



# Using mobile phone technology in baseline assessments in Malawi, Ethiopia and Rwanda for improving supply chains and product availability for community case management: Challenges and Opportunities

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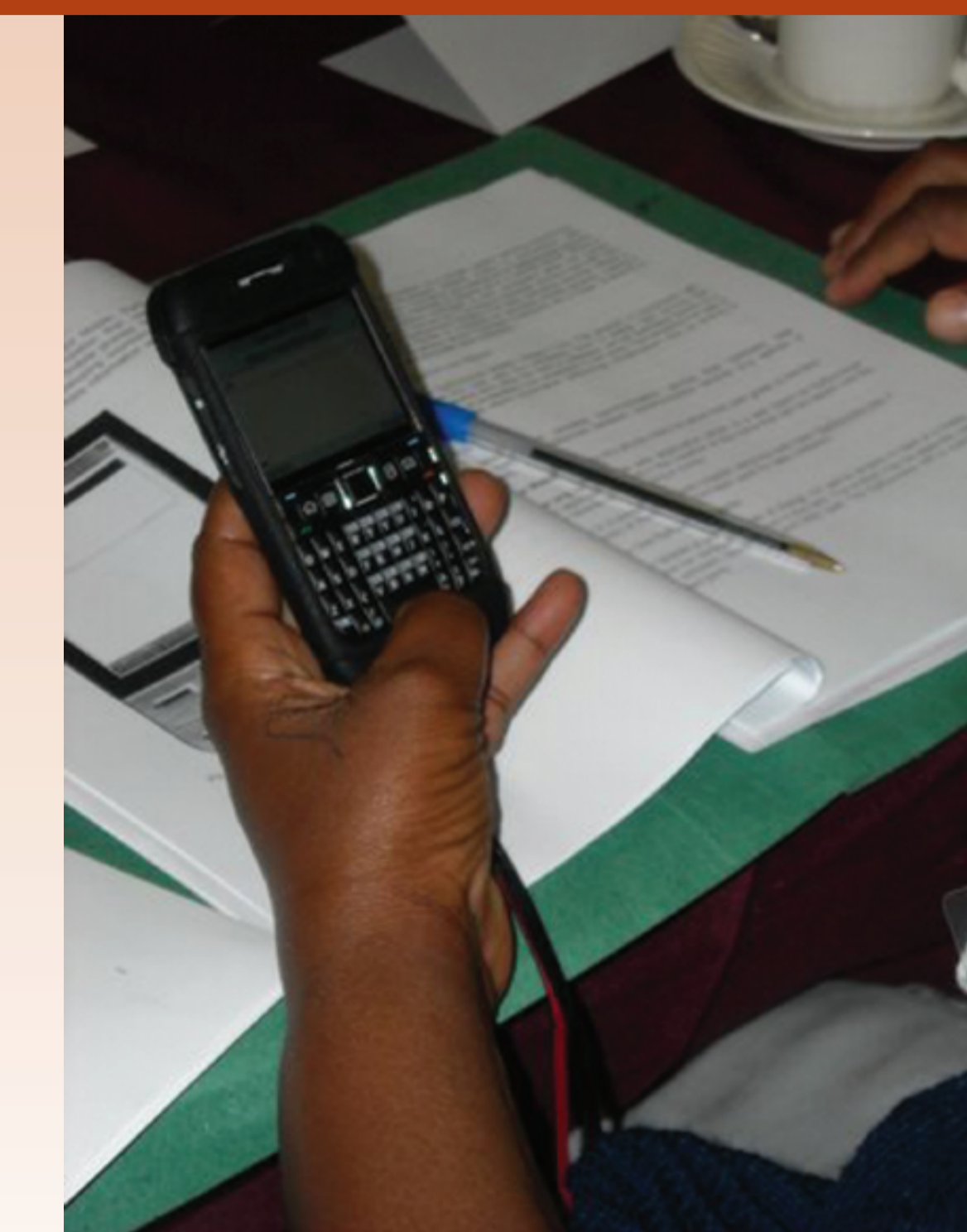
## Project Goal and Objectives

The Supply Chain for Community Case Management project (SC4CCM) will identify, demonstrate, and institutionalize supply chain management practices that improve the availability and use of selected essential health products in community-based programs. The project will work in three countries to implement its objectives through two phases:

1. To test, learn and identify supply chain solutions that will improve product availability at the community level; and
2. To work closely with the Ministry of Health, and supply chain and CCM implementing partners to catalyze the scaling up successful supply chain solutions throughout the system.

## Approach

- Data collected for baseline surveys in 3 countries using EpiSurveyor mobile by DataDyne
- Smart phone models used: Nokia e71 and Nokia e63
- Preceding each survey: 7 day data collector training on EpiSurveyor and logistics competencies, plus 1.5 day field test
- Questionnaires included interview, observation, record review and stock counting elements



### MALAWI

System Level Visited in 10 Districts	Achieved	EpiS Forms per Level	Forms Total
Regional medical stores (RMS)	3	3	9
District health office and pharmacy	10	2	20
Health Centres	81	7	567
HSAs (Community level health workers)	248	5	1,240

Dates of field work: May 6 – June 11, 2010

# Total forms collected (with 30-100 Qs each): 1,836  
 # Data collectors: 10  
 # Smart phones: 10  
 # Days in the field: ~27

### ETHIOPIA

System Level Visited in 4 Regions	Achieved	EpiS Forms per Level	Forms Total
Regional health bureaus (RHB)	4	3	12
Zonal Health Office (ZHO)	10	3	30
Woreda Health Office (WHO)	28	6	168
Health Centres	84	8	672
HEWs (Community level health workers)	252	5	1,260

Dates of field work: July 1 – August 27, 2010

# Total forms collected (with 30-100 Qs each): 2,142  
 # Data collectors: 12  
 # Smart Phones: 16 (also provided to 4 team supervisors)  
 # Days in the field: ~40

### RWANDA

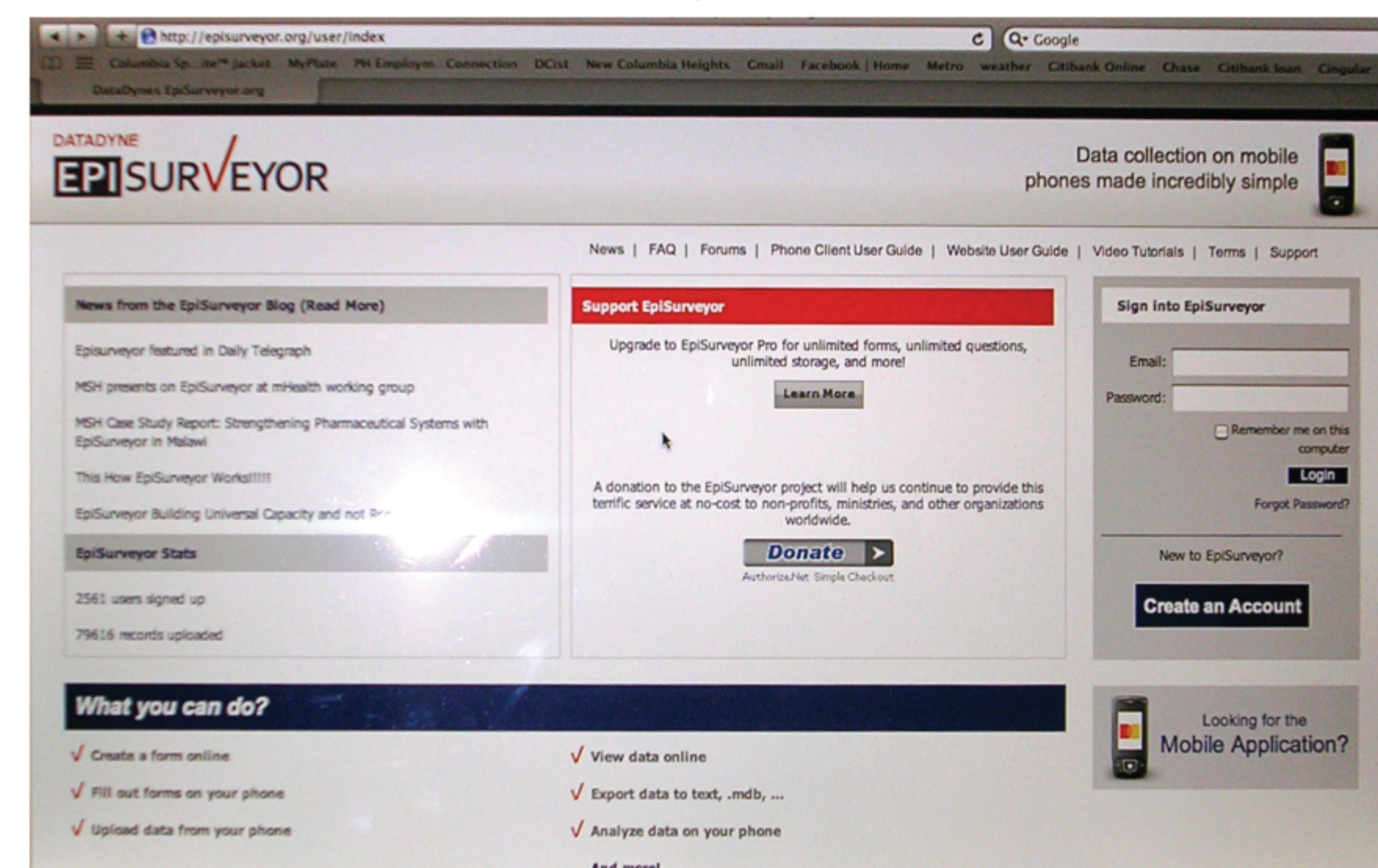
System Level Visited in 10 Districts	Targeted	EpiS Forms per Level	Forms Total
District stores	10	4	40
Health Centres	103	8	824
ASCBs (Community level health workers)	348	4	1,392

Dates of field work: September 8 – October 22, 2010

# Total forms: 2,256  
 # Data collectors: 15  
 # Smart Phones: 19 (also provided to 4 team supervisors)  
 # Days in the field: ~32

## Lessons Learned

- Mobile technology is a viable means of data collection for large baseline assessments but requires consideration of the following factors:
  - Consistent mobile phone network capabilities can ensure more consistent data transmission and more timely feedback to data collectors
  - Capacity of mobile technology for large surveys still improving
  - Estimated time savings in data entry will be partially offset by significant time investments during the preparatory phase
  - Seasoned data collectors with experience in survey implementation are quicker to master data collection with mobile phones than health care providers
  - Clearly defined protocols for supervision and review of data on an ongoing basis will enhance data quality
  - Some of time saved on data entry will be needed for inventorying electronic records
  - Limit editing rights on EpiS to one designated individual
- High time investment upfront pays off if the survey and mobile technology are used in multiple countries.



## Considerations for Future Applications

- Allow sufficient time at design stage to format questionnaires and test all programmed skips to identify and fix bugs. (When working online, consider internet speed and dependability)
- If network coverage is unreliable, plan to use computer as backup method for data transfer
- Plan adequate time to re-format data received for analyzing large datasets (\*technology is improving, so maybe unnecessary in the near future)
- Utilize EpiSurveyor support, communicate with them and keep current on the latest improvements to software