

Leveraging digital technologies to transform training of frontline health workers

A costing model for the Open Deliver Demo project in Uganda

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UGANDA

Objective: Utilizing digital technologies to transform training of frontline Community Health Extension Workers (CHEWs).

Current situation

- **Insufficient Training:** 66% of CHEWs have basic training (trained for a total between 1-7days). Remaining 34% do not have any basic training at all (but are still working as CHEWs).
- **Literacy:** About 50% of all CHEWS completed Junior High School. In remote areas only about 20%.
- **Lack of coordination, constant duplication, inequitable access and no ownership.**

Health system “frustration”:

“VHTs were not being given time to work. Many partners were crisscrossing the districts all the time doing trainings.

According to an analysis done by MoH, in a month, VHTs spent close to 2 to 3 weeks training so, the question was ... **when do the they get time to work?”** *(Senior MoH Official on Community Health Training):*



Strategy: Standardize training for 15,000 CHEWS over 5 years

- Current model of training community health workers is face-to face classroom learning - often privately organised by implementing partners.
- 6-month training program + 20 hour annual refresher course every 2 years



How? Blended Approach (classroom+mobile) using Open Deliver Technology

Guiding Principles:

- Government Owned
- Contextualized content
- Multi-Stakeholder Approach

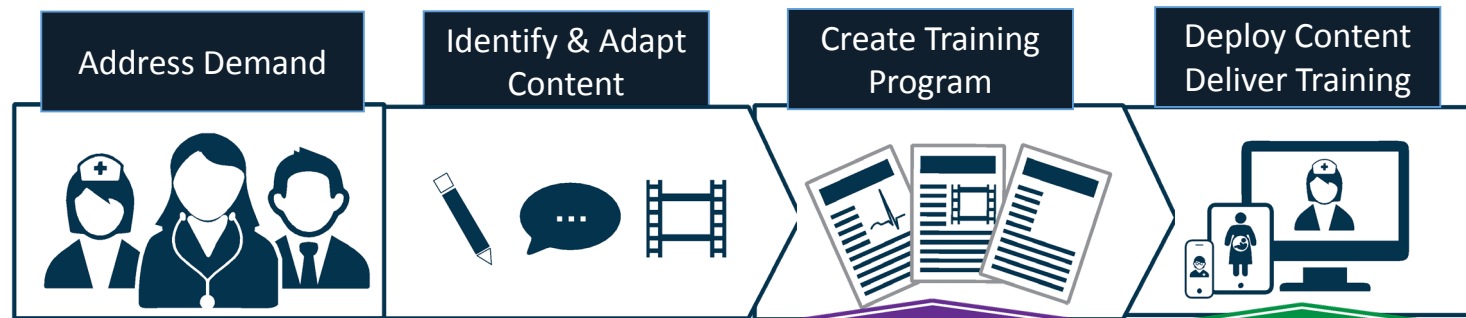


Open Deliver Approach

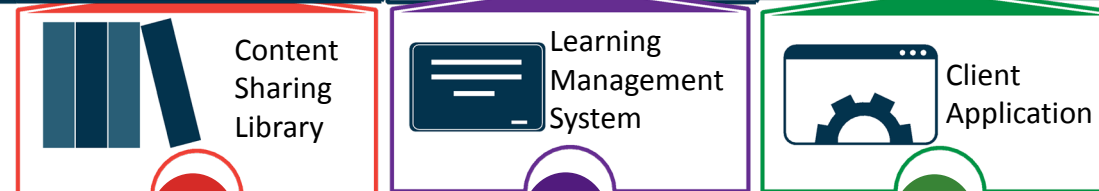
A process-based solution designed for

- government institutionalization
- changing technology
- shareable content

Process



Technology



Products



ORB



Moodle



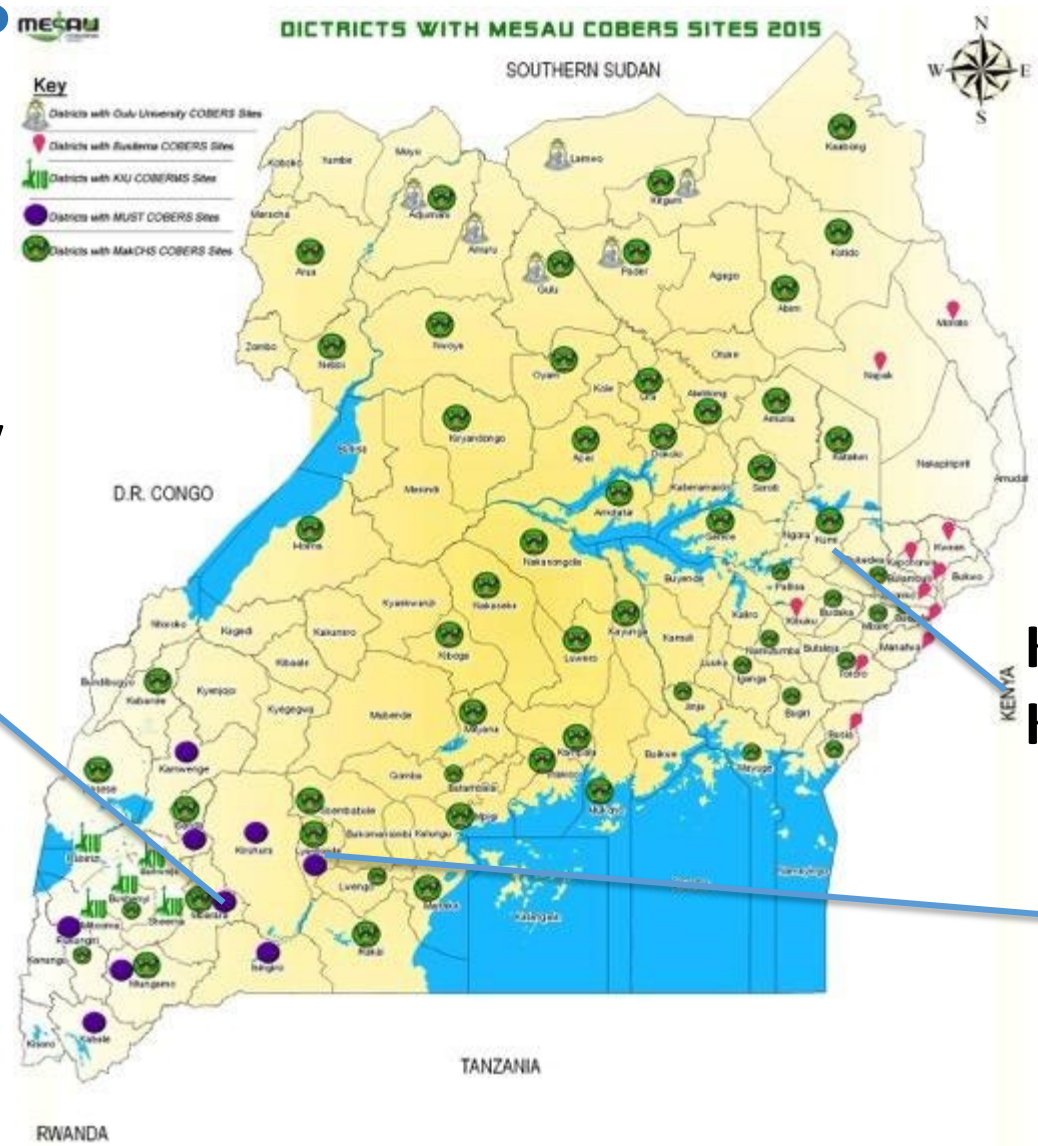
OppiaMobile

Monitor, Evaluate



Google Charts

Project Pilot Sites

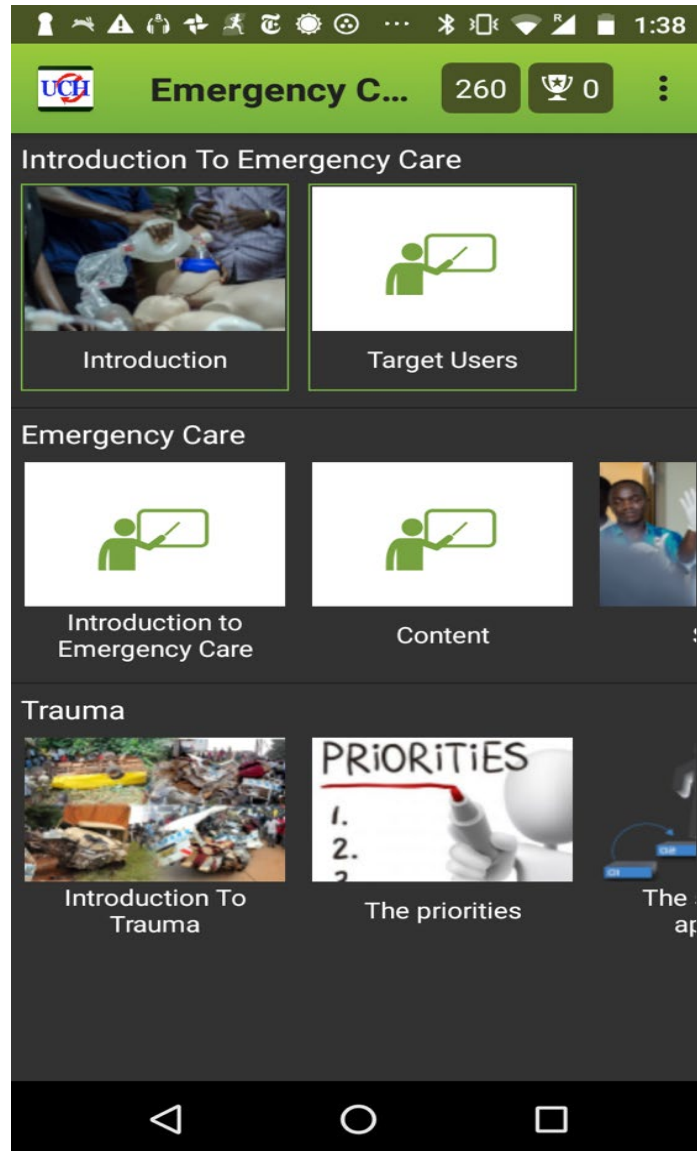


Ntungamo District
Rubaare Health Centre IV

Kumi District
Kumi Hospital

Lyantonde District
Lyantonde Hospital

Sample Module Emergency Medicine Care Course



Upon completion of this module you should be able to:

1. Identify the key considerations for Safety
2. Understand the ABCDE approach
3. Assess and manage the Airway
4. Assess and manage Breathing
5. Assess and manage Circulation
6. Assess Disability
7. Expose
8. SAMPLE history
9. Secondary Assessment
10. Handover



The ABCDE's



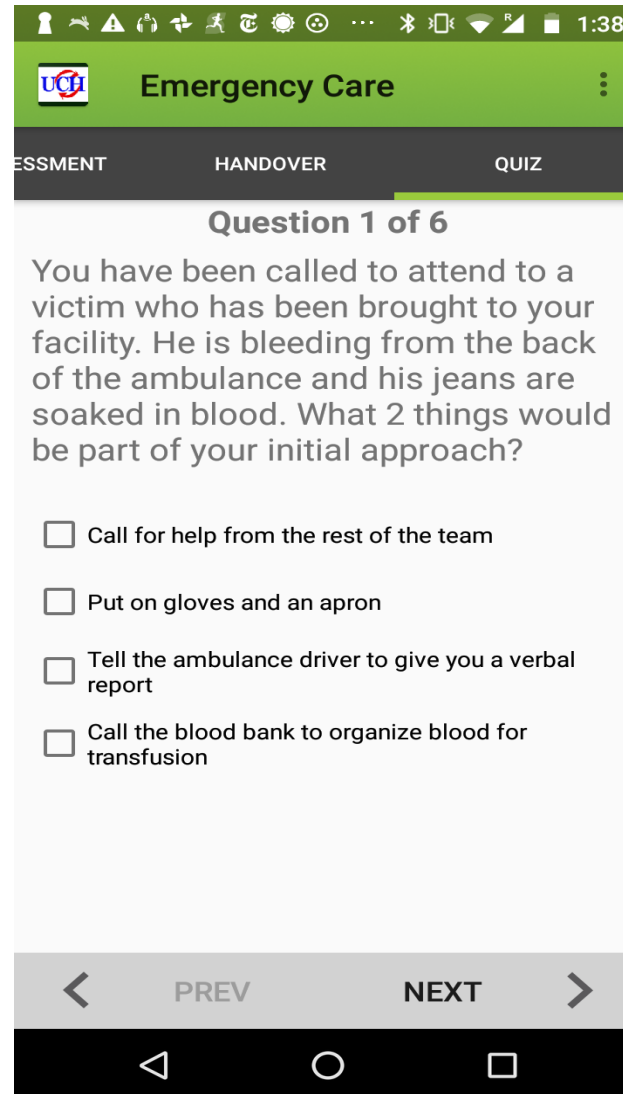
- The ABCDE's should be completed within the first 5 minutes on patient contact
- They should be repeated anytime the patient's condition changes

Animated Trauma Series Videos

- Apply a bandage on top of the materials used and wrap around the wound with some pressure



Emergency Medicine Care Course - Quiz



The screenshot shows a mobile application interface for an Emergency Medicine Care Course. At the top, there is a green header bar with the UCH logo and the text "Emergency Care". Below this is a dark grey navigation bar with three tabs: "ASSESSMENT", "HANDOVER", and "QUIZ". The "QUIZ" tab is currently selected. The main content area displays "Question 1 of 6" and a text-based question: "You have been called to attend to a victim who has been brought to your facility. He is bleeding from the back of the ambulance and his jeans are soaked in blood. What 2 things would be part of your initial approach?". Below the question, there are four multiple-choice options, each preceded by an unchecked checkbox. At the bottom of the screen, there is a grey navigation bar with left and right arrow icons, and the labels "PREV" and "NEXT". The very bottom of the screen shows the standard Android navigation bar with back, home, and recent apps icons.

1:38

Emergency Care

ASSESSMENT HANDOVER QUIZ

Question 1 of 6

You have been called to attend to a victim who has been brought to your facility. He is bleeding from the back of the ambulance and his jeans are soaked in blood. What 2 things would be part of your initial approach?

- ☐ Call for help from the rest of the team
- ☐ Put on gloves and an apron
- ☐ Tell the ambulance driver to give you a verbal report
- ☐ Call the blood bank to organize blood for transfusion

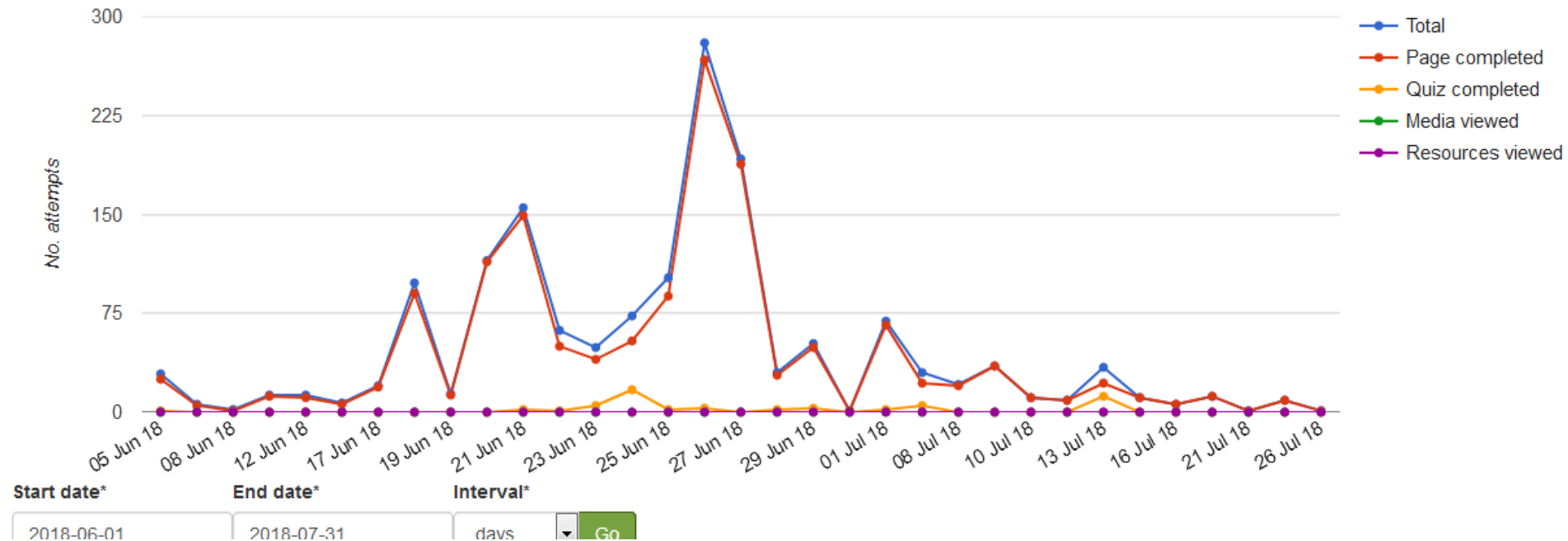
< PREV NEXT >

Analytics from Dashboard

Emergency Care

Tags: Emergency-Care

Recent Activity











Analytics from Dashboard

Completion Rates > Emergency Care

Tags: *Emergency-Care*

Course completion rates

Users enrolled: 51

User	Activities completed
Users completed: 1	
 KETTY AMODING	36 (100.00%)
Users in progress: 50	
 uch user1	6 (16.00%)
 mike bailey	6 (16.00%)
 turinawe jussy	0 (0.00%)
 meddy rutayisire	27 (75.00%)
 peter Kavuma	14 (38.00%)
 muhenda john	28 (77.00%)
 ...	4 (11.00%)

Costs considered under face to face training

15,000 CHEWs over 5 years



Costs considered under face-to-face classroom training (baseline)

- Trainers' expenses – lodging, transport (1 trainer per 50 CHEWs)
- Trainees' expenses – lodging, per diem incentive, transport
- Classroom facility expenses - training venues, manuals, supplies

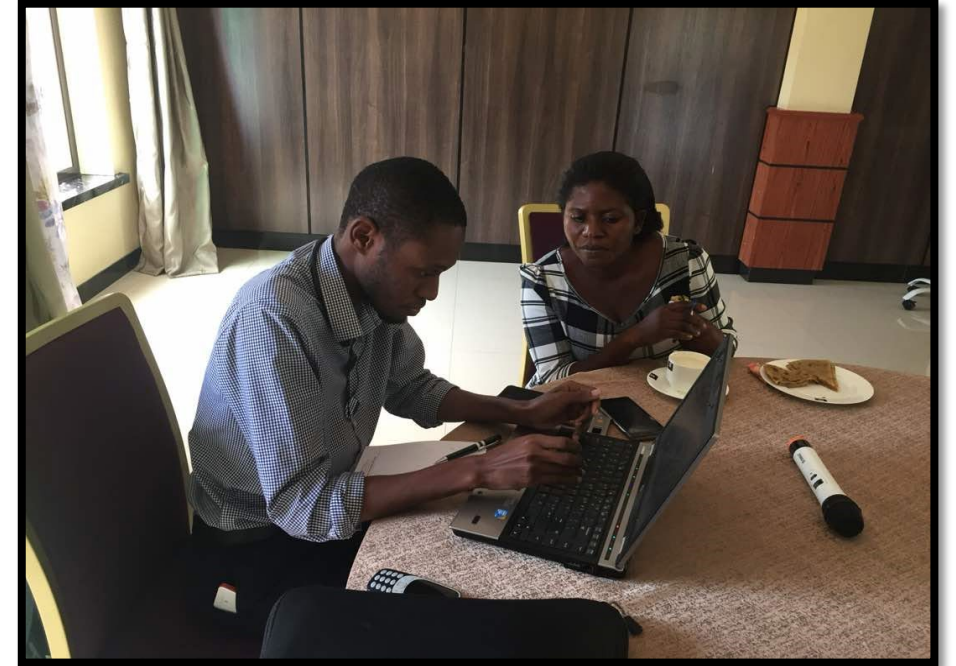
Considerations for Blended Learning

Considerations for blended learning (classroom + Mobile)

Main assumption: classroom training is reduced by 1/2

Additional costs for consideration under blended learning (offset by some of the savings from reducing classroom time)

- Tech support - staff
- Content gathering - collaboration
- Content review and adaptation
- Internet costs
- Server management / content hosting costs
- Mobile phones / devices?



Cost Reduction Benefits of Open Deliver Approach

Training Savings:

- Reduction on face to face post-service training costs.
- Reduction on training (students and in-service) and supervision costs

Content Savings:

- Reduction/elimination of costs for printing and distributing manuals.
- Reduction resulting from minimizing creation of duplicate content.
- Efficiency gains from National Library which centralizes content management and facilitates content review and validation.

Additional Benefits of a Blended Learning Approach using Open Deliver Technology

- Knowledge gained
- Time saved
- **Monetary savings**
- Additional work done as a result of time saved
- Value attached to training at own convenience
- Others - identified during the on-going evaluation process

Model Estimates Uganda

- **15.57% projected savings on Overall Training Program**
- **40% projected savings on Training and Supply Costs**
- Cost assumptions for both classroom and blended training are starting points for the use of the model.
- Baseline costs based on estimates from CHEW MoH training program
- Estimates will be modified with *real* costing data as the program wraps up.
- Long term goal – a dynamic cost model incorporating actual costs + benefits -> CBA, CEA, CUA

Thank you all, Mwebale nnyo

