

# Costs of continuous LLIN distribution strategies in sub-Saharan Africa

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# Introduction

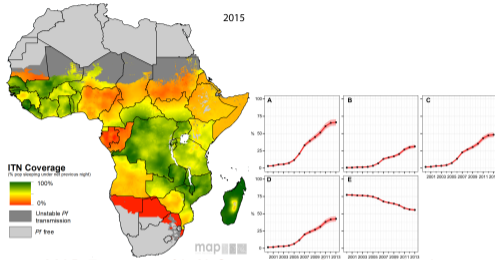
Costs of continuous LLIN distribution strategies in sub-Saharan Africa

Intro

Costing methods

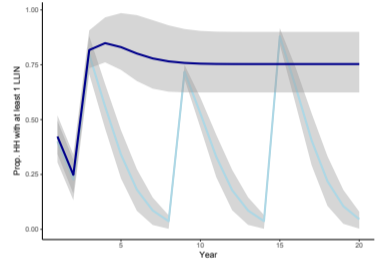
Results

Conc.



2015 MAP Estimates of ITN Coverage and Continental-level time series of estimated ITN coverage indicators for the years 2000–2013. (A) % HH one ITN; (B) % HH 1 per 2; (C) % pop. access; (D) % pop. slept; (E) 'ownership gap'. Source: MAP and Bhatt *et al* 2015.

- Successful scale up in coverage since 2000
- Heterogeneity
- Imperfect coverage
- Sustainability of coverage



- Sawtooth coverage over time
- What are the implications of gaps
- What will it cost to fill them

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distribution  
strategies in  
sub-Saharan Africa

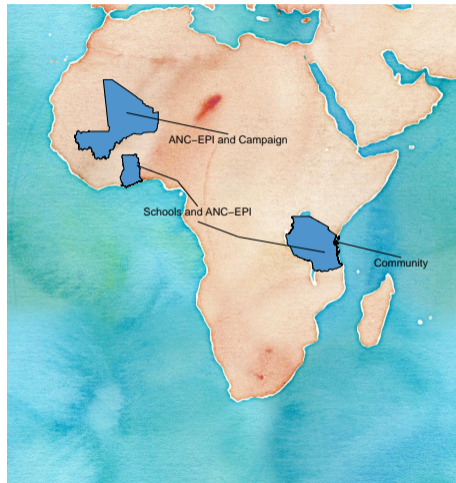
Intro

Costing methods

Results

Conc.

- ① Case series of costing for CD strategies
  - Schools
    - ① Tanzania
    - ② Ghana
  - ANC/EPI
    - ① Ghana
    - ② Tanzania
    - ③ Mali
  - Community
    - ① Zanzibar
- ② Review and meta-analysis of existing data (plus new data)
- ③ Simulation of effects using OpenMalaria
- ④ Cost-effectiveness comparisons



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continuous LLIN  
distribution  
strategies in  
sub-Saharan Africa

Intro

Costing methods

Results

Conc.

- ➊ Perspective - provider - All costs 2015 USD
- ➋ Time frame - Varies by program - intent to capture as many years of CD as possible (minimum one full year)
- ➌ Discount rate - 3%
- ➍ Data Collection
  - ➊ Financial record reviews (reports, invoices, etc...)
  - ➋ Key informant interviews
  - ➌ Resource use surveys in public sector

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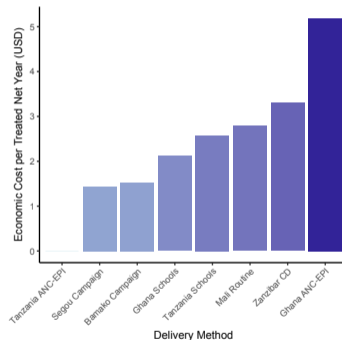
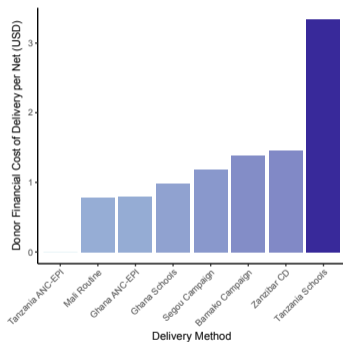
Intro

Costing methods

Results

Conc.

## Total and Distribution Costs



- International Donor Distribution Costs varied - some CD systems higher and some lower than campaigns

- Annual Economic Cost per TNY - CD systems more expensive

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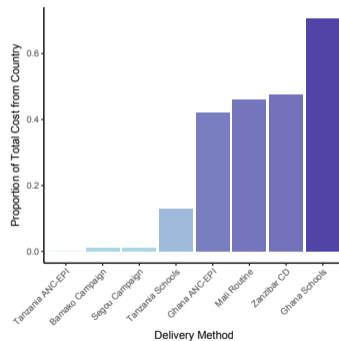
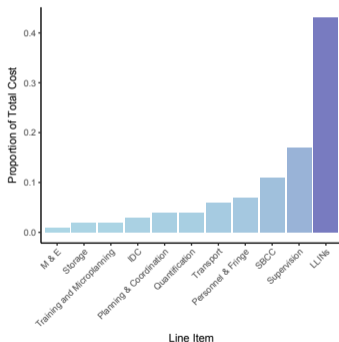
Intro

Costing methods

Results

Conc.

## Distribution of Costs and Country Contributions



- LLINs still largest line item (~ 40 – 60%)

- Country contributions much higher in CD systems (~ 15 – 40%)

# What we already know

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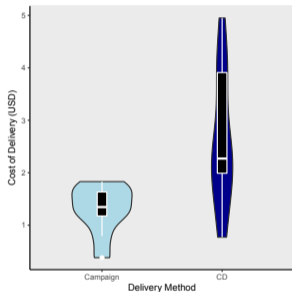
Intro

Costing methods

Results

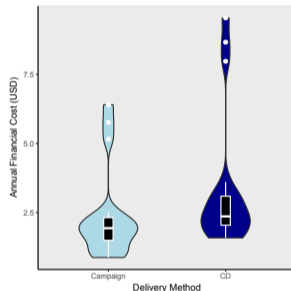
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## Cost of Delivery



- Data from Eisele *et al* 2012 ( $N = 10$ )
- CD - 2.60 USD (95% CI 1.85-3.35)
- Cam. - 1.31 (95% CI 0.99-1.63)
- CD  $\sim$  30% higher ( $p = 0.01$ )

## Annual Financial Cost



- Data from White *et al* 2011 ( $N = 35$ )
- CD - 3.44 (USD) (95% CI 2.19-4.69)
- Cam. - 2.42 (95% CI 1.56-3.29)
- $p = 0.171$  for difference

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distribution  
strategies in  
sub-Saharan Africa

Intro

Costing methods

Results

Conc.

- Current information indicates that CD strategies can be effective at delivering nets
- Cost of CD is likely to be higher than campaigns, but the margin is poorly quantified
- CD involves vastly more country resources than Campaigns (buy in?)
- Value of extra spending needs to be weighed against cost
- Distribution of costs within programs has not changed drastically over time

Costs of  
continuous LLIN  
distribution  
strategies in  
sub-Saharan Africa

Intro

Costing methods

Results

Conc.

- 1 Finalize costing of Ghana and TZ ANC–EPI program
- 2 Collect and meta-analyze all ITN distribution cost data (including those here) to estimate differences between CD and Campaign system
- 3 Determine relative value (cost-effectiveness) of these approaches in varied epidemiological settings by combining with modeled effect estimates

Costs of  
continuous LLIN  
distribution  
strategies in  
sub-Saharan Africa

Intro

Costing methods

Results

Conc.

- ZAMEP
- Tanzania NMCP
- Ghana NMCP
- PSI/Mali
- Swiss TPH
- VectorWorks
- USAID/PMI TZ
- JSI/DELIVER
- USAID/PMI Mali
- Mali PNLP
- Communicate for Health Ghana
- Peace Corps Ghana
- PSI/Tanzania
- USAID/PMI Ghana

