REQUEST FOR PROPOSALS (RFP) FOR THE INSTALLATION OF PIPING AND OXYGEN WALL OUTLETS FOR THE MALACATÁN NATIONAL HOSPITAL IN THE CITY OF MALACATÁN, SAN MARCOS, GUATEMALA

Summary of deadlines

Release request for proposals	**August 31, 2023**
Proposal Expiration/Last Proposal Submission Date	**September 14, 2023** **5pm EST**

Clinton Health Access Initiative (CHAI) invites interested and capable organizations to submit proposals to install piping and oxygen wall outlets for Malacatán National Hospital in the city of Malacatán, San Marcos in Guatemala.

If you choose to submit your quote in response to this RFP, please electronically submit your submission to Manuel Córdova, COVID-19 Regional Associate, Latin America, at mcordova@clintonhealthaccess.org before 5pm (EST) on Thursday, September 14, 2023.

Questions related to this RFP should be sent to Manuel Córdova to the email mentioned above.

BACKGROUND

A. CLINTON HEALTH ACCESS INITIATIVE (CHAI)

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 capacities of governments and the private sector in those countries. to create and maintain high-quality health systems that can succeed without our help. For more information, visit:www.clintonhealthaccess.org

B. THE PROGRAM: OXYGEN TECHNICAL ASSISTANCE

The first case of SARS-CoV-2 was registered in Latin America on February 26, 2020, when Brazil confirmed the presence of the virus in Sao Paulo, and since then, more than 46 million cases have been registered in the region. According to the statistics of the World Health Organization (WHO), in 2020, Latin America and the Caribbean was the region with the highest number of confirmed cases worldwide, representing a quarter of the total cases worldwide.

Latin America bore one of the highest burdens of COVID-19 in the world and its health systems are among the hardest hit by the pandemic. Despite initial progress in preparing for an emergency response, many countries in the region continue to experience difficulties in providing quality and timely care to patients. Documented gaps have included limited testing capacity, difficulty connecting the patient care pathway with a single information system, limited capacity to implement oxygen therapy, drug stockouts, ICU saturation, and delays in implementation of a vaccination strategy or limited access to vaccines.

Since July 2021, CHAI began supporting Ecuador and Guatemala with a new program focused on strengthening the medical oxygen technical capacity of those two countries. Under the new Oxygen Technical Assistance Program, financed by UNITAID, CHAI is working with the Ministries of Health in the prioritization of hospitals, in different departments of the aforementioned countries. Program interventions included: a) improvement of hospital infrastructure, b) training in clinical aspects of oxygen therapy and also in the prognosis of oxygen and related products, c) development of preventive and corrective maintenance programs for each of the hospitals prioritized, d) acquisition of health services supplies, among others.

c. TECHNICAL ASSISTANCE AT MALACATÁN NATIONAL HOSPITAL

It is imperative to bolster critical care capabilities and enhance hospital capacities to provide appropriate care for patients impacted by COVID-19. The timely availability of oxygen can prove pivotal in ensuring optimal patient outcomes. Notably, oxygen is classified as an essential medicine by the World Health Organization (WHO). However, despite its essential status, access to and distribution of oxygen remains inadequate, particularly in developing

nations. The primary obstacles to oxygen access are frequently attributed to cost constraints and insufficient infrastructure.

Within the public hospitals of Guatemala, there are three primary models for medical oxygen supply in common use: concentrators, cylinders, and cryogenic liquid oxygen tanks. Among these, cryogenic liquid oxygen tanks serve as the principal supply source for secondary, tertiary, and specialized hospitals. For the effective distribution and provision of medical oxygen from liquid oxygen tanks, hospitals have established infrastructure comprising pipelines and oxygen outlets.

Efforts have been underway to enhance the oxygen bed infrastructure within hospitals to address the escalated demand arising from COVID-19 patients in need of medical oxygen support. However, not all healthcare units possess oxygen support capabilities, which restricts the hospitals' capacity to provide comprehensive care involving oxygen therapy for both COVID-19 patients and those with other medical conditions.

CHAI's Oxygen Technical Assistance (TA) Program in Guatemala encompasses the assessment of priority healthcare facilities to determine optimal locations for new equipment and services. This assessment involves evaluating existing infrastructure, the range of medical care provided, and the proficiency of the staff. Additionally, the long-term considerations for oxygen availability, such as network design or optimization for oxygen generation and distribution, can be integrated into this stage.

As part of this assessment, there has been an identified need to support the Malacatán National Hospital. The overarching objective is to enhance the hospital's infrastructure for oxygen distribution to patients. The installation of oxygen outlets will significantly augment the hospital's patient care capacity. Consequently, this advancement signifies a notable enhancement in the quality of healthcare accessible to the population. This CHAI intervention is poised to yield a remarkable outcome, aiming double the coverage capacity of beds equipped with oxygen outlets.

SCOPE OF WORK

The purpose of this Request for Proposals (RFP) is to invite qualified bids for the installation of medical-grade piping, including 69 oxygen wall outlets, along with relevant accessories and components, at the Malacatán National Hospital situated in the City of Malacatán, San Marcos, Guatemala.

The primary aim is to enhance the medical oxygen distribution within the facilities of the Malacatán Hospital. This will be achieved through the deployment of a pipeline system, oxygen outlets, and their associated accessories. Additionally, the project entails conducting preventive maintenance on the current wall outlets to ensure their optimal functionality.

A. TECHNICAL SPECIFICATIONS

The following are the technical specifications that the supplier must meet for the Installation, materials and devices. Please download the technical specifications checklist (Excel file), complete and include in your application. If you are unable to Access this link, please contact us via macordova@clintonhealthaccess.org and we will email the document to you.

Technical requirements

Installation of piping, wall outlets and flowmeters for the Malacatán Hospital, which includes:

- Type "L" copper tubing.
- Accessories (valves and control boxes) and consumables necessary to cover the selected hospital services.
- Installation of the pipe for interconnection of the intensive area with the main network that is connected to the cryogenic tank.
- Devices
    - 69 simple wall outlets for medical oxygen

Service	Oxygen wall outlet quantity
Observation (emergency)	3
Adult emergency	3
Pediatric / neonatal observation	5
Pediatric / neonatal emergency	3
Gynecology emergency	2
Labor and delivery	8
Intensive care unit	11
Hemodialysis	2
Surgery women	4
Maternity	12
Men’s Medicine	6
Pediatric ICU	8
Men’s traumatology	2
Total	**69**

    - 61 single oxygen flowmeters, Flow capacity: 15 lpm.
    - 8 single oxygen flowmeters, Flow capacity: 1 lpm.
- • Installation and performance tests.

APPLICATION TO THE PROJECT

CHAI's Oxygen Technical Assistance Program conducted a comprehensive assessment of the Hospital's requirements for enhancing its medical oxygen network, with a particular focus on critical care units. These evaluations encompassed an analysis of the existing infrastructure,

the range of healthcare services provided, and the technical proficiency of the staff. It is worth noting, however, that there are specific intricacies pertaining to the installation of the equipment that necessitate evaluation by the suppliers. This evaluation process must also ensure strict adherence to all relevant standards in the specific areas where the equipment is intended to be installed.

To apply to this RFP, applicants must provide (1) a completed application form (Sections 1 and 2); and (2) a complete budget template (collectively "Materials"). Completed applications will be reviewed and agreed between the CHAI afterwards. Proposed budgets should not exceed USD $65,000 and proposed delivery times should not take more than 2 months to implement.

SECTION 1: BENEFICIARY INFORMATION

1. **Name of the beneficiary organization:**

2. **Contact information (include contact name, address, phone number, and email):**
3. **Total budget requested:**

4. **Commercial references:**

5. **Provide a brief description of the organization.**

6. **Provide information on experiences related to the work area.**

SECTION 2: PROJECT INFORMATION

1. **Description of the project and deliverables**

2. **Major activities with due dates and deliverable schedule (make sure the activities shown here match the activities shown in the budget template):**

Activity(s) / Deliverables	Description	Estimated date of completion

3. **How will this project contribute to the optimization of oxygen delivery to patients in the country or to what extent will it contribute to improving it?**

4. **How will you carry out the project within the indicated time frame? If the project is urgent (for example, funding must be ready before the XX date to achieve the proposed results), please indicate it here.**

OFFER ELIGIBILITY AND QUALIFICATION

ELIGIBILITY

The RFP is open to companies that meet the following criteria:

Certificate

- ISO9001:2015
- NFPA-99 (National Fire Protection Association)
- NITC (Inspection Test Certification).
- ASSE (American Society for Sanitary Engineering).
- DOT (Department of Transportation) of the United States of America
- ASTM (American Society for Mechanical Engineering)
- ASSE 6020 (Inspectors of Medical Gas Systems) endorsed by NFPA and NITC.
- ASSE 6010, (Medical Gas Systems Welder and Installer) endorsed by NFPA and NITC,

Suppliers will agree to establish a temporary project team structure that includes the participation of CHAI, as well as arrange regular meetings (in person or via telecommunications) and on-site when necessary.

QUALIFICATION OF OFFERS

Bid qualification criteria:

a. The determination of the qualifications for the selection of the winning offer will be made according to the criteria described below:

SUBMISSION CHECKLIST

The supplier will receive a rating of up to 60% of the total qualification based on compliance with the following specifications:

Category	Requirement
Design	According to HTM-02-01 or NFPA99
	BOQ aligns with DWGs
	Claims of all flows to TUs
	Claims of maximum pressure loss through system
Experience	At least 3 years experience in designing and setting medical gas pipeline networks for hospitals/medical facilities in [country] or low- and middle-income countries. Please attached a detailed relevant work history.

Category	Requirement
	Documentation of personnel training/qualifications, which may include: - CV of lead system design engineer - Certifications of personnel installing the system - Summary of training program supplier requires of technical team involved in design & install
Training	Certifications of personnel and CV of the Lead System Design Engineer
	Documentation summarizing the training program that the supplier requires of all engineers involved in medical gas system installation and design
Warranty	All components should have at least 2 year' warranty period after commissioning
	The supplier must ensure the availability of spare parts for at least 5 years
	Within the warranty period, the manufacturer will be responsible for the prompt repair of malfunctioning equipment within the system
Testing and commissioning	On-site: Inspection, testing and commission should be done before handover
Regulatory and Standards for pipelines	Certificate of Quality Management System (either ISO 9001 or ISO 13485 with scope clearly defined)
	ISO 7396-1: Medical gas pipeline systems — Part 1: Pipeline systems for compressed medical gases and vacuum Note: Statement of compliance to be provided by the company carrying out design and installation
	ISO 9170-1: Terminal units for medical gas pipeline systems
	BS EN 13348: Copper and coppery alloys. Seamless, round copper tubes for medical gases or vacuum
Regulatory and Standards for pipelines	BS EN 1057: Copper and copper alloys. Seamless, round copper tubes for water and gas in sanitary and heating applications (*n.b. this standard is used for dimensioning of piping)
	EN 1254-1: Copper and copper alloys - Plumbing fittings - Fittings with ends for capillary soldering or capillary brazing to copper tubes
	EN 1254-4: Copper and copper alloys - Plumbing fittings - Fittings combining other end connections with capillary or compression ends
Regulatory and Standards for medical devices	Certified Quality Management Systems (ISO 13485)
	Regulatory approval under SRA (CE under MDR or US FDA) for all medical devices included in the BOQ such as manifolds, terminal units, flowmeters, and humidifiers
	ISO 10524-2: Pressure regulators for use with medical grade gases (for manifolds)
	ISO 21969: High-pressure flexible connections for use with medical gas systems (for manifolds)

FLOWETERS

The supplier will receive a rating of up to 20% of the total qualification based on compliance with the following specifications:

Product	Spec category	Specs, WHO-UNICEF
Flowmeter, Thorpe tube, pressure compensated	Description	A device intended to measure and regulate the flow of a medical gas [e.g. oxygen (O2), carbon dioxide (CO2), nitrous oxide (N2O), helium/oxygen gas mixture (heliox), medical air] during various procedures (e.g. therapeutic administration, anaesthesia, insufflation during surgery). It consists of an upright tube containing a float, which rises and falls in relation to gas flow, and a distal valve (compensated flowmeter) to control gas flow rate. It will be calibrated to a specific medical gas and have a dedicated flow rate range, therefore some types may be dedicated to a specific patient group (e.g. neonate, infant, adult) or clinical use. (SOURCE: GMDN) Oxygen respiration flowmeters are intended for use with a variety of oxygen-supply systems such as central piped systems, cylinders valves, or concentrators and are connected to various delivery modalities or interfaces such as to a patient circuit or a medical device that uses or delivers the gas, including nasal cannulae or various types of mask-patient interfaces.
	Technical	Device suitable for use with medical oxygen
		Thorpe tube flowmeter type, contains inlet and outlet port, a flow regulator, a valve and a clear measuring tube
		Flowmeters to measure and regulate flow from an already pressure-reduced and regulated oxygen source to the patient or other medical device
		Pressure compensated flowmeters, calibrated at 345–380 kPa (3.4–3.8 bar, 50–55 psi) inlet gauge pressure.
		Max gauge inlet pressure 690 kPa (6.9 bar, 100 psi).
		Flow adjustment knobs to have rough surface to prevent slipping.
		Flowmeters calibrated to the following flow range, all metric (specify):
		0-3.5 L/min, accuracy 10%, *dual taper graduations 0.25 L/min (0–1 L/min range) and 0.5 L/min (1 L/min – maximum range), or single taper graduations 0.25 L/min full range*
		0-15 L/min, accuracy 10%, *dual taper graduations 0.5 L/min (0-5 L/min range) and 1 L/min (5 L/min – maximum range)*
		All minimum flowrates to be zero when fully closed
		All graduations to be clearly visible for 270 degrees (most breadth for provider vantage points)
		Inlet and outlet ports to be clearly specified and will in part be determined by use case (suitable for connection to centralized system):
		Piped source inlet: Connection to a terminal unit / bedside unit (e.g. from a piped oxygen network)
		Specify adapter for inlet connection: CHEMETRON

Product	Spec category	Specs, WHO-UNICEF
		Outlets: Specify outlet adapter, e.g., "Christmas tree" barbed tubing adapter, DISS (9/16 inch-18) female to barbed 1/4 inch ID (M) hose connector, DISS humidifier adapter
		Flowmeter material:
		Column to be transparent, clear, shatter-reistant, medical-grade polymer (polypropylene, polycarbonate)
		Hardware/valves: Brass/steel/aluminium
		All materials in contact with oxygen certified for medical use.
		Internal parts (e.g. valve, inlet filter if present), replaceable by user.
		Environmental
		Capable of being stored in ambient temperature of at least 5–50 °C, relative humidity of at least 15–95% non condensing.
		Suitable for continuous operation in ambient temperature of at least 5–45 °C, relative humidity of at least 15–90% non condensing.
		Specific requirements for altitude may be required, depending on the installation site.
		Disinfectable with hospital grade detergents.
	Warranty	5 years (min. 2)
	QMS	ISO 13485 (medical device QMS)
		ISO 14971 (application of risk management)
	Regulatory	CE
		FDA
	Product performance standards	ISO 32 Gas cylinders for medical use — Marking for identification of content (or ANSI equivalent)
		ISO 5359 Low-pressure hose assemblies for use with medical gases.
		ISO 15001 Anaesthetic and respiratory equipment – Compatibility with oxygen.
		ISO 15002 Flow-metering devices for connection to terminal units of medical gas pipeline systems.
		ISO 15223-1 Medical devices – Symbols to be used with medical device labels, labelling and information to be supplied – Part 1: General requirements.
		ISO 18082 Anaesthetic and respiratory equipment – Dimensions of non-interchangeable screw-threaded (NIST) low-pressure connectors for medical gases.
		ISO 18562 Biocompatibility evaluation of breathing gas pathways in healthcare applications.

PRICE:

The offer with the lowest price will automatically obtain twenty (20%) points; the other offers will have a rating inversely proportional to the first one, according to the value of its offer. For which the following formula should be taken:

$$\frac{\text{Lowest Price Offered X 20}}{\text{N-value}}$$

Value N = Offer price to qualify.

OTHER INFORMATION

Failure to provide all information required by the RFP or submitting a bid that does not respond to the RFP in all respects will be the responsibility of the bidder and may result in bid rejection or disqualification.

CHAI shall have the right to seek any additional information or documents from the Bidder in the manner it deems appropriate in its sole and absolute discretion.

The offer prepared by the bidder, as well as all correspondence and documents related to the offer exchanged between the bidder and CHAI will be written only in the Spanish language. However, in case the bidder chooses to attach certain supporting documents in any language other than Spanish, the bidder must also attach certified/true translated copies thereof in English. Any document that is not translated into Spanish will not be considered and the offer will be considered incomplete and therefore subject to disqualification.

All prices quoted in the offer will be quoted in US dollars.

CHAI will review bids to determine if they are complete, meet all RFP conditions, and if documents have been properly signed and bids are generally in order. If there is a discrepancy between words and figures, the amount in figures may be used as the prevailing amount.

Disclaimer

Distribution of this document does not mean that CHAI is committing to award a contract or fund an applicant.

CHAI will not reimburse or assume any costs associated with this RFP regardless of whether an organization is selected to supply.

Please note that no fee is required to submit these requests.

CHAI makes no representation or warranty and will not incur any liability under any law as to the accuracy, reliability or completeness of the information contained in the RFP.

confidentiality

Information that the Responder considers proprietary must be clearly marked as such. All such information will be treated confidentially and used by the CHAI team for evaluation purposes only.

CHAI code of conduct for suppliers:

The CHAI code of conduct for suppliers is a minimum set of requirements that suppliers must meet to qualify to do business with CHAI and remain in good standing with the organization. Please read the document via this link CHAI Code of Conduct for Suppliers and apply for this solicitation only if your organization can comply with these requirements.