**TERMS OF REFERENCE**

| **Distribution, installation and capacity transfer on use and management of Oxygen equipment to 100 Health facilities** | | |
|---|---|---|
| **Title** | Provision of Medical and Biomedical Expertise for On-site readiness assessment, Training, and Installation of Oxygen Equipment in 100 Health Facilities (50 Health Centres and 50 Hospitals) | |
| **Level** | Institutional Contractor | |
| **Duration** | 30 working days spread over one and a half months | |
| **Start Date** | From: 01 August 2025 | To: 15 September 2025 |
| **Reporting to** | UNICEF Rwanda, Health, Nutrition and ECD | |

## 1. Context, Background and Justification

Rwanda has made substantial strides in strengthening oxygen access across its health system. In 2014/15 UNICEF established an oxygen plant in one of the Hospitals in Ruhengeri Hospital, provided oxygen cylinders and a plan for distributing oxygen to the nearby Hospitals in the Northern and western Provinces. Between 2020 and 2022, national production capacity surged from 115 $Nm^3$ to 546 $Nm^3$ per day—a more than 600% increase—through the installation of 26 public Pressure Swing Adsorption (PSA) plants, expanding piped oxygen access in nearly all hospital units. Complementary investments include the nationwide distribution of pulse oximeters, training of over 1,650 healthcare workers, and establishment of a national quality assurance framework led by RBC, which embeds standardized SOPs, audits, and maintenance protocols into the Health Sector Strategic Plan V (HSSP V) 2024/25–2028/29. UNICEF has played a critical role by procuring and distributing essential oxygen equipment—including oxygen concentrators, pulse oximeters, CPAP machines, and oxygen delivery kits targeting particularly at maternity wards, neonatal units, and child health services in hospitals, health centers, and health posts across the country. These interventions have significantly improved clinical oxygen availability in 513 health centers and 48 hospitals, strengthening the continuum of care for newborns and children.

Despite this progress, key challenges persist in ensuring sustainability and equitable access. Initial assessments found that only 35% of hospitals had piped oxygen, and many rural districts still underutilize installed capacity due to intermittent electricity, weak diagnostics, and inconsistent maintenance. Operational costs have also risen—particularly energy expenses linked to PSA plant functioning, which have doubled power bills in some hospitals—prompting calls for preferential electricity tariffs. Furthermore, the current flat, hourly-based insurance reimbursement model fails to account for actual oxygen usage, leading to cost-recovery difficulties at facility level. In response, Rwanda's National Oxygen Strategy (2024–2027) outlines remedial actions, including transitioning to volume- or case-based reimbursement mechanisms, improving equipment maintenance systems, enhancing local technician capacity, and ensuring a reliable oxygen supply chain across all levels of care. This will cover 27.4% of the nationally identified gap. To enhance oxygen therapy access and strengthen Maternal, Newborn, and Child Health (MNCH) outcomes, the Ministry of Health (MoH), Rwanda, through Rwanda Biomedical Centre (RBC) and in collaboration with UNICEF and the Rwanda Pediatric Association (RPA), is deploying oxygen blenders and low flowmeters to 50 hospitals and oxygen concentrators with accessories to 50 health centers. These devices play a critical role in preventing and treating hypoxemia, particularly among neonates and children.

While procurement and centralized warehousing for the blenders and flowmeters are completed, there is a need for expert support to ensure proper installation, training, and sustainable system integration

at facility level. In this regard, services for a contractor are required to l facilitate the planning, training, installation, and virtual post-installation follow-up in collaboration with RBC and RPC, who will provide leadership for coordination, continued onsite cascade support and mentorship through existing health system structure in urban areas.

## 2. Purpose, Objectives and Scope of Oxygen interventions

### 2.1 Purpose and Objectives

To ensure the effective, safe, and sustainable deployment, installation, and capacity transfer in effective utilization of oxygen blenders, flowmeters, concentrators, and allocated accessories across designated 100 health facilities in Rwanda.

**Specific Objectives**

1) Develop a comprehensive deployment and installation plan aligned with UNICEF and MoH priorities shared with quotation.
2) Install and test oxygen blenders and flowmeters in 50 hospitals, and oxygen concentrators in 50 health centers.
3) Conduct orientation and training of health care providers and local biomedical technicians on device usage, basic troubleshooting, handling, and preventive maintenance.
4) Support development and dissemination of Standard Operating Procedures (SOPs), visual job aids, and maintenance plans.
5) Assess and report on the readiness of facility infrastructure and supply chain for oxygen therapy equipment use and replenishment.
6) Ensure capacity transfer to health facilities staff teams through onsite and remote follow-up with recipient health facilities and reporting back to RBC and UNICEF after distribution to all 100 health facilities highlighting improvement plan.

### 2.2 Scope and Specific tasks.

The contractor will develop and share an implementation schedule with detailed quotations and a route map, and coordinate closely with UNICEF, RBC, and MoH. Responsibilities include the delivery, installation, and commissioning of oxygen blenders and flowmeters in hospitals, and oxygen concentrators in health centers. The contractor will also conduct rapid assessments of oxygen infrastructure readiness, provide on-site training for 2–3 staff per facility on equipment use and maintenance, and supply tailored SOPs and job aids. A final comprehensive technical report covering distribution, infrastructure findings, and sustainability recommendations will be submitted upon completion.

**Specific Tasks to be undertaken by the contractor include the following**

- **Pre-deployment Planning and Coordination – which include c**onducting inception meetings with UNICEF, MoH, RBC, and partners to align priorities, review and validation of the distribution and deployment workplans , coordinating with UNICEF, RBC, MoH, RPA, oxygen experts and health facilities managers to finalize site lists and assign focal points, confirming

equipment quantities, specifications, and accessory needs for individual beneficiary health facilities to a final deployment plan with schedules and designated focal persons.

- **On-site Delivery, Installation, and Testing** – To deliver and install oxygen concentrators, blenders, flowmeters, and accessories to health facilities, perform functionality testing, calibration, and equipment tagging, record serial numbers and update inventory systems, complete installation checklists and technical handover reports and delivery notes. To fully install, test, and commission oxygen systems with signed handover.
- **On-site Training and Capacity Transfer** - Conduct interactive training sessions for biomedical technicians, nurses, and clinicians on equipment use and maintenance, cover oxygen therapy protocols, daily maintenance, and infection prevention/control measures, distribute SOPs, quick reference guides, and maintenance toolkits, identify and mentor facility focal persons to ensure ongoing equipment upkeep and effective use. This will ensure trained staff with distributed materials and strengthened local ownership.
- **Remote Mentorship and Follow-up Support** – Through onsite and virtual follow-up calls and troubleshooting support with trained facility focal points, monitoring equipment usage, document challenges, and guide resolutions as well as reinforcing maintenance protocols and accessory management remotely. This will enable documented support logs and resolved technical issues.
- **Monitoring, Evaluation, and Reporting (health facility assessment)** – This will entailed collecting and analyzing data on equipment functionality, usage, and maintenance compliance, onsite readiness assessment of staff knowledge retention and operational confidence, preparing and submitting a consolidated technical and narrative report with lessons learned and recommendations to enhance oxygen therapy in target primary health care facilities. A final report highlighting performance metrics, best practices, and recommendations to inform institutionalization, effective and sustainable use, and replenishment of the supplied oxygen equipment.

**Work modalities and administrative issues:**

- The contract period will be for 30 days over One and a half Months including days on field.
- The selected institution is expected to coordinate with health facilities in collaboration with RBC, RPA and District Health teams as necessary to ensure timely and effective delivery of set results.
- The payment to the consulting company will be made based on satisfactory deliverables/activities and quality progress reports. The final payment will be based on performance and final report approved by RBC/MOH.
- Interested institutions will submit their application, including all costs related to this consultation. The financial offer must be all-inclusive (including travel, service and field travel costs, and any other related cost as well as transportation cost.

NB: The final selection will be based on the "best value for money" principle.

## 3. Methodology

The contractor will utilize an integrated, onsite approach combining hands-on technical installation, participatory training, virtual mentorship, and data collection. Engagement with trained facility-level focal points will prioritize sustainability and capacity transfer, ensuring that local staff can independently operate and maintain the supplied equipment and continued use and replenishment of supplied accessories.

The implementation will begin with a robust pre-deployment phase focused on coordination and planning to align with national and facility-level priorities. Inception meetings with UNICEF, the Ministry of Health (MoH), Rwanda Biomedical Centre (RBC), and RPA will guide the review and

validation of workplans. Site lists, focal points, equipment quantities, and accessory needs will be confirmed in collaboration with UNICEF experts, RBC, RPA and other experts in Oxygen equipment, resulting in a comprehensive deployment schedule. This will be followed by the on-site delivery, installation, and testing of oxygen concentrators, blenders, and flowmeters as well as health facility assessment. Each unit will be installed, calibrated, and tagged, with documentation completed to ensure accountability and traceability.

Concurrently, hands-on training and capacity transfer will be conducted to ensure that biomedical technicians, nurses, and clinicians are equipped to operate, maintain, and troubleshoot the equipment. The training will include practical sessions on oxygen therapy, daily maintenance routines, and infection prevention and control (IPC), supported by the distribution of SOPs and maintenance tools. Facility focal persons will be mentored to ensure local ownership and sustainability. Remote mentorship and follow-up support will continue through the distribution period, focusing on troubleshooting and reinforcing best practices. The final phase will involve monitoring, evaluation, and reporting, including performance assessments, feedback documentation, and a consolidated report with recommendations to inform future interventions and scale-up. This methodology ensures a sustainable, data-driven, and participatory approach to strengthening oxygen therapy capacity across health facilities.

## 4. Expected Deliverables

All deliverables will have to meet expected quality and standards as elaborated in this Terms of Reference. Should the Institutional Consulting company fail to deliver as per expected quality and standards, UNICEF reserves the right to amend the payouts accordingly or to delay them until a satisfactory submission has been received.

Based on the scope of the assignment, the consulting firm will deliver the key tasks and deliverables indicated below table:

**Table-1: Key outputs and Deliverables**

| Component | Outputs | Expected Deliverables |
|---|---|---|
| **Planning & Coordination, Transportation, Installation Training/Orientation Mentorship & SOPs and Facility Readiness Assessment.** | A fully coordinated and executed deployment of oxygen equipment completed across targeted health facilities, guided by a finalized implementation schedule with route mapping and stakeholder coordination. This will include the installation and commissioning of oxygen blenders and flowmeters in hospitals and concentrators in health centers, alongside rapid readiness assessments of oxygen infrastructure and supply systems at each beneficiary site. On-site training provided to 2–3 staff per health facility on the use and maintenance of the equipment, complemented by tailored standard operating procedures (SOPs) and job aids. A final comprehensive technical report produced, detailing equipment distribution, infrastructure assessments, and actionable recommendations to ensure the | **Deliverable -** A comprehensive report with deployment package comprising a detailed work and route plan, contact list, and installation and training schedule; completed commissioning forms and facility sign-off sheets; full training documentation including attendance records, materials, photos, and participant feedback; 100 tailored SOPs and maintenance/job aids (one per facility); and finalized facility-level infrastructure reports consolidated with actionable insights to guide future equipment procurement, utilization, and sustainability. |

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| | effective, continuous, and sustainable use of the supplied equipment and accessories. | |

**Table-2: Distribution & Implementation Timeline**

| Period | Dates (2025) | Activities |
|---|---|---|
| 1 | 1st to 16th August 2025 | Begin installation and orientation at 25 hospitals and 25 health centers referenced in Annex 1. Conduct facility readiness assessments and provide SOPs and maintenance plans. |
| 2 | 18th to 22nd August 2025 | Prepare and adopt SOPs, provide mentorship, address gaps identified during installation and training. |
| 3 | 23rd August to 6th September 2025 | Complete installation and training in the remaining 25 hospitals and 25 health centers. Share simplified standard user manuals, SOPs, provide mentorship to address gaps identified during installation and training online. |
| 4 | 7th to 15th September 2025 | Final data compilation, review lessons learned, submit final report to UNICEF endorsed by RBC or MoH. |

**5. Required qualifications**

- The selected local company must demonstrate proven experience of minimum 3 years in installation and user training of medical equipment in Rwandan health facilities, In-depth understanding of oxygen therapy systems, MNCH supply chains, and health infrastructure in Rwanda.
- A dedicated team comprising at least one Medical Expert (clinical background with oxygen therapy experience) per health facility, one Biomedical Engineer/Expert (specialized in oxygen and medical device installation) at each health facility; Proficiency in Kinyarwanda and English or French; and Strong documentation, reporting, and facilitation skills.
- Bidders are to share audited financial statements for the last 2 years
- Bidders are to share Trading License -/ RDB Certificates aligned with the scope of service

**6. Knowledge/Expertise/Skills required**

- Proven experience in installing and providing user training for medical equipment within Rwandan health facilities.
- Comprehensive knowledge of oxygen therapy systems, MNCH supply chains, and Rwanda's health infrastructure.
- Availability of a dedicated team including a Medical Expert with clinical oxygen therapy experience assigned to each health facility and a Biomedical Engineer specialized in oxygen and medical device installation assigned to each health facility.
- Strong skills in documentation, reporting, and facilitation to support clear communication and capacity building.

**7. Work experience**

Clinical and biomedical Staff with a minimum of 3 years of working experience in supporting oxygen supplies.

**8. Evaluation criteria**

A two-stage procedure shall be utilized in evaluating proposals, starting with the technical proposal followed by the financial proposal.

**I. Technical evaluation of proposals**

Evaluation of technical proposals will represent 70% weighting.

**II. Financial evaluation of proposals**

Financial proposals whose technical proposals meet technical expectations will be assessed, for a consolidated score of the overall proposal, based on which the offer will be made to the qualified Institutional Consulting firm.

The financial criteria will represent 30% of the weighting.

The cumulative weighted average for the two proposals will then apply in determining the best value-a for-money proposal.

Applications shall therefore contain the following required documentation:

**a. Technical Proposal:** The consulting institution should prepare a proposal based on the tasks and deliverables (as per the ToR).

**b. Financial Proposal:**

The quotation should include a breakdown of prices, for each component of the proposed activities, based on an estimate of the time needed and destination as indicated in Annex 1 . The financial proposal shall be submitted in a separate file, clearly named the financial proposal. No financial information should be contained in the technical proposal as this will lead to proposal cancellation.

Financial Proposals should be filled as per the table below:

| **Deliverable** | **Costs** |
|---|---|
| A comprehensive deployment package comprising a detailed work and route plan, contact list, installation and training schedule; completed commissioning forms and facility installation sign-off sheets; training documentation including attendance sheets, materials, photos, and participant feedback; 100 tailored SOPs and maintenance/job aids (one per facility); and finalized facility-level infrastructure reports consolidated into one synthesis report that informs future equipment procurements, utilization and sustainability. | |
| Total | |

Bidder is to share with UNICEF a detailed implementation schedule guided by Table 2.

Payments will be effected based on completion of the deliverable under Table 1

The evaluation of bids will be based on the following:

| **Technical Proposal (70%)** | **Points** |
|---|---|
| **i) Experience of the contractor**<br>• **Proven Experience -** The selected company must demonstrate substantial experience of 3 years minimum in installing and providing user training for medical equipment within Rwandan health facilities. This includes a deep understanding of oxygen therapy systems, MNCH supply chains, and Rwanda's health infrastructure.<br>• **Past Performance -** Evidence of successful past projects in similar contexts, particularly within Rwanda, will be crucial. This includes testimonials, case studies, and references from previous clients.<br>• **Staff Expertise -** The company should have staff with a minimum of 3 years of experience in clinical and biomedical support related to oxygen supplies. | **30** |
| **1. Proposed methodology and approach**<br>• **Implementation Plan** - A detailed plan outlining the steps for the distribution, installation, and training of oxygen equipment and accessories across 100 | **30** |

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| health facilities (50 health centers and 50 hospitals). This should include timelines, resource allocation, and risk management strategies.<br>• **Team Composition** - The proposal must include a dedicated team for each health facility, comprising one Medical Expert with clinical oxygen therapy experience and one Biomedical Engineer specialized in oxygen and medical device installation.<br>• **Language Proficiency** - Team members should be proficient in Kinyarwanda and English, with French being an asset. This ensures effective communication and training delivery. | |
| **2. Technical capacity for management**<br>• **Management Structure -** The company should present a robust management structure capable of overseeing the project from start to finish. This includes clear roles and responsibilities, reporting lines, and coordination mechanisms.<br>• **Documentation and Reporting -** Strong skills in documentation, reporting, and facilitation are essential to support clear communication and capacity building. The proposal should outline how these will be managed and maintained throughout the project. | **10** |
| **Financial Proposal (30%)** | **Points** |
| **Cost Breakdown** - A detailed financial proposal that includes a comprehensive breakdown of costs associated with the distribution, installation, and training of oxygen equipment and accessories. | **30** |

The financial proposal will be opened only for those entities whose technical proposal achieved the minimum technical threshold of 50 points of the obtainable maximum score of 70 points and are determined to be compliant.

The contract shall be awarded to the proposal obtaining the overall highest score after adding the score of the technical proposal and the financial proposal. Proposals not complying with the terms and conditions contained in this ToR, including the provision of all required information, may result in the Proposal being deemed non-responsive and therefore not considered further.
Non-compliant proposals will not be eligible for further consideration.

**1. Confidentiality**

Unless otherwise specified, the consulting firm shall keep confidential all information and documentation being shared by UNICEF Rwanda and other partners.

**2. Contract management and administrative matters**

Ministry of Health and UNICEF will manage the contract for the consultancy, while the institutional consulting firm will handle all logistical arrangements related to the contract. The institutional consulting firm will also bear responsibility for additional expenses such as local travel, field travel, and office space and equipment, including computers and photocopiers.
UNICEF will be under no obligation to pay for additional operational costs related to this assignment. All costs required to operationalize this assignment shall be borne by the hired Institutional consulting firm and should be included in the proposed financial proposal.

**3. Administrative Issues, including Consulting Firm's Workplace and Travel**

The institutional consulting firm is responsible for providing an all-inclusive cost in the financial proposal, which covers all expenses related to the assignment.

UNICEF will not provide office space or electronic equipment to the consulting firm. The consulting firm's workplace and necessary electronic equipment are the responsibility of the institutional consulting firm.

**4. Policy Issues**

i) No contract may commence unless the contract is signed by both UNICEF and the Institutional Consulting firm.
ii) The Institutional Consulting firm will not have supervisory responsibilities or authority over the UNICEF budget.
iii) UNICEF will conduct reference checks (persons/institutions) for feedback on services provided by the bidding Institutional Consulting firm.

**Annex 1**

**Installation Sites:**

**Hospitals:**

| No. | **District** | **Hospital** |
|---|---|---|
| 1 | Nyarugegnge | Muhima |
| 2 | Nyarugegnge | Nyarugenge |
| 3 | Nyarugegnge | CHUK |
| 4 | Gasabo | Kibagabaga |
| 5 | Gasabo | Kacyiru |
| 6 | Kicukiro | RMH |
| 7 | Kicukiro | Masaka |
| 8 | Bugesera | Nyamata |
| 9 | Kamonyi | Remera Rukoma |
| 10 | Muhanga | Kabgayi |
| 11 | Muhanga | Nyabikenke |
| 12 | Ruhango | Ruhango |
| 13 | Ruhango | Gitwe |
| 14 | Nyanza | Nyanza |
| 15 | Huye | CHUB |
| 16 | Huye | Kabutare |
| 17 | Nyaruguru | Munini |
| 18 | Nyamagabe | Kaduha |
| 19 | Nyamagabe | Kigeme |
| 20 | Gisagara | Gakoma |
| 21 | Gisagara | Kibirizi |
| 22 | Karongi | Kirinda |
| 23 | Karongi | Mugonero |
| 24 | Karongi | Kibuye |
| 25 | Ngorero | Muhororo |
| 26 | Ngorero | Kabaya |
| 27 | Nyabihu | Shira |
| 28 | Nyamasheke | Bushenge |
| 29 | Nyamasheke | Kibogora |
| 30 | Rubavu | Gisenyi |
| 31 | Rusizi | Gihundwe |
| 32 | Rusizi | Mibirizi |
| 33 | Rutsiro | Murunda |
| 34 | Burera | Butaro |
| 35 | Gakenke | Nemba |
| 36 | Gakenke | Gatonde |
| 37 | Gakenke | Ruli |
| 38 | Gicumbi | Byumba |

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| 39 | Musanze | Ruhengeri |
| 40 | Rulindo | Rutongo |
| 41 | Rulindo | Kinihira |
| 42 | Rwamagana | Rwamagana |
| 43 | Kayonza | Rwinkwavu |
| 44 | Kayonza | Gahini |
| 45 | Gatsibo | Kiziguro |
| 46 | Gatsibo | Ngarama |
| 47 | Nyagatare | Nyagatare |
| 48 | Nyagatare | Gatunda |
| 49 | Kirehe | Kirehe |
| 50 | Ngoma | Kibungo |

**Health Centers:**

| **Sub-district/ catchment area** | **Health facility name** |
|---|---|
| Gahini Sub District | Gahini HC |
| Gahini Sub District | Rutare (kayonza) HC |
| Gahini Sub District | Kageyo I (Kayonza Gahini) |
| Kabutare Sub District | Kinyamakara HC |
| Kabutare Sub District | Ruhashya HC |
| Kabutare Sub District | Rwaniro HC |
| Kabutare Sub District | Sovu (Huye) HC |
| Kabutare Sub District | Karama (huye) HC |
| Kabutare Sub District | Maraba (huye) HC |
| Kabutare Sub District | Simbi HC |
| Kabutare Sub District | Gitovu HC |
| Kabutare Sub District | Mbazi HC |
| Kabutare Sub District | Rubona (huye) HC |
| Kabutare Sub District | Rusatira-kinazi HC |
| Kabutare Sub District | Huye Police HC |
| Kabutare Sub District | Matyazo HC |
| Kabutare Sub District | CUSP Butare HC |
| Kabutare Sub District | Rango HC |
| Kabutare Sub District | Busoro-gishamvu HC |
| Kabutare Sub District | Mukura (Huye) HC |
| Nyanza Sub District | Nyanza HC |
| Nyanza Sub District | Hanika I (NYANZA) HC |
| Nyanza Sub District | Gatagara (Nyanza) HC |
| Nyanza Sub District | Mucubira HC |
| Nyanza Sub District | Nyabinyenga HC |
| Nyanza Sub District | Nyarusange (nyanza) HC |
| Nyanza Sub District | Busoro HC |
| Nyanza Sub District | Mututu HC |
| Nyanza Sub District | Nyamiyaga (Nyanza) HC |
| Nyanza Sub District | Ruyenzi HC |
| Nyanza Sub District | Ntyazo HC |
| Nyanza Sub District | Kirambi HC |
| Nyanza Sub District | Mweya HC |
| Nyanza Sub District | Cyaratsi HC |

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| Shyira Sub District | Bigogwe HC |
| Shyira Sub District | Kora HC |
| Shyira Sub District | Kareba HC |
| Shyira Sub District | Kabatwa HC |
| Shyira Sub District | Arusha HC |
| Shyira Sub District | Kintobo HC |
| Shyira Sub District | Jomba HC |
| Shyira Sub District | Rurembo HC |
| Shyira Sub District | Rwankeri HC |
| Shyira Sub District | Gakamba HC |
| Shyira Sub District | Mwiyanike HC |
| Shyira Sub District | Rambura HC |
| Shyira Sub District | Birembo HC |
| Shyira Sub District | Nyakiliba HC |
| Shyira Sub District | Nyakigezi HC |
| Shyira Sub District | Shyira HC |