**SEF – Assessment 2 Stakeholder Requirements.**

On-Vacc

You have been assigned to develop On-Vacc, a new vaccine administration and handling system, that is based on the Commonwealth Government’s vaccine rollout strategy. Shakira, George, and Corey return with Prendergast from the state health department.

Budget Plus Regional Manager - Shakira Rahman

Thanks for the awesome design models you gave us last week! We have considered a lot more about how the On-Vacc will be used, working with Prendergast from the DHHS.

Department of Health Program Coordinator - Corey Messina

We did not reach our target of Cominarty rollouts in Phase 1 of the program. The cost of these special fridges to store the vaccines at -70℃ was too much for many clinics. For Phase 2B, we want to trial an alternative strategy. This time we will make use of existing national vaccine storage guidelines (used currently for flu-shots, measles, etc). The Cominarty vaccine vials will be delivered in 'pizza' boxes which are in deep-freeze -70℃ temperatures. The vaccine site would have made an online order of X number of vials, based on their week’s appointment schedule. When receiving each shipment, the pharmacy staff will add them to the On-Vacc vaccine inventory automatically, by scanning the manufacturer (Pfizer) barcodes on each vial before storing them in the vaccine fridge. On-Vacc will send a record of all delivered vials to our own Vaccine Management system.

Budget Plus Senior Software Engineer - George Alwyn

With the support of DHHS, we will get purpose-built standard vaccine fridges with temperature data loggers to all our vaccination sites. Each data logger will send temperature readings at 5 min intervals to On-Vacc. Email and SMS alarms are sent to the Vaccine Manager if three consecutive readings are below or above the recommended vaccine range of -8℃ to -2℃. We have a term for this event - a 'cold chain breach'. Although Cominarty arrives to us in deep-freeze state, when stored in our vaccine fridges within 15 minutes of delivery, they will last exactly the earlier of either the vial expiry date/time, or 5 days from delivery. This means that on receiving and scanning the manufacturer's barcode on the vials, the Vaccine Manager will print out a label with the new date and time expiry, and affix it to the vial before refrigeration within 15 min.

DHHS Software Architect - Prendergast Cho

Twice daily, according to federal guidelines, the relevant vaccine staff will need to record the minimum and maximum temperatures for the purpose of reporting any cold chain breach to us at DHHS. Each time, they need to record the minimum and maximum temperatures of those 5 min interval readings for the period since the last entry. We have sent you a PDF version of the existing forms for recording this for normal vaccines. (see appendix 2) but for Budget Plus and Cominarty, we would like On-Vacc to do this electronically. The Vaccine Manager will open a form to view all previously recorded date and min/max temperatures and be able accept the pre-filled minimum and the maximum temperatures sent by the data logger since the last reading - and submit.

Budget Plus Senior Software Engineer - George Alwyn

On-Vacc should store the status of vials, starting from the time the Vaccine Manager orders them from the Department of Health. When the vials arrive, their status will change from ORDERED to IN-STORAGE once they are scanned and the new label with the expiry date is printed and affixed to each vial. Sometimes the full number of vials are not received, so the Vaccine Manager records the vial as NOT-DELIVERED. We cannot receive any more vials than ordered, for each delivery. A vial record with the manufacturer’s ID is created, marked as SURPLUS and sent back via the same courier. When the vial is taken out of the fridge, punctured, and used for doses, the vial is recorded as DOSED and will remain until they are automatically EXPIRED by the system unless administered or otherwise damaged or unusable. When a vial is dosed, we want to track concurrently the status of the six doses (each starting in DOSED state). We hope each dose will reach the ADMINISTERED state within 6 hours, otherwise they will also reach the EXPIRED state along with the vial. At any time during the life cycle, the pre-dosed vial or the dose can be recorded by the Vaccine Manager as DAMAGED, if the container (syringe or vial) is compromised (such as a crack). If left outside of storage, in room temperature, over two hours, then a vial or dose will be recorded as DAMAGED\_TEMP. The cold chain breach of the vaccine fridge will first put all inventory in the REPORTED state. They cannot be administered. If the DHHS communicates (via email or fax) that the vial or dose is not usable, then they are marked as DAMAGED\_BREACH and the details of the DHHS confirmation are recorded in a comment field. Otherwise, if the DHHS verdict is an Okay, the Vaccine Manager will return their status to the state that makes sense (DOSED or EXPIRED, etc).

Budget Plus Regional Manager - Shakira Rahman

Is this meeting on record? Great! Note all vaccine handling is assigned to the Vaccine Manager, except damage reporting which is done by Vaccine administrators too. We are so glad you are building On-Vacc for us! Here are two user scenarios for you that we prepared earlier… [see Task 1 below]