

TERMS of REFERENCE
National consultant to improve medical equipment maintenance system
item 2.3.3 from AF-SSHP PP

Background

The Republic of Serbia has received a loan from the International Bank for Reconstruction and Development (IBRD) in the amount of EUR 29.1 million equivalent toward the cost of the Second Serbia Health Project (SSHP), Loan No. 8338-YF and EUR 25 million equivalent toward the cost of the Additional Financing for the Second Serbia Health Project (AF-SSHP), Loan No. 8830-YF.

The Project Development Objective (PDO) is to contribute to improving the efficiency and quality of the public health system through the strengthening of: (i) health financing, purchasing, and maintenance systems; (ii) quality improvement systems and management of selected priority non-communicable diseases.

The project includes four components with sub-components:

- 1: Improvement of Health Financing
 - 1.1 Support Hospital Financing Reforms
 - 1.2 Strengthen Primary Health Care Financing
- 2: Improve Access to Quality Health Care
 - 2.1. Improve Access to Medicines
 - 2.2. Strengthen Health Technology Assessment Capacity
 - 2.3. Improve Medical Equipment Maintenance Systems
- 3: Strengthening Quality of Service Delivery
 - 3.1. Strengthen Quality Improvement Systems
 - 3.2. Improve Cancer Management
- 4: Monitoring, Evaluation, and Project Management - this component will support project management, monitoring and evaluation, as well as audits of the project's financial statements. It will also finance the project's operating costs, including translation, interpretation, equipment, supervision costs and PCU staffing costs.

Within the component 2, subcomponent 2.3. Improve Medical Equipment Maintenance Systems, one of the main Project goals is a strategic approach to maintenance of medical equipment, aimed at developing a cost-effective system, which represents one of the priorities for the delivery of good quality health services in Serbia. The total replacement value of the equipment installed in Serbian health facilities is estimated at about US\$800-900 million. An internationally accepted figure for the annual cost of a good maintenance program is 6-8 percent of the equipment capital value, which would correspond to an expenditure of US\$56-63 million per year -- much higher than the budget currently allocated for maintenance. This explains in part the large number of unrepaired devices in hospitals. Hospitals also encounter difficulties procuring spare parts for high-tech equipment, contributing to equipment "downtimes" of several months. Despite fiscal constraints, the problem cannot be ignored, as it reduces patient access to lifesaving technology and contributes to a progressive depletion of the medical technology assets in the national health system.

Recognizing the importance of maintaining medical equipment, and in line with the World Bank's recommendations, the Ministry of Health (MoH) has planned two positions of Advisor for Monitoring the Equipping of Health Institutions and Capital Investments in Health Institutions within its unit called *Human Resources Development, Equipping and Capital Investment in Health Institutions Group* in the Sector for the Organization of the Health Service

Main tasks and responsibilities

- To support activities related to Medical Equipment Maintenance System within the Ministry of Health, in cooperation and teamwork with the International Consultant and the Head of the *Human Resources Development, Equipping and Capital Investment in Health Institutions Group*,
- To provide assistance and support to the International Consultant to Improve Medical Equipment Maintenance and take over the deliverables of international experts.

The National Consultant will be responsible *inter alia* for the following activities, in cooperation and team work with International Consultant:

- Analysis and evaluation of the existing processes within *Human Resources Development, Equipping and Capital Investment in Health Institutions Group* of the MoH;
- Providing assistance in the establishment of a comprehensive medical/clinical equipment management and maintenance system within the national health system, as well as in the development of the maintenance strategy, systematization of the installed medical devices documentation (database), provision of the description of equipment maintenance personnel qualifications and in carrying out analysis and evaluation of the existing service and maintenance contracts.
- Reviewing of the existing MoH's medical equipment inventory, including the spatial arrangements within the health facilities;
- Verification of the feasibility and organization of the implementation of the national coding system for medical equipment, based on internationally accepted methodologies;
- Cooperation with the *Human Resources Development, Equipping and Capital Investment in Health Institutions Group* of the MoH, and providing support and advice regarding the medical equipment maintenance:
 - Assessment of the existing equipment (corrective and preventive maintenance of medical equipment);
 - Establishment of Equipment Registry;
- Proposing a set of maintenance standards in consultation with the *Human Resources Development, Equipping and Capital Investment in Health Institutions Group* of the MoH:
 - Quality Assurance,
 - Quality Control,
 - Quality Management System (ISO, EFQM, JCI, etc.);
- Development of recommendations for improvements to the maintenance management system for medical equipment:

- Preventive Maintenance (periodic adjustment, inspection and replacement of worn-out parts of mechanical or other types of equipment to ensure their operability),
- Corrective Maintenance (unexpected breakdowns of assets or equipment),
- Spare Parts Management and Procurement,
- Calibration of medical equipment,
- Safety Control Program;
- Assistance in setting up of in-house maintenance services of medical equipment;
 - User, Operations and Maintenance Manuals;
- Verification of the feasibility and organization of the implementation (in pilot health facilities identified by the MoH) of an integrated maintenance system, which includes both engagement of in-house technicians and outsourcing of maintenance services and consists of the following activities:
 - finalization of a complete inventory of medical devices;
 - preliminary assessment of equipment status, level of use, maintenance costs;
 - identification of ToRs for in-house technicians (first-tier maintenance);
 - development of bidding documents for the selection of a multi-vendor maintenance services supplier;
 - identification of performance indicators for the monitoring of results.
- Proposing *Performance Monitoring System* to ensure that undertaken corrective and preventive measures are effective and sustainable;
- Piloting multivendor service provider, or other medical equipment maintenance solution.

It is essential that all steps during the whole process are discussed and agreed with MoH and PCU staff.

Requirements

- University degree in biomedical engineering or similar field;
- Minimum of 5 years of relevant professional experience;
- Experience with Serbian legislation requirements pertaining to the Medical Equipment Maintenance;
- Experience in IFI financed projects would be an asset;
- Experience with Medical Equipment Maintenance cost estimation;
- Computer literate;
- Good command of English and Serbian, including oral and written reporting abilities;

Reporting requirements

The Consultant is obliged to report to the PCU Coordinator and MoH officials as required. Minimum reports to be prepared:

- Monthly Reports – the Consultant shall prepare the monthly reports describing tasks performed. This report will form a basis for payment and should be submitted at the end of each month.
- Ad hoc reports as requested by the Component 2 Coordinator, PCU Coordinator and/or MoH.

All reports should be submitted in English and/or Serbian language, as needed.

Duration of the assignment

The Consultant shall be engaged for up to 72 days in the period of one year. Duration of the assignment may be subject to extension depending on project needs.