Improving data to improve iCCM programs:

Implementation of a data quality and use package in Malawi

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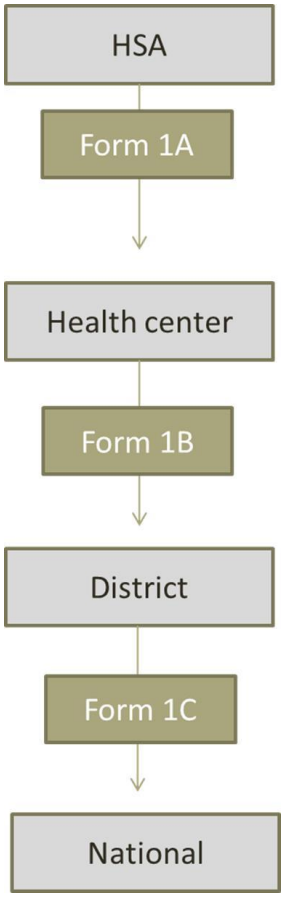
Background

- Health Surveillance Assistants (HSAs) started providing iCCM for malaria, pneumonia and diarrhea in 2008
- As of February 2014, about 4000 HSAs have been trained and deployed for CCM across the 29 districts of Malawi
- HSAs record cases treated in a sick child register and submit monthly summary data to the health centre where senior HSAs compile and send to district
- A 2012 data quality assessment (DQA) identified **data quality issues** and **low levels of data use**

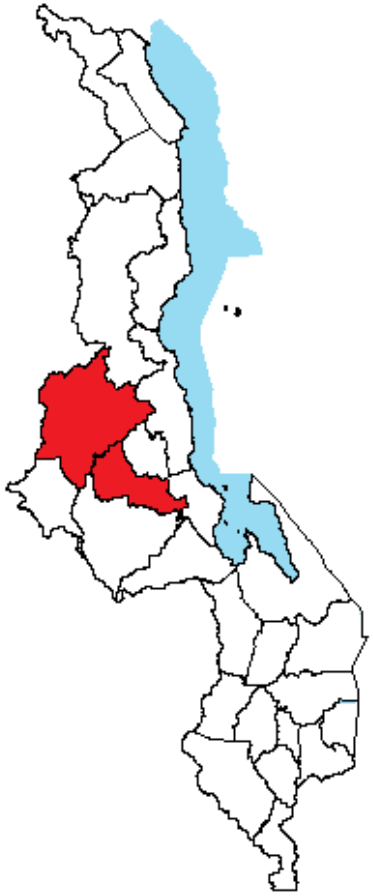


Development of a data quality and use improvement package

- Developed the package with district health staff and partners
- The DI package included:
  - general training on data management, use and interpretation;
  - refresher training on the routine reporting forms;
  - simple templates for displaying CCM implementation strength data;
  - provision of calculators to assist with completing monitoring forms; and
  - working with district staff to identify reporting benchmarks and action thresholds.

Pilot Implementation

- Two pilot districts selected: **Dowa** and **Kasungu**
- All relevant district staff, HSA supervisors and HSAs implementing CCM (n=426) trained
- Feb 2013: TOT with IMCI/deputy coordinators, HMIS, Pharm. Tech, others
- April 2013: District staff conducted trainings for HSAs and senior HSAs at health facilities
  - Half-day trainings
  - Trainings supervised by MOH and SC staff



Templates for HSAs

Village Clinic at a Glance

Village clinic name: _____
HSA name: _____
HSA supervisor name: _____
Facility name: _____

Background information:

Catchment population: ☐

Estimated # children U5: ☐

Support and supervision monthly summary (tick if received):

Month:	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Supervision Visit												
Mentoring												

1) Number of fever cases treated in children aged 5-59 months by month

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

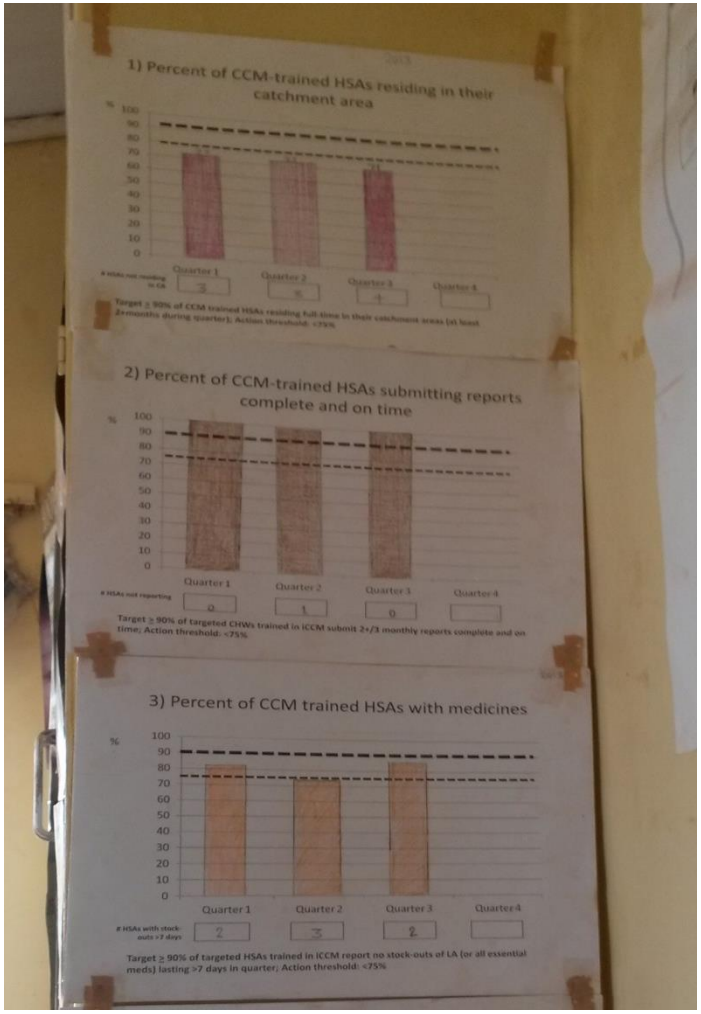
# of stock-out days LA ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

# of referrals due to LA stockout ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Set of 5 graphs to summarize:

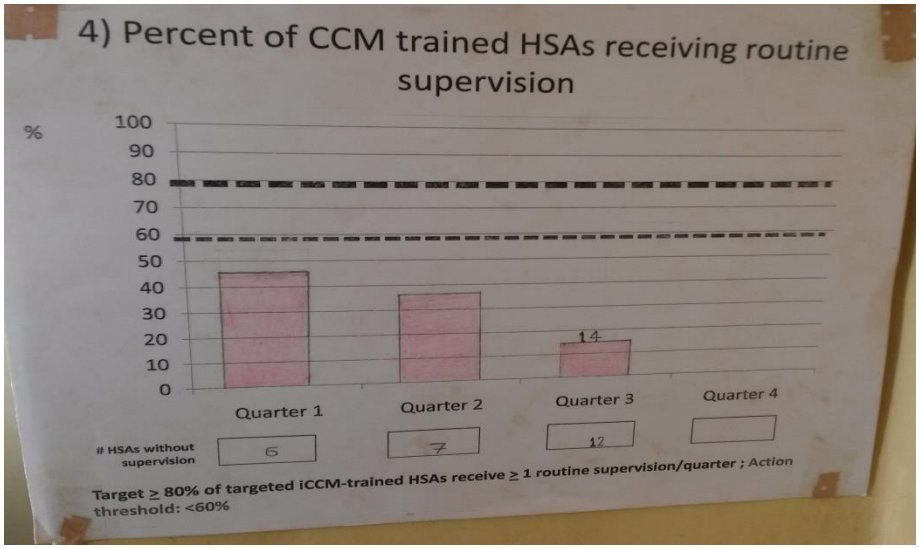
- Background data and supervision visits
- # cases treated and referred
- Total cases and days VC operated

Templates for Health Facilities



Set of 6 graphs to summarize:

- HSA is residing in catchment area
- HSA reporting
- Stock-outs lasting more than 7 days
- Supervision (routine)
- Mentoring
- Cases treated by HSAs



Evaluation of the package

- ***Sample*:** 5 health facilities and 3-4 HSAs per facility were randomly selected at baseline in each district. The same facilities and HSAs were followed up at endline
- ***Data collection***: Baseline data collection in June 2012. Endline data collection in July/August 2013 after 3+ months of implementation.
- ***Data analysis:***

1. Measured changes in reporting:

  - Availability: forms were submitted for the previous month
  - Completeness: submitted forms are complete for the previous month
  - Consistency: measured through results verification ratio (RVR: verified/reported; 1.0 = perfect consistency)

2. Assessed template use, ease of use, display and completeness.

High use of data display templates

	HSA	Health facility
Percent using template	100% (37/37)	89% (8/9)
Percent report template is easy to use	97% (36/37)	100% (8/8)
Median (range) hours per month to complete	1.0 hours (0.2-8)	1.0 hours (0.5-24)
Percent displaying template	59% (22/37)	67% (6/9)
Percent completed for all months	89% (33/37)	78% (7/9)

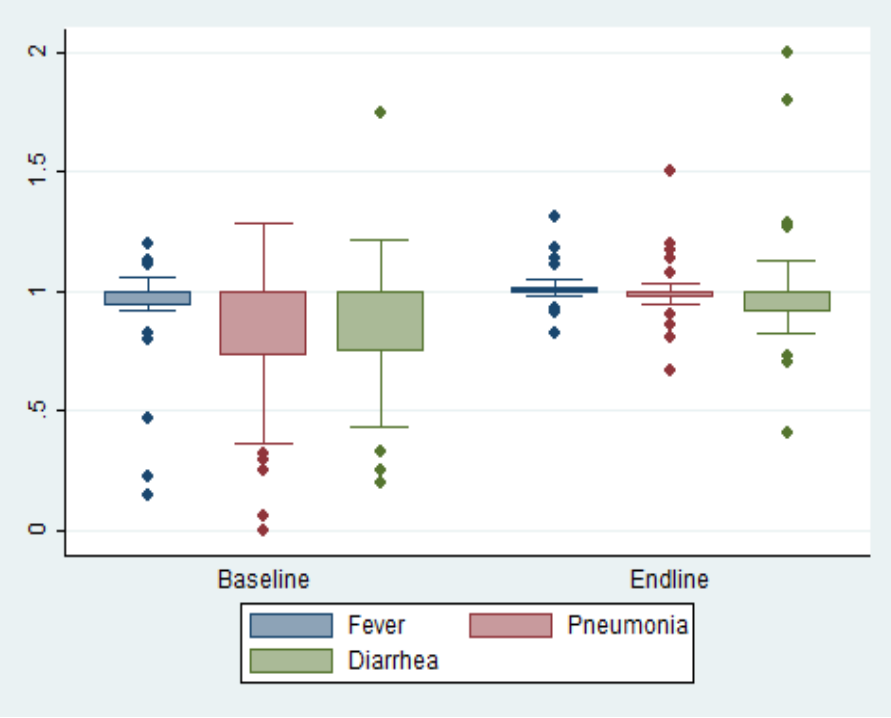
Differences by district in reporting availability and completeness

	Kasungu		Dowa	
	Baseline	Endline	Baseline	Endline
HSA reporting forms (Form 1A)				
Percent Available	93% (25/27)	96% (23/24)	95% (57/60)	80% (37/46)
Percent Complete	74% (20/27)	79% (19/24)	95% (57/60)	63% (29/46)
Health facility reporting forms (Form 1B)				
Percent Available	Missing	100% (24/24)	100% (23/23)	44% (11/25)
Percent Complete	Missing	100% (24/24)	95% (22/23)	16% (4/25)

Improvements in data quality at HSA level

- After introduction of the package, the monthly data reported by HSAs for cases treated was more consistent with what they recorded in their registers:
  - Average reporting consistency for cases treated improved
  - There was less variation in reporting consistency after the package (shown by the smaller boxes).

Figure: Comparison of reporting consistency levels for cases treated between baseline and endline



Health facility reporting consistency

	Baseline: (n=10)	Endline (n=7)
Fever cases	1.0	1.0
Diarrhea cases	1.2	1.0
Fast breathing cases	1.0	1.1
# HSAs reporting supervision in last month	1.0	0.8
# HSAs reporting mentorship in last month	0.7	1.1
# of HSAs with stock-out lasting 7 or more days of:		
LA (6x1; 6x2)	0.87	0.9
Cotrim	0.5	0.9
ORS	0.67	1.0

Results verification ratio: HC = $\frac{\text{Sum of verified counts from the HSA reports}}{\text{Total count reported in the health center report}}$

Data use examples

- Most HSAs mentioned using data to inform their community health education activities

"The display of data makes it easy for the community to see which cases are common which helps in choosing targeted interventions to address the situation" – HSA, Dowa

"The community was told that not any cough is fast-breathing; the community perception of demanding cotrim for any cough is gradually changing" – HSA, Dowa

- Senior HSAs reported using data to make staffing decisions (deploy HSAs to vacant areas, ask district to allocate more HSAs) and to respond to stock-outs

"Our percentage of CCM-trained HSAs with stock-outs >7days in February, March and April was above action threshold so we took action to order drugs on time" – Msakambewa HF

Summary of findings

- Package helped to improve data quality for caseload at the HSA level.
- Routine data on CCM treatments aggregated at the HF level, may not be as bad as people think
- Strength is that now “everyone can see the data”.
- HSAs and HF staff do use these data to improve the ICCM program at the grassroots level. The benchmarks and action thresholds were seen as helpful guidance.
- Turn-over and other management/health systems issues at the district level limit its potential effects
- Package is acceptable and feasible to implement at national level

Next steps

- Package is being scaled up to >15 districts (with support from MOH and implementing partners)
- Consider opportunities to:
  - Integrate successful elements of the DI package within CCM training for HSAs and HSA supervisors
  - Include dashboards at district and national levels within the DHIS 2
  - Improve tracking of actions and problem solving
  - Include displays for other services by HSAs (newborn, family planning)

Thank you

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More information and reports from TRAction in Malawi:

http://www.jhsph.edu/departments/international-health/centers-and-institutes/institute-for-international-programs/projects/traction/index.html

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