Nurse Module

When a CHV (Community Health Volunteer) observes a sick patient during their routine household visits, there are two scenarios: the sickness case is very simple and the CHV can give some advice and not open a referral, the sickness case is severe enough for the CHV to open a referral case. In the first scenario, the CHV is helpful in providing knowledge-based advice about how the patient can treat their simple condition. In the second scenario, the sickness is *more severe* *than simple* and the CHV can’t provide knowledge-based advice (not medically qualified), so the CHV refers the patient to the nearest health facility. In almost all cases, this is Dodoma general hospital because local health facilities aren’t often trusted health providers or more expensive than the hospital. However, for these patients (and their mothers in the case of sick children), going to the hospital is expensive:

* Traveling there is expensive when walking is not an option;
* Basic hospital services are expensive and a fee is required before a doctor will see you; and
* most of all, it’s time consuming (opportunity cost).

In result, there isn’t any real motivation for patients to visit the hospital until the patient’s condition is clearly very severe, and this is when a condition is the most expensive to treat and the most dangerous. Additionally, since a CHV can only knowledgably determine very simple cases and very severe cases, these referrals can also have the unintended side effect of causing unnecessary congestion at the hospital with non-severe cases not requiring the hospital’s level of treatment.

The purpose of this module is to have a nurse serve as an intermediary between the CHV and the hospital in order to avoid the disincentive patient’s have to wait to treat their condition, avoid unnecessary trips by the patients and unnecessary congestion at the hospital, and, lastly, increase the effectiveness of the existing referral activity.

This new process and module alter scenario 2 described above where a patient’s condition is *more severe than simple*. In this new process, when a CHV observes a sick patient during a household visit, the CHV opens a referral case. The referral case is placed under 2 categories: “Emergency” or “For Nurse Review”. In emergency cases, the CHV can click “Emergency” on the referral form which doesn’t send this patient case to the nurse’s module. The CHV will arrange for emergency transport manually, outside of the module.

For cases categorized under “For Nurse Review”, the CHV will be asked to collect more information about symptoms, wounds, or other important observations. When finished, the CHV will press “Send” and the referral case is sent to a CommCare module designed for the nurse. This module displays all of the current referral cases, and the nurse can review the referral cases with just basic information and/or click for more detail to display symptoms and other information collected during the CHV’s initial referral. This allows the nurse a chance to prioritize the most severe cases requiring follow-up based on the listed symptoms. For each prioritized case, the nurse checks a box indicating that they will follow-up with this sick patient. As the nurse checks the boxes, the module is building a “Patient List” which is a list of all of the cases the nurse will visit on their patient follow-up route.

Before the nurse leaves on her patient follow-up route, the nurse can view a list of her “Patient List”. Based on this list of patients and the symptoms previously observed by the CHV, she can pack her medical kit bag with the medications that she thinks she might need to treat these patients. These medications would be very low-level and general treatment drugs such as Paracetamol (OTC pain killer) or other medical supplies (gauze, medical scissors, etc.). Since the nurse has the ability to more intelligently distribute the medication, the cost of providing these supplies would be much less than if the CHVs were distributing drugs.

Once on the patient follow-up route, the nurse will visit the patients listed in her “Patient List”, and the nurse will provide treatment to the patient. With her higher level of training and available medication/medical supplies, she can treat the patient more effectively. Then, if the nurse identifies the patient’s condition as too severe for her to treat, then the patient will have to be told to go to the hospital. At this point, however, the patient isn’t unnecessarily sent to the hospital, and the patient’s condition is treated before the condition is more serious.

On average, there is about 1 nurse per 2000 people throughout sub-Saharan Africa (<http://www.who.int/bulletin/volumes/87/3/08-051599-table-T2.html>). In Tanzania, this ratio is 1 per 3000. In this design, I think this module would be effective, sustainable, and replicable with this current nurse per capita ratio.