

# **AMDA** Nepal

## Terms of Reference for Hospital Management Information System

### A. Organization Background

Association of Medical Doctors of Asia-Nepal (AMDA-Nepal) was established in 1989 as a non-profit making social organization. It is officially registered in the government office as an NGO on March 4, 1991. AMDA-Nepal is also a humanitarian, nonprofit-making, nonpolitical, non-sectarian organization, working with its mission “to promote the health and well-being of the underprivileged and marginalized people” under the slogan "Better quality of life for better future."

### B. Objective

The main objective of this ToR is to find a suitable and capable software development company/consulting firm that can install and implement a **Hospital Management Information System** for AMDA Nepal, along with its hospitals and clinics.

### C. Scope of work

AMDA Nepal is issuing this request for Hospital Management Information System (HMIS) and its related installation, configuration and training to increase productivity & efficiency and to provide better management information. It is AMDA's preference to purchase a single software solution that provides the complete range of required functionality and related services. A user-friendly, highly intuitive system for leveraging technology to improve departmental performance and efficiency.

Software solution providers must meet the following requirements:

- I. A cloud-based web-based browser accessible application, with high-performance and availability to users around the world.
- II. HMIS should run with all functionalities without dependencies on any third-party software or applications.
- III. The system should be in client-server architecture. Application, data and database should be server and client can access via web and/or client application interface.
- IV. System should run in IP network which is setup locally and/ or remotely for centralized server.
- V. The software license mechanism should be organization-based (AMDA Nepal). It means one software license for the whole organization and

should not require additional license for any branches. License must not ever expire.

- VI. The system should support clustering with primary and secondary systems running in parallel for automatic failover.
- VII. Ability to easily import and export data, and web-based API integration capabilities to allow linkage to other software(s) in use.
- VIII. Capability to configure with another database (PostgreSQL, MySQL, MariaDB, SQL Server, Oracle etc.)
- IX. Service availability and data backup processes consistent with industry standards for this type of application.
- X. Systems and policies consistent with the regulations governing the management of personal data, such as the GDPR (General Data Protection Regulation)
- XI. System must fully comply rules and regulation of Government of Nepal and its authorities.
- XII. Support multiple branch and layer setup for several offices (hospital / clinic).
- XIII. System log management for user activities, transactions, data manipulation and other activities as well.
- XIV. Role-based security and functionality at the global level for system management and branch level for local.
- XV. Settings, hosting configuration on production server during deployment (deployed in local production server and/or cloud space provided by AMDA Nepal.)
- XVI. Easy to access data for robust report and query generation without the need for programming specialist.
- XVII. Data/database synchronization to centralized server from branches.

## D. Scope of Services

Supplier must state if their solution satisfies but not limited to each of the following requirements:

### D.1 The initial standard plan includes;

#### 1. Clinic Module:

##### **I. I. Patient Billing and Admission**

- I. Out-patient registration
- II. In-patient registration
- III. Emergency-patient registration
- IV. Patient admission
- V. Investigation billing
- VI. Deposit and advance in billing
- VII. Health insurance billing
- VIII. Social security billing

- IX. Scheme based billing
- X. Discharge billing
- XI. Suspend bill (temporary bill)
- XII. Revenue reports
- XIII. Statistical report

### **I.2. Patient Discharge Summary**

- I. Generate discharge summary as per AMDA Nepal Hospitals and/or government format.

## **2. Laboratory information system**

- I. Sample collection
- II. Sample rejection report
- III. Work lists
- IV. Sample pending reports
- V. Sample complete reports
- VI. Sampling Reporting and Verification
- VII. Email reporting (optional)
- VIII. Capable of machine interfacing
- IX. Barcode/QR-code of samples
- X. Lab report as per standard format by AMDA.

## **3. Pharmacy management system**

- I. Purchase requisitions
- II. Purchase order
- III. Drug configuration
- IV. Pharmacy store configuration
- V. Drug issue (pharmacy sales) to patient and billing
- VI. Suspend bill (temporary bill)
- VII. Drug inventory
- VIII. Consumption and Stock report (dynamic)
- IX. Pharmacy stock adjustment (role based)
- X. Report as per standard format by AMDA.
- XI. Short expiry alert configuration

## **4. Social Security Fund (SSF)**

- I. SSF Rules, package setup
- II. SSF patient billing as per SSF billing scheme/rules
- III. SSF two-way API integration to access patient records/profile, uploading claim, uploading invoices and documents.
- IV. SSF revenue and statistics report.

- V. HMIS reporting as per AMDA Nepal format and/or Government format
5. Health Insurance Board (HIB)
- I. HIB rules, package setup
  - II. HIB patient billing as per HIB billing scheme/rules
  - III. HIB two-way API integration to access patient records/profile, uploading claim, uploading invoices and documents.
  - IV. HIB revenue and statistics report.
  - V. HMIS reporting as per AMDA Nepal format and/or Government format
6. Digital payment system/ QR Code Payment System
- I. Generate dynamic digital/ QR-code (Fonepay and Nepalpay) for each bill/invoice for payment via smart device.
  - II. Maintain separate transaction details made by all/each digital payment.
7. Medical Record Management System, HMIS Recording and Reporting
- Must fully comply with latest HMIS reporting; DHIS2 reporting.
- I. Customizable as per the requirement of hospital and/or Department of health service.
  - II. Disease department-wise reports.
  - III. Death report and Recovered reports.
  - IV. In the case of death, death certificate is maintained.
8. Accounting Module
- I. Registration, follow up, consultation report.
  - II. Cash/credit/scheme billing report
  - III. Discharge report
  - IV. Due clearance report
  - V. Patient admission report
  - VI. User, department, wise report
9. IT Administration
- I. Access management
  - II. User, group role setup
  - III. Database management
  - IV. Data/database synchronization setup
  - V. Able to monitor log generated by system

## 10. Managerial Report

- I. Dashboard service reports
- II. Dashboard revenue report

### D.2 The optional/preference plan may include

1. Inventory management system
2. Patient registration supports scan and save supporting documents
3. Realtime radiology service imaging; view, transfer and store
4. Medical Record and Research (Data analysis for patient registration, Consultation, bed transitions, delivery, Laboratory, Sensitivity, radiology.
5. mobile application
6. Voice to text conversion for patient history and notes
7. Support smart device for input OPD consultation prescription notes
8. Support patient queue management
9. Self-consultation booking and confirmation with payment integration
10. SMS integration
11. Patient ID generation/print
12. Provide Software source code.
13. Compatible with multiple operating systems (OS) for Server/workstation.
14. Web-based patient report (time-based)

### E. Training

1. Orientation and onsite training for the users, administration and IT staff on the deployed applications with a detailed user updated-manual and tutorials.
2. Technical knowledge transfer to AMDA Nepal IT staff with proper hand over of the system process documentation.
3. Vendors should provide training for each module to users, IT and administration units.
4. At least one contact person should be designated for the first one-year on-call support service after handover of the software application.
5. Vendors should provide training for each module. If any changes in changes in procedure or features in any module, the vendors should provide refresher training for those modules or features.

### F. Service support

1. Vendor should provide system architecture document, updated-system setup manual, system administrator guide.
2. Vendors should provide effective support for HMIS for any issue or bugs raised within an hour or at earliest possible during hospital/clinic hour.
3. The support system may phone call / remote login/ group chat.

4. Any written requirement or customization in software should be solved at the earliest possible or within 2 weeks.

#### G. Hardware Requirement

1. System should run on the minimum requirement of server hardware specifications (Intel Xeon, CPU 2.20 GHz 4-core, 16GB RAM, 1x2TB Storage SATA, Gigabit ethernet)

#### H. Price and agreement

The software price should be proposed for Three different components;

1. License cost: Paid only one time after successful installation of software in all designated sites/services.
2. Maintenance: Maintenance service for the first year should be free of charge. It should be optional for subsequent years. AMC will be paid for the following support if a separate agreement signed for each year.
  - I. Minor customization
  - II. GoN imposed modules/feature.
  - III. Phone support to IT focal person
  - IV. On-site visit support
  - V. Bug fixing, error fixing
  - VI. Free version upgrades released by the vendor from time-to-time
3. Active user support: No extra charge will be paid for active user support, if annual maintenance charge is paid up to 50 billing users from 5 different sites. Active user cost is applicable only for exceed number of users and sites. Vendor can propose active user support cost per user for the following support
  - I. Regular phone support
  - II. Refresher training
  - III. Group chat support

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