

Clinton Health Access Initiative, Inc. Request for Proposal

Consultancy Services: Integration of Human Resource for Health Information System (HRHIS) into the Rwanda Health Management Information System (HMIS).

Dated: 08 March 2022



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Purpose of the project

Clinton Health Access Initiative, Inc. (CHAI)-Rwanda Country Office, on behalf the Rwanda Human Resource for Health Secretariat (HRHS) seeks to engage a Service Provider to integrate the Human Resource for Health Information System (HRHIS) into the existing Rwanda Health Management Information System (HMIS).

The establishment of Human Resource for Health Information system (HRHIS) is essential for strengthening national health systems at all levels. Accurate health workforce data are crucial for health workforce planning, education, and training as well as improving regulation of practice, and tracking appropriate information system for decision making. In addition, a health workforce information system will uphold the coverage and quality of health care, easy access to inform on production, distribution, and utilization of health personnel, and assist in budgeting of health workforce development.

CHAI will provide financial and technical support for the integration of the HRHIS to enhance the evidence-based decision-making tied to the availability of aggregated data of health workforce and assists both national and decentralized level in producing essential health workforce staffing planning and indicator-based reports, as needed. The financial support will include the consultancy fees for customization of the HRHIS and cost for capacity building of system users. The technical support will include facilitating the recruitment of the consultancy provider, co-facilitating the stakeholders' engagement, scoping of the system and co-facilitating the workshops for rolling out of the system to the end users.

As the custodian of the HRHIS, the HRHS will oversee and provide strategic direction for the customization/integration process of the HRHIS into the HMIS. The oversight will focus on overseeing the recruitment of the consultancy provider, facilitating the stakeholders' engagement, leading the scoping of the system, and organizing the workshops for testing and rolling out of the system, and approval of completion of the consultants' deliverables. The HRH Secretariat will work closely with the MOH digital department to ensure system administration and maintenance is upheld.

RFP Instructions

RFP rules, timeline, process, and contact information

CHAI Rwanda Country office invites you as a Service Provider to submit a competitive bid by responding to this "Request for Proposal" (RFP). Please follow these instructions in completing your bid.

- Well written bids documents prepared in English, will be sent to this email address rwandaprourement@clintonhealthaccess.org, with "Consultancy Services HRHIS" in the subject line not later than 29th March 2022 at 05:00 pm Kigali local time. It shall remain your responsibility to ensure that your bids will reach the address email above on or before the deadline. Bids documents that are received by CHAI after the deadline

indicated above, for whatever reason, shall not be considered for evaluation. Only shortlisted applicants will be contacted.

- Faxed copies will not be accepted.
- Any questions/concerns/clarifications related to this tender should be addressed to CHAI Rwanda procurement Office through rwandaprocurment@clintonhealthaccess.org not later than 5 days before the deadline for submission. Any questions/concerns/clarifications received after this deadline will not be considered.
- All bids must indicate that they are valid for no less than ninety (90) days from the quotation due date.
- The development of the HRHIS is expected to start immediately following contract signature.
- CHAI Rwanda Country office reserves the right to:
 - reject any proposal without obligation or liability to the potential Service Provider;
 - withdraw this RFP at any time before or after submission of bids, without prior notice, explanation or reason;
 - modify the evaluation procedure described in this RFP;
 - accept other than the lowest price offer;
 - award a contract based on initial offers received, without discussions or requests for best and final offers;
 - decide not to award any contract to any Service Provider responding to this RFP;
 - request additional data, information, discussions, or presentations to support part of, or your entire bid proposal. All responses should be submitted in electronic format. Service Providers or their representatives must be available to discuss the details of their proposal during the evaluation process.

Required Proposal Format and Documents to Provided

Responses to this RFP must consist of the following:

1. Cover letter, which includes:

- Name and address of the Service Provider.
- Name, title, telephone number, and e-mail address of the person authorized to commit the Service Provider to a contract.
- Name, title, telephone number, and e-mail address of the person to be contacted regarding the content of the proposal, if different from above.
- A signature of this letter done by a duly authorized representative of your company.

2. Electronic copy

- Documents and spreadsheets in Office 365 format
- Diagrams and drawings in Visio 2021, PowerPoint, PDF or Office 365 format

Please do not submit generic marketing materials, broadly descriptive attachments, or other general literature.

CHAI Overview

Overview

The Clinton Health Access Initiative, Inc. (CHAI) is a global health organization committed to saving lives and reducing the burden of disease in low- and middle-income countries, while strengthening the capabilities of governments and the private sector in those countries to create and sustain high-quality health systems that can succeed without our assistance. For more information, please visit: <http://www.clintonhealthaccess.org>

CHAI Health Workforce Background:

A skilled health workforce is the backbone of every health system and therefore an essential precondition for progress toward universal health coverage (UHC). However, WHO estimates a projected shortfall of 18 million health workers by 2030, mostly in low- and lower-middle income countries. The chronic under-investment in education and training of health workers in some countries and the mismatch between education and employment strategies in relation to health systems and population needs are contributing to continuous shortages. These are compounded by difficulties in deploying health workers to rural, remote, and underserved areas. CHAI assists governments to develop their health workforce by enhancing their capacity to train highly qualified health workers and by strengthening national systems to finance, deploy, and manage those health workers.

CHAI's approach to national health workforce strengthening emphasizes three strategies:

- (i) improving the quality and strategically increasing the scale of education for health workers,
- (ii) expanding and optimizing health workforce financing, and (iii) providing technical assistance to governments to strengthen their overall health workforce planning and management systems.

Two key principles guide CHAI's approach to workforce development. The first is focusing on the right kind of health workers—from community health workers to midwives, nurses, health managers, general physicians, and medical specialists—based on national need and service delivery objectives. CHAI's approach also emphasizes sustainability by building the institutional capacity of the schools and universities where health workers are trained, training new generations of health professions educators, and developing systems and individual capabilities within governments to better plan and manage their own health workforce. CHAI's health workforce programs vary by country, as they reflect the major barriers and opportunities to workforce development in that specific context, as well as the priorities of the host

government. Currently, CHAI is focused on health workforce programming in Ethiopia, Kenya, Malawi, Nigeria, Rwanda, Zambia, and Zimbabwe.

Background and Context of this RFP

One of the key pillars of Rwanda's effort to achieve Universal Health Coverage is the development of a national health workforce that can appropriately respond to the health needs of the population. To address this need, the Government of Rwanda launched the National Strategy for Health Professions Development (NSHPD 2030) to substantially increase the accessibility and coverage of high-quality health services across Rwanda by ensuring the availability of a qualified, competent, and equitably distributed health workforce. Over the course of ten years, the strategy will produce more than 6513 health care professionals that will graduate from 37+ prioritized programs.

The government of Rwanda established a national Human Resource for Health Secretariat (HRHS) with a mandate to build health education infrastructure and capacity of health workforce necessary to create a high-quality and sustainable healthcare system. Specifically, the HRHS focus on overseeing the health professional education and training in public and private institutions to ensure the quality of health professional training, advocating for adequate infrastructure and equipment for quality health professional education, putting in place strategies to attract student's enrollment in health profession education, coordinating the teaching sites expansion, coordinating academic partnership in health sector at national, regional and international level, providing support in teaching hospital reforms, and ensuring the quality of health professional teaching. The HRHS intends to use a robust Monitoring and Evaluation (M&E) system with an integrated Human Resource for Health Information System (HRHIS) to track the progress of the implementation of these strategic objectives.

Stronger Human Resource for Health information system (HRHIS) is required to track HRH results and to strengthen availability of quality of data for decision making. The HRHIS is expected to track the sustainable capacity of learning institutions to produce health professionals required to meet the country staffing norms, along with the absorption, equitable distribution, utilization, continuous development of health professionals in all public and private health facilities. The HRHIS will be extended to University of Rwanda College of Medicine and Health Sciences (UR-CMHS), the primary public training institution, and other Higher Learning Institutions (HLIs) as the point of entry into pre-service training so that the learning institutions may monitor the production of health professionals. Similarly, the HRHIS will be expanded to health facilities to track the absorption, distribution, utilization of health professionals in public and private health sector. Finally, the HRHIS will be expanded to health professional councils and associations to track the licensing and continuous development of health professions. The HRHS will work closely with the World Health Organization (WHO) to ensure the system is aligned with the WHO recommended National Health Workforce Accounts (NHWA) and minimum Data Set for Health Workforce Registry. The system will be integrated into Rwanda Health Management Information System (HMIS) built in a DHIS2 platform.

Objectives of this RFP

The objective of this RFP is to invite and contract an experienced institution to customize and integrate a human resource for health information system (HRHIS) into the existing Rwanda health management information system (HMIS).

The following three (3) sections provide details of the expected HRHIS structure and functionalities, the service provider's responsibilities and the deliverables expected from the service provider.

System Structure and Functionalities

The information system shall have the following integrated modules:

Module 1: Pre-service training registry: this registry will store information for student admission in health professional education programs (public and private), link to future health workforce needs, and project possible impact of various enrolment scenarios on health workforce targets. This module must be able to track individual student's progress from admission up to graduation for each academic year. This module will be based on the workflows at the University of Rwanda and other major public and private training institutions and tracks the enrollment, student progress, and graduation across health professionals training programs and cycle.

Module 2: Health workforce licensing and continuous development program (CPD): this sub-system will track registration, licensing and continuous professional development including in the areas of professionalism, code of ethics for active health professionals. The sub-system will also record the management of health professional's malpractices and disciplinary measures for health professionals deviating from the code of conduct. It will be used by health professional councils, health professionals' associations and other regulatory bodies. The HRHS will provide technical support to Health Professional Councils to manage records for registration and licensing of health professionals.

Module 3: Health workforce deployment and utilization: this sub-system will track the health workforce at public and private health facilities. This module must be able to manage workforce recruitment, movement, promotions, retention, and exit. It will be used at all levels of health care services delivery including all public health facilities (teaching hospitals, referral hospitals, provincial hospitals, specialized hospitals, district hospitals, health centers and health posts) and private health facilities (hospitals, clinics, and dispensaries, etc). In addition, health professionals serving as faculty in health teaching institutions and teaching sites will be recorded. This sub-system must provide data on unemployed, and out of the health workforce professionals as well.

In term of **functionalities** The HRHIS is expected to have at the minimum the following features:

- A system-wide unique identifier of trained health professionals built on national ID that will be consistently used to map and link individuals from the entry into pre-service

training through the professional councils' registry to deployment and activity in health facilities.

- A system with capabilities to allow users to collect, capture, upload, edit, store and download individual data of health workforce and corresponding attributes as per the country staffing norms and WHO guidelines.
- Support for slow and intermittent internet connectivity to use the system. The HRHIS will permit for offline data access/entry capabilities and using android data entry functionalities.
- Simple and user-friendly interface to update current information which will be easily applied by users with low IT literacy levels and minimal training. The systems will be on the back end of existing systems and workflows, and where necessary, improve existing workflows by digitizing their processes instead of a parallel reporting system.
- Interactive, dynamic, and downloadable dashboards and standard reports for key performance indicators that will provide stakeholders with consistent, accurate and reliable data required for monitoring, decision making, and reporting.
- Capacity to enable data interoperability across HRHIS modules linking pre-service data to licensing and deployment.
- Integrate the formula for indicator calculation based on a combination of data elements and considering different multiplier factors including staffing norms, pipeline, and projected population.
- Search algorithms to enable users easily track the status of the health professionals across modules.
- Robust modules to enforce data quality, data privacy, confidentiality, and data security algorithms. The HRHIS will implement a dynamic user access control to define different user roles in the system.
- A system-generated student/health professional profile to enable the students and health professionals to view information on their status.
- Geographic Information System (GIS) capabilities to enable users to collect location data such as GPS coordinates as may be required and/or aligning with the existing GIS data such as shape files to generate digital analytical maps.

Tasks of the consultants

The service provider is responsible to provide services as defined here:

- Participate in a kickoff meeting with relevant stakeholders (MOH, HRHS, UR-CMHS, health teaching institutions, health professional councils and health facilities) to determine the system functionalities, end users' requirements, workflows, and data to be collected.
- Organize consultation with stakeholders to clarify and determine responsibilities for system management.
- Appraisal of existing HRH Information Systems (IS) and tools in use in Rwanda and conduct a desk review of the relevant documents to understand the nature of the individual and aggregated reports that will be generated from the system to respond to global, national and sites data demand and use.

- Review existing data collected on health workforce, identify data gaps, and prioritize attributes for data collection, and propose a data model for the types of data to be collected, stored, and published on the HRHIS.
- Provide an inception report outlining the challenges in HRH data management and detailing the system customization process and phases including system design, program indicators calculation, individual to aggregate and dashboard, and data ownership for all stakeholders.
- Prepare a detailed activity plan defining activities, milestones, deliverables, resources, and time estimates according to the requirements. The activity plan should include prioritization of the requirements and regular scheduled releases.
- Perform the customization of prioritized attributes to the MOH staffing norms, existing health workforce pipeline modeling, performance indicators, and alignment with WHO National Health Workforce Accounts (NHWA). The customization should prioritize key attributes for health workers namely education level, cadres, distribution, pre- and in-service training, and professional development.
- Ensure data interoperability with existing systems and possibility for integration with government of Rwanda social and health systems.
- Install and configure the system to run on MOH servers after the final prototype has been approved to be used for production purposes and ensure user acceptance test (UAT) is conducted.
- Pilot the HRHIS in a controlled environment with selected training institutions and health facilities before national rollout.
- Develop the Standards Operating Procedures to clarify procedures, roles, and responsibilities for data management.
- Integrate interactive user guides such as product tours and tooltips and provide a comprehensive user training manual with complete visual aids which the users will comfortably and independently use to teach themselves how to navigate and apply the system.
- Organize and conduct training for central level users of the system who will include system administrators, system support users, and data managers in selected teaching institutions and health facilities.
- Provide at least one-year ongoing maintenance support on the application of the system by addressing the identified bugs in the system and conducting performance improvements on the deployed features.
- Ensure capacity is transferred to all HRHIS users at different levels according to different user roles (system administration, data capture, data users). The HRHS will be accountable for system administration at central level while learning institutions, health professional councils and health facilities will access data capture and data use.
- Develop a clear transition plan and ensure the transition of governance and technical maintenance of the system to HRHS.

Deliverables

The service provider selected will be required to provide the following deliverables:

- An inception report describing the system functionalities and an activity plan detailing phases of development of HRHIS.
- System design specification document with prioritized requirements.
- Regular and phased releases of the HRHIS for testing throughout the customization process.
- Automated issue tracking system to track the progress of customization, record, and resolution of bugs.
- Working prototype including configured data collection app, dashboards, installed on servers.
- User and training manual including PowerPoint slides for training users.
- Standards Operating Procedures to clarify procedures, roles, and responsibilities for data management.
- Monthly progress reports.
- One-year ongoing maintenance plan to fix Bug using DHIS2 GitHub.
- Final consultancy report.

Note: Service Provider effectiveness will be measured for each deliverable.

Requirements

Desired Profile of the experts

- Proven experience in developing, maintaining, and implementing database-based information systems in DHIS2 systems (individual and aggregated) and using the DHIS2 API of key technical team of experts.
- Team of experts with master's degree in one or a mix of the following areas: health information systems, data science, computer science, information systems, software engineering or related fields and with at least one expert specialized in HRH.
- Proven experience in iHRIS software, WHO-National Health Workforce Accounts (NHWA) database as well as Android and USSD application program development and system integration.
- Experience in UI & UX design for web and mobile, code reviews and automation.
- Familiarity with web security protocols.
- Excellent communication skills.
- Experience with time-series and panel data analysis will be an added advantage.

Technical Proposal

Submissions must contain a technical proposal, submit in Word or PDF format, containing at the minimum the following sections:

- Detailed methodology and technical implementation approach. This will also include a simulated concept design of the proposed HRHIS.
- Detailed work plan with estimated and reasonable timelines for each deliverable.
- A plan for extended support/maintenance services of the system
- Biographies, and responsibilities for the proposed key administrative and technical team of experts who will serve on this consultancy. CVs to be provided as annexes.
- Three letters of reference and certificates of completion of similar or related projects performed in the past three years encompassing the following information:
 - Customer name, Type of service provided, contact name, Contact phone and e-mail.

Financial Proposal

Financial proposals must be submitted separately from the technical proposal and should provide full details of the financial offer and reasonably priced as part of the financial proposal.

- Fixed costs for the experts.
- Separate listings for material cost (including any required software licenses or printing), logistic and travel cost where applicable (flights, in country transportation and logging) and per-diems.
- Any additional fixed costs or overheads.

Prices should be submitted inclusive of any applicable taxes and in US\$ for international applicants. Local companies are required to submit their offer in Rwf. However, for comparison purpose, CHAI will use the average exchange rate of BNR of the proposal submission deadline date.

Evaluation Criteria

Decision Making Process

The decision to award a contract because of this RFP process will be based on Service Provider's responses to this RFP and any subsequent negotiations or discussions. The decision-making process will consider the ability of the Service Provider to fulfil requirements as outlined in this RFP and the cost of doing so. CHAI Rwanda Country office will consider proposals based on their

total score (technical + financial). Proposals will be evaluated against the following criteria:

| # | Evaluation Criteria | Maximum Score |
|-------------|---|---------------|
| 1 | Technical proposal | 20 |
| 2 | Applicants' relevant capacity and past performance in developing similar information systems. | 30 |
| 3 | Qualifications and experience of the proposed development team. | 30 |
| 4 | Financial proposal - value for money. | 20 |
| Total Score | | 100 |