

## BACKGROUND

• People living in malaria endemic countries often turn to the private sector for fever case management. However, private sector markets are typically characterized by low levels of readiness for appropriate malaria case management, particularly in comparison with public health facilities.

• Efforts to improve readiness for malaria case management have included the Affordable Medicines Facility – malaria (AMFm). The AMFm aimed to improve availability and affordability of quality assured artemisinin combination therapy (QAAC) in both public and private sectors. An independent evaluation of the AMFm identified significant improvements in QAAC availability and affordability after a pilot period ending in 2011.<sup>1</sup> Access to co-paid ACTs among public and private sector first-line buyers in pilot countries continued beyond the pilot period through 2013.

## RESULTS

• The majority of antimalarial-stocking outlets in the private sector across survey rounds were drug stores in both Nigeria (patent proprietary medicine vendors – PPMVs) and Uganda (Figure 1). Drug stores (PPMVs) accounted more the majority of antimalarials distributed in Nigeria across survey rounds and about one-quarter of antimalarials distributed in Uganda (Fig 2).

• Quality-assured ACT availability among antimalarial-stocking private sector outlets increased over time in Nigeria and Uganda during the AMFm pilot period ending in 2011 and continued to increase among most private sector outlet types between 2011 and 2013. In 2013, more than 80% of antimalarial-stocking private health facilities (Uganda) and pharmacies (Uganda and Nigeria) were stocking QAAC, and more than 70% of drug stores in both countries were stocking QAAC (Fig 3).

• Although the median price of a QAAC adult equivalent treatment dose has decreased over time, in 2013 QAAC remained 3 to 4 times more expensive than the most popular non-artemisinin therapy, SP (Fig 4)

• The market share for QAAC relative to other antimalarials increased during the AMFm pilot period and was maintained or further increased by 2013 among most private sector outlets in Uganda and Nigeria. Most QAAC distributed in the private sector were marked with the co-payment 'green leaf' logo. However, in 2013 fewer than half of antimalarials distributed by private sector outlets were QAAC in both countries, and QAAC market share was particularly low among drug stores (PPMVs, 26%) and pharmacies (17%) in Nigeria (Fig 5).

• Availability of malaria blood testing among antimalarial-stocking private sector outlets has improved over time among private health facilities in Uganda and Nigeria such that in 2013, more than 60% of these outlets had blood testing available. Although blood testing availability increased over time among drug stores, 2013 availability remained very low in Nigeria (7%) and Uganda (12%) (Fig 6).

## METHODS

• Antimalarial medicine outlet surveys were conducted as part of the ACTwatch project in Nigeria (Sept-Nov 2009, Oct-Nov 2011, Nov-Dec 2013) and Uganda (Nov-Dec 2010, Nov-Dec 2011, July-Aug 2013). A census of all outlets with the potential to sell/distribute antimalarials was conducted within a nationally-representative sample of clusters. A provider interview, antimalarial audit, and malaria rapid diagnostic test (RDT) audit were conducted among outlets meeting eligibility criteria (Table 1).

• Drug information, sale/distribution in the previous week, and retail price were collected for each antimalarial in stock. Product and distribution information was used to calculate relative market share using the adult equivalent treatment dose as the unit of analysis.

Table 1. Sample Summary

Number of Outlets:	Nigeria			Uganda		
	2009	2011	2013	2010	2011	2013
Approached	6,089	8,507	5,363	11,369	16,521	8,264
Screened	5,456	7,939	5,148	11,153	16,207	7,932
Interviewed: Antimalarial(s) in stock on the day of the survey	2,113	1,504	1,714	2,420	3,138	3,308
Interviewed: Antimalarial(s) in stock on the day of the survey or reportedly in stock within the past 3 months	2,206	1,562	1,784	2,511	3,227	3,472

Fig 1. Private sector market composition

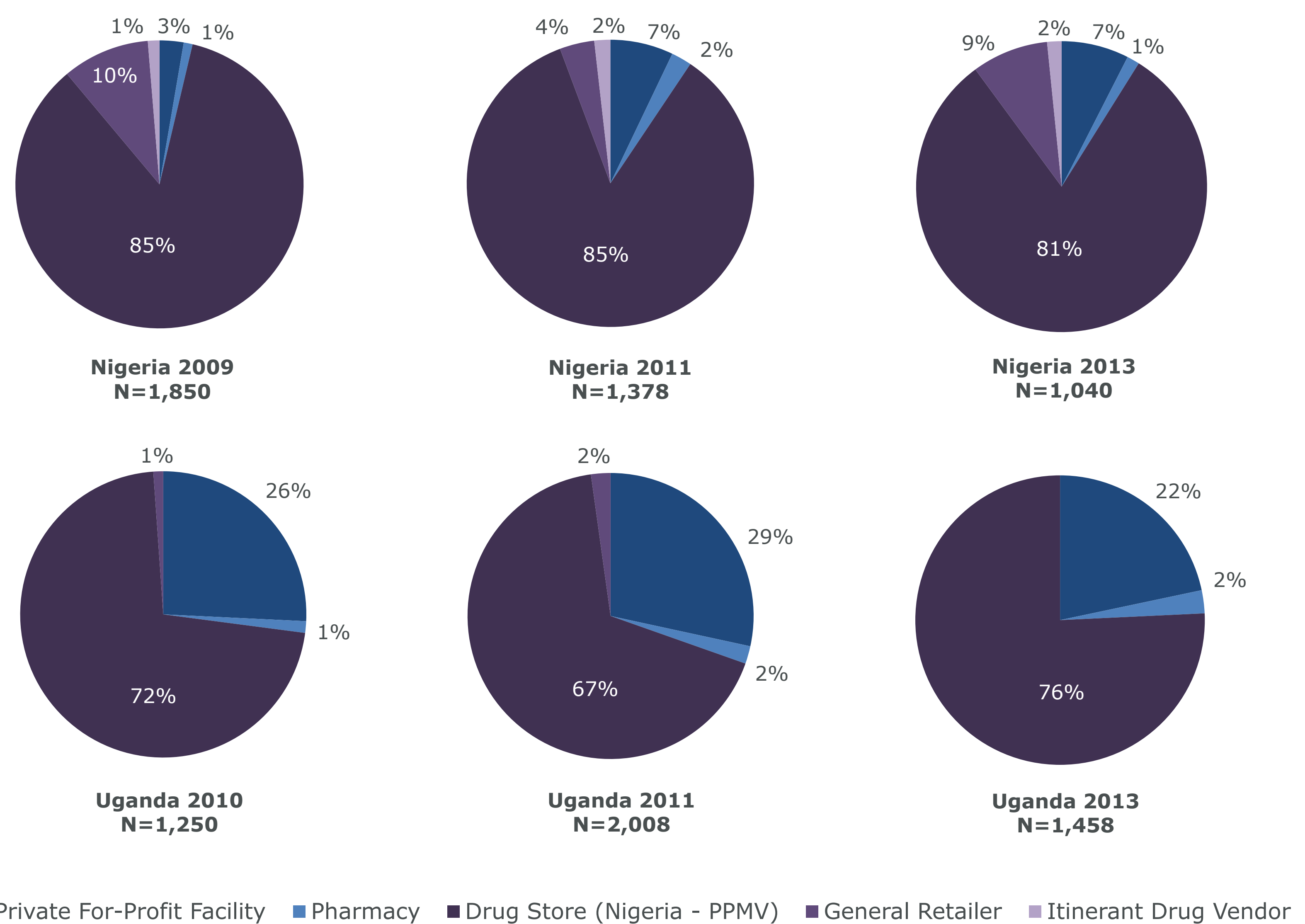


Fig 2. Relative antimalarial market share – outlet type

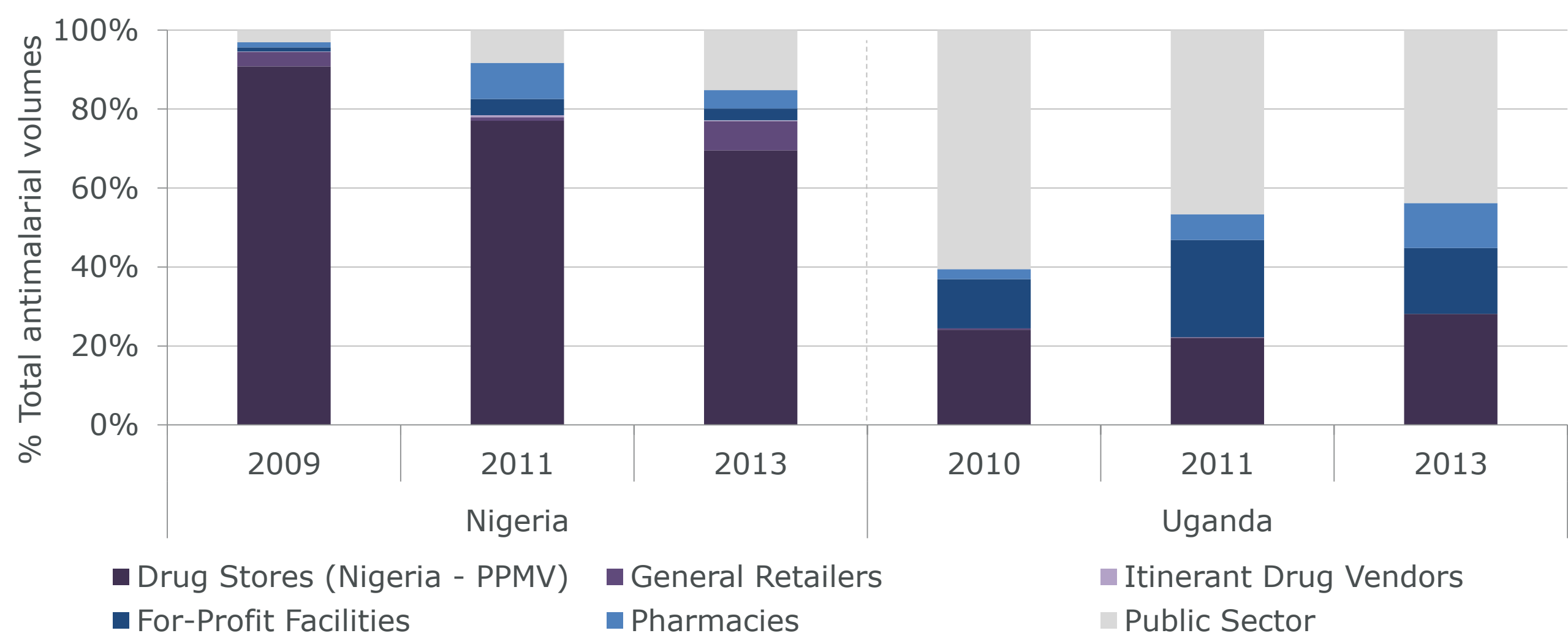


Fig 3. QAAC availability, among outlets with at least 1 antimalarial in stock

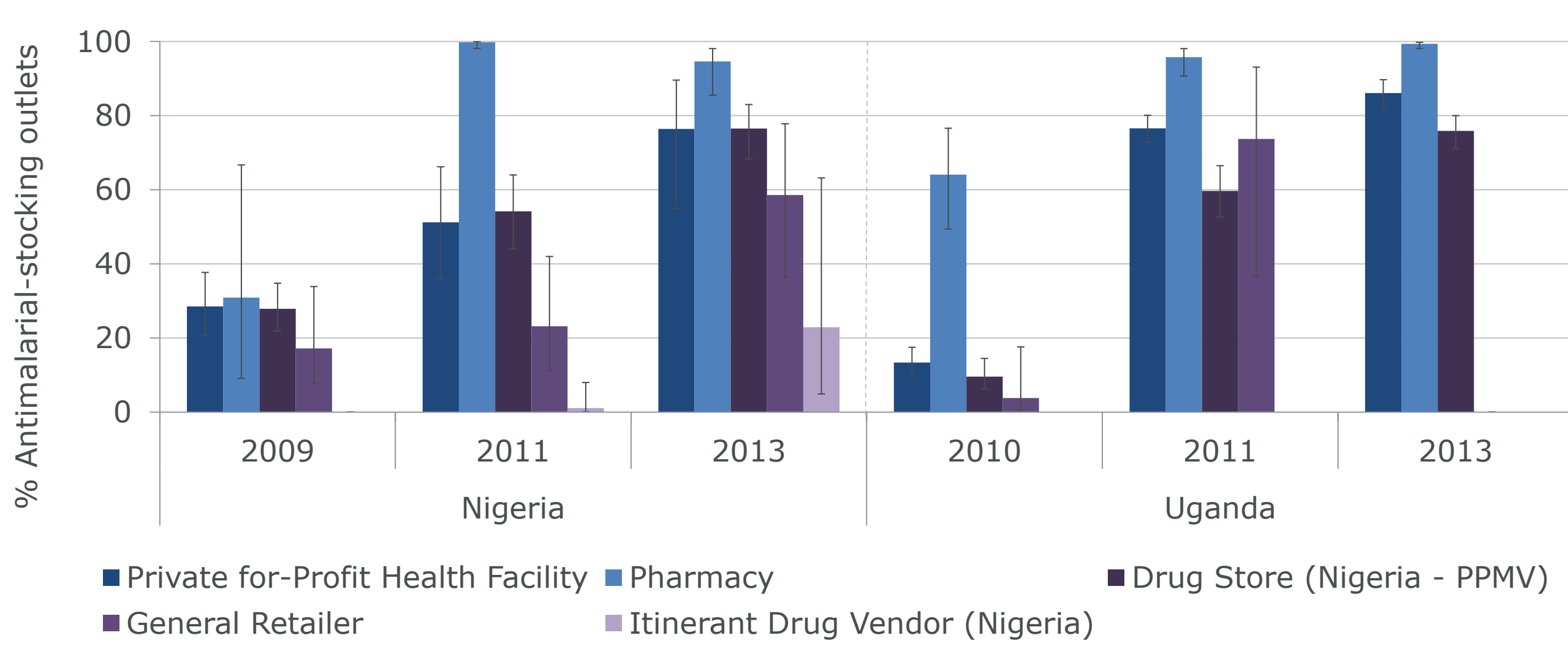


Fig 5. Relative market share – antimalarial type, across private sector outlet types

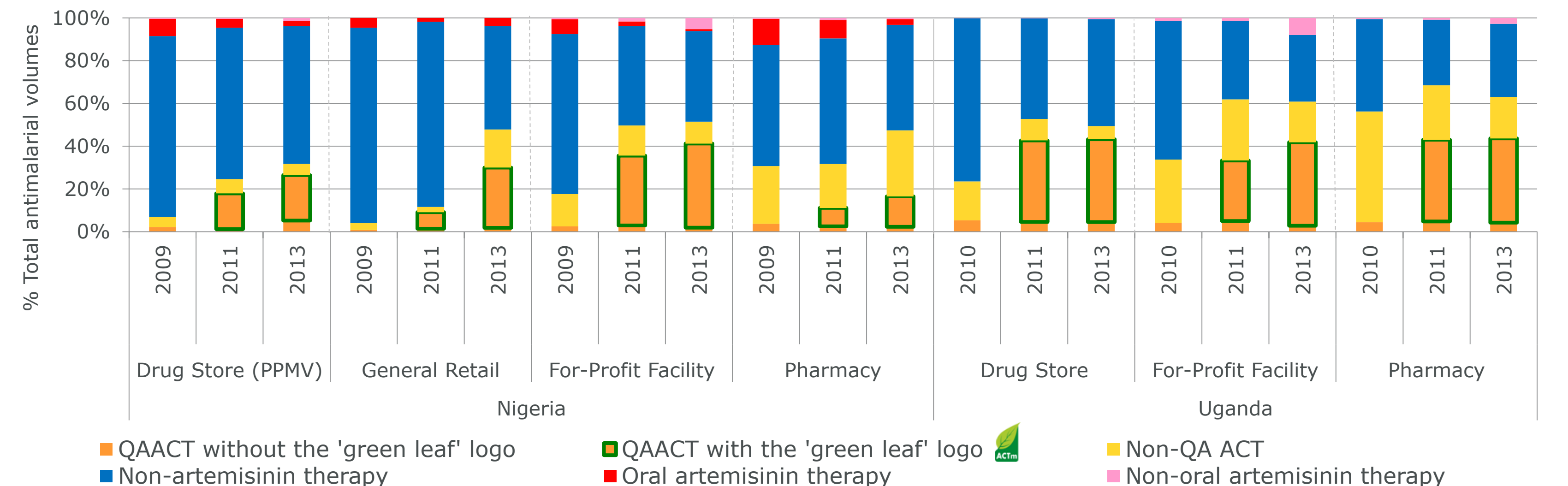


Fig 4. Median private sector price of an adult equivalent treatment dose (tablet formulation)

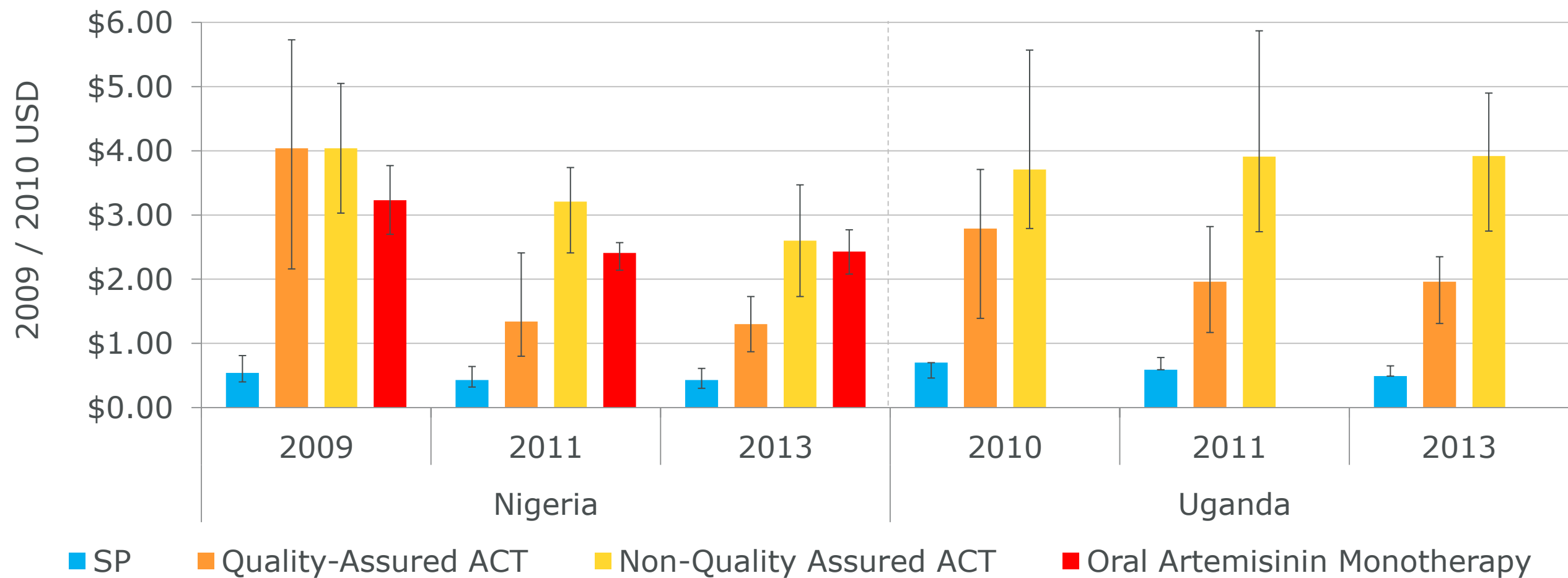
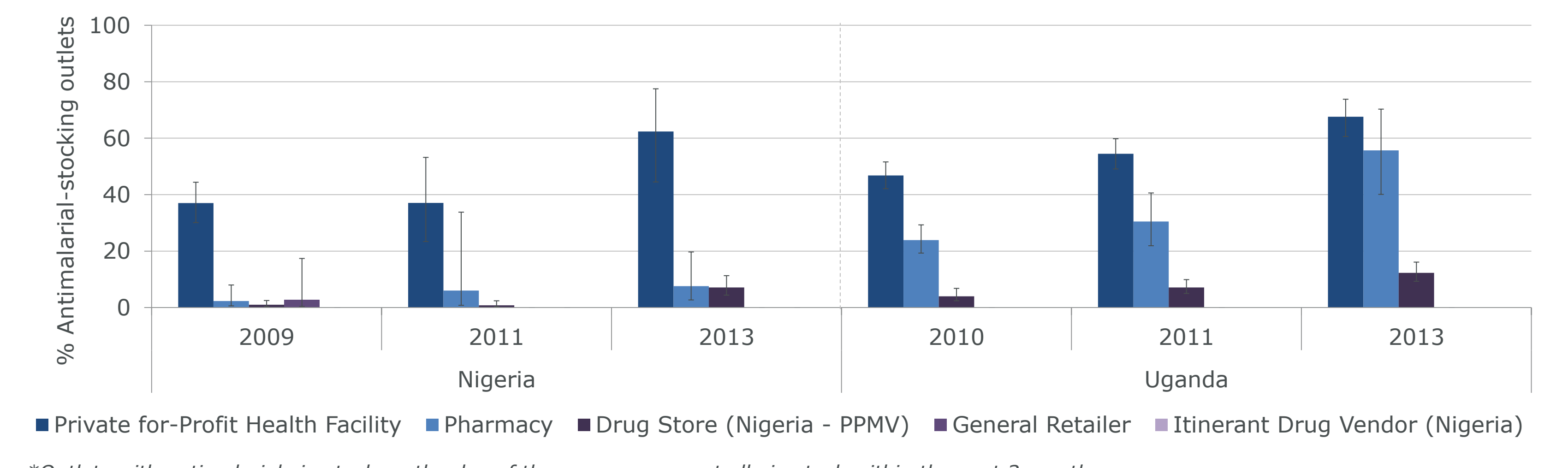


Fig 6. Blood Testing Availability, among antimalarial-stocking outlets\*



## DISCUSSION

• While private sector readiness for malaria case management has improved in Nigeria and Uganda in recent years with respect to QAAC availability, non-artemisinin therapy is still widely distributed by private sector outlets. The cost of treatment with QAAC relative to SP is likely a barrier to achieving higher QAAC relative market share.

• QAAC treatments available and distributed in the private sector in recent years have largely been marked by the 'green leaf' logo indicating a co-payment subsidy. The Global Fund co-payment mechanism in the seven AMFm pilot countries has now ended. A co-payment strategy is available through the new Global Fund funding model should countries choose to include co-paid ACTs in their funding proposals. ACTwatch outlet surveys will continue to monitor antimalarial availability, price, and market share in the context of the discontinuation of the subsidy mechanism and subsequent strategies employed by national programs to improve appropriate case management coverage.

• While malaria blood testing is increasingly available among private sector antimalarial-stocking outlets, nonetheless stocking levels remain very low among drug shops and additional strategies are required to ensure access to confirmatory testing prior to treatment.



<sup>1</sup>Tougher S, the ACTwatch Group, Ye Y, et al. (2012). Effect of the Affordable Medicines Facility – malaria (AMFm) on the availability, price, and market share of quality-assured artemisinin-based combination therapies in seven countries: a before-and-after analysis of outlet survey data. *The Lancet*, 380(9857): 1916-26.