**Annex A**

**Terms of Reference (TOR)**

**Supply, Delivery and Installation of Medical Equipment to Hospitals and Primary Health Care Centers in KRI in Iraq**

**Background information and rationale:**

UNHCR – Iraq plans to procure medical equipment for different public health facilities in Kurdistan Region of Iraq (KR-I) to enhance the capacity of the national health system and support UNHCR – Iraq refugees’ inclusion strategy. The medical equipment will be provided to Kalak Public PHC in Duhok Governorate, Kawergosk, Sarish, Daratu, and Qalat new Public PHCs in Erbil Governorate, Said Sadiq, Shar, Pediatric Public Hospitals, in Sulaymania Governorate, which refugees and host community will use since these locations are concentrated by a high number of refugees, or nearby refugee camps (approximately 40,800 individuals), or main hospitals that refugees and host community use.

**Objectives:**

Receive high-quality medical equipment in a timely manner as required by the operation.

**Scope of the Requirement:**

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| **No.** | **Item** | **Specifications** |
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| **1** | Hematology auto analyzer CBC (complete blood count) | • Full colour LCD touch-screen • Built-in printer with 58 mm wide roll paper, full report with histograms • Electrical impedance method • Photometry – LED based technology for measurement of hemoglobine • Provided 20-parameters, complete CBC including a 3-Part WBC differential • 3 histograms: WBC 3-Part, RBC, PLT • Sample method: open tube system with automatic sample rotor • Throughput: 60 tests/hour • Results: within 60 seconds • Storage capacity: 1000 results • With Following Reagents:  Diluent Diff (450 test) / Lyse Diff (900 test) / Cleaner (1350 test) |
| **2** | Microscope | • Optical system : Infinity Correction optical system • Illumination : 6 V, 20 W Halogen Bulb • Focusing mechanism : Stage height adjustment mechanism  Fine adjustment scale: 2.5 μm per graduation  Fine adjustment stroke: 0.3 mm per turn  Total stroke: 20 mm. • Pre-focusing knob provided, coarse adjustment knob tension adjustable • Revolving nosepiece : Quadruple positions fixed (Front oriented)  • Binocular observation tube : Field number: 20   Tube tilting angle : 30°  • Stage : 120 x 132 mm (with mechanical stage) / 76 (X-axis) x 30 (Y-axis) mm • Condenser : Abbe condenser (daylight filter detachable) |
| **3** | Centrifuge - 8 tube | • Max.Speed 5000 rpm/ RCF: 2515xg • Max.Capacity: 8 x 15 ml • Rotory Type: Vertical 35o fixed angle • PID Digital Control • Number of Program : 9 • Timer: 1 - 99 min. |
| **4** | Micro centrifuge | • Max.Speed: 12.000 rpm / RCF: 13000xg • Max.Capacity: 24 x Capillary tubes • PID Digital Control • Reading Scale : 45 - 70 mm |
| **5** | Emergency patient transfer trolly | •2 position, low position 54cm, high position 88cm •160kg limit loading capacity •Side rail is foldable. •The stretcher can split from the trolley. •Flame retardant •The stretcher surface made of plywood. X-ray translucent. •The main frame used high-quality, high-strength aluminum alloy. •Advanced protection universal brake wheel, easy to move, simple to operate, reliable performance. •Back rest lifting:0-75°" |
| **6** | Patient Bed (Mechanical) | •Strong and sturdy structure with pantograph frame  •Frame made of epoxy-coated steel  •Movements control levers and cranks in steel strong materials •Legs on wheels with central locking brakes  •Frame equipped with plastic bumpers and receptacles for IV poles •IV poles  •Perforated steel plate platform with mattress retainers  •Easily removable head and foot ends made of steel with plastic-covered bends and grips  •Collapsible protection sides  •Workload not less than 190Kg  •Approximate Dimensions: 2100 x 950 mm.  •Movements/controls: a. Height adjustment hydraulic by foot pedalb. Back-rest section adjustment of at least +60º by a gas spring lever or crank. Knee break leg section by a gas spring lever or crank |
| **7** | ECG Machine - 12 channels | • 8” Color TFT LCD, Touchscreen • 12 waveforms synchronously display • Fixed Memory:100 groups of ECG data, • Optional Memory: SD card or U disk, • Recording speed:5 ,6.25, 10, 12.5, 25, 50 mm/s • Rechargeable Lithium Battery, used continuously 90 minutes |
| **8** | Suction pump - Double jar | •Pump type: Piston or Diaphragm  •Input power: 220/240VAC, Frequency = 50/60Hz  •Vacuum control  •Collection canister: Reusable and disposable  •Double Jar  •Capacity limit line = 2000 ML each Jar  •Overflow protection  •Filter type: Bacterial, Hydrophobic  •Standard accessories: collection bottle (4), filters (50), cart, footswitch. |
| **9** | Nebulizer | •Motor pump: Oil free ball bearing piston motor (with thermal fuse protector)•Power supply: Ac 220v +10%,50 Hz •Power consumption: 65 w •Motor work life > 5,000hours •Mode of operation continuous •Max compressor pressure (with nebulizer) .0.25-0.3 Mpa 3644.0 psi •Operating pressure 80-1.0 Bar ,12 -14 psi •Compressor operating flow > 14LPM •Adult mask 1 pc child mask 1pc mouthpiece 1 pc air tubing 1 pc •Replacement filter, user manual. |
| **10** | Patient bed examination with ladder | • Mechanical adjustable headrest • Made by electrostatic painted steel  • Leather upholstered seat and head sections • Foldable stays • Approximate Diameter (WxLxH): 60 X 180 X 70 cm |
| **11** | Medical Paravan | • Electrostatic Painted Steel • Mobile on 2 castors • Foldable, 3 Sections |
| **12** | Autoclave steam sterilizer 24 L | •Capacity 24 L •Sterilization temperatures: 121°C / 134°C • Seamless stainless steel chamber • 4 preset programs: Universal, Quick, Gentle, Prion • 128 x 64 pixels LCD display • 2 test programs: Vacuum test - Bowie&Dick/Helix test • Memory for last 52 cycles |
| **13** | Medical Pharmacy Refrigerator | •Pharmacy glass door refrigerator •Temp range 2~8° •The capacity of 395L •Auto‐defrost to remove moisture on a cooling surface •Removable outdoor double seal design for better temperature maintenance and energy saving, accurate temperature control to make inner temperature maintain •Microprocessor digital display •Audible alarm: High/Low temp, door alarm and system failure alarm •Voltage 220V,50Hz •Refrigerant R600a •6+1 shelves made from high‐quality steel •Two doors. |
| **14** | Blood sample collection chair | •Manual synchronized adjustment of the backrest and foot section. •Mechanical structures provide quick and smooth angular positioning. •Metal structure with epoxy paint •Foam seat, back and footrest, covered in curving •Waterproof, anti-bacterial coating •Backrest, armrest, and side rest reclining by means of a lateral lever •Vertical and lateral adjustment of the armrest •Feet with plastic tips •Anti-rust treatment, electrostatic powder coating |
| **15** | Dental chair with full accessories | a) Dental Treatment Unit  - Patient Couch  - Light Reflector  - Doctor & Assistant's Consoles  - Integrated Cuspidor b) Dental Compressor  c) Curing Light d) Ultrasonic Piezo Scaler e) Air turbine f) High Speed Handpiece g) Air Micromotor h) Contra-Angle Handpiece i) Straight Handpiece |
| **16** | Camera & Head camera for Laparoscopy & Arthroscopy Device | •Karl Storz Spies camera TC200 brand |
| **17** | Electrical Patient Bed | •Electrically operated backrest, height and leg rest adjustment •Electrically operated Trendelenburg, Reverse Trendelenburg, fowler, and vascular position •Foot end nurse control unit •Footrest adjustment by ratchet •Auto-CPR •Auto Regression system on backrest •Auto contour •Hygienic design (PP), lockable and tuck away side rails •Easy removable ABS mattress platform •Removable head and footboards •Electrostatic epoxy painted metal frame •Height adjustable IV pole •Plastic protective crash bumpers on four corners •Central Lockable Castors, 150mm •Angle indicator for backrest •Angle indicator for Trendelenburg and Reverse Trendelenburg positions •Cardiac chair position with single button •Shock position with single button •Semi-Fowler position with single button •Bed exit position with single button •Examination position with single button •Electronic CPR with one touch button •Activation key at remote control to prevent any undesired positions •Urine bag holder •Urine basket (optional) •Dual side manual CPR levers at backrest (optional) •Rechargeable Battery Backup (optional) •Bed size extension (optional) •X-ray cassette holder at backrest (optional) •IPX6 standard electronic system |
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| **18** | Patient Monitor - 15 inches | •15 inches high resolution color TFT display with LED backlight •Optional full touch-screen for easy operation •Attractive and durable silicon buttons with backlight •Support 10-channel waveforms displayed on screen, pacemaker detection, ST segment analysis and 23 types of arrhythmia analysis •Support 12-lead waveforms of resting ECG displayed on screen, optional simultaneous 12-lead ECG analysis •Maximum 480-hour graphic and tabular trends, 1000 NIBP records, 700 alarm events and 2-hour ECG waveform storage and review •User-defined menu shortcut keys to meet different users' habits •ESU proof and defibrillation synchronization for different working environments •USB port enables software upgrade and also supports external USB storage •VGA output for external display (optional)  •Flexible mounting and trolley solution (optional) •Wire/wireless network connects to central monitoring system(optional) •HL7 for transferring the data to HIS seamlessly |
| **19** | Oxygen flowmeter | •High Pressure O2 regulator  •Gas Type: Medical Oxygen  •Maximum Inlet Pressure ≥13MPa [1133psi]  •Outlet Pressure: 200 – 600 KPa  •Regulator: Fixed output pressure  •Gauge Range: 0 to 30,000 KPa  •Standard Conditions: 101.3 KPa |
| **20** | Cobas - c311 | •Analysis of serum, plasma, urine, cerebrospinal fluid (CSF), hemolysate and whole blood.  •Standalone analyzer for Clinical Chemistry •Has capacity for ion-selective electrode (ISE) determination of sodium, potassium, and chloride in serum, plasma, and urine •the measurement of HbA1c levels in whole blood •Flexible system for consolidating routine and special chemistry workloads •On-board capacity of 45 tests •Throughput 480 samples/hr |
| **21** | Neonatal Incubator | •Mobility castors with brakes.  •Visual indicators on LCD display  •Number of main doors: 2.  •Number of portholes: 4. •Number of tubing iris ports:1.  •In-bed scale performance (weighting). •Oxygen control performance  •Air temperature mode set point range 20.0 °C to 39.0 °C.  •Skin temperature mode set point range 34.0 °C to 37.5 °C.  •Humidity Control: Adjustable relative humidity, often from 20% to 95%, to maintain the baby's skin integrity and fluid balance.  •Water tank capacity: 1200-1500 ml.  •Air Circulation: Gentle air circulation to ensure even temperature and humidity distribution without causing drafts.  •Servo Controlled Oxygen Carbon Dioxide (CO2) level (per EN60601-2-19), < 0.5%. Micro air intake filter 99.9% efficiency. Particle size removal 0.3 micron.  •Servo Humidity control, range 30 to 95% in 1% increments.  •Servo Oxygen (Optional) Oxygen control range 21% to 65%.  •Scale: Weight range 0 to 7 kg. Weight display resolution 1 g. Weight accuracy 2 g ± 1/2 digit up to 2 kg, 5 g ± 1/2 digit over 2 kg.  •Ambient noise in the infant compartment of the incubator: No more than 55dB(A) at stable temperature.  •The velocity of air flow over the baby mattress: ≤0.35m/s. |
| **22** | Electrical operation bed | Operating table, **electro-hydraulic** with complete line of table accessories for general and orthopedic surgery Table positions: Degrees from horizontal  Trendelenburg: ≥25  Reverse Trendelenburg: ≥25  Lateral tilt: ≥18 Table sections: ≥3 Maximum patient capacity: ≥250 kg All the functions with a manual back-up in case of no power or malfunctioning. Controllable global movements to include up/down, forward/back, left/right and Trendelenburg and reverse Trendelenburg. Controls: Hand and foot  - Remote control: Yes Lateral bars (siderail) all along the table to hook for surgical accessories. Patient complete fasten accessories. Accessories for orthopedic extension, upper and lower limbs Radiographic/Fluoroscopic use:  - Radiolucent tabletop: Yes  - C-arm accessible: Yes  - Cassette sizes: 14 x 17" (35 x 43 cm) Kidney Elevator: Yes Base attachment: mobile with conductive casters. Casters with lock Power requirements: line 220V and Battery for at least 30 minutes. **On-site installation and training** |
| **23** | Operation light | **Double arms surgical led light** Material: Metal, Steel Each Head Diameter: 700mm Each LED lamps qty: 48  Illumination: 80 - 180 klx Color Temperature: 3500-5000K (Adjustable)  Spot Diameter: 100-300mm LED Life > 50,000 Hours Removable Sterilizer Handle LCD control panel **On-site installation and training** |
| **24** | TENS machine with trolly | TENS with large LCD display6 ChannelsIsolation between channelsPulse Rate: 1 Hz - 150 Hz (Adjustable)Pulse Width: 30 - 300 microseconds (Adjustable)Pulse Intensity: 0-100mA peak into 500ohm load each channel (Adjustable)Trolly |
| **25** | Infrared machine | Output wavelength: 800-1000nm Operating mode: Continuous Function: Relieve Pain, Rehabilitation Therapy Ambient temperature range: +5℃ ~ +40℃ 360° rotation, 120° wide-angle illumination, suitable for different parts of the body Detachable lamp head, reinforced base, flexible and convenient |
| **26** | Medical exercise bicycle | Material: Steel Function: Exercise Muscle Max User Weight: 150kg |

**Anticipated duration of the contract:**

The Contract will be awarded for supplier that proposed the technically compliant medical equipment within 120 days to the designated destination as stipulated in the financial proposal form.

**Deliverable and schedule:**

The equipment should be delivered and installed (operating) at the destination of each Hospitals / Health Care Centers in KRI.

The incoterm for delivering of the items is **DDP** to the indicated location in the financial proposals (Annex-C).

The supplier should commit to the same requirement in terms of quality as they proposed in the technical proposal form and submitted brochures, catalogs …etc.

**Warranty**

The Equipments should have at least (18) months warranty from the installation time.

**Governance accountability and verification of services rendered,**

* The Supplier shall ensure that all the delivered medical equipment are of good quality and in good condition not damaged during transportation and installation.
* The Supplier will take responsibility for all items that are not up to standards.
* The Supplier shall appoint a focal person to be a point of contact with UNHCR.

**Payment mechanism:**

Any Purchase Order (PO) issued as a result of this ITB will be made in the currency of the winning offer(s). Payment will be made in accordance with the General Conditions for the Purchase of Service and in the currency in which the PO is issued. Payments shall only be initiated after confirmation of successful completion by the UNHCR business owner.

The standard payment terms of UNHCR are net 30 days via electronic fund transfer (EFT) upon satisfactory delivery of goods and acceptance thereof by UNHCR.

**Confidentiality:**

All the materials and information that UNHCR shares are confidential and should not be disclosed or discussed with anyone without permission or authorization from UNHCR. Care shall also be taken to ensure that unauthorized individuals do not have access to this information and that UNHCR documents are not left in the open or inadvertently shared.

The unauthorized disclosure of confidential or privileged information is a serious violation of this policy. It will subject the person(s) who made the unauthorized disclosure to appropriate discipline, including terminating the contract.