

**Costing iCCM in
Ethiopia, Ghana, Malawi
Mali, Mozambique, Niger**

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Purpose

- ❑ To assess the **additional costs** for the government of introducing ICCM.
 - ❑ What are these costs per treatment?
 - ❑ What factors influence these costs?

- ❑ To assess the **financial sustainability** of the ICCM program for Malaria, Diarrhea and Pneumonia:
What would be the **percentage of government health expenditure** if the program is scaled-up?

Which Costs ?

Design Costs: one-off

Fixed Costs per CHW

Consumables

Start-Up Costs

iCCM Training
Equipment
Bicycles

Recurrent Costs

Salaries / Subsidies
Supervision/Management
Transport

Tests : RDT
Drugs
Stationary

Additional Costs

Fixed Costs per CHW

Already Existing	New for iCCM
Equipment Bicycles	iCCM Training
Salaries / Subsidies Supervision / Management Transport	

Fixed Costs per CHW

Start-Up Costs

Training
Equipment
Bicycles



Last Several
Years
But
Need
Replacement



Annualised
Cost for 1
Year

**Recurrent
Costs**

Salaries / Subsidies
Supervision/Management
Transport



Cost for 1
Year
2012-13



Additional cost per treatment

- Annualised CHW costs/ treatment
- Consumables / treatment
- Impact of utilisation

Countries	CHW Cost	Number Treatments / CHW/Year	CHW Cost / Treatment	Consumables / Treatment	Cost per Treatment
A	100	200	0.5	0.2	0.7
B	100	10	10	0.2	10.2

RESULTS

Different Contexts

	Ethiopia	Ghana	Mali	Malawi	Moz	Niger
GDP per Capita \$ 2012	454	1605	694	268	565	395
Months since at scale (iCCM trained CHW)	11	36	2	11	13	35
# CI iCCM trained CHWs in CI districts	27 116	16 812	1 847	1 018	905	2 560
# MDP Treatments/CHW per Year	20	10	134	546	99	603
Population <5 per CHW	377	72	360	632		576

Different Additional Costs

CHW Costs	Ethiopia	Ghana	Mali	Malawi	Moz	Niger
Pre-Existing system	X			X		X
Paid / Volunteer	P	V	P	P	P	P
Monthly Salary included in costing			80		40	
Days Training	6		15	6	23	6
# CHWs/Supervisor	8	30	4	10	25	3
Annualised CHW cost	129	126	933	55	526	188
# MDP Treatments/CHW per Year	20	10	134	546	99	603
Annualised CHW cost/Treatment	6	12	7	0.1	5	0.31

Additional Cost per treatment

Cost / Treatment	Ethiopia	Ghana	Mali	Malawi	Moz	Niger
Share CHW Cost	6.47	12.28	6.95	0.10	5.29	0.31
Cost Consumables	0.86	0.92	1.80	1.34	0.77	3.01
Total Cost	7.33	13.20	8.75	1.44	6.07	3.32
Paid by Patient/Treatment						
Consultation			0.20			
Drugs		0.33	0.11			

Increased Utilisation?

□ Is it feasible in terms of time?

Impact on Time	Ethiopia	Ghana	Mali	Malawi	Moz	Niger
# Visits /CHW per Year	24	12	161	655	119	724
Hrs / Week for Current Utilisation	1.2	1.0	3.1	7.2	3.0	8.6
Hrs / Week for Utilisation +30%	1.4	1.1	3.6	9.0	3.6	11.0

□ Cost impact

Current Utilisation +30%	Ethiopia	Ghana	Mali	Malawi	Moz	Niger
Cost per Treatment	- 20%	-21%	- 19%	-3%	- 21%	-2%
Program Cost Increase	3.8%	1.7%	5.9%	26.1%	2.8%	27.0%

Strengthening Health System

- iCCM can only take place if strengthening health system.
- Costs of strengthening are higher pre- or at start of iCCM, decreasing over time
- Assumed ARBITRARY value of an additional 15% of costs: **iCCM+**

AFFORDABILITY:

Share of public health expenditure

Share higher when no pre-existing program

ICCM+ & 30% higher utilisation/CHW	Ethiopia	Ghana	Mali	Malawi	Moz	Niger
Assumptions Scale-Up	All under 5s	All under 5s 1 CBA/Community	All under 5s	All districts	Target CHWs 2017 - full APE subsidy	All districts
Scale-up: % increase CHWs	20%	151%	350%	0%	190%	0%
Projected Number CHWs	32 670	25 415	8 320	1 018	3 809	2 560
Share Govt own + Donors Expenditure	0.1%	0.4%	4.0%	1.0%	2.3%	3.2%
Share Govt own Expenditure	0.2%	0.5%	9.4%	3.5%	7.6%	6.5%

Is program financially justified?

Cost and Impact

- Cost per Treatment **changes with maturity of program (utilisation).**
- New programs so **currently** not always cheaper than PHC visit

Objectives of ICCM and impact on **demand**

- **Increasing access** in hard to reach areas => often lower density => limitations to size of demand
- **Creating new demand** for unmet needs => help seeking patterns don't change fast
- Where low demand => little measurable health impact

=> Costs per life saved can be misleading at this early stage

Efficiency

- ❑ Cost per Treatment function of catchment area of CHW because affects utilisation / CHW
 - reconsider catchment area per CHW where possible when density not too low.
 - issues of appropriate transport and communication to be addressed

- ❑ Management of stocks and distribution systems

- ❑ Allowances significant part of training and supervision costs. Their level much higher when in a project than in a routine set-up.

Transport

- Problem for supervisors (petrol) and CHWs
- Cost of replacing bicycles every 3 years: \$33/CHW/Year
- Malawi: would add 4% to program cost