Public Notice for Submission of Quotation
Development of an Electronic Medical Record (EMR) System

The Cervical Cancer Screening and Prevention (CCSP) Project, targeting women aged 30–60 years in Biratnagar Metropolitan City, Dharan Sub-Metropolitan City, Inaruwa Municipality, and Duhabi Municipality of Koshi Province, is being implemented by Karuna Foundation Nepal in partnership with the Family Welfare Division (FWD), Department of Health Services (DoHS), Ministry of Health and Population (MoHP).

To support this initiative, Karuna Foundation Nepal hereby invites sealed quotations from qualified and experienced vendors for the development of a robust and interoperable Electronic Medical Record (EMR) system. The EMR system will enhance data accuracy, coordination, and timely interventions, with the vision of national scalability through the Government of Nepal upon successful implementation.

Objectives of the Assignment
The main objective is to design, develop, and deploy a user-friendly, secure, and scalable EMR system that integrates with the national server infrastructure and is fully compatible with GoN's HMIS/DHIS2 systems. The system must support both online and offline data entry and synchronization.

Scope of Work (Summary)
- Design and development of web and mobile-based EMR with offline functionality.
- Interoperability with DHIS2/HMIS using standard APIs/data formats.
- Hosting on government-approved server/cloud environment.
- Integration with biometrics and SMS/email services.
- Compliance with data security and health data protection policies.
- Customizable dashboards, analytics, and role-based access controls.
- Training and capacity building of end-users.
- Post-deployment support and maintenance.

Key Deliverables
- UI/UX design prototypes
- Beta version of EMR (web & mobile)
- Final validated EMR system integrated with HMIS/DHIS2
- Training materials and sessions for users
- Deployment on government server
- Technical and user documentation
- Post-deployment support report

Timeline
- UI Prototype Delivery: Within 3 weeks of contract signing
- Beta Version Release: Within 7 weeks of contract signing
- Final Release and Handover: Within 12 weeks of contract signing

Vendor Qualifications
- At least 5 years of experience in information system/software development
- Prior experience with government/I/NGO health projects
- Proven experience in system integration (preferably DHIS2/HMIS)
- Strong technical team in web/mobile development, data security, and hosting
- Nepal-based support team for rapid response

Submission Requirements
Interested vendors must submit:
- Technical proposal (including system architecture, interoperability plan, risk mitigation plan)
- Work plan and financial proposal (including all applicable taxes)
- Team composition with resumes of key experts
- Company profile and relevant past experience
- Firm registration, PAN/VAT certificate, and latest tax clearance certificate

Submission Deadline & Contact
The complete proposal (technical & financial) must be submitted in a sealed envelope clearly marked "Quotation for Development of EMR System – CCSP Project" at the following address:

Karuna Foundation Nepal
Central Office, Baluwatar, Kathmandu
Tel: 01-4513340 / 01-4513719 / 01-4510687
Mobile: +977-9851029552

Deadline for submission: 10th September 2025
Late submissions will not be entertained.
Detail Terms of Reference (ToR) and Variables are in Annex-1 and 2

Note:
Karuna Foundation Nepal reserves the right to make the final decision on the selection of vendors.
Only shortlisted vendors will be contacted for further process.

Annex-1

Development of an Electronic Medical Record (EMR) System
Terms of Reference (ToR)

1. Background

The Cervical Cancer Screening and Prevention (CCSP) Project targets women aged 30 to 60 years old in four municipalities of Koshi Province namely: Biratnagar Metropolitan City, Dharan Sub-Metropolitan City, Inaruwa Municipality, and Duhabi Municipality. To support this initiative, Karuna Foundation Nepal, in partnership with Family Welfare Division (FWD), Department of Health Services (DoHS), is seeking a qualified vendor to develop a robust and interoperable Electronic Medical Record (EMR) system. This system will enhance data accuracy, coordination, and timely interventions, with the goal of national scalability through the Government of Nepal, after successful implementation.

2. Objectives of the Assignment

The core objective is to develop and deploy a user-friendly, secure, and scalable case-based recording EMR system that seamlessly integrates with the national server infrastructure and is compatible with the existing government health information management systems (HMIS/DHIS2). It will facilitate both online and offline data collection, operating effectively across health facilities and outreach clinics.

3. Scope of Work

The selected vendor will be responsible for:

- Designing and developing a web and mobile-based EMR system with offline capabilities.
- Ensuring interoperability with GoN's HMIS/DHIS2 system through DHIS2-compliant data exchange using standard APIs or data formats, and support automated synchronization with DHIS2 national servers.
- Hosting the application and database on a government-managed server or an approved cloud server under the Ministry of Health and Population.
- Integrating the system with biometrics, and SMS/email notification services.
- Ensuring data privacy and security standards compliant with national health data protection policies.
- Providing customizable dashboard, visualizations and reports for different stakeholders, and implementing role-based entry and access controls.
- Conducting training and capacity building for users, health workers and other related stakeholders.
- Working closely with the Family Welfare Division and HMIS Section of Department of Health Services (DoHS) throughout the development and deployment process.
- Providing detailed technical documentation, including system architecture, data distionary, and API references.

- Offering post-deployment technical support and maintenance during the transition period.

4. Key Features Required

- Multi-layered user access control
- Offline data entry and synchronization
- Data export and integration with HMIS/ DHIS2
- Automated synchronization with DHIS2
- Patient profile management
- Sample labeling and barcode scanning
- Automated SMS/email alerts for patients and stakeholders
- Customized dashboards and analytics
- Secure login, audit trail, and data encryption

5. Deliverables

- UI/UX design prototypes
- Beta versions of EMR system (for both web and mobile-based versions)
- Final tested and validated EMR system
- Data integration with government systems (HMIS/DHIS2)
- Training materials and sessions for end-users
- Deployment on government server
- Technical and user documentation
- Support and troubleshooting report during the post-deployment period

6. Timeline

SN	Deliverable	Timeline
A	UI Prototype Delivery:	Within 3 weeks of contract sign
B	Beta Version Release:	Within 7 weeks of contract sign
C	Final Release and Handover:	Within 12 weeks of contract sign

7. Coordination and Oversight

The vendor will coordinate with:
- Karuna Foundation Nepal
- Family Welfare Division, DoHS, MoHP
- HMIS Section, Management Division, DoHS

Regular update meetings and technical review sessions will be held to ensure progress and alignment with national standards.

8. Vendor Qualifications

- Minimum 5 years of experience in information system development
- Prior experience working with government or I/NGOs particularly in health-related projects

- Proven experience in integrating various information systems
- Strong technical team with expertise in web/mobile development, data integration, cloud hosting and cybersecurity
- Capacity to provide post-deployment support and training with a Nepal-based team for rapid support

9. Submission Requirements
Interested vendors must submit:
1. A detailed technical proposal with system architecture, interoperability plan, risk mitigation plan
2. Work plan
3. Financial proposal (including taxes)
4. Team composition with respective expertise and resumes
5. Company profile with relevant past experiences, firm registration certificate, PAN/ VAT registration certificate
6. Latest tax clearance certificate

Annex-2

<h1 align="center">Electronic Medical Record (EMR) System Variables</h1>

EMR Dashboard:
- Number of women screened HPV DNA – Vs Target
- Number of women identified HPV DNA positive vs- screened
- Number of women screened in VIA and VIA Triage
- Number of women identified VIA positive in VIA camp & Triage vs-screened
- Number of women treated in VIA Camp & Triage vs identified
- Number of women referred to hospital from VIA camp and Triage vs identified
- Number of women received treatment from Hospital vs identified
- Number of active users
- Number of Health workers trained in EMR

Section I: HPV/DNA or VIA Camp Details -Entry only once				Remarks
1.1	Date of camp		- DD/MM/YYYY in BS	
1.2	Province District Municipality		- Dropdown	
1.3	Ward Number	Numeric	- …………… Validation from 1 to 20	

Section II: Data Entry Person Details				Remarks
2.1	Name of Data Entry Person	……………………..	- Appears once only while starting first registration	
2.2	Designation	……………………..		
2.3	Date of Registration		DD/MM/YYYY in BS	

Section III: Woman's Registration				
S. No.	Variables	Types	Coding	Remarks
3.1	Consent Taken (verbal)	String	- Yes - No	(If no stop here)
3.2	Name of Woman	String	- …………………..	-
3.3	National ID number	Numeric	-	(Optional)
3.4	Citizenship Detail		-	(Optional)

3.4.1	Citizenship Number	Numeric	-	
3.4.2	Issued district		-	Drop down list of districts
3.4.3	Issued date		- DD/MM/YY	
3.5	Biometric Scan		-	(Index Finger of Right hand)
3.5.1	If index finger not available, Specify which finger was used for biometric	String	- …….	
3.6	Age (in years)	Numeric	-	Mandatory
3.7	Date of birth		- DD/MM/YYYY (BS)- Nepali date	Optional
3.8	Province	String	-	Dropdown
3.9	District	String	-	Dropdown
3.10	Municipality	String	-	Dropdown
3.11	Ward Number	Numeric	- ……………………	- Apply 2-digit validation
3.12	Name of tole	String	- …………………..	-
3.13	Contact Number	Numeric	- 10 - digit Number	-
3.14	Marital Status of woman	String	- Never married - Married - Separate - Widow - Divorced	-
3.15	Name of Husband / Guardian	String		
3.16	Alternative contact number	Numeric	- 10- digit Number	
3.17	Have you received HPV vaccine before?	String	- Yes - No - Don't know	-
Unique ID code generated (Automatic) 3 initial letters of name, 1 digit Province code, 2 digit District code, 2 digit Palika code				
Section IV: HPV/DNA or VIA camp				
History Taking in HPV/DNA or VIA Camp				
4.1	**Menstrual History**			
4.1.1	Are you currently on your menstrual period?	String	- Yes - No	If yes, Stop here and advise her to visit in next camp after completion

			- Didn't have menstruation for more than a year	of current menstrual period
4.1.2	If no, when was your last menstrual date	String	- ……. days	
4.2	**Infection Related History**			
4.2.1	Have you ever experienced following symptoms of pelvic infection	String	- Pain in lower abdomen and pelvis - Excessive/unusual vaginal discharge with Foul Odor - Discomfort/Pain/Bleeding after sex - Heavy/Painful periods - Burning micturition - Others (specify)………………..	- Multiple Choice Question - Other than Foul discharge you can move to 4.3
	If yes to Excessive/unusual vaginal discharge with Foul odor symptom in 4.2.1. – Stop here and refer to gynecologist			-
4.3	**Family and Sexual History**			
4.3.1	Have you ever been diagnosed with any of the Sexually Transmitted Infections (STI)		- Yes - No - Don't know	- If yes go to 4.3.2,
4.3.2	If yes, which of the of the following Sexually Transmitted Infections (STIs) have you had?	String	- Gonorrhoea - Syphillis - Herpes - Chlamydia - Others (specify……….)	- Multiple choice
4.3.3	Have you been Diagnosed with HIV?	String	- Yes - No - Don't Know	If no Skip to 4.4.1
4.3.4	Have you received ART (Antiretroviral Therapy)?	String	- Yes - No	
4.3.5	How long have you been on ART?	Numeric	………. Days	-
4.4	History of Cervical Cancer and Screening			

4.4.1	Have you previously undergone cervical cancer screening?	String	- Yes - No - Don't Know	If no & don't know, skip to 4.5
4.4.2	If yes, what was the name of the test?	- String	- VIA - HPV/DNA - Pap-Smear - Unknown	Multiple choice
4.4.3	When was the test performed?	Numeric	YYYY	Year
4.4.4	What was the result of the test?	String	- Positive - Negative - Invalid - Don't know	- If test was performed within 3 years for VIA & 5 years for HPV and result was negative, stop here and call her after the completion of the test period. - If test result was positive, invalid or Don't know, then continue
4.4.5	Have you received treatment?	String	- Yes - No	- If no, skip to 4.5.1
4.4.6	Which treatment did you receive?		- Thermocoagulation - LEEP - Others (Specify) ……..	
4.4.7	When was the treatment received?	Numeric	- YYYY/MM/DD	- Send notification after one year of treatment
4.5	**If HPV /DNA camp - HPV Swab Collection**			
4.5.1	Status of HPV swab collection	String	- Yes - No	-
4.5.2	Date of swab collection	Date	- DD/MM/YYYY (BS)	-
Section V: Laboratory				
5.1	Unique ID code			Barcode/Manual
5.2	Lab ID	String		
5.3	When was the sample received at the lab?	Date	- DD/MM/YYYY (BS)	-
5.4	When was the sample analyzed?	Date	- DD/MM/YYYY (BS)	-
5.5	When was result sent?	Date	- DD/MM/YYYY (BS)	-

5.6	What is the HPV test result	String	- Negative - Sampling error - Invalid Test - Error - HPV 18 - HPV 16 - HPV Others	
Section VI:	**VIA Triage /VIA**			
Section VI: Women's history taking section				
6.1	Verbal Consent	String	- Yes - No	Including photo of cervix
6.2	Date of message sent	Date	DD/MM/YYYY (BS)- Nepali date	(Via Triage only) (Generated by system)
6.3	Date of taking Service	Date	DD/MM/YYYY (BS)- Nepali date	(Via Triage only) (Generated by system)
6.4	Examination for VIA or VIA Triage		-	-
6.4.1	Upload the photo of the cervix	JPG	-	- (optional)
6.4.2	Condition of the vulva	String	- Healthy - Any abnormality (specify….):	-
6.4.3	Condition of the vagina	String	- Healthy - Prolapse - Other abnormality (specify….):,	-
6.4.4	Observation of cervix		- Normal - Cervicitis - Cauliflower appearance/Suspected cancer - Others (Specify…….)	- If Cauliflower appearance/ cancer suspected/Refer to tertiary hospital and STOP further screening procedure, - If other than cauliflower, Start the VIA procedure
6.4.5	Upload photo of cervix after the VIA procedure	JPG	-	- (Optional)
6.4.6	Visibility of the cervix (Squamo-columnar Junctions)	String	- Completely Visible - Partially Visible - Not visible	-
6.4.7	Location of Aceto-white lesions on the cervix?	String	- No aceto-white lesions - 1st quadrant - 2nd quadrant - 3rd quadrant	-

			- 4th quadrant	
6.4.8	What is the VIA test result?	String	- Positive - Negative	If positive, skip to 6.5
6.4.9	If VIA test negative, is the woman counseled?	String	- Yes - No	
6.5	Management		-	
6.5.1	Treatment suggested		- Thermocoagulation - LEEP	If referred for LEEP, move to 6.6
6.5.2	Does the woman accept the recommended treatment?	String	- Yes - No	If yes, skip to 6.6.4
6.5.3	What are the possible reasons for refusing the treatment?	String	- Avoid sexual intercourse for six weeks after the treatment - Lack of awareness about the condition - Fear of the procedure or treatment - Financial constraints - Social or cultural beliefs/stigma - Lack of family support - Distance to the healthcare facility - Others (Specify):……….	Multiple response
6.5.4	Date of treatment provided?	Date	- DD/MM/YYYY (BS)	
6.5.5	Counselling given after the treatment?	String	- Yes - No	
6.5.6	What is the date of next visit?	Date	- DD/MM/YYYY (BS)	
6.5.7	Is a referral needed?	String	- Yes - No	If no, stop here If Yes, go to 6.6
6.6	Referral		-	
6.6.1	What are the reasons for referral?	String	- Suspected cervical cancer o Lesion > 75% o Lesion > 2mm beyond cryoprobe, including the tip of the probe o Lesion extends to vaginal wall	

			- Referred to further testing/treatment - Abnormalities due to treatment - Others (….specify)	
6.6.2	Where is the woman referred to?		-	
6.6.2.1	Province		- Dropdown	
6.6.2.2	District		- Dropdown	
6.6.2.3	Health Facility Name		- Dropdown	Link with HMIS
Section VII:	**Treatment at referral centers**		-	
7.1	Unique ID code		-	
7.2	Treatment registration Number	String	-	
7.3	What is the date of visit to the referral center?	Date	- DD/MM/YYYY (BS)	
7.4	What type treatment provided	String	- Thermocoagulation - Colposcopy - Cold Knife conization - LEEP - Abdominal radical hysterectomy - Chemotherapy - Radiotherapy - Palliative care - Other…..	Multiple response
7.5	What is the follow-up date after treatment provided?	Date	- DD/MM/YYYY (BS)	
7.6	What are the complaints during the follow up?	String	- Specify:	
7.7	What are the findings of the physical examination?	String	- Specify:	

Note:- Some of the variables may change or addition on above,