## LYFPLUS LIMITED

# EAC CROSS-BORDER TELEMEDICINE PLATFORM

1st June 2022, Dar es Salaam.

House No. 7, Plot No. 224, Bahari Street, Mbezi Beach, Dar es Salaam, Tanzania.

Telephone:

+255 745247261

Email: info@lyfplus.com

#### **Contents**

| 1.  | Executive Summary3  |
|-----|---|
| 2.  | Introduction and Background6  |
| 3.  | Objectives of the Project   |
| 4.  | Did you collaborate with any other organizations?9  |
| 5.  | Report of the Project Activities  |
| 6.  | Outreach of the project (in Numbers)  |
| 7.  | Describe the Communication interventions  |
| 8.  | Describe the M & E intervention implemented   |
| 9.  | Achievements during the project implementation period24   |
| 10. | To what extent do the outcomes of the project match the objectives of the original proposal? 46 |
| 11. | Project's lasting impact and sustainability   |
| 12. | Describe the Lesson Learnt during the Implementation of the Project                             |
| 13. | What are some of the Challenges encountered during the Project Implementation 46                |
| 14. | What are the Recommendations for the Integration Process from the Project? 46                   |
| 15. | Next Quarter Work Plan and Budget as per the agreement  |
| 16. | Conclusion and Way Forward  |
| 17. | Pictures  |

#### 1. Executive Summary

| EAC Cross Border Telemedicine Platform.  |  |  |
|--|--|--|
| LyfPlus Limited.   |  |  |
| August 2019.   |  |  |
| 12 people, and 4 people working on the project.  |  |  |
| October 2021 to June 2022  |  |  |
| The African Development Bank (AFDB), Medical   |  |  |
| Association of Uganda, Burundi and South   |  |  |
| Sudan.   |  |  |
| Uganda, Burundi and South Sudan  |  |  |
| - 170 doctors and 86 pregnant women  |  |  |
| through physical campaigns.  |  |  |
| - 30,158 people through online campaigns.  |  |  |
| Continuity of obstetric care to pregnant women   |  |  |
| in marginalized settings for 3 months, improved  |  |  |
| beneficiaries health for safer delivery and  |  |  |
| introduction of a new business model (new  |  |  |
| revenue stream) to the onboarded doctors on  |  |  |
| to the land of the state of the |  |  |
| LyfPlus Platform present growth opportunities  |  |  |
| to healthcare providers to expand their services   |  |  |
|  |  |  |
| to healthcare providers to expand their services   |  |  |
| to healthcare providers to expand their services to distant populations.   |  |  |
| to healthcare providers to expand their services to distant populations.  Five (5) onboarding sessions to train the doctors  |  |  |
| to healthcare providers to expand their services to distant populations.  Five (5) onboarding sessions to train the doctors on how to use the platform in providing safe and   |  |  |
|  |  |  |

| Number of people participated in events    | A total of 170 doctors in different fields of    |
|--|--|
|  | specialties in all onboarding sessions and 37    |
|  | women in the medical camp.                       |
| Benefit for people participating in events | Analysed market value information for            |
|  | telemedicine services and opportunities found in |
|  | remote populations (patients), skill             |
|  | development to the participated doctors in       |
|  | practicing telemedicine services, common         |
|  | pregnancy conditions screening including high    |
|  | blood pressure, gestational diabetes, HIV,       |
|  | infections and depression/anxiety, and medical   |
|  | diagnosis to the participating pregnant women.   |
| Number of beneficiaries                    | Fifty-four (54) doctors and thirty-seven (37)    |
| (Number for each EAC Country)              | pregnant women with special medical needs.       |
| (Number of Youth)                          | - Thirty-seven (37) pregnant women from          |
| (Number of Women)                          | the EAC country of Uganda.                       |
|  | - Thirty-seven (37) doctors from Uganda,         |
|  | 17 doctors from Burundi (Total of 54             |
|  | doctors).  |
| Concrete impact on beneficiaries           | Continuity of obstetric care to the 37 pregnant  |
|  | women at Busia border ensured healthier          |
|  | pregnancies and reduced the risk of labour       |
|  | complications to the beneficiaries ultimately    |
|  | reducing chances of foetus and maternal          |
|  | mortality. Some of the beneficiaries' conditions |
|  | attended to during the project ensured reduced   |
|  | chances of disease spreading to the              |
|  | beneficiaries' immediate surrounding, overall    |

| contributing to improvement of populations        |
|---|
| health at the project's field areas. Some of the  |
| conditions treated and/or under treatment         |
| include;  |
| - Gestational diabetes                            |
| - Pelvic Inflammatory Disease (PID)               |
| - High blood pressure                             |
| - Gonococcal Infection and other STDs             |
| - Mental health issues                            |
| - Etc.  |
| Not yet.  |
| Not yet.  |
| The project created jobs both directly and        |
| indirectly. In total we estimate the project      |
| created 53 jobs so far, including beneficiary     |
| acquisition personnel, laboratory technicians, a  |
| nurse and doctors during medical camp. We shall   |
| be able to prove a precise figure of jobs created |
| by the project at the end of the project.         |
| The project has so far created income job         |
| opportunities for 54 doctors. Through online      |
| consultation services, the project enabled        |
| doctors to earn a total of TZS 4,047,931.3/- as   |
| consultation fees from patients.                  |
| - Onboard more doctors across East Africa.        |
| - Reach more remote patients.                     |
| - To conduct info-seminars for the doctors.       |
|   |

|   | - Conduct medical camp in Elegu and           |
|---|---|
|   | Akanyaru Border.                              |
| Financing secured for further operations? | US\$ 16,250 from the African Development Bank |
|   | Group.  |

#### 2. Introduction and Background

LyfPlus Limited is a telemedicine provider facilitating medical services to patients in marginalized settings, working with healthcare providers that provide primary care and partner organizations that provide resources including subsidizing medical costs for patients. LyfPlus runs and operates proprietary technologies i.e., software platforms that aid in providing remote medical consultation and patient care, diagnosis, prescription of drugs and patient referral, in improving healthcare accessibility for remote and marginalized populations.

The online platform is a telemedicine platform that integrates virtual physician consultation, hospital appointment booking, diagnosis and e-prescription allowing patients to access important medical services instantly and conveniently in one platform. Working with local health workers in rural areas, we onboard patients with specific conditions like pregnant women with hypertension/diabetes, tests like ultrasound and ECG are shared to specialist doctors through the platform and patients are able to consult them by video or voice calling.

The "EAC Cross-Border Telemedicine Platform" project is aimed at implementing an online platform that facilitates medical services to cross-border truck drivers, traders and resident communities at Elegu, Busia and Akanyaru border points, to improve healthcare accessibility for safer integration and cross-border trading. Specific services including reproductive health for pregnant women in the border regions and mental health consultation to cross-border truck drivers are implemented as prioritized medical services for facilitation.

The online platform is integrating virtual physician consultation, diagnosis, e-prescription and electronic medical records with various healthcare providers to allow users to access important

medical services instantly and conveniently in one platform. The platform is also featuring a voice call solution for users with no internet access to receive remote physician consultation and prescription at their specific location.

Medical care delivered timely helps prevent disease worsening and reduces the chances of transmission. This project therefore is aimed at contributing improvement to healthcare accessibility for truckers, traders and residents at these borders to improve safety for effective integration and cross-border trading, as diseases and epidemics compromise trade by affecting integration.

From the TZS 29,030,000/- provided funding from GIZ in the first phase, the project was able to develop the integrated telemedicine platform, onboard 54 doctors on the platform through conducted info-seminars in Kampala, hospital outreach campaigns in Uganda and Burundi and social media campaigns that invited the doctors to sign-up. This was facilitated by the support administrators, that the project hired. The project was also able to onboard 37 pregnant women with special medical needs as among the beneficiary groups, through conducting a medical camp in Bulumbi village, Busia district border, and the project was able to provide services including screening and diagnosis of pregnancy issues, provide obstetric consultation and medical follow-up for a period of 3 months. This was facilitated by the hired Gynecologist-Obstetric specialists that the project hired. The project faced challenges that affected implementation and project timelines, among them including lack of contingency funding/budget, and as a result of Covid-19 travelling regulations in Uganda and Burundi, LyfPlus Limited organization was forced to spend unbudgeted expenditures to cover for testing for each member prior entering the EAC countries. Another challenge was lack of recommendation/endorsement from partner donors made it difficult for project/organization registration in the EAC partner states the project was to be implemented in. The project is therefore recommending effective budgeting that takes account of uncertainties that might occur during project implementation that might require a contingency budget and effective including endorsement organizations to governments for support easy registration/incorporation.

#### 3. Objectives of the Project

#### **Project Goal:**

A fully integrated online platform that facilitates continuity of obstetric care to pregnant women living in Elegu, Busia and Akanyaru border points, and mental health consultation to cross-border truck rivers and traders implemented, for safer integration and cross border trading.

#### Project Objectives:

- 1) To Integrate video calling, multimedia messaging and appointment booking to LyfPlus application (the online platform), for facilitating mental health consultation to cross-border truck drivers and traders and continuity of obstetric care to pregnant women at Elegu, Busia and Akanyaru border points.
- 2) To onboard 100 doctors in different specialties from Burundi, South Sudan and Uganda to the online platform for providing mental health consultation to truckers and traders and obstetric care to pregnant women at the selected border points.
- 3) To enroll pregnant women with special medical needs like hypertension and diabetes from Elegu, Busia and Akanyaru, to an obstetric continuity care program, 15 every month for 6 months, where they will access free obstetrician consultation and treatment through the online platform.
- 4) To conduct a health camp primarily for mental health at Elegu border and register 50 cross-border truck drivers and 50 cross border traders on the platform for providing continuous mental health consultation and counselling.

During the first implementation period, the project set-out to implement Objective 1, Objective 2 and Objective 3. From the Objective 1, the specific objective was info-seminar with local healthcare providers, doctors and stakeholders to announce launch of the project conducted in Uganda, Burundi and South Sudan. From Objective 2, the specific objective was outreach campaigns to raise awareness for partnership acquisition conducted in Uganda and South Sudan. From the third objective, the specific objectives were conducting on-boarding

campaigns to on-board 30 patients every month, and conducting gynecologic continuity care program to 30 patients (pregnant women) every month for six months.

#### 4. Did you collaborate with any other organizations?

■ Uganda Organization of Health Associates. Collaboration with this NGO which drives professional, sectoral and community engagement for enhancement of reproductive health, rights, and empowerment for youth, the project was able to reach-out to community pregnant women in Bulumbi village to participate in the medical camp conducted, where they were screened and diagnosed, and onboarded on the platform for continuity of care program. This collaboration was also materially supportive of some diagnostic tools that were used during the program.

#### **Pending Collaborations:**

■ Partnership with the Uganda Medical Association (UMA). An initial meeting was conducted with the Uganda Medical Association, following an introductory letter and partnership proposal submitted to UMA on 11<sup>th</sup> November 2021. From the meeting, the members concluded that the partnership for the project under LyfPlus implementation was subject to regulation (registration and licensing) under the government through Uganda Ministry of Health, which was not initiated. Therefore it was recommended that LyfPlus Limited undertake necessary procedures to register the organization and license the project under the Ministry of Health of Uganda prior the partnership.

#### 5. Report of the Project Activities

According to the contractual agreed objectives, the project implemented the following activities;

A. Objective 1. To Integrate video calling, multimedia messaging and appointment booking to LyfPlus application (the online platform), for facilitating mental health consultation to cross-border truck drivers and traders and continuity of obstetric care to pregnant women at Elegu, Busia and Akanyaru border points.

1.0. Conduct an info-seminar with local healthcare providers, doctors and stakeholders to announce launch of the project in South Sudan, Uganda and Burundi.

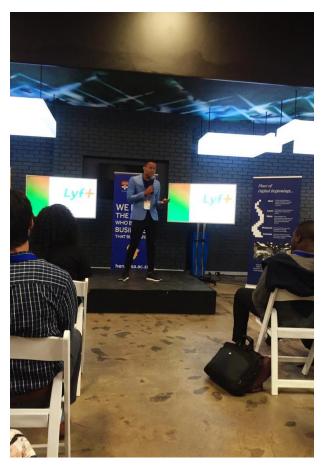
On November 10<sup>th</sup> 2021, the project hosted a telehealth information seminar in collaboration at Makerere University FST Conference Hall and invited prospect practitioners/medical doctors, hospital owners and other stakeholders in the health sector to attend the seminar. Promotional materials including banners, t-shirts and brochures were printed for showcasing and displaying during the seminar. The focus of the seminar was to raise awareness on opportunities that lie on cross-border telemedicine services, remote medical consultation and the need for healthcare providers to adopt telehealth technologies. The goal of the seminar was to onboard medical doctors and their practicing centers into LyfPlus online service platform, for beneficiary patients to find, consult and book appointments. Also, to engage other stakeholders into participating into the project.

The seminar was attended by a total of thirty-four doctors (34) and hospital owners, and two members of the Uganda Organization of Health Associates. Twenty-one (21) doctors from six different specialties signed up on LyfPlus, 6 doctors did not qualify to be onboarded and seven (7) are still in close communications. The onboarded doctors were then trained through webinar sessions on how to use the platform, invite patients, provide online consultation, accept appointments and share health information through LyfPlus. These doctors are now actively engaging on the platform available for beneficiaries to consult.

 Mr. William Mduma during an information seminar with doctors in Kampala, presented available opportunities over cross-border telemedicine services, and their benefits both for healthcare providers and patients (10<sup>th</sup> November 2021).

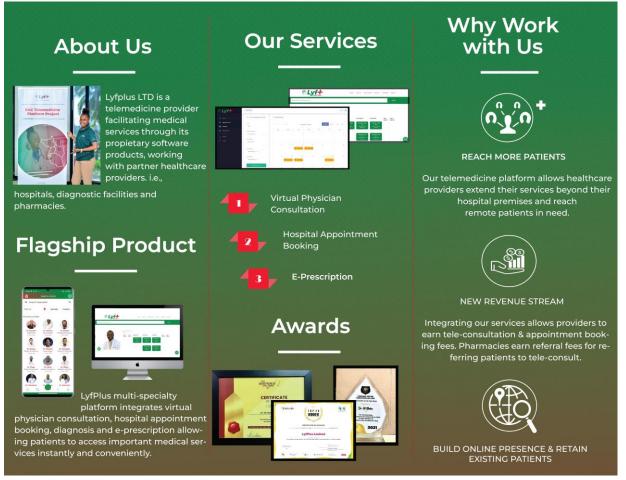






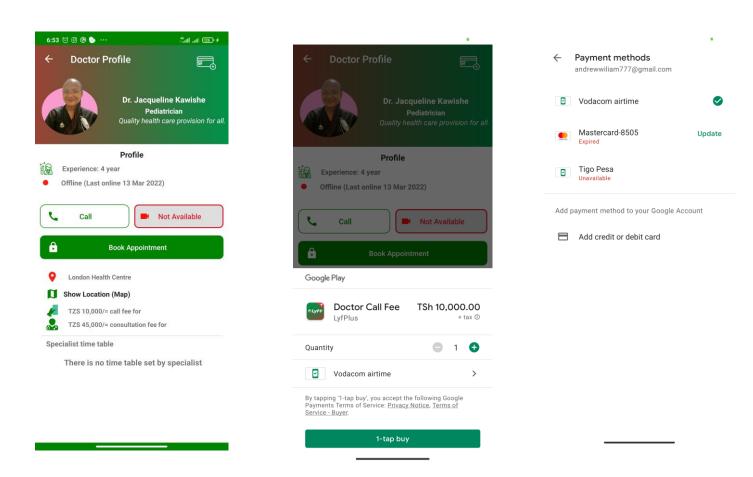
ii. Three (3) fold brochure printed and disseminated during the info-seminar on 10<sup>th</sup> November 2021 giving information as a brief partnership proposal between LyfPlus and Healthcare Providers.





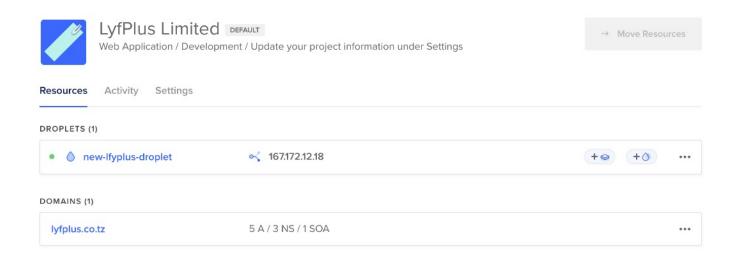
From 3<sup>rd</sup> September 2021 to 11<sup>th</sup> October 2021, the project made applications to Mobile Payment Providers including M-Pesa, Tigo-Pesa, Airtel Money and Mastercard, and acquired payment gateway APIs for integrating with the platform, to allow patients to make remote payments using mobile money. These payment methods were integrated with the platform and now the platform supports mobile money payments by patients.

iii. Screenshot images entailing payment ID generation process by clients (Process for making payment for call consultation to a doctor with various payment methods, Tigo-Pesa, Vodacom and Mastercard).

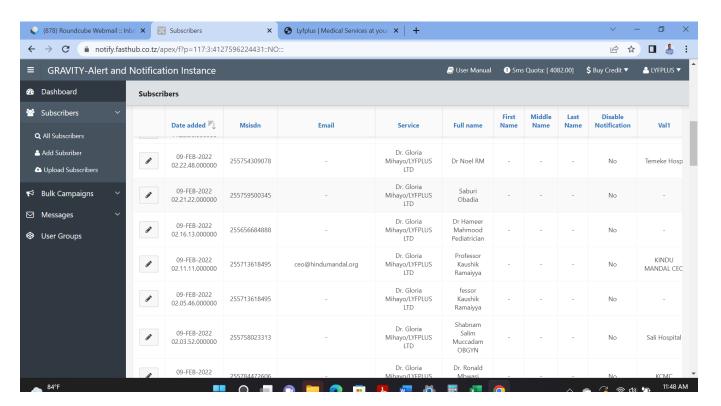


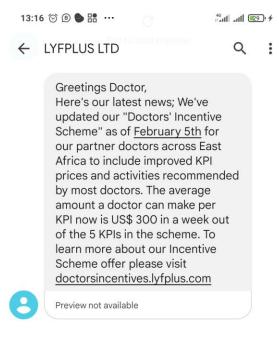
Other functional tools including Google Map API, Firebase, SSL certificates as well as a bulk SMS package have been acquired/purchased that support integration process. 2 GB CPU memory and 60 GB disk storage server space have been acquired with Digital Ocean, where the platform and all its features are hosted.

#### iv. Acquired Digital Ocean Account for LyfPlus Limited

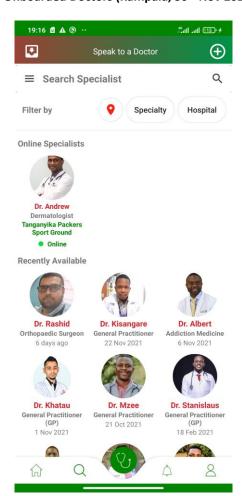


v. FastHub Bulk SMS Account for LyfPlus Limited with Screenshot of a bulk sms campaigns for onboarding doctors

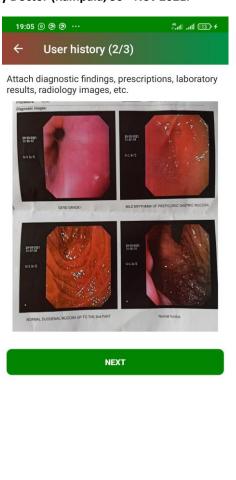




Vi. Landing Page of the Developed Platform Showing List of Onboarded Doctors (Kampala, 30<sup>th</sup> Nov 2021)



iv. Patient History-Taking for Patients by Doctor (Kampala, 30<sup>th</sup> Nov 2021.



- B. Objective 2. To onboard 100 doctors in different specialties from Burundi, South Sudan and Uganda to the online platform for providing mental health consultation to truckers and traders and obstetric care to pregnant women at the selected border points.
- 3.0. Conduct outreach campaigns and raise awareness for partnership acquisition in Uganda and South Sudan

The project conducted hospital outreach campaigns from 9<sup>th</sup> November 2021 to 29<sup>th</sup> November 2021 at Nakasero Hospital, Tam Medical Center, Mulango Hospital and Wamala Health Centre for partnership acquisition, where we met with healthcare providers and hospital owners. From these health centers the project onboarded a total of 20 doctors, out of the 45 reached and partnering with their hospitals allows beneficiary patients to book appointments seamlessly for surgery and other complex procedures that cannot be dealt with online. The project is working to onboard more doctors from the three East African countries in improving healthcare accessibility for beneficiaries in each country and list more hospitals for seamless appointment booking. (Activity report to this activity is attached).

vii. Mr. William Mduma conducting training on the telemedicine platform to doctors at Nakasero Hospital in Kampala Uganda, as part of the project's hospital outreach program to onboard doctors on the LyfPlus cross-border telemedicine platform. (Tuesday, 16<sup>th</sup> November 2021)







3.1. Run social media campaigns to invite doctors to sign up for 30 days.

Social media campaigns were also deployed as strategies/activities to raise awareness and onboard doctors to the online platform. On 1<sup>st</sup> of November 2021 a Facebook campaign to invite doctors to sign-up was commenced for thirty days (30), with a series of graphical images and other content for the same purpose. The campaign reached a total of 30,518 people on Facebook and received 13 new signups. These doctors were then trained on how to use the platform and were listed on the platform for patient's to consult.

- C. Objective 3. To enroll pregnant women with special medical needs like hypertension and diabetes from Elegu, Busia and Akanyaru, to an obstetric continuity care program, 15 every month for 3 months, where they will access free obstetrician consultation and treatment through the online platform.
  - 4.0. Conduct on-boarding campaigns to on-boaard 30 patients every month

The project conducted hospital outreach campaigns at Busia Health Centre and Bruno International Hospital at Busia border from 22<sup>th</sup> November 2021 to 27<sup>th</sup> November 2021 and enrolled 37 pregnant women into a three months obstetric continuity care program, where the women benefited diagnosis of conditions and gynecologist consultation and follow-up for three months. This was done by implementing a diagnostic medical camp and inviting pregnant women with special medical needs to attend for conditions screening, medical checkup, diagnosis and doctor consultation. Some beneficiary pregnant women with the doctor's recommendation were taken for further investigation including ultrasound imaging so for the doctor's confirmatory diagnosis. Some of the conditions diagnosed during the medical camp include Gestational Diabetes, Pelvic Inflammatory Disease (PID), High blood pressure, Gonococcal Infection and other conditions. An appropriate treatment plan was initiated for each condition and the beneficiaries were followed upon with specialist consultation for three months. Effective intervention programs as this project renders community protection from infectious diseases by preventing widespread of identified conditions, and in this case reduce cross-border transmission of diseases including dangerous pandemics.

**4.1.** Conduct gynaecologic continuity care program to 30 patients (pregnant women) every month for six months

Two Obstetrician-Gynecologist doctors were successfully recruited to provide continuity of obstetric care to beneficiary pregnant women acquired. The specialist doctors successfully provided a total of 300 consultation sessions to the beneficiary pregnant women in a course of 3 months of continuity of obstetric care program. These doctors are also registered on the platform, well trained and are available for consultation for other beneficiary groups engaged in the project. The doctors also share health content as posts on the platform regularly and the beneficiaries are able to ask questions through the platform's online forums. Using bulk SMS's, the project also shares this health information curated by the specialists to beneficiary pregnant women with no access to internet as SMS messages. The content/information is related to pregnancy, delivery and motherhood healthcare wellness.

i. LyfPlus team in one of the hospital outreaches in Busia border, Uganda onboarded pregnant women in need of specialist consultation to LyfPlus Platform and enrolled them in 3 months obstetric continuity of care program (Sunday 27<sup>st</sup> November 2021).













#### 6. Outreach of the project (in Numbers)

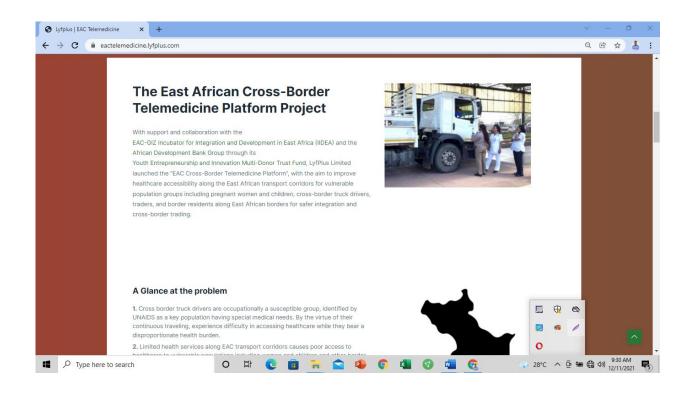
So far, the project has reached 170 doctors of different specialties, of which 54 have been onboarded/registered on the platform ready to serve the target beneficiaries, and in discussion with 11 others on the terms of partnership.

The project has also reached 86 pregnant women of which 37 have been onboarded on the platform and have received specialist consultation for their various conditions through the online platform.

#### 7. Describe the Communication interventions

i. <a href="https://www.eactelemedicine.lyfplus.com">https://www.eactelemedicine.lyfplus.com</a> is a web page dedicated to the project where all activities are communicated regularly. The website will be improved to categorize events with date and time, list recent updates clearly and include links to activity videos.





ii. Other communication strategies including dissemination seminars and video documenting will be deployed during the second month of the project implementation.

#### 8. Describe the M & E intervention implemented

In reference to the metrics and indicators we put in place for monitoring and evaluation, the following were the outcomes per each objective so far;

A. Objective 1. To Integrate video calling, multimedia messaging and appointment booking to LyfPlus application (the online platform), for facilitating mental health consultation to cross- border truck drivers and traders and continuity of obstetric care to pregnant women at Elegu, Busia and Akanyaru border points.

Goal: A fully integrated online platform that facilitates continuity of obstetric care to pregnant women living in Elegu, Busia and Akanyaru border points, and mental health consultation to cross-border truck rivers and traders border implemented, for safer integration and cross border trading.

Objective 1. To Integrate video calling, multimedia messaging and appointment booking to LyfPlus application (the online platform), for facilitating mental health consultation to cross- truck drivers and traders and continuity of obstetric care to pregnant women at Elegu, Busia and Akanyaru border points.

| Outcome  | Target/ Output  | Inputs                          | Activities  | Indicators  | Time<br>frame     | Responsible<br>Person | Status      |
|--|---|---------------------------------|---|---|-------------------|-----------------------|-------------|
| 1.0 Well integrated and optimized telemedicine platform contributing | 1.1 Project materials branded, disseminated and made visible during the launch. | T-shirts, promotional brochures | 1.1. Conduct an infoseminar with local healthcare providers, doctors and stakeholders to announce launch of the project in South Sudan, Uganda and Burundi. | 1.1.1 Number of people reached through the project launch | Q1 (July<br>2021) | Project<br>Team       | On<br>track |

| convenient   | 1.2 A functional         | Payment gateway APIs,           | 1.2. Develop an       | 1.2.1 Number of  | Q1 (July to | Technical | On    |
|--------------|--------------------------|---------------------------------|-----------------------|------------------|-------------|-----------|-------|
| access of    | interactive online       | Functional tools, Bulk SMS APIs | integrated online     | APIs integrated  | Mid-        | Manager   | track |
| medical      | platform (mobile and     |                                 | telemedicine platform | daily            | August      |           |       |
| services for | web) that supports       |                                 | system from LyfPlus   | 1.2.2 Number of  | 2021)       |           |       |
| South        | efficient doctor-patient |                                 | application.          | database gueries |             |           |       |
| Sudan,       | communications           |                                 |                       | resolved         |             |           |       |
| Uganda and   | developed.               |                                 |                       | resolveu         |             |           |       |

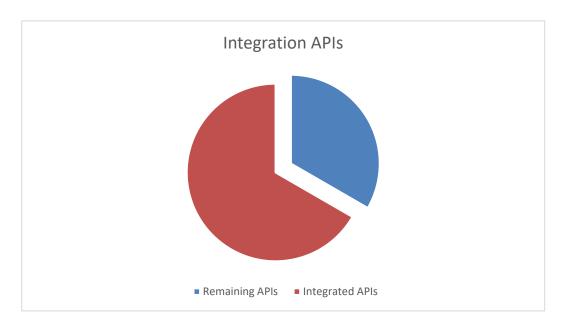
**Activity 1.1.** Conduct an info- seminar with local healthcare providers, doctors and stakeholders to announce launch of the project in South Sudan, Uganda and Burundi.

An info-seminar featuring the Uganda Organization of Health Associates was conducted on November 10<sup>th</sup> 2021, promotional t-shirts and brochures were disseminated to brand the project effectively. The seminar was attended by doctors, hospital owners and delegates from the Uganda of Health Associates, a total of thirty-six (36) attendees. The collaboration with the Uganda Organization of Health Associates was pivotal in planning and implementation of the medical camp at Busia border, as the organization provided both material support and consultation that improved the project. From the thirty-four (34) doctors and hospital owners that attended the seminar, 21 doctors had registered to provide tele-consultation services on LyfPlus with their practicing hospitals.

**Activity 1.2.** Develop an integrated online telemedicine platform system from LyfPlus application.

Since project inception (1<sup>st</sup> September 2021), the project has been able to implement 14 out of 18 APIs that make up the LyfPlus platform communication between the patient application with doctor's application. As a result, the platform now supports efficient patient-doctor

communication, and the u remaining 4 APIs include test order, home appointments, health questions and doctor's forums which does not involve patient-doctor communication. From the developed integrated platform, patients can now find and consult various specialists, book hospital appointments, receive prescription of drugs, ask health questions and receive feedback answers from professional doctors across the East African region.



- Mr. William Mduma leading the technical team in development and integration of new features to the platform at LyfPlus offices in Dar es Salaam (Friday 22<sup>nd</sup> October 2021).





B. Objective 2. To onboard 100 doctors in different specialties from Burundi, South Sudan and Uganda to the online platform for providing mental health consultation to truckers and traders and obstetric care to pregnant women at the selected border points.

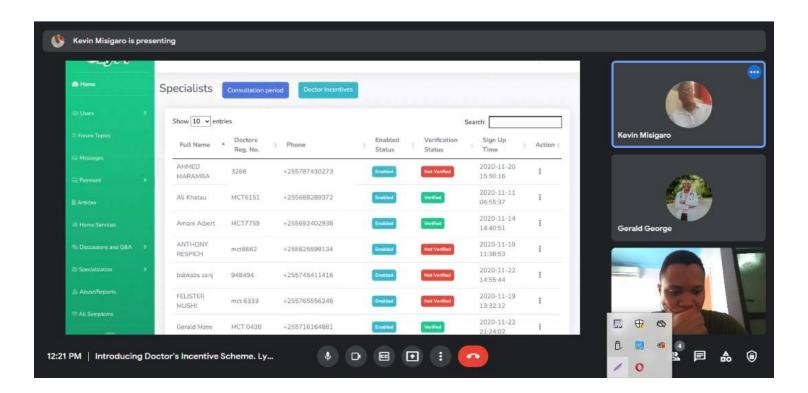
Objective 2: To onboard 100 doctors in different specialties from Burundi, South Sudan and Uganda to the online platform for providing mental health consultation to truckers and traders and obstetric care to pregnant women at the selected border points

| Outcome   | Target/ Output  | Inputs   | Activities   | Indicators  | Timeframe                         | Responsible<br>Person | Status      |
|---|---|--|--|---|-----------------------------------|-----------------------|-------------|
| 2.0 Competent doctors that are well trained how to practice online successfully registered for effective cross border medical consultation. | 2.1 Application manuals distributed to doctors, hospitals and clinics  2.2 Social media content shared and advertised to healthcare providers | Informational booklets as manuals on how to use the platform, social media posts | 2.1. Conduct outreach campaigns and raise awareness for partnership acquisition in Uganda and South Sudan  2.2. Conduct outreach campaigns to raise awareness for partnership acquisition in Burundi | 2.1.1. Number of doctors and healthcare providers reached (on social media physical visits) and trained.  2.2.1. Number of doctors and healthcare providers that have registered/signed-up to the platform. | Q1 (Mid-<br>July to<br>September) | Program<br>Manager    | On<br>track |

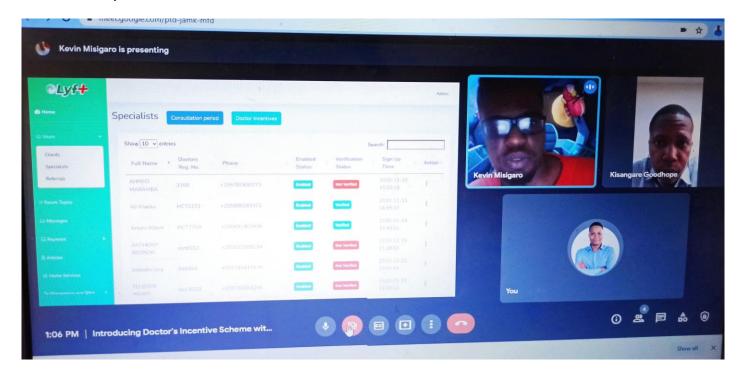
#### Activity 2.1. Conduct outreach campaigns and raise awareness for partnership acquisition in Uganda and South Sudan

The project conducted hospital outreach campaigns from 9<sup>th</sup> November 2021 to 29<sup>th</sup> November 2021 at Nakasero Hospital, Tam Medical Center, Mulango Hospital and Wamala Health Centre in Kampala, Uganda for partnership acquisition. Application manuals were distributed successfully to participants that entail instructions for the platform. Social media content were created to invite healthcare providers to sign-up and provide services through the platform. The outreach campaigns reached a total of 45 healthcare providers (i.e., hospitals and doctors) and 20 doctors were registered on the platform. The social media content shared reached a total of 30,518 people on Facebook, from which the project received new 13 doctor signups. The onboarded doctors were trained through a series of webinars and seminars to become competent for providing tele-consultation services for the project beneficiaries.

The LyfPlus team conducting an onboarding session to Dr. Gerald Mzee during a vetting webinar on Friday 12<sup>th</sup> November 2021.



The LyfPlus team conducting an onboarding session to Dr. Kisangare Goodhope during a vetting webinar on Friday 12<sup>th</sup> November 2021.



Promotional ID cards for Dr. Hasnain Rashid and Dr. Gerald Mzee created after onboarding session, for inviting the target beneficiaries on Monday, 15<sup>th</sup> November 2021.





C. Objective 3. To enrol pregnant women with special medical needs like hypertension and diabetes from Elegu, Busia and Akanyaru, to an obstetric continuity care program, 15 every month for 6 months, where they will access free obstetrician consultation and treatment through the online platform.

Objective 3. To enrol pregnant women with special medical needs like hypertension and diabetes from Elegu, Busia and Akanyaru, to an obstetric continuity care program, 15 every month for 6 months, where they will access free obstetrician consultation and treatment through the online platform.

| Outcome                | Target/ Output  | Inputs                          | Activities  | Indicators  | Timeframe           | Responsible<br>Person | Status |
|------------------------|---|---------------------------------|---|---|---------------------|-----------------------|--------|
| 3.0 Increased          | 3.1 Thirty women  | Obstetric doctors, functional   | 3.1 Conduct on-boarding                                     | 3.1.1 Number of   | Q1 & Q2             | The Medical           |        |
| access to              | successfully complete                                       | platform, social media content, | campaigns to on-board                                       | patients leads  | (August to          | & Technical           | track  |
| medical consultation   | monthly care programs every month                           | hospital appointment time       | 30 patients every month.                                    | generated and onboarded every   | January<br>2021 to) | team                  |        |
| for pregnant women in  | 3.2 Two Obstetric   |                                 | 3.2. Conduct obstetric continuity care program              | month   |                     |                       |        |
| marginalized settings. | doctors successfully sees<br>16 women in total in a<br>week |                                 | to 30 patients (pregnant women) every month for six months. | 3.2.1 Number of women receiving and following continuity care every month |                     |                       |        |

**Activity 3.1.** Conduct on-boarding campaigns to on-board 30 patients every month.

The project conducted hospital outreach campaigns at Busia Health Centre and Bruno International Hospital at Busia border from 22<sup>th</sup> November 2021 to 27<sup>th</sup> November 2021 and enrolled 37 pregnant women into a three months obstetric continuity care program, where the women benefited diagnosis of conditions and gynecologist consultation and follow-up for three months. This was done by implementing a diagnostic medical camp and inviting pregnant women with special medical needs to attend for conditions screening, medical checkup, diagnosis and doctor consultation.

**Activity 3.2.** Conduct obstetric continuity care program to 30 patients (pregnant women) every month for six months.

Two Obstetrician-Gynecologist doctors were successfully recruited to provide continuity of obstetric care to beneficiary pregnant women acquired. The specialist doctors successfully provided a total of 300 consultation sessions to the beneficiary pregnant women in a course of 3 months of continuity of obstetric care program. These doctors are also registered on the platform, well trained and are available for consultation for other beneficiary groups engaged in the project. The doctors also share health content as posts on the platform regularly and the beneficiaries are able to ask questions through the platform's online forums. Using bulk SMS's, the project also shares this health information curated by the specialists to beneficiary pregnant women with no access to internet as SMS messages. The content/information is related to pregnancy, delivery and motherhood healthcare wellness.

#### 9. Achievements during the project implementation period

In reference to the three objectives of the first phase of the project, the following has been achieved;

<u>OUTPUTS</u>: Detail all Planned and actual activities carried out during the reporting period and the actual outputs. Explain any deviation between the planned and actual activities and propose follow-up actions.

| Description of activities planned for the reporting period   | Output targets  Planned Achieved  |  | Level of achievement (achieved/pla nned) in per | Explanation (s) /<br>Performance /<br>Remarks                             |
|--|---|--|---|---|
| Development of an integrated online telemedicine platform system from LyfPlus application.                                   | A functional interactive online platform that supports efficient doctor-patient communications developed. | An android version of the platform has been successfully developed and features integrated | 85%   | The new features are yet to be integrated to the web platform and tested. |
| Conducting info-<br>seminars with local<br>healthcare providers,<br>doctors and<br>stakeholders to<br>announce launch of the | Project materials branded, disseminated and made visible during the launch.                               | Informational<br>Seminars in Uganda<br>and have been<br>conducted and                      | 40%   | Informational<br>seminars in<br>Burundi and<br>South Sudan are            |

| project in South Sudan,<br>Uganda and Burundi.  |   | project materials were disseminated.   |     | yet to be conducted.   |
|---|---|--|-----|--|
| Increased access to medical consultation for pregnant women in marginalized settings. | - Thirty women successfully complete monthly care programs every month  - Two Obstetric doctors successfully sees 16 women in total in a week | The project has facilitated continuity care programs to 37 beneficiary women in Uganda for the past 3 months  Obstetric doctors have seen 37 beneficiary women in total for course of 3 months, a total of 300 sessions. | 60% | The project is yet to facilitate continuity of care program for pregnant women in South Sudan  Obstetric doctors are yet to see 16 women in total in a week for women from South Sudan |

#### 10. To what extent do the outcomes of the project match the objectives of the original proposal?

The overall goal of this project is to develop a fully integrated online platform that facilitates continuity of obstetric care to pregnant women living in Elegu, Busia and Akanyaru border points, and mental health consultation to cross-border truck rivers and traders implemented, for safer integration and cross border trading. Within the first phase of the project implementation, the project sought to achieve the following;

- a) Objective 1: To Integrate video calling, multimedia messaging and appointment booking to LyfPlus application (the online platform), for facilitating mental health consultation to cross- border truck drivers and traders and continuity of obstetric care to pregnant women at Elegu, Busia and Akanyaru border points. This objective has been achieved by 85%, the features are yet to be integrated into the web platform to achieve 100% completion.
- b) Objective 2: To onboard 100 doctors in different specialties from Burundi, South Sudan and Uganda to the online platform for providing mental health consultation to truckers and

traders and obstetric care to pregnant women at the selected border points. From the 170 doctors reached through seminars and webinars, only 54 have registered to work for the project, and in discussion with 8 others for the same. This is 54% of the objective completion and more reach out shall be done to reach the set 100 doctors mark.

c) Objective 3: To enroll pregnant women with special medical needs like hypertension and diabetes from Elegu, Busia and Akanyaru, to an obstetric continuity care program, 15 every month for 6 months, where they will access free obstetrician consultation and treatment through the online platform. The objective has been achieved by 60%, pregnant women from South Sudan (Elegu border) are yet to benefit from the obstetric continuity of care program to access specialist consultation and diagnosis.

#### 11. Project's lasting impact and sustainability

Continuity of obstetric care to the 37 pregnant women at Busia and Akanyaru borders ensured healthier pregnancies and reduced the risk of labour complications to the beneficiaries ultimately reducing chances of foetus and maternal mortality. Some of the beneficiaries' conditions attended to during the project ensured reduced chances of disease spreading to the beneficiaries' immediate surrounding, overall contributing to improvement of populations health at the project's field areas.

The long-term sustainability plan of the project, is to establish a subsidization model, where partners and/or donor organizations will provide subsidy revenue to cover for patients bills, incentivise doctors and cover operation costs of the project. Eventually this will reduce the financial burden for healthcare services for the marginalized and underprivileged living along East African borders while improving safety along the borders by improving healthcare accessibility.

#### 12. Describe the Lesson Learnt during the Implementation of the Project

East African Interconnected telemedicine services if implemented effectively can bolster cross-border medical tourism market among the EAC member states, that can contribute to country's enemies' growth and increase people's integration. The project having onboarded doctors from 2 different East African countries, and having facilitated 386 consultation sessions and 26 appointments among doctors and health facilities between the 2 countries, learned that as a result of different costs and quality for healthcare, some patients are willing to book appointments to hospitals/doctors in other East African countries especially for medical procedures not delivered in their own country. The project is therefore looking forward to engage medical tourism providers in the region to ease the process of patients who seek medical services in neighbouring East African countries.

- effective telemedicine service should incorporate diagnosis and patient monitoring and not only teleconsultation. The diagnostic medical camp implemented during the project to onboard beneficiary pregnant women into the project, diagnostic finding of patients' conditions unveiled for effective continuity of care for patients, a comprehensive patients' history has to be established. This has to therefore involve medical investigation during the first consultation session with the patient and regular medical check-up during the course of the treatment plan. Among the conditions intervened during the project was Pelvic Inflammatory Disease among the beneficiary patients which requires a long term treatment plan of at-least 3 months, having only teleconsultation without diagnosis would not detect the disease and without and efficient follow-up increases the chance of disease resistance. It is for this understanding that other patients are willing to travel to other East African countries to seek eminent medical treatment.
- Research before commitment. During project inception period, we encountered some uncertainties that we initially did not foresee. For instance, we were required to either open a subsidiary company or register a new company in Uganda to be able to carry-out the project there. Additionally, the project needed to be registered at the ministry of health of the country, for the government to monitor and regulate compliance of the project. Again, this affected our timelines as well as budget to follow every process and be compliant.

#### 13. What are some of the Challenges encountered during the Project Implementation

### Describe problems / obstacles that were encountered during the reporting period and what was done to overcome them.

- 1a. Obstacle: Compliance trail. The project was required to be registered under the ministry of health of Uganda in-order to be regulated by the government. Operating the unregistered project with an unknown entity/company could lead to legal complication as the project involves citizens health and data. This was not foreseen earlier and was not budgeted on, and so it affected our implementation plan timelines.
- 1b. Solution: We're currently working to register the project at the ministry of health in Uganda in-order to continue with other project activities.
- 2a. Obstacle. Many of the doctors the project sought to onboard did not find the model attractive, where they get to be paid monthly as compensation for the services they provide to the target beneficiaries (patients). Many preferred to get paid per patient service they provide cumulatively, and this proved to be a challenge to the project's sustainability.
- 2b. We then had to find ways for compensating the doctors per patient service they provide while also considering sustainability of the project. We developed a scheme we call "Doctor's Incentives Scheme", where each doctor would be incentivized per a specific activity they deliver on the platform with a percentage share on the patient fee the patient pays. This attracted more doctors to the project rather than monthly payment.

#### 14. What are the Recommendations for the Integration Process from the Project?

- 1. The question behind the project's significance within a short contract period of only 6 months. The six (6) months project period is relatively limited in contrast to the anticipated desired outcome to improve integration/cross-border trade and long-lasting sustainable impact the project can produce to target beneficiaries. The number of beneficiaries the project can incorporate within the tenure of 6 months is quite low as compared to the actual size of the problem in the field which consequently produces limited outcomes and raises the question of the project's significance apropos to the project's proposed original goal. We are therefore recommending that this is reviewed to achieve results and project's long-lasting impact to beneficiaries.
- 2. Lack of a long-term sustainability plan. The IIDEA and IRTF were designed to support and incubate small-scale projects which foster economic integration and intra-regional trade by promoting people and businesses' engagement, but with questionably little emphasis on the growth of the projects and the implementing organizations. Actions to follow up and seek for other actors (additional organizations, donor or investors) to partner with the projects in support for growth and sustainability post the contract period are understated. This raises the question to IIDEA and IRTF,

are their performance only evaluated by the number of civil society organization supported and incubated or also with the sustainability of the supported projects, in ensuring economic integration is achieved through sustaining their impact. We therefore recommend that measures that ensure long-term sustainability of the supported projects are improved by having a smart sustainability plan.

- 3. Lack of contingency funding budget. As a result of unforseen Covid-19 travelling regulations in Uganda and Burundi, the project was forced to spend unbudgeted expenditures to cover for testing for each member prior entering the EAC countries. These unforseen costs were communicated to IIDEA but because they were not budgeted from the beginning they weren't refunded. The program needs to incorporate a contigency budget of a specific percentage from the main budget to cover for uncertainties and unforseen costs that might come-up during implementation that can hinder the project implementation.
- 4. There's a need to integrate business regulations and centralize business registration processes in EAC partner states of Uganda, Burundi and South Sudan in promoting business ecosystem growth. When implementing social driven initiative projects, less bureaucratic regulatory processes will mean efficiency and effectiveness in implementation. This includes tax authorities and companies' regulatory bodies.

15. Next Quarter Work Plan and Budget as per the agreement

| Planned Activities   | Objectives  | Output  | Budget Line<br>(extract from the<br>agreed budget) | Responsible                        |
|--|---|---|--|------------------------------------|
| Conduct an infoseminar with local healthcare providers, doctors and stakeholders to announce launch of the project in South Sudan and Burundi. | Objective 1. To Integrate video calling, multimedia messaging and appointment booking to LyfPlus application (the online platform), for facilitating mental health consultation to crossborder truck drivers and traders and continuity of obstetric care to pregnant women at Elegu, Busia and | Project materials branded, disseminated and made visible during the infoseminars. | TZS 2,449,996/-                                    | Administrative and Technical team. |
|  | Akanyaru border points.   |   |  |                                    |

| Conduct outreach<br>campaigns and raise<br>awareness for<br>partnership acquisition in<br>Burundi and South Sudan   | Objective 2: To onboard 100 doctors in different specialties from Burundi, South Sudan and Uganda to the online platform for providing mental health consultation to truckers and traders and obstetric   | Application manuals distributed to doctors, hospitals and clinics  Social media content shared and advertised to healthcare providers        | TZS 9,099,700/-  | Marketing and Administrative team. |
|---|---|--|------------------|------------------------------------|
|   | care to pregnant women at the selected border points  |  |                  |                                    |
| Conducting on-boarding campaigns to on-board 30 patients every month and conducting obstetric continuity care program to 30 patients (pregnant women) every month for six months. | To enrol pregnant women with special medical needs like hypertension and diabetes from Elegu, Busia and Akanyaru, to an obstetric continuity care program, 15 every month for 6 months, where they will access free obstetrician consultation and treatment through the online platform | Thirty women successfully complete monthly care programs every month and two obstetric doctors successfully sees 16 women in total in a week | TZS 5,739,174/-  | Marketing and Administrative team  |
| Carry out a diagnostic health camp and onboard/register 100 users on the LyfPlus  | To conduct a health camp primarily for mental health at Elegu border  | At-least 200 people screened for diabetes, and hypertension  | TZS 11,560,000/- | The Technical Team                 |
| platform at Elegu border  | and register 50 cross-<br>border truck drivers and<br>50 cross border traders<br>on the platform for  | At-least 100 truckers and drivers diagnosed of mental health issues  |                  |                                    |
|   | providing continuous<br>mental health<br>consultation and<br>counselling  | At-least 50 truck driver's sign-up on LyfPlus  At-least 50 traders sign-up on LyfPlus  |                  |                                    |
|   |   |  |                  |                                    |

#### 16. Conclusion and Way Forward

To-date the project has reached 170 doctors and 86 pregnant women in Busia and Akanyaru border through physical campaigns and activations, and has reached 30,158 people through online campaigns and webinars (primarily Facebook platform). The project has benefited 54 doctors and 37 women along the two borders, has facilitated 386 consultation sessions and 26 appointments, and will enrol

50 cross-border truckers and 50 cross-border traders along Busia, Elegu and Akanyaru border points into mental health continuity care program for the second phase of the project. The project has shown potential in improving health and safety of the people along Busia and Akanyaru border, action which when further expanded will contribute greatly in reducing cross border disease transmission and improve safety along the borders for people's integration and cross-border trading. The project has also shown potential in improving medical tourism market between the East African countries, especially for specialist services that are unavailable or limited in the patient's country of origin. One (1) patient from the 86 reached after medical diagnosis during the project, sought further specialist service in the neighbouring country of Kenya, in Aga Khan Outpatient Health Centre which is approximately 31 kilometres from Bulumbi Village in Uganda. This shows the project's potential in boosting medical tourism market as it allows doctors from across East Africa to provide online consultation to patients in different EAC countries, further contributing to economic integration among EAC countries.

The following can be implemented to achieve the project's potential; More stakeholders from across the EAC region should be involved, including national referral hospitals where they can use the telemedicine platform to provide limited specialist consultation to remote patients, admitting complex medical cases and referring minor cases to primary and secondary health facilities. Mobilizing more resources from partners and investors to expand the project to cover other East African countries including Kenya, Tanzania and Rwanda. And finally, improvement of policy structures among EAC member states to accommodate telehealth innovative solutions allowing their incorporation into the countries' healthcare systems to benefit the general population.

From this the project is preparing a strategic plan to mobilize more actors into participating into the project activities including civil societies, engage donor organizations and investors to mobilize required resources and policy makers to improve regulatory processes.

Epidemic outbreaks and cross-border disease transmission generally compromise safety along East African borders and largely affect cross-border trade consequently economic integration. Promotion of cross-border trade and economic integration is subject to safety of the people's health living along the border regions and mobile populations that regularly travel across the borders including cross-border truck drivers and traders. The "East African Cross Border Telemedicine Platform" project has a vision

to improve healthcare accessibility for remote and mobile populations for safer integration and cross-border trade.

of East African population.

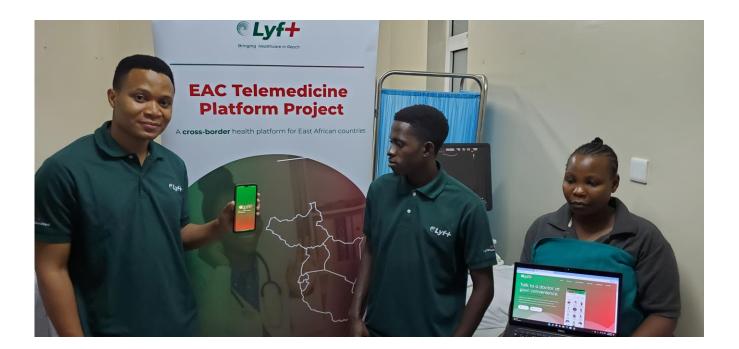
#### 17. Pictures

Please included some pictures of different activities from your project with a brief description.

1. A specialist doctor examining a beneficiary patients remotely through LyfPlus platform. Doctor gives instruction to the technician with the mobile ultrasound machine.

#### Remote Medical Diagnosis by a Doctor on LyfPlus Youtube Demonstration Video Link





2. The LyfPlus team in one of the community outreach campaigns to onboard pregnant women into benefiting from the "East Africa Cross Border Telemedicine Platform Project"







3. Mr. William Mduma conducting training on the telemedicine platform to doctors at Nakasero Hospital in Kampala Uganda, as part of the project's hospital outreach program to onboard doctors on the LyfPlus cross-border telemedicine platform.







4. Social media posts created and deployed in the project's social media campaigns .



Posted on March 15<sup>th</sup> 2022 on LyfPlus Instagram page to invite patient sign-ups.



Posted on December 20<sup>th</sup> 2022 on LyfPlus Facebook page to invite patient sign-ups.



Posted on February 5<sup>th</sup> 2022 on LyfPlus Facebook page to invite doctor sign-ups.