:** The Executing Agency is responsible for presenting a PSR to the IDB Lab within 30 days following the end of each semester or more frequently if required by IDB Lab. The PSR must include information on the implementation of the project, results obtained and contribution to reaching the project objective as presented in the Result Matrix (Annex I) and other planning instruments. Additionally, the document must include information on challenges encountered during the implementation period and possible paths to address these challenges. Within 90 days of finishing the execution period, the Executing Agency will present to IDB Lab a Final PSR giving priority to reporting on key results achieved, a sustainability plan, scaling up strategy and lessons learned.
- 8.5. Project Coordinator:** The Executing Agency have appointed the CEO of MDLink as the Project Coordinator, among its existing staff. Related expenses incurred by project coordination and/or administration costs are not eligible under IDB's contribution Lab, but such expenditures must be financed by the counterparty contribution. The project coordinator will have overall responsibility for project management, including 6-month project outcome reporting, follow-up of milestones and results, and coordination with IDB Lab

APPROVAL

This Technical Cooperation Prototype is recommended and approved for funding under IDB Lab's Line of Activity for Innovation Prototypes MIF/GN-123 (project number RG-O1676, document number MIF/AT-1565, and resolution number MIF/DE-8/19).

Recommended by: Terry-Ann Segree, Private Finance Operations Senior Specialist

Date:

Approved by: Therese Turner-Jones, Country Representative Jamaica

Date: May 6, 2020