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From: ISF – Mr Fabrizio Montino, Mr Alessandro Domanico

To: Malindi Hospital – Dr Morris Buni

C.c. to: CISP – Mrs Isabella Ferrari

Malindi, 25-10-2012

### **Subject**

This document reports the results of the assessment of the Open Hospital Project status and the actions suggested for the future.

It is the result of the interviews done in the last three days with: Dr Buni - Hospital Medical Superintendent, Mr Limba - Record Office, Dr Elwin - Pharmacy, Mr Sammy and Mrs Gladys - Billing, Mr Jerry – IT specialist, Mr Kenneth – Open Hospital specialist.

### **Record Office and Pharmacy**

The modules Open Hospital Record Office and Open Hospital Pharmacy are regularly used, the user perception of Open Hospital is good because of its simplicity to learn and to use.



Up till now, in the Open Hospital Database almost 100.000 patients have been registered. The average number of registered OPD is 5.450 per month, against 3.150 per month before of the introduction of Open Hospital, with an increase over 70%.

During the interviews we asked to the users their requests for improvements and optimizations of the OH system.

Afterwards we realized those improvements and new reports that were feasible in a short time and we are going to install and deliver them within the week. Moreover we'll deliver the latest version of Open Hospital containing new features developed in the meanwhile.

For the remaining change requests, we will define a delivery timing plan.

The attachment below contains the list of the new features, developments and change requests.

### **Billing**

Open Hospital billing has never started to being used, because it was not able to produce a Bills summary report by department, a mandatory report requested by the government.

To produce this report, we needed the association between each billing item code and the corresponding department. We didn't succeed in obtaining it from the users, so we looked for this information in the old

billing software, we found there and then produced the association table. After having this table, we easily realized the report.

So the problem that prevented the adoption of the OH Billing module has been solved, and OH Billing could be used, if it will help.

### **New billing software AFYA IT – IQ Care Project**

The billing department has been using this new billing software since three months ago. This software has been installed in the framework of the IQ Care Project, a pilot project that is going on in Malindi Hospital with the sponsorship of the central government and that aims to introduce new procedures and software tools to improve the hospital management.

The current process with AFYA IT is inefficient because of the need to enter twice the record data of the patients: the first time the data are entered into OH Patient Record, the second time they have to be entered in the AFYA IT billing system.

To eliminate this inefficiency, there are two ways.

The first way is to use the OH Billing module, that is integrated with the OH Patient Record module, instead of AFYA IT. This is now possible because the report by department is now available. This could be the choice, if the ongoing project foresees to continue to use Open Hospital and to integrate it with additional IQ Care modules.



The second option is to interface the AFYA IT software with Open Hospital. This should be the choice, if the ongoing project plan foresees the substitution of all OH modules by the end.

With regard to the interface of OH with AFYA IT, first of all we have to say that it has to be a real time interface. In fact the time between the patient recording in OH and the billing could be very short in many cases, so an asynchronous batch interface would not be suitable.

The technically best way to realize a real time interface would be to develop APIs Application Program Interfaces (e.g. Web Services), at the two sides, by specialists of the two systems. This approach requires at least some meetings, both for the first startup of the interfaces and for any future changes, that are quite difficult to manage and synchronize.

So our suggestion, technically less orthodox but practically more simple and effective, is to leave to the AFYA IT specialists the access, in read-only mode, to the Open Hospital Patient database tables. In this way the AFYA IT specialists will be enabled to read the patients data from within their software application.

### **OH Management and support activities**

During the CISP project which included the delivery, startup and maintenance of OH system, Mr Kenneth has been engaged to carry on the onsite activities related to OH: OH System management (Server, PCs, networking), Back-up management, Software upgrades installation, Users training and ongoing support, Communications with ISF development team. The costs of Mr Kenneth were subordinated by CISP during the project, and by ISF for an extension of 8 months up to October 2012.

In order to continue overtime the maintenance of the OH system and the support to the users after the end of the project, the Hospital should decide if engage itself Mr Kenneth or if transfer these activities in charge of someone else (Mr Jerry or other). Mr Jerry already knows how to do the OH activities done by Kenneth, anyway it could be more safe to refresh his training.

In any case, ISF will continue to guarantee central development of OH, and will be glad to continue giving advise and support to Malindi Hospital management, if requested.

With our best regards.

Mr Fabrizio Montino

Mr Alessandro Domanico



## ATTACHMENT 1

### New features in OH version 1.6.0 release 4

#### Billing:

- Added Variable and Chargeoff capabilities in custom prices codes
- Added Refund function in payments
- Added 3 new reports for accounting
- Some GUI improvements
- Added "served by" field in receipts

#### Pharmacy:

- Added history window to show patient bills and drugs givings
- Modified one report according to Dr. Elwyn needs
- Some GUI improvements

#### Record Office:

- Added 3 new reports for administration
- Added Anamnesis and Examination features
- Added history window to show drugs givings to the patient
- Some GUI improvements

#### Server:

- Provided a new USB key for night backups
- Added night-time script for local backups

#### Challenges for the future:

- Computer in the Pharmacy Store with import/export feature
- More reports for Pharmacy (Drugs Tally Sheet and Dispenser's Book)
- Allarm systems for Pharmacy (expiring dates, out-of-stock, etc...)
- Providing critical levels for each ward
- Allow automatic movements between wards

#### To be defined:

- Drugs cost management (requirements needed)
- Other reports (examples needed)

