



# **Malaria, medicines and miles: Investigating household access to malaria treatment**

Benjamin Palafox, GHD  
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LONDON  
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# Background:

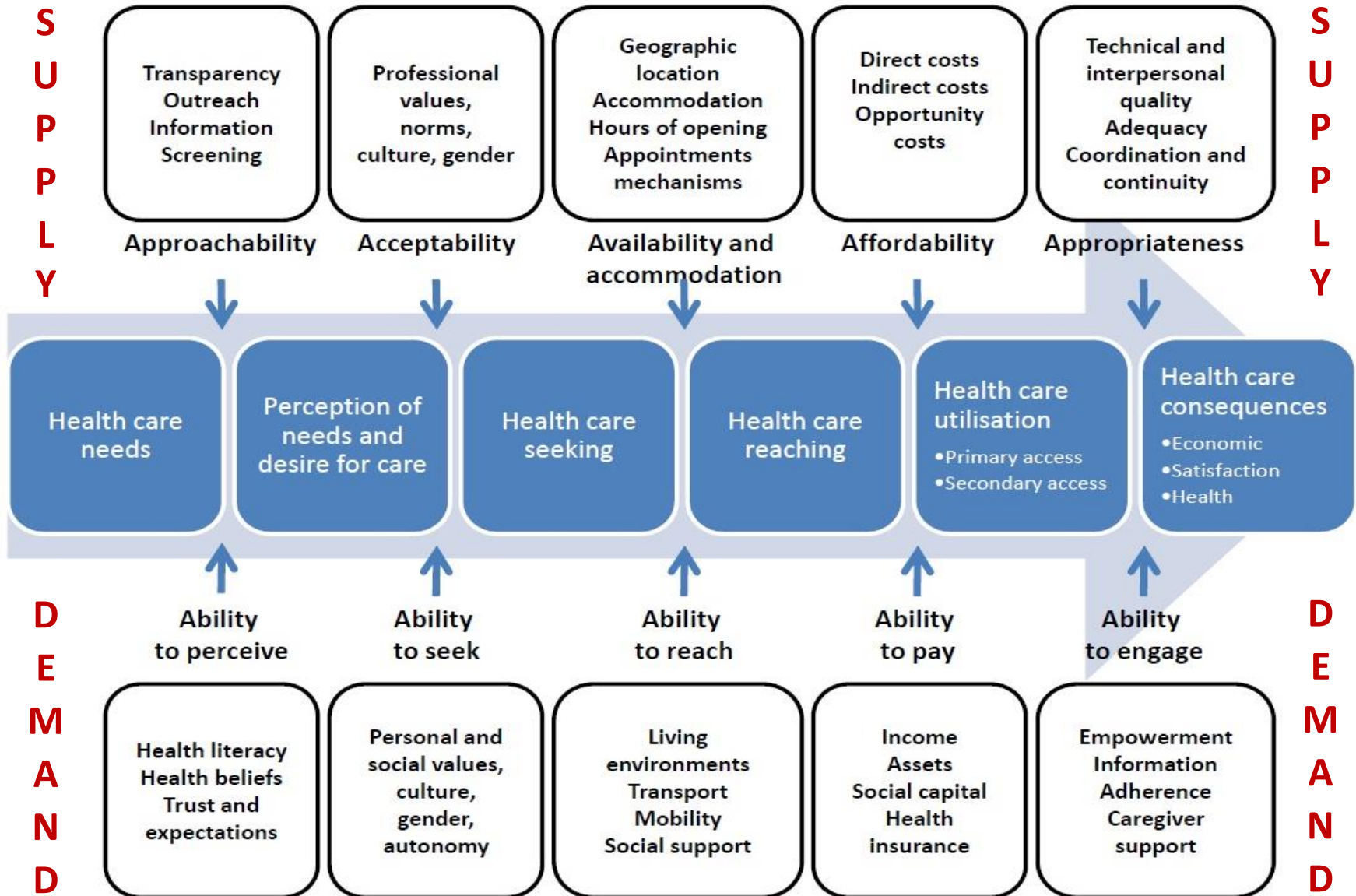
# Malaria treatment

- Recommended first-line treatment:
  - Artemisinin-based combination therapy (ACT)
  - Adopted by WHO in 2005
  - Resistance to non-artemisinin therapy (e.g. SP)
  - Bans on oral artemisinin monotherapies
- Large treatment gap persists
  - Children with confirmed malaria who receive ACT ranges from 1% to 42%



## Background:

# Conceptualising the ACT access gap



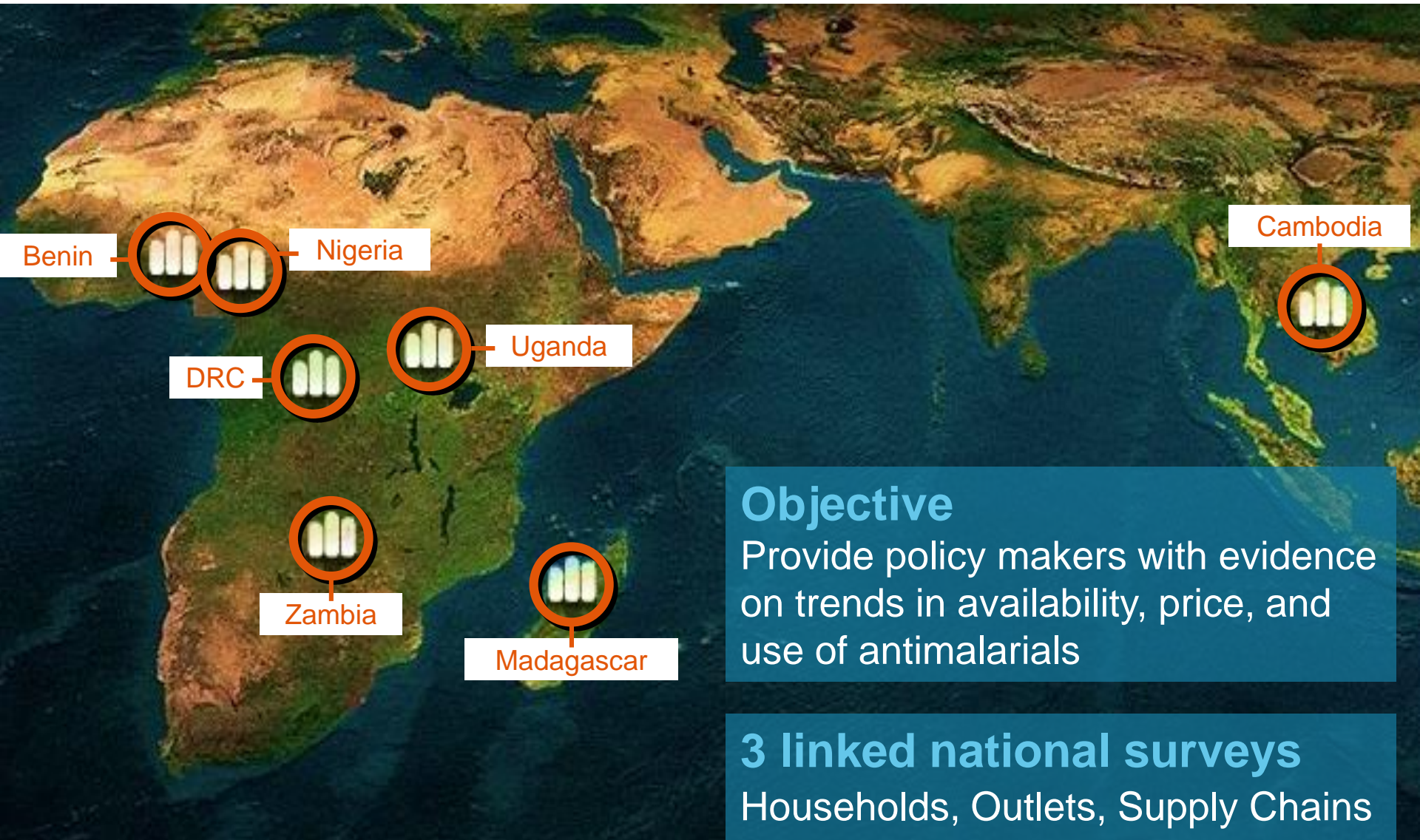
# Presentation objectives

1. Describe a method of combining supply- and demand-side survey data to produce representative indicators of household access to treatment
2. Illustrate this approach to estimate supply-side access indicators using data from Benin, Nigeria, Uganda and Zambia
3. Discuss strengths and limitations of this approach and implications for policy and practice



**Methods:**

# The ACTwatch project



## Objective

Provide policy makers with evidence on trends in availability, price, and use of antimalarials

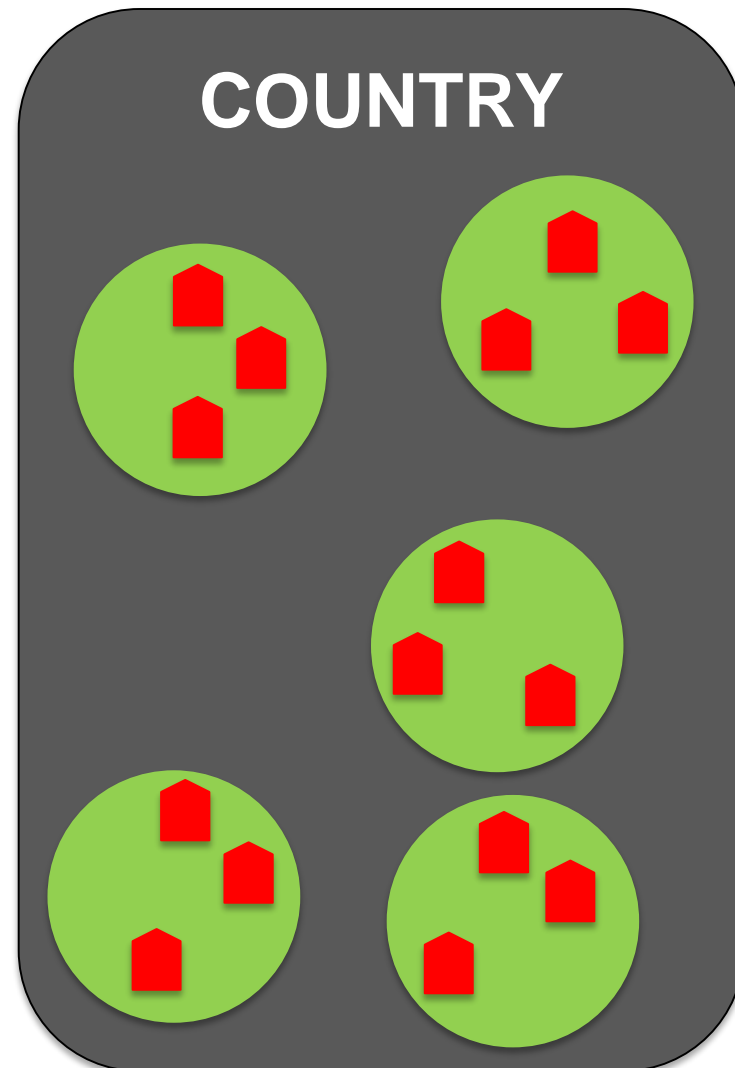
## 3 linked national surveys

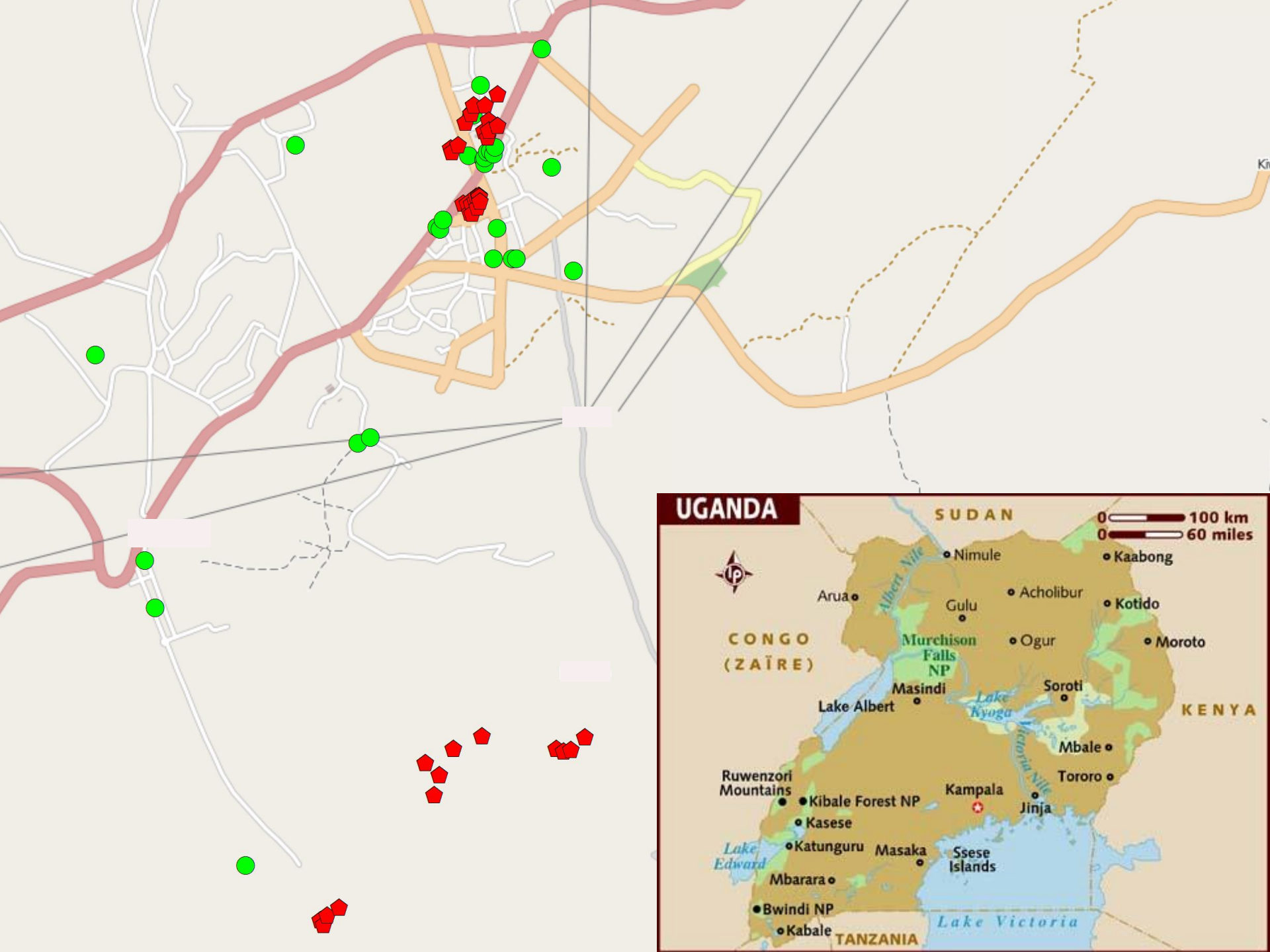
Households, Outlets, Supply Chains

## Methods:

# Household and outlet surveys

- National cross-sectional samples
- 2 survey rounds per country: 2009-10 and 2011-12
- Share similar multi-stage cluster design
- Included households: recently febrile child under 5 years
- Include outlets: *all* outlets currently or recently stocking antimalarials





## **Methods:**

# **Household and outlet data**

## **Households:**

- Treatment choices for febrile children under 5
- Type, source, price paid for treatment
- Caregiver's knowledge, beliefs, attitudes
- Household wealth index based on assets and dwelling characteristics
- Geographic coordinates

## **Outlets:**

- Availability, product details and price of all antimalarials stocked
- Provider perceptions and knowledge of antimalarials
- Availability and price of diagnostic testing services
- Geographic coordinates



## Methods:

# Creating the access dataset

- Merge household and outlet datasets
- Use geographic coordinates from households and outlets in vicinity to define treatment options available
- Defining treatment option 'catchment area'
  - By distance from household → different radii to define
  - By primary sampling unit

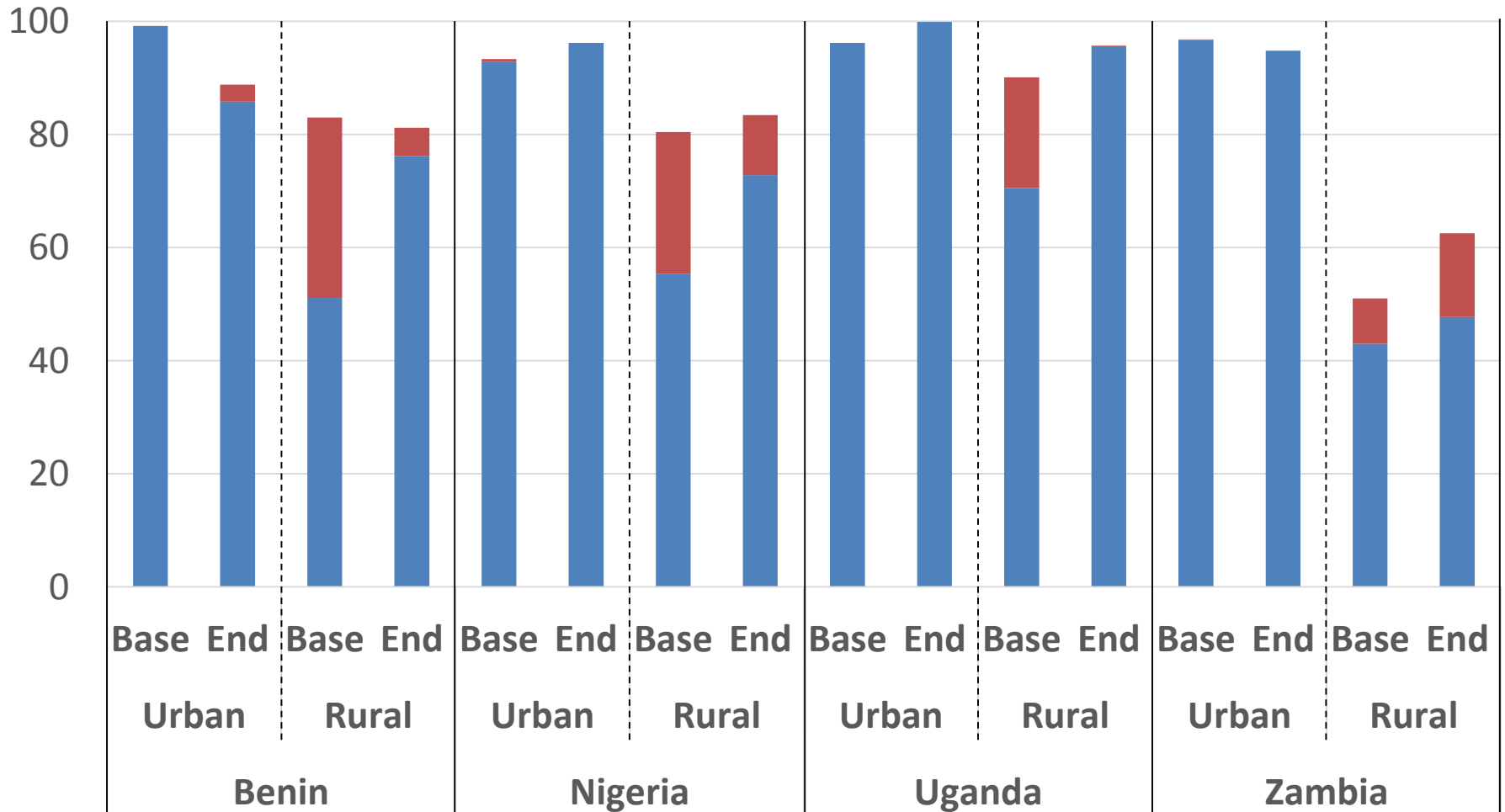
## Methods:

# Defining access indicators

- Treatment options reasonably accessible to households:
  - Radius of 5km around surveyed household
  - Number, types and other characteristics of treatment sources
    - Types of antimalarials and diagnostics stocked and their prices
- Basic supply-side indicators on availability
  - % households with reasonable access to:
    - Any treatment source stocking ACT
    - Specific treatment source types stocking ACT
- National estimates account for survey design
  - Compared across urban and rural areas
  - Examine changes over time

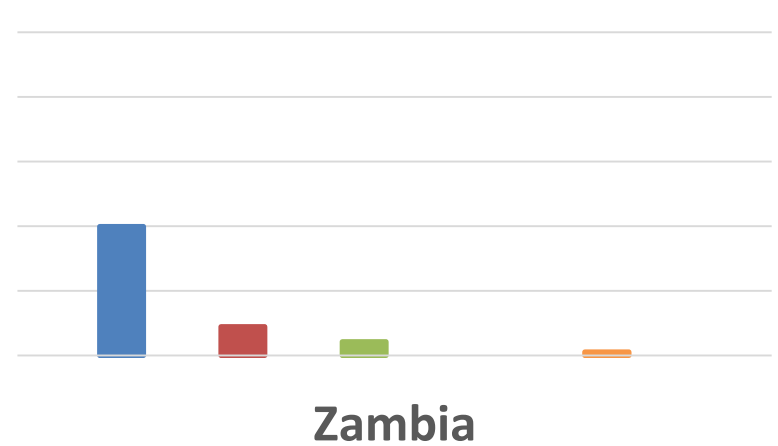
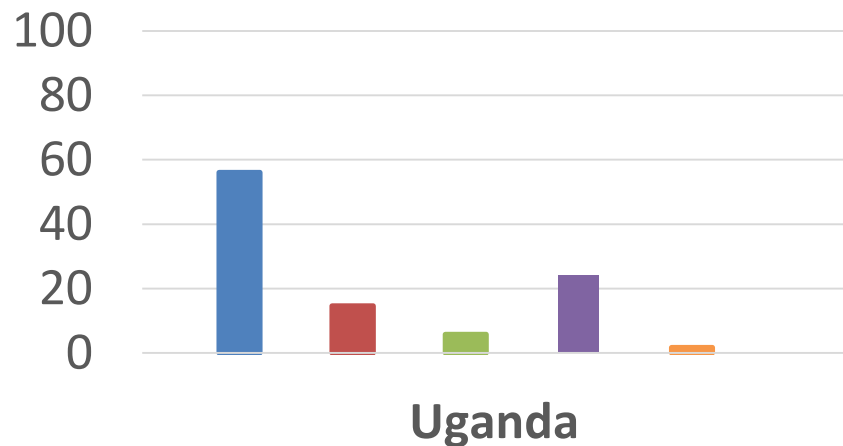
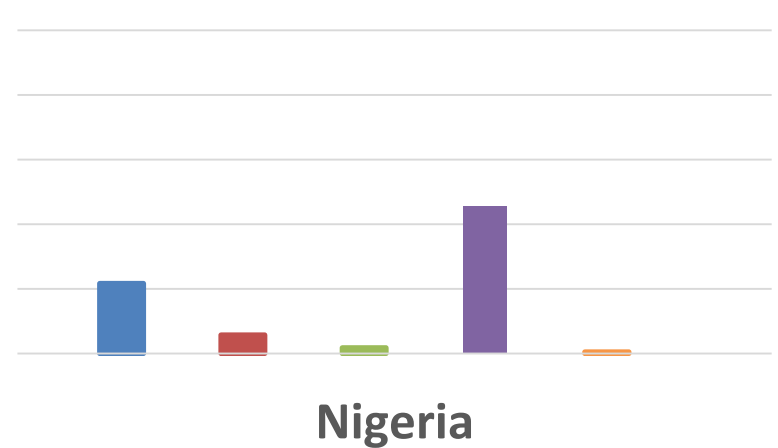
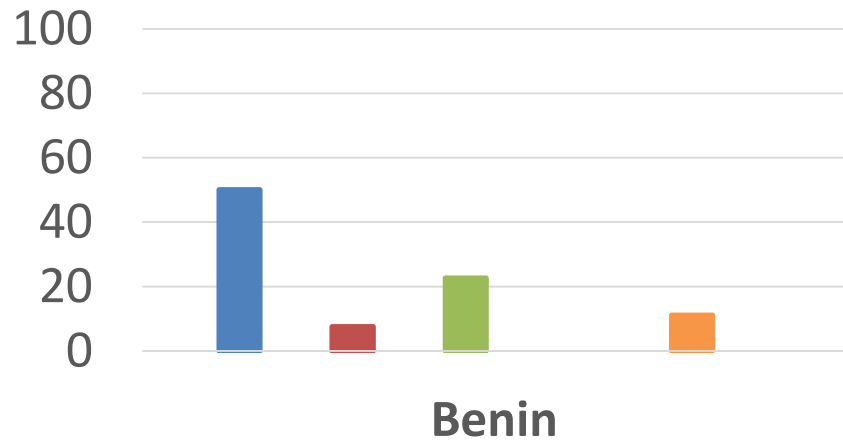
# % of households with access to ACTs vs. non-ACT within 5km

■ ACT ■ Only non-ACT



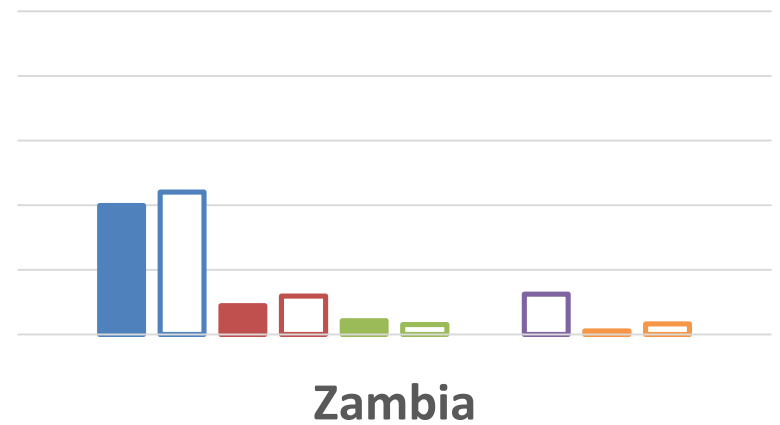
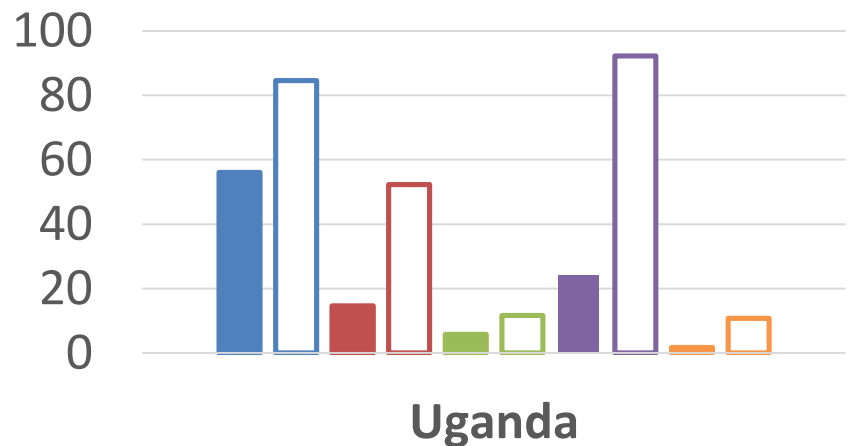
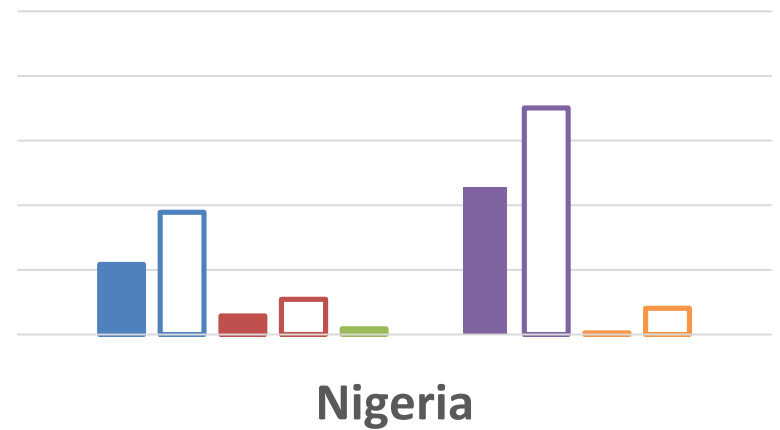
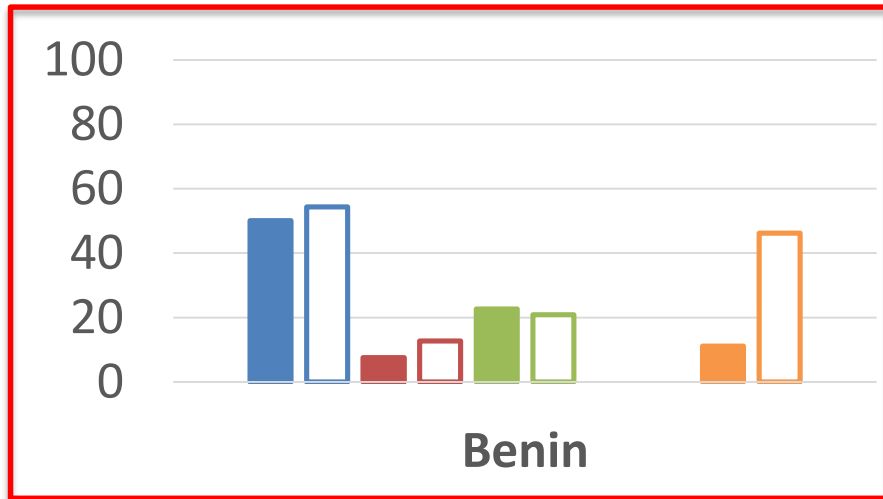
# % of rural households with access to ACT by source: over time

Public/Non-profit facility Private facility Pharmacy Drug store General retailer



# % of rural households with access to ACT by source: over time

Public/Non-profit facility Private facility Pharmacy Drug store General retailer





# Other indicators and applications

- Price of ACT and non-ACT accessible to households
- Distance to nearest treatment sources
- Quality: access to microscopy and RDTs, qualified health professionals
  
- Combined access dataset provides rich information from supply and demand perspectives
  - Integrated understanding of access and how to improve it
  - Enhance modelling determinants of treatment seeking behaviour

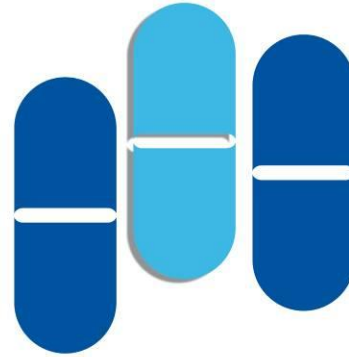
# **New approach to measure access**

## **Strengths**

- Produces objective, realistic, dynamic and representative measures of access
- Comparable across contexts and over time: impact evaluations
- Easily scaled and transferred to other products/conditions

## **Limitations**

- Complementary surveys must be conducted contemporaneously
- Expensive: censusing
- Simplistic use of geospatial data



# ACTwatch

Evidence for Malaria Medicine Policy

[www.actwatch.org](http://www.actwatch.org)



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