Integrating community data into the health information system in Rwanda

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Outline

• Background on the community health program
• The Community Health Information Systems
  – Overview
  – HMIS
  – Rapid SMS
• Data use
• Successes and challenges
Background of Community Health Program in Rwanda: What is a CHW

Male or Female elected by members of the village and are accountable of the village they serve. The elected CHW should:

- Be living in the village
- Be qualified, honest and accountable
- Agree for voluntarism
- Have a P6 education minimum

CHWs are more accessible, acceptable by clients in their communities and less expensive

CHW performing a malaria test on a child. Photo KT Press
CHWs in Rwanda

- Team of three CHWs per village
- Technically supervised by the HC staff and administratively supervised by the in charge of social affairs (cell, sector, district)
- Receive financial compensation through PBF: based on a set of performance indicators from monthly reports
- Implement income generating activities through CHWs cooperatives

**Cell Coordinator:**
Senior CHW overseeing multiple villages

**Binome:**
1 female & 1 male in charge of iCCM

**ASM:**
1 Female in charge of Maternal Health
Community Health Milestones

Pilot in 3 districts before national scale-up in 2014
Pilot in 3 districts before national scale-up in 2011
Pilot in 8 districts before national scale-up

In 2015-2016, CHWs started treating malaria among adults countrywide
CHWs in the Health System

- Organization of the Health System:

<table>
<thead>
<tr>
<th>Subdivision</th>
<th>Health Service</th>
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<tbody>
<tr>
<td>4 Provinces + the City of Kigali</td>
<td>8 referral hospitals 4 Provincial hospitals</td>
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<tr>
<td>30 districts</td>
<td>35 district hospitals</td>
</tr>
<tr>
<td>416 Sectors</td>
<td>465 health centers</td>
</tr>
<tr>
<td>2,148 cells</td>
<td>44,511 CHWs</td>
</tr>
<tr>
<td>14,837 villages</td>
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- All CHWs are organized into cooperatives. Each health center oversees one CHW cooperative.
The Community Health Information Systems

The M&E system for community interventions is done through different national data collection and reporting tools managed by web based interface.

Tools include:
- National standard paper based source document (registers)
- Paper-based monthly summary form
- DHIS-2/SISCOM
- Rapid SMS
# History of HIS for community Health Program

<table>
<thead>
<tr>
<th>Year</th>
<th>Health Information system</th>
<th>Current status</th>
</tr>
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<tbody>
<tr>
<td>1995-1998</td>
<td>• Paper based reporting only and excel sheet used at HC and Hospital</td>
<td>Excel no longer used</td>
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<tr>
<td>1998-2007</td>
<td>• Paper based at village, cell and CHWs cooperative</td>
<td>Access no longer used</td>
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<tr>
<td></td>
<td>• Aggregated data managed using Access software</td>
<td></td>
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<tr>
<td>2007-2010</td>
<td>• Paper based at village, cell and CHWs cooperative</td>
<td>M-Ubuzima no longer used</td>
</tr>
<tr>
<td></td>
<td>• Use of M-Ubuzima by CHWs Binomes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Use of Rapid SMS by CHWs ASMs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Access software to manage PBF data</td>
<td></td>
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<tr>
<td>2012- to date</td>
<td>• Paper based at village, cell and CHWs cooperative</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Use of HMIS-DHIS-2 that integrates over 11 modules including SISCOM, PBF, what was reported through M-Ubuzima, Maternal and child death surveillance (verbal autopsy).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Use of Rapid SMS by all CHWs (Code card paper based, then send SMS of individual record)</td>
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</tbody>
</table>
Services areas tracked

CHW monthly report form
Services areas tracked

- Treatment of sick children (iCCM)
- Community Based Nutrition Program (CBNP)
- Malaria Treatment Adults (HBM)
- Family Planning
- RDTs carried out
- Home based Follow up of pregnant women, mothers and newborns
- Nutritional monitoring
- Maternal and Newborn Death Surveillance
- Under-5 vaccination
- Drugs and supplies
- IEC and user payments

CHW monthly report form
The SISCOM monthly summary form

Paper based tool

The second aggregation that generate the monthly report paper based is done at CHWs cooperative then the summary form is sent to HC data manager who carry data entry into DHIS-2/SISCOM

The first aggregation is done at cell level by cell coordinator who compile all reports from village then send the summary form to CHWs cooperative in catchment area of HC

Each CHW report monthly activity by recounting data from national source document (registers) used for documentation of services offered then the 3 CHWs at village level refills the summary form and send the report to cell coordinator
Data flow system

MOH

District hospital

Health Center

Cell Coordinator

Cell Coordinator

CHW

CHW

CHW
Electronic system from the Health Center→Up

The coordinator of CHW cooperative submit the monthly summary form to HC data manager who enters aggregated data into DHIS-2/SISCOM

The data entry screen of DHIS-2-HMIS/SISCOM
Rapid SMS

Text-messaging tool used by CHW to track pregnant women and track the first 1000 days of life up to 5 years

Examples of information submitted:
- Woman’s pregnancy and delivery
- Children under five identified with danger sign
- Tracking referrals (track alert sent and responses)
- Maternal and under five deaths

CHW sending Rapid-SMS from his cellphone
Data use

RapidSMS data accessed at District Hospital
## Summary of Community Data Use

<table>
<thead>
<tr>
<th>System</th>
<th>Main Clients</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rapid SMS</td>
<td>Primary level health facilities</td>
<td>Respond to maternal and child health emergencies</td>
</tr>
<tr>
<td>HMIS/SISCOM</td>
<td>CHW</td>
<td>Drug and supply management</td>
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<tr>
<td></td>
<td>Primary level health facilities</td>
<td>Support community health workers within the catchment area</td>
</tr>
<tr>
<td></td>
<td>Local administration: village, cell, sector, district</td>
<td>CHWs data is used for planning, setting and monitoring health related performance contracts</td>
</tr>
<tr>
<td></td>
<td>Central: RBC/MOH and development partners</td>
<td>Informed policies, establishment of strategies, supply chain management, research, PBF</td>
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Use of Rapid SMS

The system sends automated, actionable responses to CHWs when reported events indicate risk, or when antenatal care visits or deliveries are due.

Health facilities are notified to prepare for an anticipated delivery and/or to provide ambulance transport.

Instructions for sending Rapid-SMS
Feedback Mechanism and Data Quality

National
- Quarterly community sub-technical working group meeting
- Quarterly and annual analysis of community data
- Biannual integrated supervision including community DQA

DH
- Quarterly analysis of CH data to inform decision by Management Team
- Biannual DQA of community data (quality control paper vs. electronic)

HC
- Monthly meeting at HC level to review reported data and link data to quality of service provision
- Mentorship including community DQA

Community
- Monthly CHWs meeting with cell coordinator to review reported data
Community Performance-Based Financing

Incentives to cooperatives in exchange of their performance based on two categories of indicators:

**Pay-for-reporting:**
Quarterly payment based on the timely submission of quality data reports related to 29 indicators.

*Conditions:*
1. **Report Quality:** Timeliness, Accuracy and Completeness of Report
2. **Cooperative Quality:** Legal status, Presence of President, Bank account, …

**Pay-for-indicators:**
Additional payment for improvement in five targeted areas (Nutrition, ANC, SBA, FP referrals and FP new users LTPM)

The average quarterly payment is $900 per cooperative for a 100% quality score
Successes and Challenges
Examples of Successes

• All CHWs are using standard data collection tools (registers, flipcharts and summary forms)

• All CHWs are equipped with a mobile phone regularly loaded with airtime for Rapid SMS, communication with HC and other CHWs

• The DHIS-2/SISCOM functional countrywide

• A strong feedback and coordination mechanism is in place and functional

• The PBF include the CHW reporting rate
Remaining challenges

• Turnover of trained CHWs
• High workload for CHWs
• Inadequate response rate on alerts sent through Rapid SMS
• Disaggregation of data (e.g., FP not disaggregated by method)
• Disparities in CHWs activity as per instructions for Rapid SMS
• Sub-optimal use of data
Thank you

For more information, please visit
www.mcsprogram.org

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