Project Status Report as at 17-04-2013
Project: **RHEA**
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1. **Project Status**

Green	Orange	Red
Project expected to deliver agreed scope on time and within budget	*Project expected to deliver at least 80% of agreed scope, with less than 10% overrun on time and/or budget*	*Project in danger of delivering less than 80% of scope, and/or project time or schedule overruns expected to be greater than 10%*
		✓

2. **Project general update.**

   - **On going urgent issues:**
     - At site
       - Musha
         Internet is still disconnected and the clinicians are using the system in offline mode. As of 9th April 2013, 1948 RHEA transactions (including save patient, update patient and save encounter messages) have been queued to be sent to the HIE. Between the 3rd and 9th of April, 117 transactions have been queued.
       - Ruhunda
         Internet is still disconnected and clinicians are using the system in an offline mode. From the time Ruhunda was connected to the HIE, we have logged 1786 successful RHEA transactions (made up of save patient, update patient and save encounter messages). There as been 3123 transactions logged in the error queue. Between the 27th of March and 10th April, 207 transactions have been queued in the system at Ruhunda

   - Notification messages are now being sent from RapidSMS, however most of these are failing the patient validation with the Client Registry as our current CR implementation is loaded with Patients only from Rwamagana district. This is expected behaviour until a decision is made by the RHEA team to load patients from the rest of the Country into the Client Registry. Jembi will continue to monitor these and verify that notifications originating from the Rwamagana district are successfully being persisted in the Shared Health Record and can be queried. To date, we have not being able to confirm a single notification message originating from RapidSMS (submitted by Community Health Workers in the Rwamagana District) that has been successfully stored in the Shared Health Record. Last week, our team obtained three sample patient NID's from the CHW Head at Musha to confirm that the notification messages that were submitted to RapidSMS where in turn

posted to the HIE as notifications. However, we could not find any trace of these notifications (by manually inspecting the logs) in the Shared Health Record, the Interoperability Layer and RapidSMS. Jembi will work with the MoH and Pivot Access to follow-up on who is responsible for maintaining and managing the RapidSMS deployment so that we can further investigate whether this is a core RapidSMS problem, whether RapidSMS is not being used as expected (notifications are not being sent to RapidSMS by CHW's) or if there is a problem with the RapidSMS-HIE Integration.

- The technical team is prioritising the Client Registry and Shared Health Record Reconciliation problem. Last week, the Jembi and Regenstrief Tech leads had a call to review the proposed design and discuss updating the Notification message format and content emitted by OpenEMPI to better allow the Interoperability Layer and SHR to validate events being emitted from OpenEMPI and process the appropriate updates in the SHR accordingly. This design update is expected to be finalized this week so that development can continue.

- Jembi team is working on a revision of the point-of-care adapter module to enhance the queue user interface that will allow for improved reporting on the different transaction types and their status over user-defined periods.

- Following up on the issue reported by Liz and confirmed by the MoH developer team that users are unable to select a service when registering patients on return visits at the Health Centers, Jembi setup a test environment to replicate the reported issue. We have identified that the service select screen does not present when a user tries to search for a patient who has already been oriented to a particular service. It is not possible to re-orient the patient to another service until a built-in timeout elapses (24-hours). This constraint was built into the module originally by PIH and confirmed by the local PIH developer team and we are following up with the PIH team to better understand the reasoning behind this design decision so that we can help address if this is not expected behaviour.

- A joint Jembi/MoH planning session for developing an implementation plan for the MoH rollout of the ANC OpenMRS/RHIE system to the other health facilities in Rwamagana District is scheduled for the week of the 15th April 2013-03-19.

- The MoH was planning to begin the infrastructure rollout to the remaining site in Rwamagana this week. MoH will provide an update on the RHEA call.

- Liz and Dawn visited sites (Ruhunda and Musha) last week. Site visit reports will follow separately.

- It is Genocide Eduction week in Rwanda this week. MoH and Jembi in country staff are participating in community activities and progress on the project will be slow.

The current up-to-date project plan can be viewed at
https://dl.dropboxusercontent.com/u/63883595/130417%20RHIE%20Project%20Plan%20Track%201/index.html

Please note: This project plan does not include the rollout activities and will be changing in the coming weeks as these activities are rescheduled.

3. Progress

3.1. Tasks Completed

- Jembi has completed development work on upgrading the RHEA modules to be compatible with OpenMRS version 1.9. Jembi and the MoH ran a joint integration-testing sprint on the week starting the 25th of March. The MoH team is currently updating the PoC Concept Dictionary to include reference mappings that were incorrectly removed and the Jembi team will finalize testing once these are sent through.

- Progress on tasks planned for last week:

Task	Status
RACI chart for RHEA is being developed by Rhonwyn, Dawn and Liz	Basic draft of chart was done and shared with Richard for comment.
Support and monitoring software at Ruhunda and Musha	Ongoing
Research into Network and Systems monitoring tool	The Jembi team continue to work with the MoH to explore setting up Nagios for agent based remote monitoring of the Health Centres. As a transitory measure the Jembi team are reviewing indicators outlined in system monitoring spreadsheet Wayne and shared with the group to identify key indicators that can be collected as a short-term measure. Daniel is in discussion with the NDC around using Nagios to monitor the systems at the NDC.
Development of Documentation for the NDC Server Backup to a remote site and Recovery Testing Process.	Jembi has collated the Registry documentation (except Provider Registry) and shared them with the MoH tech team. The RHEA wiki will be updated within the next week so that this content is shared with the larger RHEA working group.
Finalize OpenMRS Patient Search Module development (previously Track 2 but critical to Track 1 implementation)	We have received feedback from an initial round of user testing from both the MoH team and Liz. Jembi is currently updating the module and will release a revision for review before the end of this week.
Developing new message queue interface for the adapter module (previously Track 2 but critical to Track 1 implementation)	Ongoing
OpenMRS Provider Helper Module Design	Ongoing.
MoH working on providing access to a remote backup-server	Ongoing
Review existing help desk setup and process with MoH and work with them to define the help desk process for RHEA with an implementation plan	Jembi waiting for MoH to provide team with documents to review
Implementation handover	MoH infrastructure rollout successfully completed. Rhonwyn, Dawn, Gilbert and Emmanuel are currently developing an implementation plan.
Mentorship or registries managers	Dawn is working with the MoH team to identify what training they need and how they would like to received the training. She will feed back to the RHEA working group on this week's call

3.2. Tasks currently underway/planned for the next week

- This week, our team is prioritizing the design and development of a solution for the Client Registry and Shared Health Record Reconciliation problem. The technical team is aiming to have a working solution installed and running by end of April.
- Richard reviewing the proposed RACI chart
- The Jembi technical team continues to support and monitoring of Ruhunda and Musha
  - Twice weekly site analysis through follow-up calls with IT managers.
- OpenMRS Module upgrade to 1.9 - Collaborative Testing (MoH-Jembi)
  - A few incorrect concept mappings were identified during the joint testing. The MoH to update Concept Dictionary with correct concept mappings this week.
- OpenMRS Patient Search Extension Module
  - An initial version of this module as been developed and loaded onto Jembi's testing environment in the cloud. We have received feedback from an initial round of user testing from both the MoH team and Liz. Jembi is currently updating the module and will release a revision for review before the end of this week.
- Research into Network and System monitoring tools for the NDC Environment as well as monitoring the point of care applications in collaboration with PIH and the MoH.
  - Point-of-Care Monitoring: Following discussions with Daniel Murenzi, we plan to setup a test Nagios installation to remotely monitor Ruhunda as a pilot site. While we wait for Daniel to provide access to a dedicated server for the central monitoring instance, we are currently setting this up on two nodes in our RHEA testing environment in the cloud and documenting the setup and configuration process.
  - NDC Server Monitoring: Jembi as recommended that the NDC provide as a service under the MoH-NDC contract, access to a Nagios dashboard for monitoring the RHEA Servers. Daniel Murenzi is following up with the NDC and will feedback to the group.
- Daniel Murenzi is still working on providing access to a remote backup-server. Currently, the all NDC RHEA servers except the FR dump backup data to the local servers in the NDC and this need to be stored remotely where the MoH Registry managers will periodically run through the recovery testing process.
- Review existing help desk setup and process with MoH and work with them to define the help desk process for RHEA with an implementation plan.
- OpenMRS Provider Helper Module Design
  - Jembi is currently developing a prototype to generate the HPD query to submit to the Provider Registry to support the priority use case of auto-validating providers loaded in OpenMRS at the health centers against the Provider Registry. We are also coordinating with IntraHealth to develop the endpoints on the Provider Registry to support this use case.
- Rhonwyn, Dawn, Gilbert and Emmanuel are work on the implementation plan for getting the system out to other sites in Rwamagana District by end Sept 2013
- Mentorship of MoH team regards monitoring and management of the HIE implementation.

4. Issues

- Neither Ruhunda nor Musha currently have Internet connectivity. The OpenMRS systems are working offline but no messages are coming though the RHIE.
- Last week, our team obtained three sample patient NID's from the CHW Head at Musha to confirm that the notification messages that were submitted to RapidSMS where in turn posted to the HIE as notifications. However, we could not find any trace of these notifications (by manually inspecting the logs) in the Shared Health Record, the

Interoperability Layer and RapidSMS. Jembi will work with the MoH and Pivot Access to follow-up on who is responsible for maintaining and managing the RapidSMS deployment so that we can further investigate whether this is a core RapidSMS problem, whether RapidSMS is not being used as expected (notifications are not being sent to RapidSMS by CHW's) or if there is a problem with the RapidSMS-HIE Integration.