



Center for
Communication
Programs



Recalculating the 'net use gap': ITN Access vs Use

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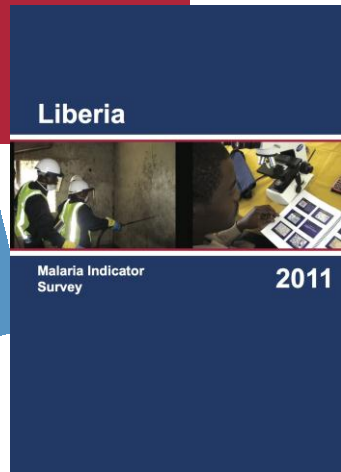
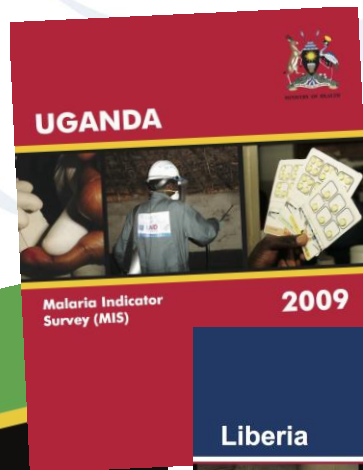
President's Malaria Initiative

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Does this ever happen to you?



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Last page

Annex 2: Sample Stata® Code for Calculating Intermediate Variable for Indicator 3 – Proportion of Population with Access to an ITN within Their Household

The calculation of Indicator 3 – *Proportion of Population with Access to an ITN within Their Household* (page 20) needs an intermediate variable which is “potential users.” It can be calculated by multiplying the number of ITNs in each household by two. The product of this calculation may be greater than the number of individuals who spent the previous night in a household if a household has more than one ITN for every two people. In this case, the “potential users” variable in that household should be modified to reflect the number of individuals who spent the previous night in the household, because the number of potential users in a household cannot exceed the individuals who spent the previous night in that household.

The indicator can then be calculated by dividing the sum of all potential ITN users in the sample by the total number of individuals who spent the previous night in surveyed households. An example of the Stata® code used to calculate this indicator is provided below.

Sample Stata®, Version 12 Code

* create access variable in individuals file (household roster)

* variable "numitnhh" is the number of ITN per household from the household file

* variable "sleep" is the de-facto residency (slept in the household the night before) yes=1, no=0

* variable "hhid" is the unique identifier for the household

```
gen potuse= numitnhh *2
```

```
label var potuse "potential ITN users in hh"
```

```
bysort hhid: gen access=potuse/sleep>1
```

```
svy: mean access if sleep==1
```

MERG webpage, under “Reference documents” tab

With just a simple do-file you can:

- Improve your country's rates of net use!
- Get more value out of your BCC activities!
- Show donors that your culture of net use is growing!

...and it won't cost you a penny!

The new ITN Access Indicator

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MERG*

Access indicator(s)

- “proportion of the population that has access to an ITN within their household”
 - Assuming that two people share a net
- “proportion of households that own one net for two people” AKA universal coverage

The old “net use gap”

- In the past, we talk about the “net use gap” – the gap between ownership (coverage) and use.

Ownership	Use
# of households with at least one net	# of <5s/people who slept under a net the previous night
_____	_____
# of all households in survey	# of all <5s/people in the survey

Calculating access for each household

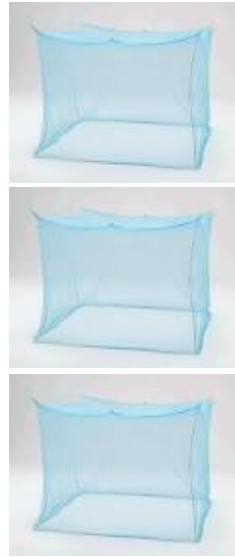
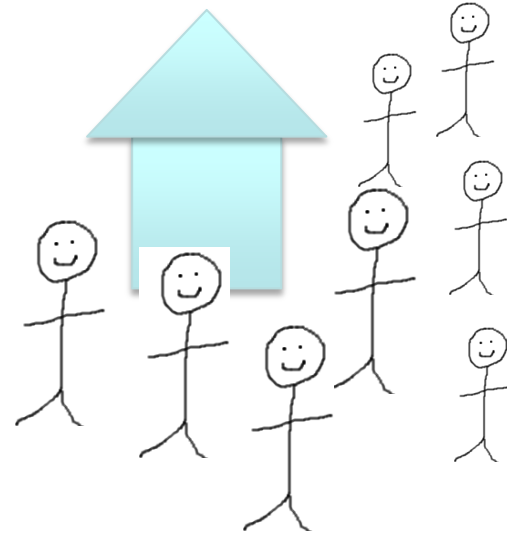
$$\frac{\text{\# of potential users}}{\text{\# of defacto hh members}} = \frac{(\text{\# of ITN}) \times 2}{\text{\# of defacto hh members}}$$

If there are more potential users than defacto members we set this ratio equal to 1.00

Then calculate the mean of these proportions

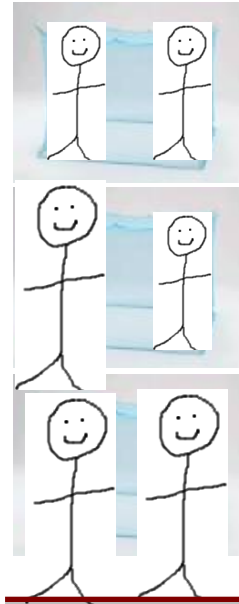
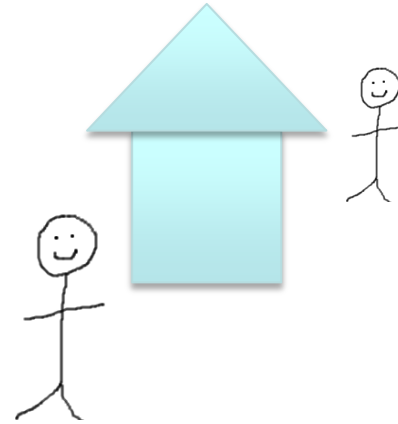
Calculating access

- Household A has 3 nets and 8 people:
 - 6 people can have access (if each net protects two people)
 - In the analysis, we randomly allocate household members to have access. We don't know for certain.



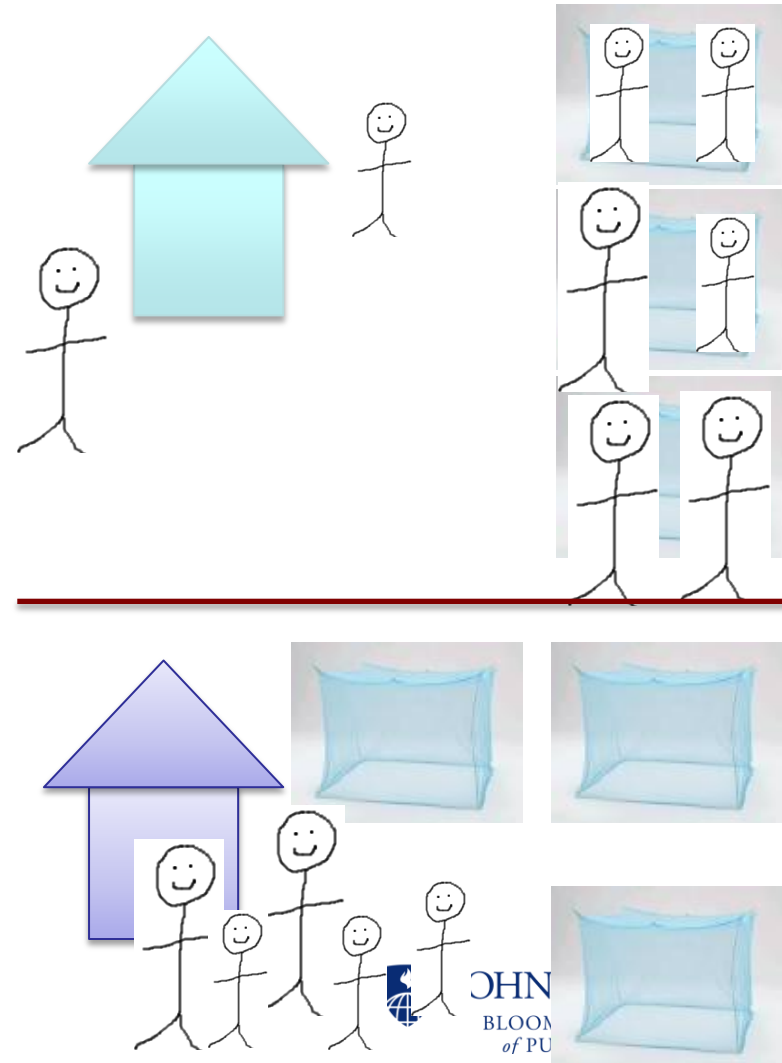
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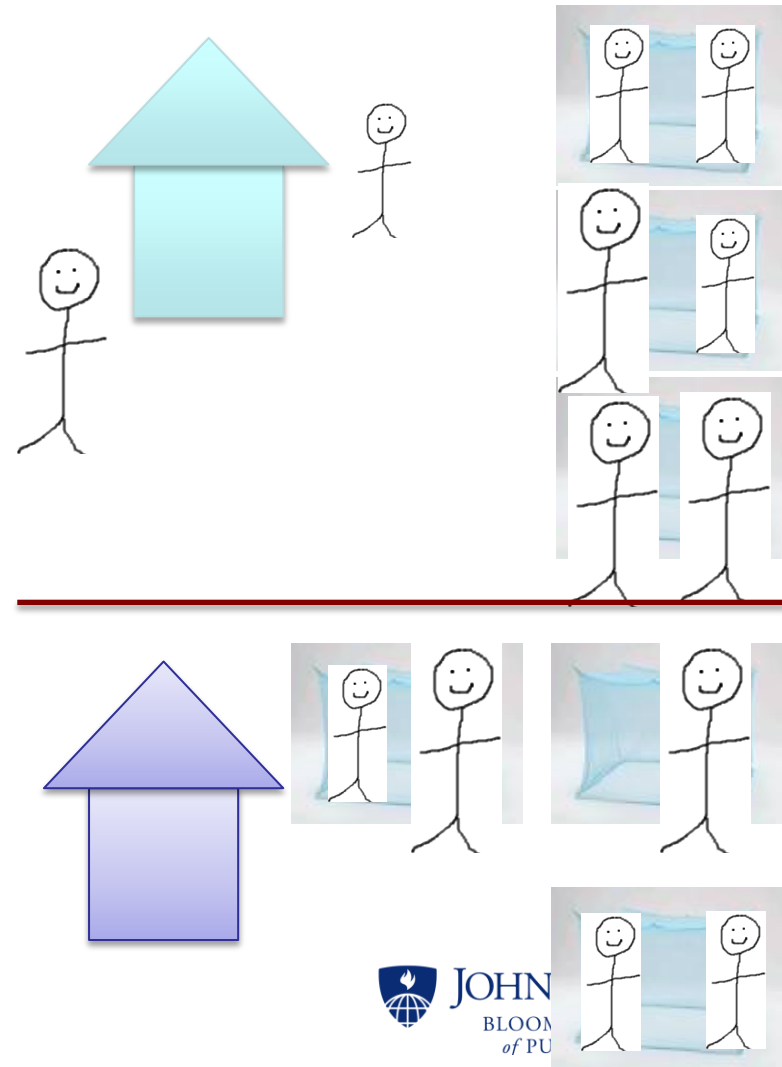
Calculating access

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- Household B has 3 nets and 5 people
 - All five people have access (but they can't have more than 100% access)



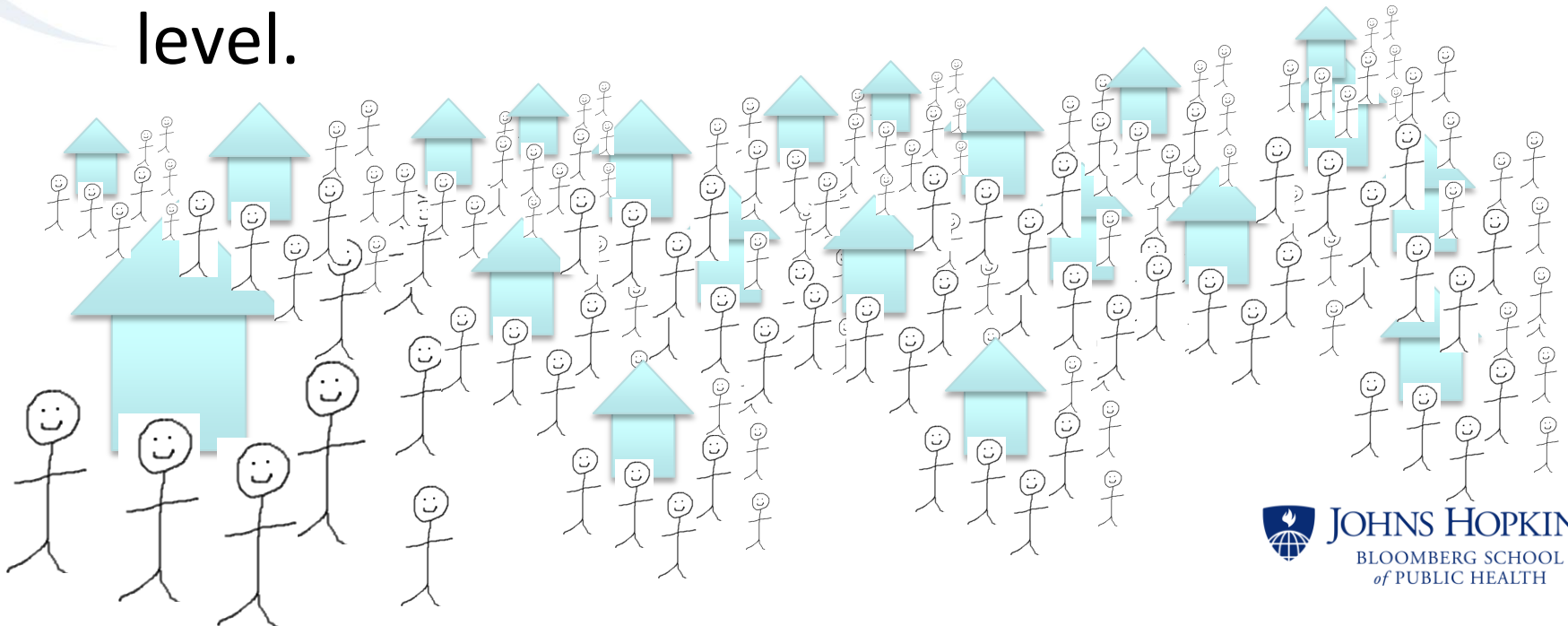
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Limitations

- Since we have randomly assigned access to individuals, we can't do the comparison on the individual level. Only on the population level.



Multi-country analysis

- 41 DHS & MIS datasets from 2005-2012
- 28 countries

	Ownership	Access	ITN use	Ratio of use to access
Range	3.5%-90.9%	1.5%-74.5%	0.3%-68.4%	0.11-1.19
Median	50%	31.6%	25.6%	82.1

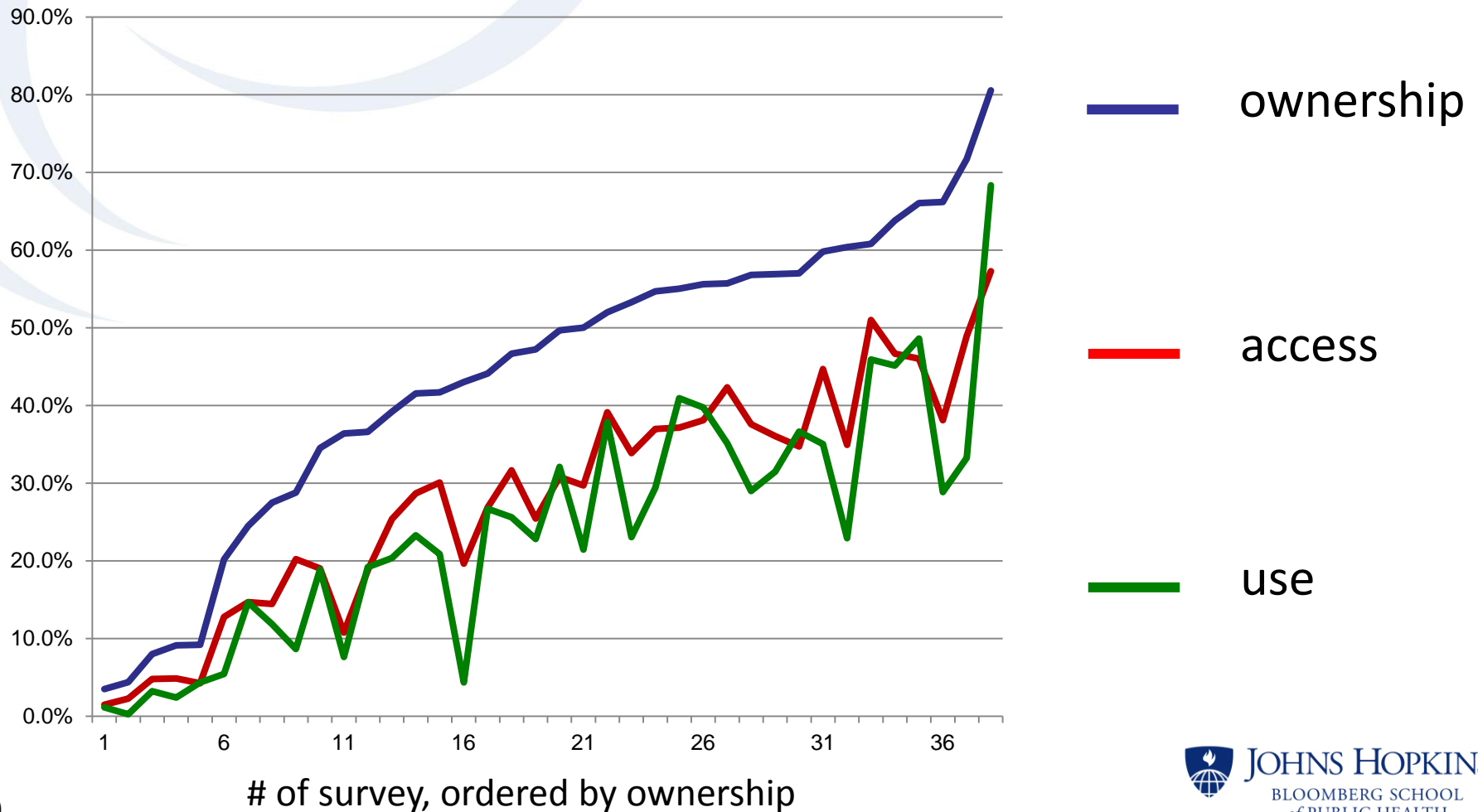
	Household ownership	Population with access	ITN use	Ratio of use:access
Liberia MIS 2009	47.2%	25.4%	22.8%	0.90
Liberia MIS 2011	49.7%	30.8%	32.1%	1.04

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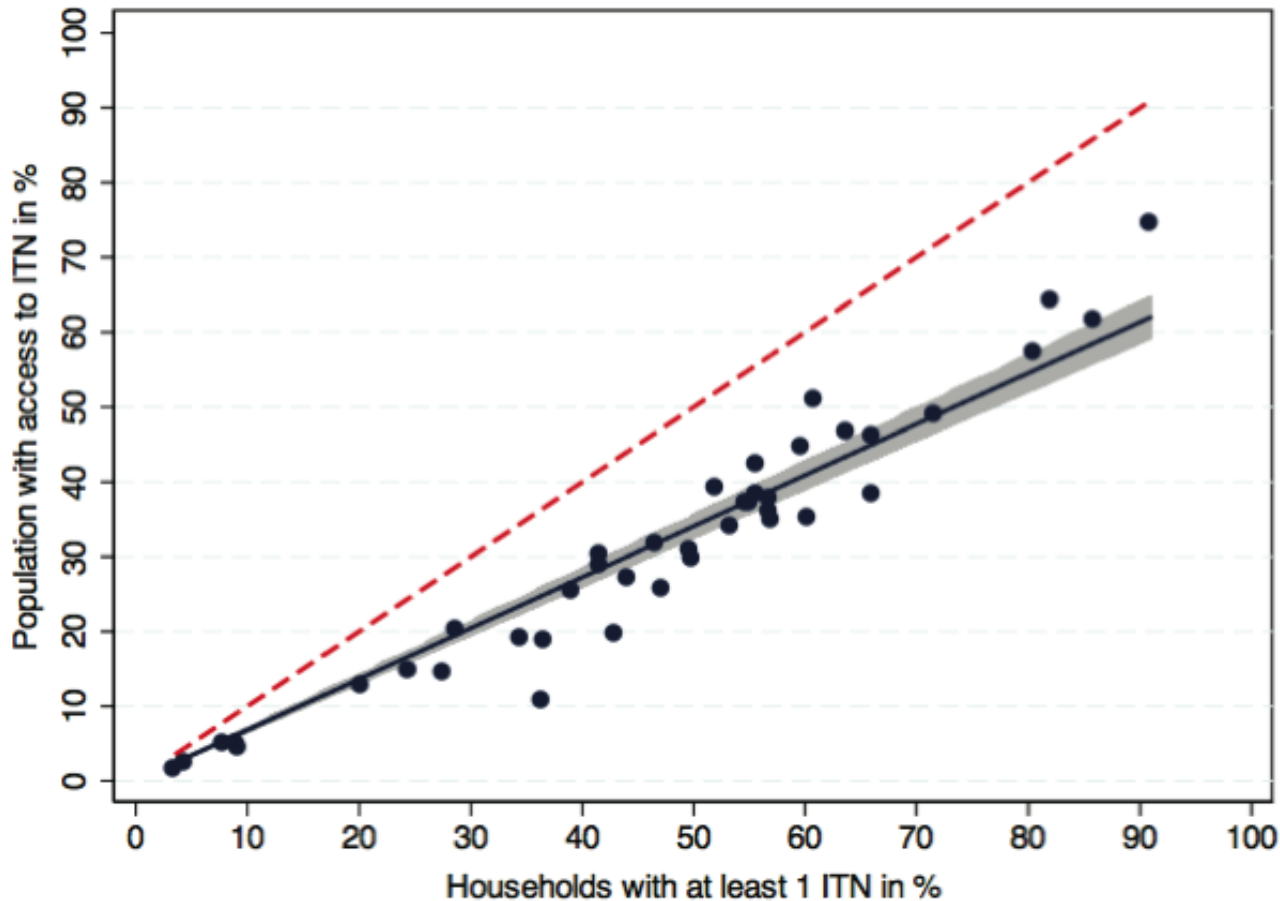
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Results: it's (mostly) an access gap.

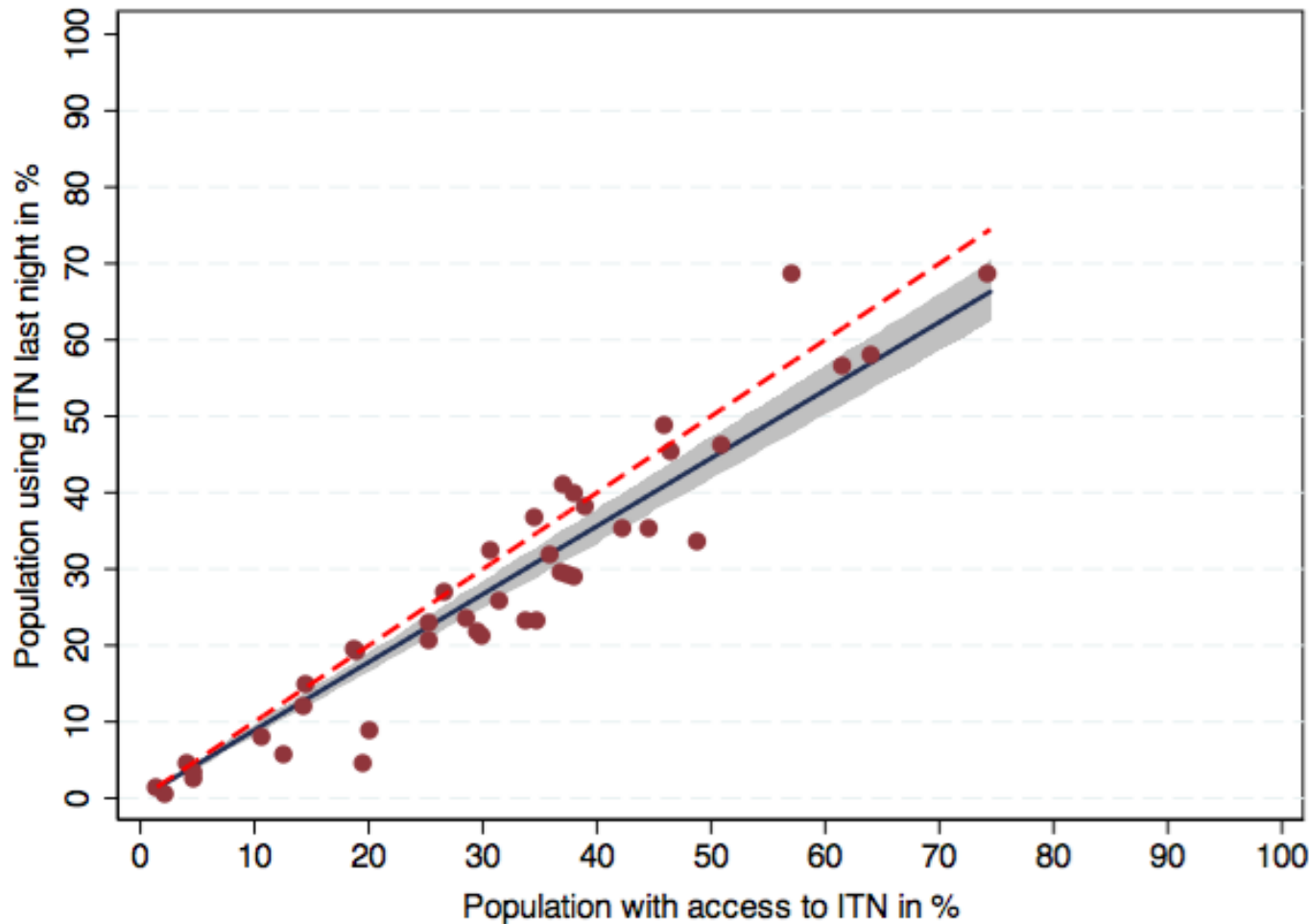


Results: ownership is strongly correlated with access



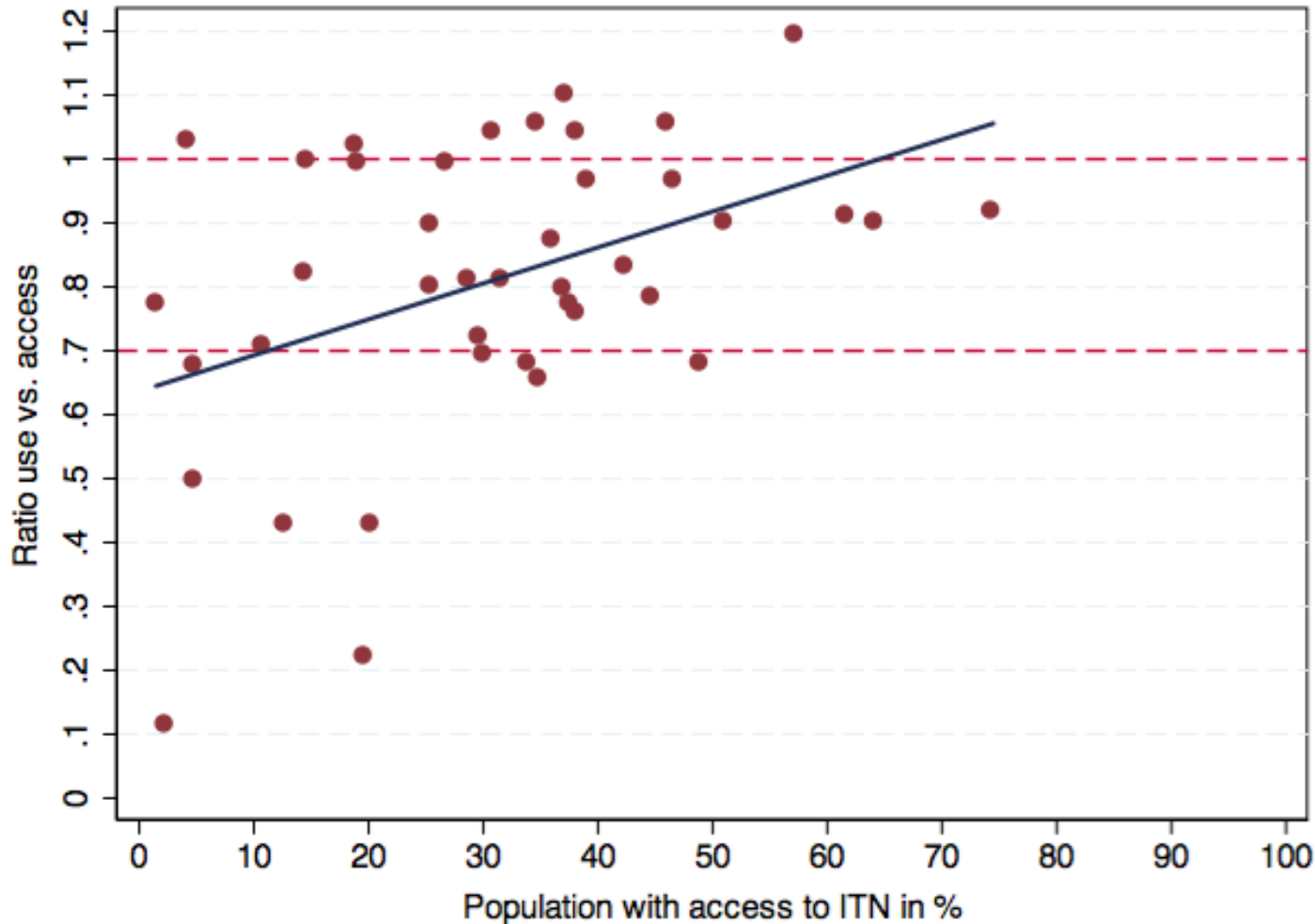
Regression
coefficient
= 0.68

Results: Use is strongly correlated with access



Regression
coefficient
= 0.89

Results: the use ratio improves as access increases



Take Home Points

1. People are using nets, when they have them
 - The “use gap” is much smaller, now that we are measuring it correctly
2. The “use gap” has gotten smaller over time and as access improves
 - Social norms/culture of net use?
3. In many places, more than 2 people are sharing a net, giving a use:access ratio > 1.00
4. Use:access ratio can vary within a country
5. All survey reports should include all the new universal coverage indicators

Implications

- Is this due to BCC?
 - We'd like to think so, but cannot tell from this analysis.
 - BCC has accompanied nearly all net distributions – no control group
- Or happening even without BCC?
 - Ongoing familiarity with nets
 - Seeing the benefits of net use
 - Establishing a habit of net use and
 - A culture of net use



More research is needed!



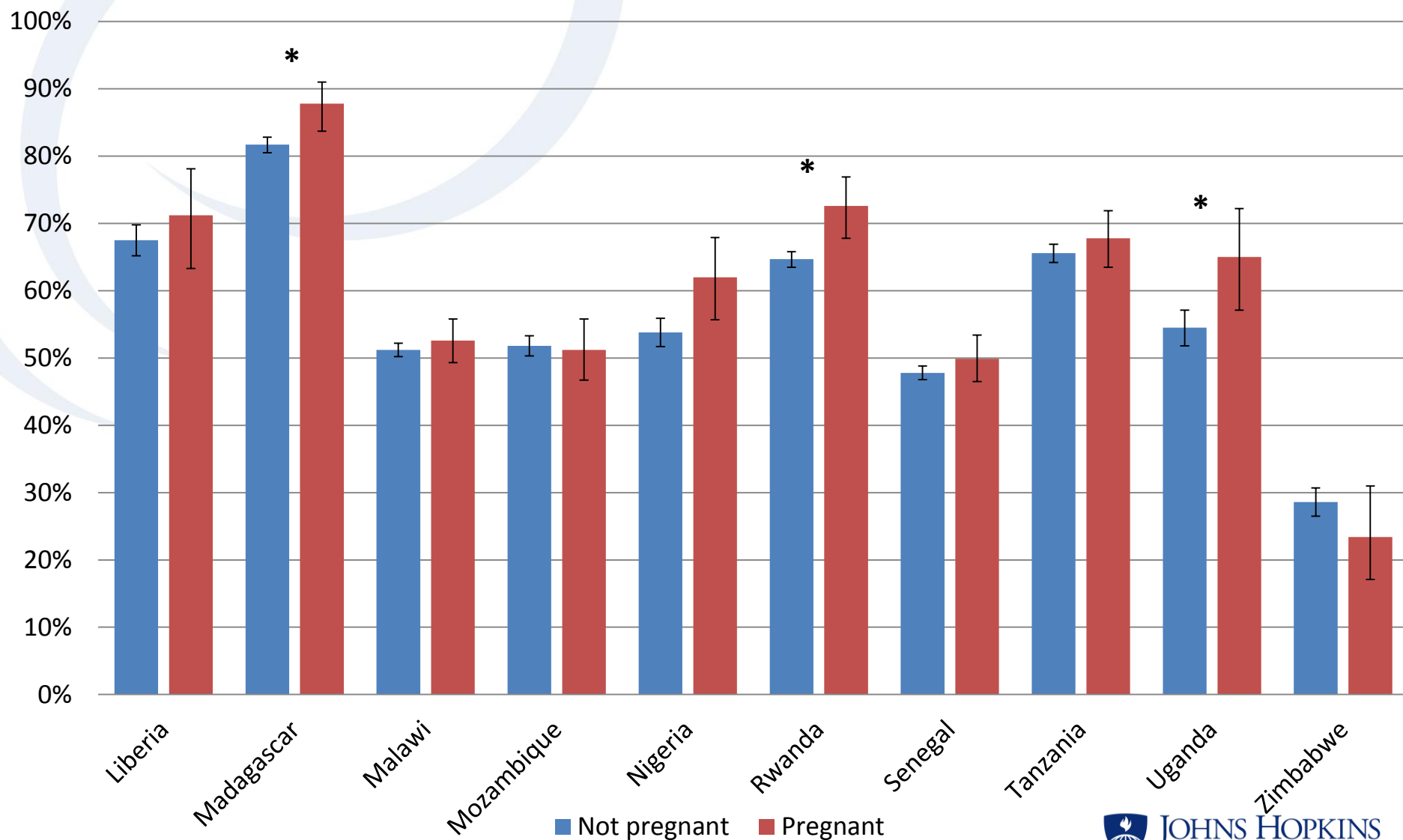
ARE PREGNANT WOMEN STILL PRIORITIZED FOR NET USE?

Are pregnant women still prioritized?

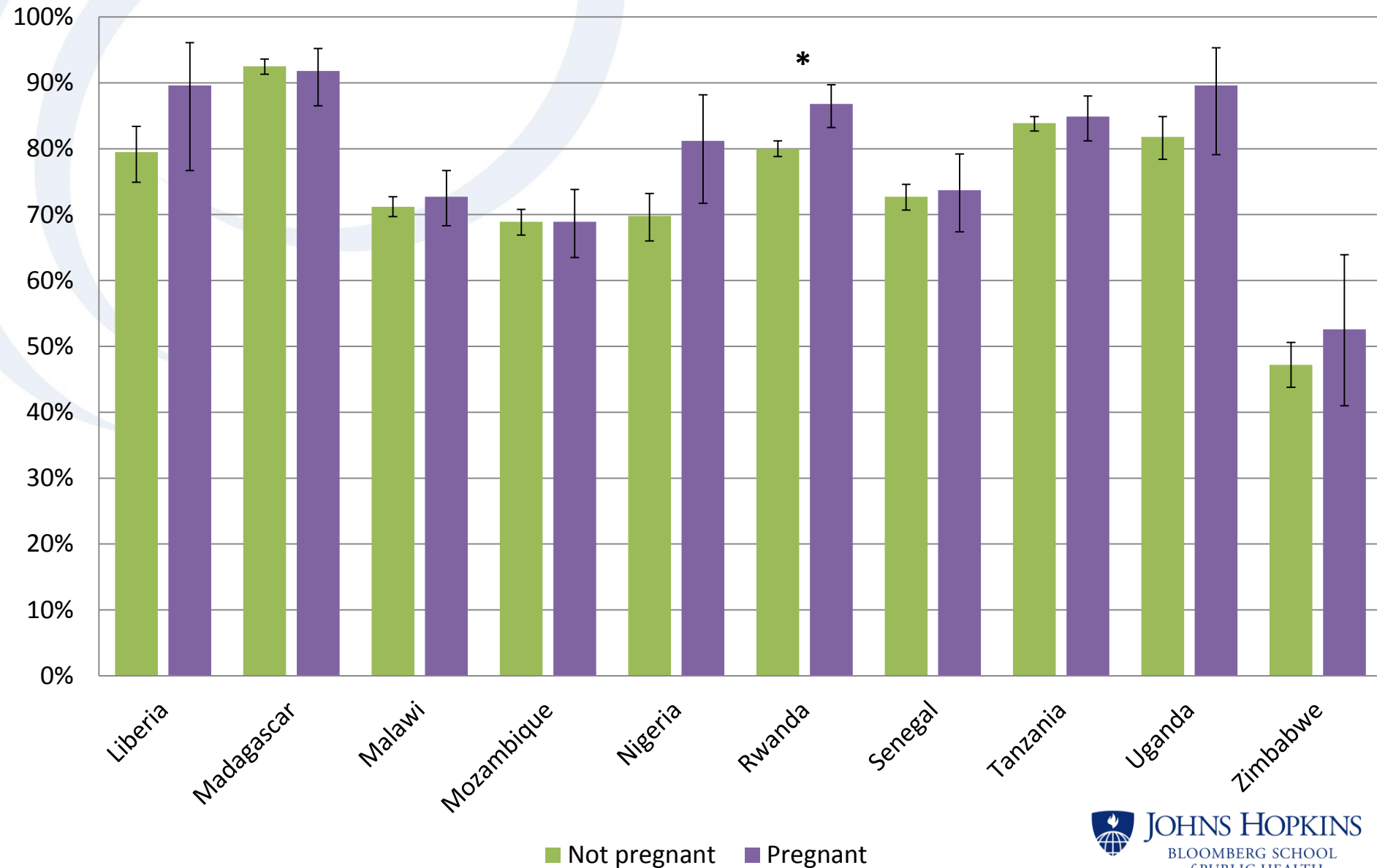
- 10 DHS/MIS surveys from 2009-2011
- Compared proportion of net use by pregnant women to that of non-pregnant respondents
- Logistic regression of pregnancy on net use controlling for different household variables
 - Universal coverage, wealth index, cluster, setting, region, interview month

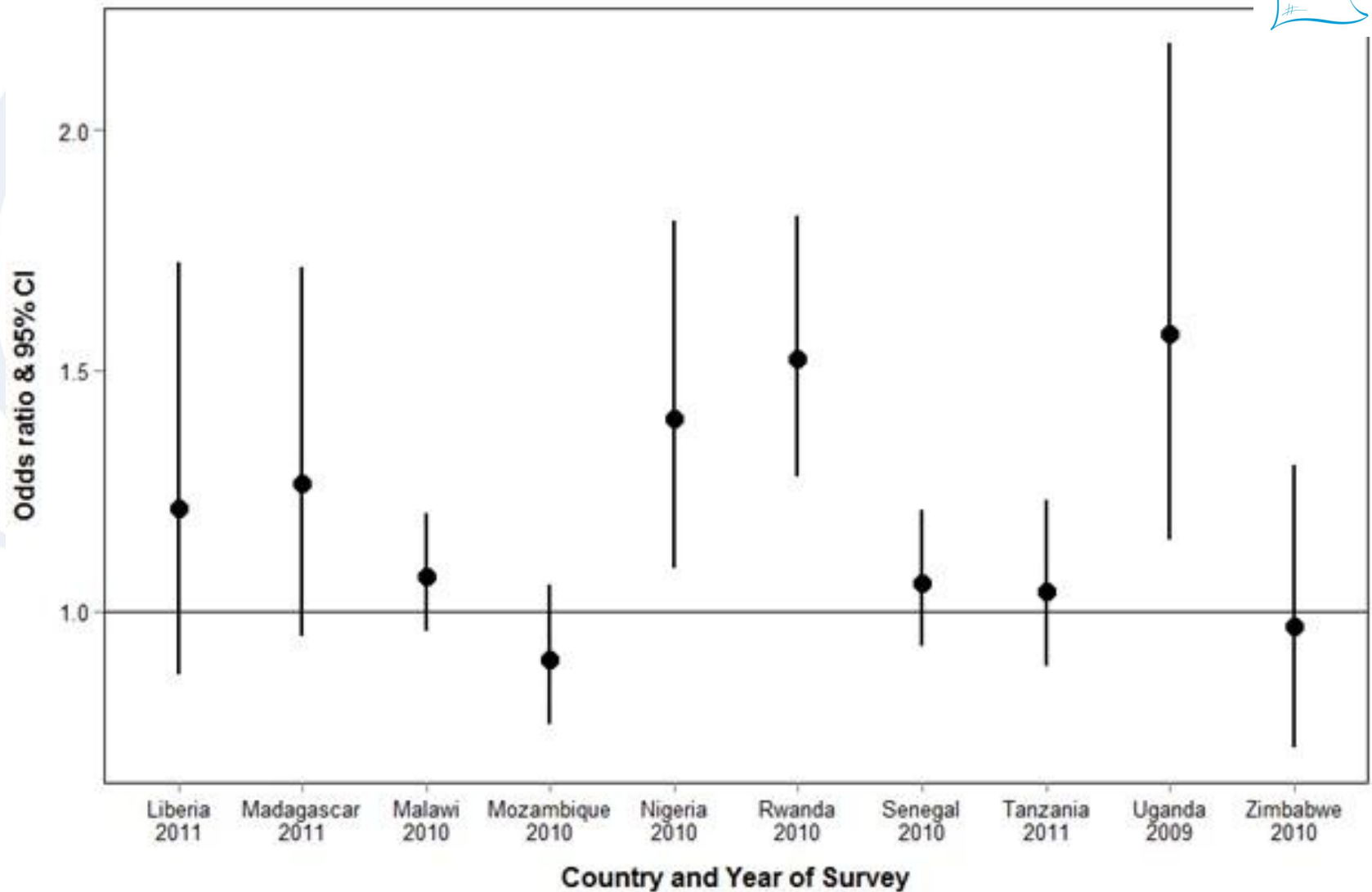
- On average, 9% of population is pregnant
- 63% (range 30-92%) report owning at least one ITN
- 18% (range 9-33%) report universal coverage (one net per two people)

Net use in households with partial net coverage



Net use in households with Universal net coverage





- Pregnancy, universal coverage, wealth index, region, setting, interview month, cluster

So what does that mean about pregnant women's net use?

- Access to nets appears to be important factor in decision-making for prioritization of pregnant women for net use in some countries
- Increased net access alone will not solve the prioritization problem completely
- As shortages and gaps in coverage are inevitable at national and local levels, BCC to promote prioritization of pregnant women are still critical!



Thank you!