



Mapping the private commercial sector distribution chain for antimalarials in six low-income countries in Africa and South-East Asia

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Review of key findings from ACTwatch Household & Outlet Surveys

- Despite free or highly subsidised provision, limited access and availability of ACTs in public sector has resulted in poor coverage
 - 3%-21% of febrile children in Africa receive ACT (2011 ACTwatch HH)
- Many seek treatment from private sector retailers
 - More than 50% for care for febrile children in 6 countries → but only 22% in Zambia (2011 ACTwatch HH)
 - Retail prices for ACT are 5-23 times higher than those of older, less effective antimalarials (e.g. CQ, SP) (2011 ACTwatch OS)
 - Retail level availability of ACT ranged from 6%-53% (except Cambodia), but availability of older, less effective antimalarials was ~100%
 - Most retail customers purchase older, less effective therapies
 - Use of oral artemisinin monotherapies also common → resistance

Rationale & objective of ACTwatch Supply Chain Study

- Price and availability of antimalarials in the private retail sector are expected to be influenced by wholesalers at higher levels of the distribution chain, as well as by market level factors
- Describe the distribution chain for antimalarials, including wholesaler characteristics, mark-ups & sales volumes



Supply chain sampling & survey methods:

- Sampling frame of wholesalers created by tracing the distribution chain starting from the bottom and working up
- From the nationally representative sample of outlets surveyed during the outlet survey
 - name and address of top 2 antimalarial suppliers (terminal wholesalers)
 - Purchase and selling price for each antimalarial in stock (mark-ups)
- Terminal wholesalers identified and interviewed
 - business characteristics, knowledge of ACTs, licensing, regulation
 - name and address of top 2 antimalarial suppliers (intermediate wholesalers)
 - Purchase and selling price for each antimalarial in stock (mark-ups)
- Process repeated with intermediate wholesalers, and so on, until top of the chain is reached

Outlet & Supply Chain Survey Overview 2009-2010

Outlet surveys
conducted in 7 countries

33,781

Outlets with
potential to stock
antimalarials
screened

10,044

Eligible Outlets
Interviewed

53,435

Antimalarials
Audited

Supply chain surveys
conducted in 6 countries

818

Wholesalers with
potential to stock
antimalarials
screened

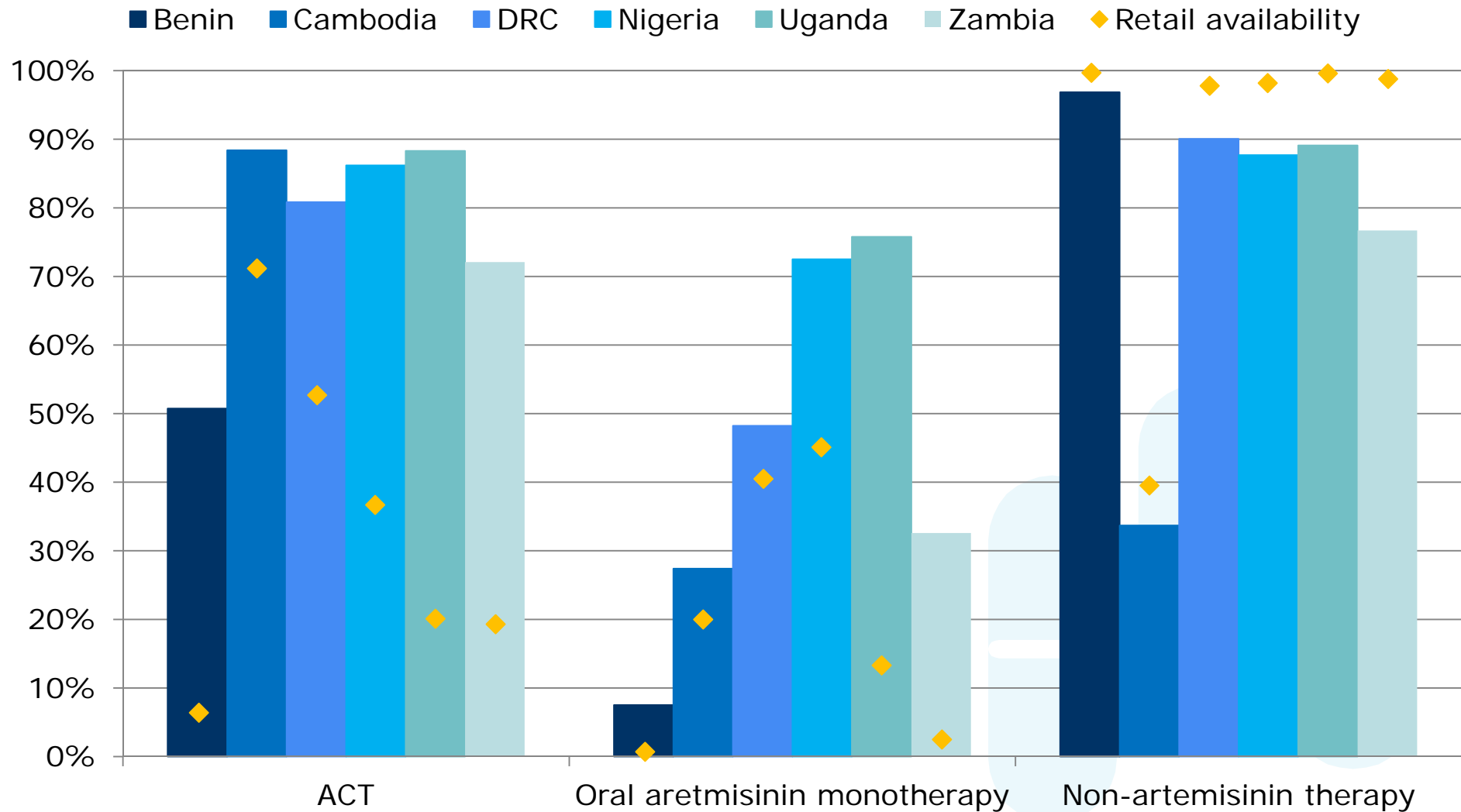
749

Eligible Wholesalers
Interviewed

7,935

Antimalarials
Audited

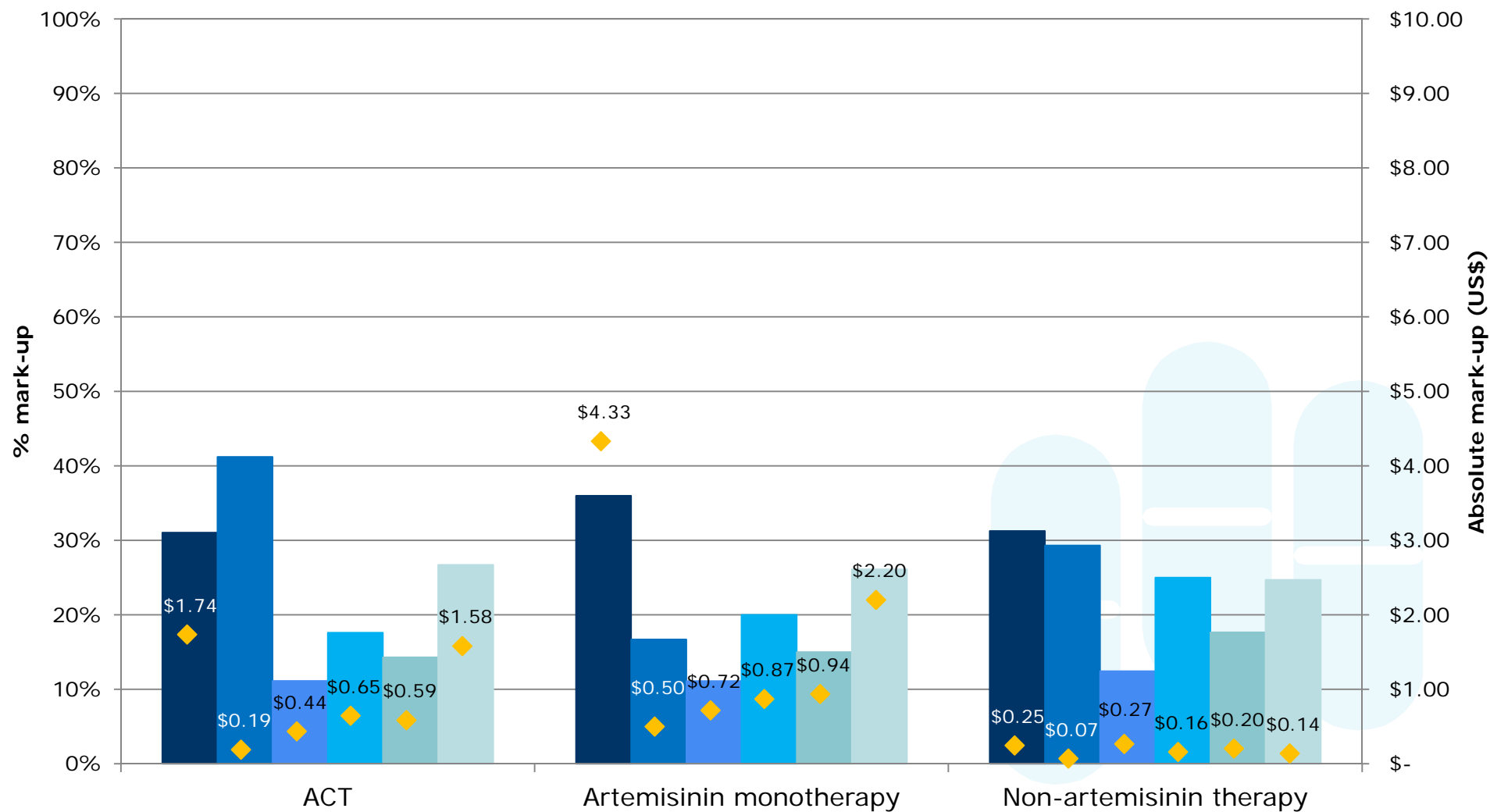
Private sector antimalarial availability: wholesale vs. retail level⁺



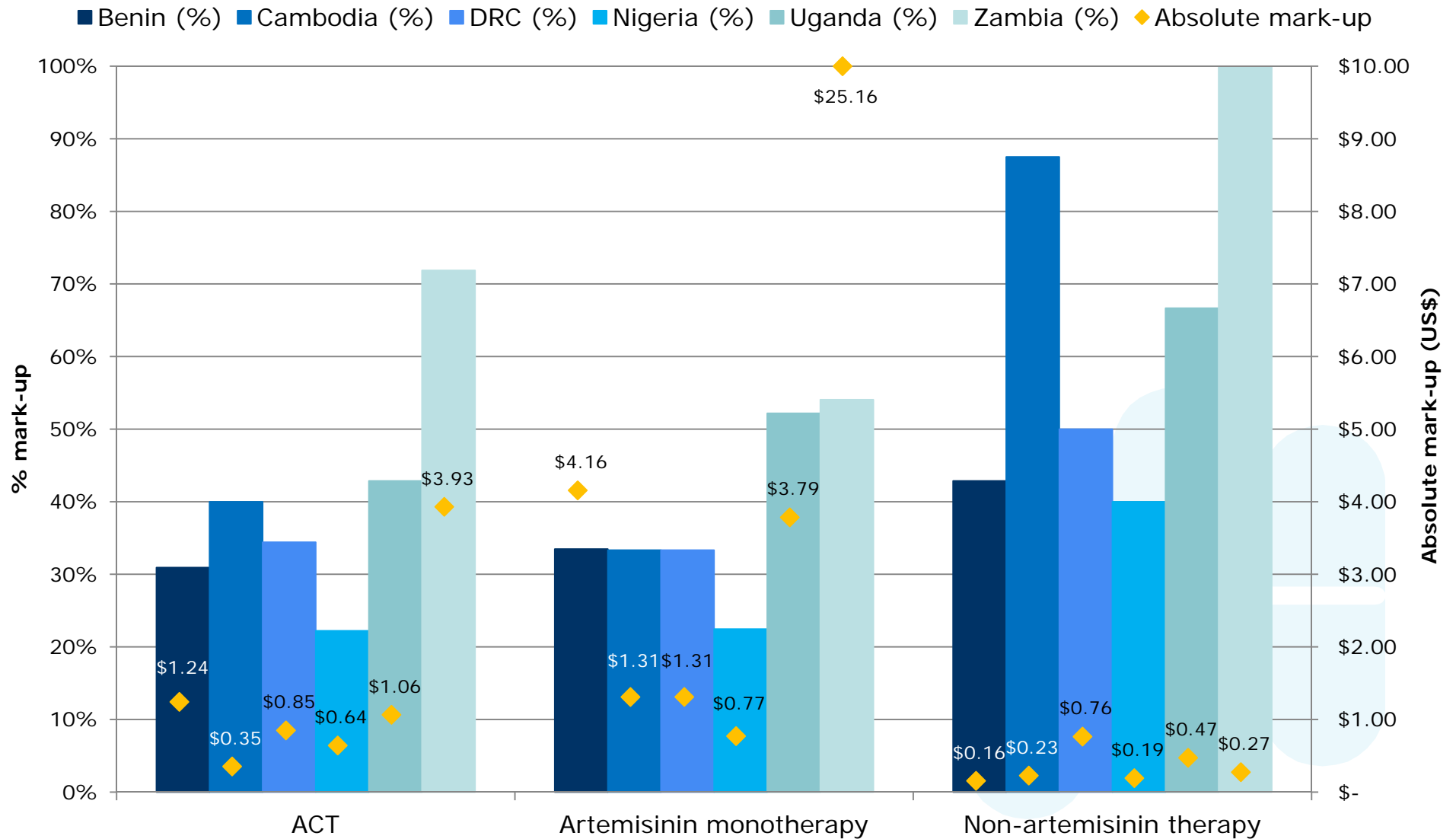
⁺ Of those stocking at least one antimalarial drug;

Median wholesale mark-up (% & absolute) by antimalarial type

■ Benin (%) ■ Cambodia (%) ■ DRC (%) ■ Nigeria (%) ■ Uganda (%) ■ Zambia (%) ◆ Absolute mark-up



Median retail mark-up (% & absolute) by antimalarial type



Wholesaler characteristics: Qualifications, licensing & storage

Wholesalers that: (N)	Cambodia	Benin	DRC	Nigeria	Uganda	Zambia
Employed a member of staff with health qualifications	63.4% (93)	34.8% (144)	92.9% (141)	62.8% (137)	100.0% (128)	97.6% (42)
Displayed any up-to-date pharmacy license from the DRA (either wholesale or retail)	29.5% (95)	1.1% (198)	0.0% (135)	8.7% (138)	82.0% ⁺ (128)	70.0% (40)
Reported they had been visited by an inspector in the past year	82.4% (91)	17.0% (191)	94.3% (141)	71.2% (132)	99.2% (123)	97.5% (40)
Stored antimalarials in a dry area, out of direct sunlight & off the floor	88.4% (86)	90.8% (156)	90.4% (115)	97.0% (100)	92.1% (126)	86.1% (36)

+ In Uganda this includes wholesalers who had a recently valid pharmacy license (i.e. Expired Nov or Dec 2008) as licences for 2009 were still being processed by the authorities at the time of data collection

Distribution chain characteristics

	Cambodia	Benin	DRC	Nigeria	Uganda	Zambia
Traditional markets a location for wholesaling		+++		++		
Integrated distribution networks		+	++	++	+	
Local manufacturing of antimalarials		+	++	+++	+	



Discussion

- Wholesale mark-ups lower and more consistent than at retail level, where some very high mark-ups were observed (e.g. in Zambia)
- Wholesale and retail mark-ups on ACTs are generally reasonable
 - decreases in end-user price would require decreases in factory gate prices
- Considerable variation in distribution chain characteristics and wholesaler practices, regulatory compliance and effectiveness of enforcement across countries
 - likely to influence end-user price and availability of antimalarials
 - presents challenges and opportunities for potential interventions targeting wholesalers
 - design of interventions needs to take into account local context

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Zambia (cont)

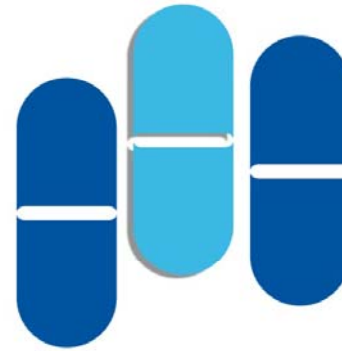
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