Terms of Reference

for Primary Health Scale up Health Information System

Background

The Lebanese Red Cross (LRC) provides Primary Health Services to more than 150,000 patients per year, through 36 primary health centers and 8 Mobile medical units.

The LRC is in the process of launching a Primary Health Scale up national program to increase the scale, and improve the quality of its primary health services, and to alleviate the suffering of the population in Lebanon as a result of the economic crisis.

As part of this scale-up program, LRC plans to procure, customize and deploy a Health Information System (HIS).

1. Scope of work

The HIS will help the LRC deliver, monitor and improve the quality of its primary health services throughout the territory.

The primary health services include mainly:

- Health awareness, prevention and promotion activities.
- Health consultations on site or in mobile medical units.
- Medicine procurement, transfer, storage and distribution
- Psychosocial services
- Referral of patients to secondary healthcare or other services
- Referral of patients to a "cash for health" database for secondary healthcare services

At a high level, the H.I.S is required to accompany and document each of these activities and tasks. These will be part of the acceptance criteria used by LRC.

This includes:

A. Core functionality:

a. New patient registers at the check-in desk.

b. Existing patients log in at the check-in desk .

c. Scan and upload of relevant identification documents.

d. Unique card and/or unique ID on smartphone application is received by the patient.

e. Patient triage.

f. Patient can see his place in the queue and the estimated waiting time.

g. Physician enters relevant diagnostic and prescription information on the system

h. In case a patient has to take medicine from LRC-PHC, a prescription will be sent to the pharmacy as a pending case.

i. Pharmacist logs medicine out using barcode, with printout of posology instructions.

j. Medicine is deducted automatically from the system.

k. In case medicine refill is required on a recurrent basis, a task (new appointment) is automatically generated.

l. In case the request of the patient cannot be fulfilled by LRC, the issue is logged under an "unmet need" category

When the Doctor selects a patient, the General Info page of the patient will be displayed. This page includes the basic Info of the patient that will be automatically retrieved from the Personal Info Card, in addition to the Allergies, Immunizations, Life Style and Medical History.… that will be first filled in the first consultation, and can be updated in later consultations, if needed.

B. Patient-facing portal

a. Patient can access portal at any time to:

i. See available services

ii. Check the availability of physicians based on calendar view

iii. Book an appointment

iv. Ask a question / provide feedback

v. Download medical records

vi. Request deletion of all medical records from LRC system

C. Referrals

a. Patients can be referred internally to another specialist within the PHC

b. If diagnostic service is not available at LRC, patient is transferred to another service provider (hospital, lab, other) for diagnostic

c. Referral is logged in patient file

d. When patient comes back with test results, results can be uploaded and attached to patient file

e. Patients can be referred from Mobile Medical Unit to nearest PHC

D. Cash for health

a. According to pre-set medical criteria, treating LRC physician can recommend that patient be referred to Cash for Health program

b. To be developed further once CFH is set up (estimated availability of data and forms: mid-September 2022)

E. Staff facing portal

a. Physicians are able to log in their shifts directly, or via the clerk in the PHC.

b. Physicians are able to place a request to amend their shifts and view their calendars.

c. Requests can be subject to a workflow for review and approval by supervisor

d. Physicians can see their KPIs

F. Pharmacy:

a. Central pharmacist is able to upload the standard list of medicine to the inventory

b. Thresholds for each PHC can be set for each type of medicine. When the threshold is reached, a request is sent automatically to the central pharmacy to deliver and/or pick up an order of medicine

c. The central inventory is updated on the system upon receipt of new shipments

d. The inventory of each PHC is updated on the system upon receipt of new shipments from the central pharmacy

e. Orders in progress appear on the system (from supplier to LRC)

f. Delivery of medicine to PHC logistics documents can be uploaded on the system and attached to each PHC entity for traceability

g. Expiry date alerts can be set for the medicine

h. The system Stock Management and Monitoring feature to provide:

- Stock transactions
- Warehouse management
- Item Activity filter function to group transactions by type
- Activity and Margin
- View Starting balance of Current Year
- View Sum of Quantities by Transaction type
- Validation between available quantity and sum of transactions
- Stock Validation
- Monitoring, Alerts
- Inventory Statistics per item

G. Promotion and prevention:

a. System allows for the grouping of patients by medical condition, to send them a notification via SMS/Whatsapp and/or email, inviting them to participate in health promotion, prevention and awareness sessions that are related to their disease or medical condition.

b. System can export a contact list for the LRC contact center to reach out to patients, inviting them to participate in health promotion, prevention and awareness sessions that are related to their disease or medical condition.

c. Actual participation can be logged into the system, so that the administrator knows which patient actually participated in an awareness session

d. PHC staff can see which promotion/prevention sessions each patient participated in.

H. Evaluation:

a. A PHC evaluation form can be uploaded onto the system and used to evaluate the PHCs during field visits

I. Reports

a. System allows modality to link a specific shipment of medicine to a specific donor, and to then report back to the donor on the specific use of this medicine (donor code)

b. System allows tracking and reporting on all related program logframe indicators

c. Reports can be customized by system administrator using back-end

J. Feedback and Complaints management

a. System to include a feedback and Complaints section available for all users (patients, doctors, nurses, hospitals, healthcare organizations…) allowing them to submit any comment, concern, complaint

K. Mobile clinics

a. Mobile medical units will also have access to the system and patients should be able to book appointments in various locations according to the pre-set schedule of the Mobile Medical Unit

L. Patient drop out

a. System to allow to change the status of the drop out patients, add the reason of drop out if available, schedule a follow up

M. Adverse event and morbidity review

a. the system to allow recording any unexpected medical problem that occurred during a certain treatment with a drug or other therapy

b. Patients of PHCs who are deceased can be logged as such and this should trigger a workflow to review the case of the deceased patient

2. Use Cases

The below section is intended to provide additional details translating the objectives listed in section 2. as specific use-cases which the requested solution is expected to meet or exceed. Bidders should explain how their approach will address each use-case, and LRC's acceptance criteria and payment releases will be tied to the use-cases being satisfied.

Use case 1.1 - New patient

51 y.o male, KTH diabetes and dyslipidemia for 5 years. No surgical history. He is currently taking Metformin 1000mg 2 tablets per day and Atorvastatin 20mg 1 tablet per day. His last blood exam was done over one year ago. He never consulted an ophthalmologist for retinopathy. He stopped his medication two weeks ago due to financial problems. He heard that LRC HCCs are offering free medication and scheduled an appointment with the GP.

1) Welcoming the patient :
   - Assign a queue number for the beneficiary
   - Open a new file for the beneficiary and generate a unique family code by the system
2) Triage : vital signs are registered on the system
3) Doctor consultation :
   - Clinical interview + physical exam are conducted and findings are registered on the system
   - Medication prescription for one week through the pharmacy system on HIS
   - Order blood exam by selecting required tests from the laboratory blood test list on the HIS (possibility of linkage to existing laboratory in the catchment area)
   - Refer to ophthalmologist for diabetes complication check up through the referral section on the HIS by speciality (Internal referral/external referral)
   - Schedule a follow-up appointment on the HIS calendar with an alert system to track no-show patients.

Use case 1.2 - New patient

Two months old baby visited the HC accompanied by his mother for a pediatrics consultation, for a routine checkup and immunization services (appointment taken by the beneficiary guardian).

1) **Welcoming the patient :**

- Assign a queue number for the beneficiary

- Open a new file for the beneficiary and generate a unique family code by the system

· **2) Triage:** Vital signs are registered on the system (height, weight, temperature, head circumference, malnutrition screening-baby↑6months/pregnant or breastfeeding women)

· **3) Physician's consultation:**

- Brief of the consultation is logged on the system

- Vaccine's order selected from the HIS Immunization calendar (vaccine's name and dose)

- Vaccine's schedule and details are documented on the HIS calendar (with instructions to the caregiver for side effects). The next vaccine's date is selected on the HIS with an alert system to track drop-outs children.

- Medication prescription through the pharmacy system on HIS

Use case 2.1 - Existing patient

Female, 42 y.o. No past medical history. Surgical history : appendicectomy

She Does Not take any medication. She took an appointment from the OB-GYN for her annual gynecological check up. She already did her mammography and brought the results with her.

1) Welcoming the patient : Assign a queue number for the beneficiary

2) Open the file of the beneficiary using her ID code number or search by patient's identifier on HIS

3) Triage : vital signs are registered on the system and NCD screening is done by the nurse and results are registered on the system in the blood test result section. (Alert system for abnormal results)

4) OB-GYN consultation :

- Clinical interview + physical exam are conducted and findings are registered on the system

- PAP smear + Ultrasound are ordered through the radiology and laboratory section of HIS

- Check mammography : scan the mammography report and attach it to beneficiary file

- Refer to GP for NCD through referral system

Use case 2.2 - Existing patient

The baby's father visited the HC before for a prescribed intramuscular injection administration; he is above 40, asking again to do the injection. The assistant nurse checked his BP, which was 170/100. The registered nurse advises the beneficiary to do the NCD screening and see the family physician as a walk-in patient.

- Welcoming the patient : Assign a queue number for the beneficiary
- the beneficiary's name is scheduled on the appointment schedule as walk-in patient
- Open the file of the beneficiary using his ID code number or search by patient's identifiers on HIS
- the file information is updated if necessary
- Triage: NCD screening and results are documented on the HIS
- Injection administration and documentation via HIS (medication name, dose, injection route, etc..)
- Physician consultation:
    - Brief of the consultation is logged on the system
    - A future appointment is selected on the HIS calendar with an alert system to track no- show beneficiaries)

Use case - Adverse event

a 4 months old baby got his vaccination in an LRC HC. Few hours later, the baby showed pain, redness and swelling at the injection site.

Scenario 1:

-The parents reported the listed adverse events through the HIS.

-The system notified the quality control department in order to take action.

-The filled incident report is archived in the system and the HC provider is notified for further investigation.

Scenario 2:

-The adverse event was reported through the LRC hotline.

-The quality control department is notified.

-The incident is entered on the system after investigation

- the system will notify the HC provider for any additional investigation.

3. Features

1. Integration with LRC website www.redcross.org.lb
2. Integration with Whatsapp for Business to be able to send Whatsapp messages to patients
3. Integration with Salesforce CRM for feedback and complaints management
4. Advanced Reporting tool: ability to generate reports by channel, by segment, and by status of patient
5. Data Backup: all data on the system is backed up on the Cloud and on external hard disks
6. Data confidentiality: LRC able to assign roles about who can see which data, and access to H.I.S is fully logged
7. Language: system is available in English and Arabic
8. Fully mobile responsive
9. Back-end is accessible to LRC with ability to add/remove fields and forms, and to adjust/create workflows and reports

4. Deliverables

The implementation partner is requested to provide the following scope of work:

- Provide a solution that meets the objectives listed in section 2
- Provide a solution that answers to all use cases listed in section 3

- Provide a solution that contains the features listed in section 4
- Provide specific responses to all questions listed in section 5
- Solutions provided should take long term cost efficiency and special user needs into account
- Work with LRC stakeholders to design the H.I.S dashboard and reports
- Provide support for a period of at least 36 months after completion of scope of work
- Provide handover manual and in-depth training to 20 LRC staff on the use of each of the H.I.S modules and 2 super users.

4.1 Bid application documents

Interested bidders should provide the following documents within their proposal:

- A full proposal package including:
    - Proposed solutions meeting all LRC's requirement detailed above
    - Proposed methodology of implementation and change management guidelines
    - Timeline for implementation showing clearly the expected progress of each module of the CRM in addition to overall for the full project
    - Letters of recommendation from similar/comparable non-profit organizations
    - Company profile and portfolio description showing prior experience in similar projects
- Clear description of resources to be allocated to the project including:
    - CVs of appointed persons
    - Roles and responsibilities of appointed persons
    - Time that will be allocated by each role
- A full financial proposal including:
    - Cost of implementation with detailed breakdown
    - Cost of support with detailed breakdown
    - Cost of Software Licenses
    - Any discounts for non-profits should be clearly mentioned

- Payment terms should be clearly mentioned including method of payment and linked to the implementation progress

5. Bid selection criteria

LRC will only select bids meeting or exceeding the below criteria and mandatory requirements:

- Completeness and clarity of proposal
- Company portfolio
- CVs of staff that are assigned to this project and their experience with implementing similar projects with non-profits
- Letters of recommendation from similar/comparable non-profit organizations
- Financial proposal
- Timeline for implementation

Mandatory Solution Requirements

This section provides business requirements at a high-level. It is the responsibility of the appropriate vendor to elicit specific business requirements during the business requirements gathering phase of the project.

- The solution must be web-based and fully responsive.
- The solution must be implemented and live and able to be used by more than 1000 users
- The solution must have an Open API protocol.
- The solution should be able to have different types of databases (MS SQL, PostgreSQL, Oracle…).
- The solution should have the capability to be deployed on Windows or Linux.
- The solution must have readymade APIs and connectors to tier one applications.
- The solution should be available in Arabic and English by default.
- The solution should be flexible and scalable to amend future changes.