Outcome Mapping: A Monitoring and Evaluation tool for the Uganda Health Information Network Project.

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Introductions

- Uganda Chartered HealthNet
    - Local NGO promoting use of ICT
- Uganda Health Information Network
    - A joint initiative of UCH, Satellife, Makerere Faculty of Medicine and funded by IDRC

Outcome Mapping

- A methodology developed by IDRC's evaluation unit

- A planning, monitoring and evaluation tool

- Focuses on changes in behaviour, actions of the people, with whom the program works directly

- Categorized into 3 stages and 12 steps

Stages and steps of Outcome Mapping

1. INTENTIONAL DESIGN

- Step 1: Describing the Vision
- Step 2: Identifying the Mission
- Step 3: Identifying the Boundary Partners
- Step 4: Identifying the Outcome Challenges
- Step 5: Developing Progress Markers
- Step 6: Competing a Strategy Map
- Step 7: Articulating Organizational Practices

Stages and Steps of Outcome Mapping

2. Outcome & Performance Monitoring

- Step 8: Setting Monitoring Priorities
- Step 9: Developing an Outcome Journals
- Step 10: Creating a Strategy Journal
- Step 11: Creating a Performance Journal

Stages and steps of Out Come Mapping

3. Evaluation Planning

- Step 12: Developing an Evaluation Plan

Design Workshop

- Covering the 3 stages and steps 1 -12 answered the questions on:
    - Why – Vision
    - Who – Boundary Partners
    - What – Outcome challenges and progress markers
    - How – Mission, strategy maps and organizational practices

Step 1: Describing the Vision

- The Uganda Health Information Network (UHIN) will support better health outcomes by enabling policy makers, planners and health providers to communicate critical information in a timely manner.

- It will also demonstrate the effectiveness of a locally controlled, low-cost ICT that can be easily replicated in other settings and serve other sectors beyond health.

- Additionally it will provide valuable experience in taking a technology project to a national scale in a short time span

Step 2: Identifying the Mission

- This six month pilot will test the assumptions we have made regarding the creation and operation of a health information network based upon the use of the cellular telephone network and the handheld computer.

- We will examine the needs and acceptance of users and decision makers by following their use behaviors.

- We will also collect quantitative data on the cost of the network for data collection and information dissemination as compared with existing systems.

- We will present the findings and user experiences to the "Palm Pioneers" and other stakeholders following the six month pilot in a fashion so as to enable them to make recommendations about the potential for further expansion of the project within Uganda.

Step 3: Identifying the Boundary Partners

- **Boundary Partner 1:**

  The two District Directors of Health Service in the pilot Districts – Rakai and Mbale .

- **Boundary Partner 2:**

  The PDA users who will be suing the PDA for at least one function

- **Boundary Partner 3:**

  The Vendors of services to the project who are expected to provide services during the pilot phase including MTN and Wide Ray

- **Boundary Partner 4:**

  The Health sectors and donor community in Uganda who participated in planning the projects – "Our Palm Pioneers "

Step 4: Identifying the Outcome Challenges

- **Outcome challenge for Boundary Partner 1 (District Director of Health Service:**
  - **Ideally by the end of the pilot phase, UHIN expects to see, the DDHS in Mbale and Rakai actively engaged in the process of sustaining handhelds in their districts and are acting as effective change managers.**
  - **They are communicating regularly with the project team, sharing their needs and expectations.**
  - **Because of the introduction of the technology, they are traveling less often to lower units and are spending less money on printing and photocopying and have more money to spend in other areas.**
  - **They are planning to look for more resources (either from donors or district resources) to purchase more handhelds, jacks, and other technologies.**
  - **The timely transmittal of HMIS data allows them to make relevant decisions more quickly and organize more targeted interventions based on local needs.**

Step 4: Identifying the Outcome Challenges (cont'd)

- **Outcome challenge for Boundary Partner 1 (District Director of Health Service:**
    - **They are monitoring the use of handhelds and the quality of the data received by their staff.**
    - **The DDHS will be inserting a few fields in the HMIS 105 and other forms and reports to meet their specific needs.**
    - **The good performance of the systems allows them to have better relationships with the resource center, NGOs, and HMIS officer, write reports more easily, and to file reports to the MOH on time.**
    - **They are communicating more frequently and better with health workers.**
    - **They are exploring the possibility of expanding the use of the handhelds to new areas (e.g., inventory control and supply ordering).**
    - **They are leading by example by using their personal handhelds and have more access to information for self-development and learning and are sharing relevant information with colleagues.**

Step 4: Identifying the Outcome Challenges (cont'd)

- **Outcome challenge for Boundary Partner 1 (District Director of Health Service:**
    - They will have an increased ability to detect and respond to disease outbreaks.
    - They are championing the use of handhelds and ICTs within the district and beyond and explaining the project to non-participating workers and other local government organizations.
    - All in all, they are dedicated to using the handhelds themselves and mandating others to use them so that the health system in their districts functions more efficiently and effectively

Step 4: Identifying the Outcome Challenges (cont'd)

- **Outcome challenge for Boundary Partner 2 :**

  (**The PDA Users**)

  – Ideally at the end of the pilot phase, UHIN intends to see <u>195 PDA Users</u> in Mbale and Rakai districts confidently using their handhelds to support their health related activities.

  – They have integrated their handhelds into their daily work lives and routinely use applications for storing contacts, using emails, arranging date books, etc.

  – They are efficiently managing the information they receive and are seeking out new tools and resources for specific applications.

  – They are collecting the required HMIS (or other data) and entering it with ease into the handheld.

  – They are transmitting the data in a timely manner to the relevant levels of feedback from DDHS.

Step 4: Identifying the Outcome Challenges (cont'd)

- **Outcome challenge for Boundary Partner 2 :**
  (**The PDA Users**)

  – They are confident enough in the technology to have discarded the paper HMIS forms.
  – With the time saved by up-loading and downloading data on the handheld they are conducting basic analysis of HMIS data which is informing their work,
  – When appropriate they are designing and conducting new surveys to gather additional health information.
  – Via the handheld the PDA users are communicating with experts to receive and share information and ideas and are engaging in continuing medical education and testing.
  – They are successfully searching for quality information relevant to their needs quickly, easily and at a reasonable cost.

Step 4: Identifying the Outcome Challenges (cont'd)

- **Outcome challenge for Boundary Partner 2 :**
  (**The PDA Users**)

  – They are demonstrating their knowledge by presenting at grand rounds and other medical fora.
  – They are championing the utility of handhelds within their districts and beyond supporting the efforts of other colleagues to adopt them in their work by sharing tips, programs, etc.
  – All in all, using the PDA has provided the users a greater sense of satisfaction about their work and has improved their (and the district health system's) performance.

Step 4: Identifying the Outcome Challenges (cont'd)

- **Outcome challenge for Boundary Partner 3 :**
  The Vendors of services to the project who are expected to provide services during the pilot phase including MTN and Wide Ray

  - Ideally at the end of the project the key vendors (service providers) to the project will have responded to all of the projects request for assistance and have participated in the learning experience.
  - They have worked with the project to test the assumptions about the ability of the system to meet our needs and expectations including the reliability of the cellular network, the amount of data we are able to send, the cost of the data transfer, the reliability of the Jacks and the feasibly of the network expansion plan.
  - The vendors have participated in regular conversations with the project to ensure that problems are quickly addressed, that technical support is provided and that their need for information from the project has been met.

Step 4: Identifying the Outcome Challenges (cont'd)

- **Outcome challenge for Boundary Partner 4 :**

  The Health sector and donor community in Uganda who participated in planning the projects – "Our Palm Pioneers"

  - Ideally by the end of the pilot phase the group of Palm Pioneers has been sufficiently informed that they are prepared to participate in an evaluation and decision making process that carefully examines the lessons learned in the pilot and makes recommendations regarding the further expansion of the network, the content and the targeted users.

  - The Palm Pioneers will review regular email updates about the project and contribute ideas, comments and questions during the course of the pilot. They will receive formal updates and briefings and participate in meetings to discuss out comes.

Step 5: Developing Progress Markers

- A set of progress markers showing the change in the boundary Partner

- The Progress Markers are graduated from:
  - the minimum "expect to see"; to
  - the medium "like to see" and lastly
  - the maximum "love to see"

Step 5: Developing Progress Markers (Cont'd)

Outcome Challenge:	
Expect to see: _____ **Boundary Partner**	
1	
2	
3	
4	
Like to see: _____ **Boundary Partner**	
5	
6	
Like to see: _____ **Boundary Partner**	
7	
8	
9	
Like to see: _____ **Boundary Partner**	
10	

Step 5: Developing Progress Markers (cont'd)

For Boundary Partner 1 (DDHS)

"**expect to see**"

– The DDHS will himself be using the pda for multiple purposes
– The DDHS will be advocating for its use among his peers and subordinates
– Within the District the DDHS will Mandate the use of the PDA for data collection
– The DDHS will monitor the use of the PDAs during the course of the pilot
– The DDHS will communicate regularly with the UHC/UHIN team
– The DDHS will participate in the evaluation process during the course of the pilot

Step 5: Developing Progress Markers (cont'd)

For Boundary Partner 1 (DDHS)

"Like to see"

– Using the data for planning (including disease outbreaks)
– Rewarding (by acknowledgement or otherwise) behavior of pda users
– Ask for more District specific data tools (like adding specific fields)
– Use the results of evaluation for forward planning Budgeting for pda in the next year's budget
– Saving money on stationary, and staff time and resources, etc. over the paper based information system.
– Organizing more ground rounds

Step 5: Developing Progress Markers (cont'd)

For Boundary Partner 1 (DDHS)

"**Love to see**"

- Champion the whole project and the pda use, showing it off.
- Advocacy with NGO's and others in and out of district.
- Continue the project beyond pilot.
- Lobbying for more funds.
- Expansion to all health units in the district

Step 5: Developing Progress Markers (cont'd)

For Boundary Partner 2 (PDA Users)
  " **Expect to see"**
– Asking for training to use PDA.
– Eagerly asking for PDAs to use
– Looking for places/ways to charge the PDAs.
– Using PDAs for some purpose.
– Individual users start to complain about the PDA – difficulties and constraints.
– Transmitting data effectively using the network.
– Showing off the PDA (bragging, walk with the "swagger")
– Arguments over who uses their PDA the most

Step 5: Developing Progress Markers (cont'd)

For Boundary Partner 2 (PDA Users)
  " Like **to see**"
– Discovering new functions
– Participating actively in the training
– Accurately entering data in forms
– To spend less time entering and transmitting data
– Demanding more access to e-mail
– Fewer visits to the DDHS by PDA users
– Becoming trouble shooters
– Becoming trainers
– Publicizing the good and the bad about the PDA use
– Missing their PDA if it is taken away from them

Step 5: Developing Progress Markers (cont'd)

For Boundary Partner 2 (PDA Users)

"Love **to see**"

- Looking for new ways to use the pda (new settings, new applications)
- Putting information to use in patient care
- Improving quality of health care
- Asking to create their own forms .
- Wanting to purchase more pdas for self or others (other districts as well)
- Demanding to be examined on the their new knowledge (gained by using PDA)
- Sharing their experiences with others who have not (cross cutting all)

Step 5: Developing Progress Markers (cont'd)

For Boundary Partner 3 : the vendors

Expect to See

– Asking for periodic updates

– Responding to requests for assistance

– Providing periodic utilization data

– Trouble shooting

Step 5: Developing Progress Markers (cont'd)

For Boundary Partner 3 : the vendors

Like to See

– **Making enhancement in response to user feedback**

– **Asking for data and feedback for their own assessment**

– **Attending project meetings when invited**

Step 5: Developing Progress Markers (cont'd)

For Boundary Partner 3 : the vendors

Love to See

– **Look for new ways to use the network (new settings, new applications)**

– **Visiting field sites to observe use**

– **Working on ways to reduce costs and other barriers to expansion**

Step 5: Developing Progress Markers (cont'd)

For Boundary Partner 4 : the Palm Pioneers

Expect to See

– **Asking for information on the pilot**

– **Using PDAs for some purpose**

– **Attending project meetings when invited**

For Boundary Partner 4 : the Palm Pioneers Expect to See

– Asking for information on the pilot

– Using PDAs for some purpose

– Attending project meetings when invited

For Boundary Partner 4 : the Palm Pioneers Like to See

– Contributing questions and comments to email list
– Sharing ideas for expansion and other uses of network
– Asking to participate in expansion
– Preparing to elevate the project by reading material

Step 6: Complete a Strategy Map for each outcome (cont'd)

- The purpose of a strategy map is to identify the strategies used by the program to contribute to the achievement of an outcome
- There are 2 rows of strategies describing the different relationships between the program and the boundary partner
- The three strategy types in the first row are aimed at the individual, organisation, etc.
- The three strategy types in the bottom row are aimed at the environment in which the individual, organisation, etc. operate.
- Both rows are further divided into 3 categories: Causal, Persuasion and Supportive

Step 6: Complete a Strategy Map for DDHS (cont'd)

Casual	Persuasive	Supportive
• Refine project /pilot design in collaboration with DDHS • Train DDHS to use handheld • Develop specific information tools for use in the District with the DHS (forms and CME) • Collect preliminary cost data from DDHS and review with him to establish agreed upon baselines • DDHS and project team supervise and close monitoring of the project • Regular progress reporting and consultation	• Impart training to other users • Provide technical guidance • Transfer research • Motivate and create awareness among PDA users • Encourage feedback from users • Identify field problems and provide suitable management practices	• Regular meetings with project team • Regular communication with evaluation team • Continued development of information tools in response to field • Regular reports on utilization and cost
• Continue to engage MOH • Conduct with staff to advocate for use of data for decision making	Press releases at the end of the pilot Periodic updates to press as requested Written report on impacts and findings	• utilize existing network of DDHS officers through out the country • utilize the network of those engaged in CME throughout the country

Step 6: Complete a Strategy Map for PDA Users (cont'd)

Casual	Persuasive	Supportive
• Train to use PDA • Support users • Provide equipment • Train Trainers • Provide variety of information for different users • Continue to enhance information services • Request regular feedback • Request regular input • Acknowledge participation and use of PDA • Provide information on availability of local resources	• Select and encourage local champions to receive additional training • Expose them to best practices • Reward behavior and participation • Make them accountable to the project – mandated use by DDHS • Invite them to request additional information services • Formal participation in evaluation	• Supervise and monitor periodically • Check records for timeliness and completeness of data submitted • Continuous engagement throughout the pilot
• Ask them to talk to non-users about PDA experience • Let users add their own content and other programs/information to personalize the PDA		• utilize existing network of DDHS officers through out the country • utilize the network of those engaged in CME throughout the country

STAGE 2
Step 8: Setting Monitoring Priorities

- Priorities set not to waste resources
- Three types of information that can be monitored:
  - Organizational practices
  - Progress towards the outcomes
  - Strategies employed
- Three data collection tools for each of information type:
  - Performance Journal
  - Outcome Journal
  - Strategy Journal

Step 9: Developing an Outcome Journal

Work Dating from/to		
Contributors to Monitoring Update:		
Outcome Challenge:		
LMH Low=0-40%, Medium = 41 – 80%, High = 81-100%)		
EXPECT TO SEE	**Activities**	**WHO?**
O O O		
O O O		
O O O		
O O O		
LIKE TO SEE		
O O O		
O O O		
O O O		
O O O		
LOVE TO SEE		
O O O		
O O O		
DESCRIPTION OF CHANGE		
CONTRIBUTING FACTORS AND ACTORS		
SOURCE OF EVIDENCE		
UNANTICIPATED CHANGE		
LESSONS/REQUIRED PROGRAM CHANGES/REACTIONS		

Step 9: Developing a Strategy Journal

Work Dating from/to:		
Contributors to Monitoring Update:		
Strategy to be monitored:	**Strategy type**	
Description of activities		
Effectiveness		
Outputs		
Required Program follow-up or Changes		
Lessons		
Date of Next Monitoring Meeting		

Stage 3 Evaluation Planning
Step 12: Evaluation Plan

- At this stage evaluation priorities are identified

- From the three journals there is so much information that is broad in coverage rather than deep in detail.

- By conducting evaluation the program choose a strategy issue to sturdy and assess in depth.

- Resources are prioritorised and choices made

Stage 3 Evaluation Planning
Step 12: Evaluation Plan

Evaluation Issue: Results achieved from the pilot

Who will use the evaluation? when	Questions	Information Sources	Evaluation Methods	Who will conduct and manage the evaluation?	Date (start and finish)	Cost
Management to: •Write reports to donor •Help make geographical planning for next phase •Present finding to Palm Pioneers	•Profile of the research institutions involved •How has capacity to conduct program changed?	•Progress markers and Outcome Journal •Strategy Journal	•Focus groups with research institutions •Document reviews •Site visits •Key informant interviews with program staff	•Satellife •External consultants	To be conducted throughout the 6 months of the pilot phase	