Job Aid Smart App

for Community Health Workers

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Problem space

Users

- **Community health workers and trainers**

Most job aids are paper-based

- Quickly accessing the right job aid takes time
- Some job aids are posters—
not always where they're needed
- Carrying around multiple job aids can be cumbersome

An electronic job aid could offer more

- Help with decision-making
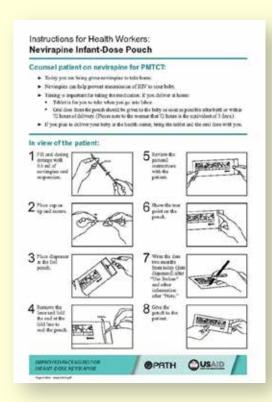- Assist with calculations
- Video instructions provide better context

Focus where job aids are needed most

- **Rare** procedures
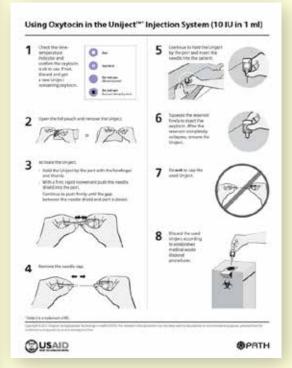- **Complicated** procedures

Typical paper-based job aids

Basic app concept

Benefits of smart apps

- § Smart phones more portable and secure than desktops
- § Allow for quick job aid access
- § Interactive

Application description

- § Basic instructional app
- § Calculations
- § Real time feedback, status update (alarm clock)
- § Store and upload patient data

App builders for non-programmers

- § Create job aid database

L-IV

1. Extract **XXXX ml** of MgSO4 solution into the Syringe from Vial.

2. Add to **YYYY ml** of sterile water

3. Give the **IV** solution **slowly** over **5 minutes**

Training

Simulate on-the-job environment

Enable the trainee to practice before actual use.

On the job

Abasi is a newly hired health worker in Kenya providing life-saving services to pregnant women.

Abasi encountered a pregnant patient who was suffering from life-threatening seizures (eclampsia). However, he had limited training on how to administer MgSO4

Abasi decided to use the job aid app to walk him through the procedures.

The app prompted him to input the amount of available MgSO4 he had.

The app calculated the exact amount of solution needed and showed him what he should do next.

Abasi gave a deep Intramuscular injection to the patient after refering to the application.

Abasi also typed in the time he injected the patient so that the app will remind him when he needs to check the patient again.

After 22 hours, the alarm went off. Abasi reexamined the patient. 20 days later, the patient gave birth to a healthy baby girl.

Basic components

§ One app for all job aids

§ Menu

§ Images as important as words

§ Flowchart overview for full context

   o Also be included in training

§ User input—decision tree

§ Calculations based on user input

   o Body weight to inform medication doses

§ Real time notification

   o Alarm system

Expected effort

What fieldwork needs to be done?

- § Identify the project and country
- § Feedback from people who are familiar with the target users
- § Find users to test app

What pieces have to be built?

- § Question framework that will guide the app contents
- § The app itself!

What is the minimum vs. desired functionality?

- § Start simple: basic instructions first, then add functionality
- § Future: Find or create an app-builder

The big unknowns

Patient confidentiality

- § If we input patient data we need to be conscious of privacy issues, especially in case smart phones are lost or stolen.
- § Important to implement passwords and other security measures.

How we develop and maintain our app database

- § Sharing the information with other similar countries/contexts.

Whether this can be **affordable** and **sustainable**.

- § How much will the app cost?
- § Will ministries of health be able to purchase the app?
- § Will ministries of health be able to purchase smart phones?
- § Will maintenance be an issue? How can we address this?
- § Will smart phone theft or loss be an issue? How can we prevent this?

Related work

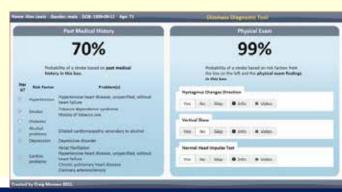What other projects relate to this one?

- Many job aids created by NGO's
- Many instructional apps are out there
  - Hoola hoop dance instructions for beginners!
- Health instruction apps—straight-forward
  - CPR and choking app
- Health diagnosis apps—calculations/diagnoses based on user input
  - Dizziness Diagnostic Tool

What makes this novel or interesting?

- Simple idea with great potential for scale up.