

TERMS OF REFERENCE

Technical Advisor (Medical Equipment)

Preparation of Technical Specifications for Supply Contract in Support of Perinatal Centre in Tiraspol, Transnistrian region of Republic of Moldova

1. BACKGROUND

The Transnistrian region of Republic of Moldova is located on the left bank of the Nistru River and remains since the armed conflict in early 90' a zone of contested statehood.

The project "Support to Civil Society in Transnistria" financed by the European Union and implemented by UNDP includes a module aimed at promoting confidence building measures through provision of better social and medical services. A partial re-equipment of the Transnistrian central prenatal facility in the city of Tiraspol (TPC) coupled with provision of training by medical specialists from Chisinau (right bank Moldova) is part of this project.

The premises of the Tiraspol Mother and Child Centre are in relatively good condition. The building has been built at the end of 1970s / beginning of 1980s. However, the windows of the intensive care unit, reanimation unit, and delivery rooms are in poor condition, causing loss of heat and inadequately low internal temperature during the cold season of the year.

The basic hospital equipment (operating theatre tables, operating theatre lamps, examination tables, doctor's chairs, drug and consumable materials cabinets, dry heat sterilisation devices etc.) is scarce, 35-40 years old on average, and partially of military origin. Although maintained at the best of the health personnel efforts, the important mechanical assemblies, such as hydraulic cylinders of operating tables, rotating handles, levers, etc. are not functional. The equipment has multiple visible stains of corrosion, which make proper cleaning and disinfection difficult.

The sophisticated hospital equipment (anaesthesia devices, lung ventilators, incubators, cardiac monitors, ECG devices, infusion pumps, suction devices) is scarce and 20-25 years old on average. Most of these devices have been received in the beginning of 1990s as part of humanitarian assistance operation, and have already been in used condition by the time of delivery. Considering the old age and the impossibility of proper disinfection, mentioned equipment should be regarded as a potential source of intra-hospital infection.

The anaesthesia devices are military, field type "FAZA-5" machines, offering basic functions. The only lung ventilator for newborns is not suitable for utilisation in children with a body weight of less than 3 kg, is not suitable for monitoring of life functions, and does not have a functional power back up system. The cardiac monitors used in the delivery rooms have multiple defects in the electrode connectors' part. The ECG device is not suitable for monitoring of foetal heart activity. The infusion pumps do not allow precise setting of drug dose and infusion speed. The suction devices are not suitable for utilisation in newborn babies. The incubators do not allow maintaining of constant temperature, humidity, and oxygen concentration, monitoring of respiratory and cardiac activities, and weight. There are no devices for monitoring of foetal heart activity and foetal condition, except for plain stethoscopes.

The sets of surgical instruments include the very basic items. There is only one functional intubation / ventilation set for newborns. The adult laryngoscopes are in inadequate condition and pose a real threat of lamp loss during intubation, resulting in obstruction of mother's airways.

The backup power supply system suitable for intensive care unit, reanimation unit, and delivery rooms does not exist.

2. DESCRIPTION OF THE ASSIGNMENT

2.1 Beneficiary

Perinatal Center in Tiraspol, Transnistrian region of Republic of Moldova.

2.2 Objectives

The overall objective is to improve the performance of the prenatal health care system in the Transnistrian region of Moldova by providing medical equipment to the Mother and Child Centre in Tiraspol. This will contribute to an increase in use of health services thus achieving better health status and prenatal indicators in the region.

Specific objectives:

- To undertake a rapid needs assessment of the medical equipment to be purchased for the Tiraspol Perinatal Center (TPC) and to prepare the technical specifications for the above-mentioned medical equipment.
- To provide support in technical evaluation of supply offers received during tendering of the supply contract
- To collect relevant information on existing local capacity and to identify training needs for medical professionals to operate with the identified medical equipment.
- To control the delivery of the supplies and the training provided to TPC personnel, including on-site checks.

2.3 Requested services

The Contractor will provide the following services:

- Identify the medical equipment to be purchased for TPC. This should be closely coordinated with the UNDP Moldova, which will be procuring the equipment and partly refurbishing TPC under its on-going health related confidence-building projects. The list of medical equipment should clearly state the type of equipment, its functional purpose (e.g. disease or surgical intervention) and the number of units. Insurance, maintenance and repair issues have to be taken into consideration when preparing the list of equipment.
- When preparing the list of medical equipment, the expert will take into account the findings of the previous mission carried out by the European Commission Delegation to Moldova and UNDP Moldova. An electronic copy of the mission report shall be transmitted to the expert by the UNDP 10 days before the first mission to Moldova starts.
- Provide the technical specifications for the identified medical equipment.
- Provide support in technical evaluation of supply offers
- Control the provisional acceptance of the medical equipment and the training provided to TPC personnel, including on-site visits.

2.4 Expected results

The expert is expected to deliver the following results:

- The list of medical and hardware equipment, stating the type of equipment and its functional purpose (e.g. disease) and the number of units needed
- The technical specifications of the medical equipment
- Technical evaluation of supply offers

- Control of the equipment supplied, including on-site check of delivered equipment.
- Control of the training provided to TPC personnel.

3. EXPERT PROFILE

3.1 Education, experience, references and category of the expert:

- § University degree (or equivalent), preferably in health care management, medical engineering, or other relevant field.
- § At least 7 years of experience relating to health care management, medical engineering, or another relevant field.
- § Proven knowledge of assessment of medical technical needs, design of technical specifications or similar tasks.
- § Excellent analytical and evaluation skills.
- § Fluency in English (written and spoken), and spoken Russian.
- § Previous experience in Central and Eastern Europe, including the Republic of Moldova, would be an asset.

3.2 Working languages

The working languages will be English (in terms of formal papers to be produced) and Russian in order to be able to communicate directly with the Beneficiary and other relevant stakeholders and partners.

4. LOCATION AND DURATION

4.1 Schedule, number of days and objective of the assignment

The total duration of the assignment is 16 days over a period of 1 year, including the number of days spent on the place of assignment (including briefing, debriefing, weekends and public holidays) as well as the days carried out abroad on reporting. The contract is expected to start by mid December, 2009.

The assignment can be divided into **four** separate missions:

- **First mission to Moldova for a total duration of 5 days:** The first mission will start with a visit to UNDP Moldova together with meetings at the EC Delegation and the health/medical authorities in the Transnistrian region of Moldova. The objective of the first mission is to assess the needs of the TPC centre and prepare and submit to UNDP Moldova the Technical Specifications for the supply tender.
- **Second mission - follow up support for a total duration of 2 days** in the technical evaluation of the pre-selected offers, collected during the tendering of the supply contract.
- **Third mission to Moldova for a total duration of 4 days:** The third mission to Moldova will be performed once the provisional acceptance of the equipment has been completed. The objective of the third mission is to control the delivery and the installation of the medical equipment purchased under the supply contract.
- **Fourth mission to Moldova for a total duration of 5 days:** The fourth mission to Moldova will be performed eight months after the provisional acceptance of the equipment. The objective of the fourth mission is (1) to inspect the equipment supplied so as to detect any

defect arisen since the delivery and installation and (2) to assess the training provided to TPC personnel by the suppliers.

The expert will coordinate each of the four missions with UNDP Moldova and will brief the UNDP Moldova office upon request.

4.2 Location of assignment

The expert will carry out three missions to Moldova, which will include the stay in the capital city Chisinau and extensive travel to the Transnistrian region of Moldova.

5. REPORTING

5.1 Content, format and schedule of reporting

At the end of each mission, the Contractor shall deliver the following document:

- Five days after the first mission, the Contractor shall deliver to UNDP Moldova a first report containing: (1) an assessment of the current situation in terms of equipment available in TPC; (2) the list of medical equipment to be purchased (per type and number of units); (3) the technical specifications for the medical equipment to be procured, and (4) a tentative pricing per unit as well as a total tentative sum for the whole supply contract according to current market conditions.
- One day after the receipt of the pre-selected tender offers the Contractor shall deliver an evaluation of offers based on a technical review of the equipment offered (brand, specifications etc.).
- Five days after the end of the third mission, the Contractor shall summarize his findings in a second report assessing the medical equipment delivered. The second report will also identify any lacunae or errors in delivery, etc. Pictures of the sites visited and equipment checked are welcome.
- Five days after the end of the fourth mission, the Contractor shall summarize his final findings in a final report assessing the medical equipment and the training delivered. The final report will also identify any lacunae in training and defect in the equipment.