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MEDICINE OUTLETS AND THEIR PRACTITIONERS IN MALARIA CONTROL IN GHANA

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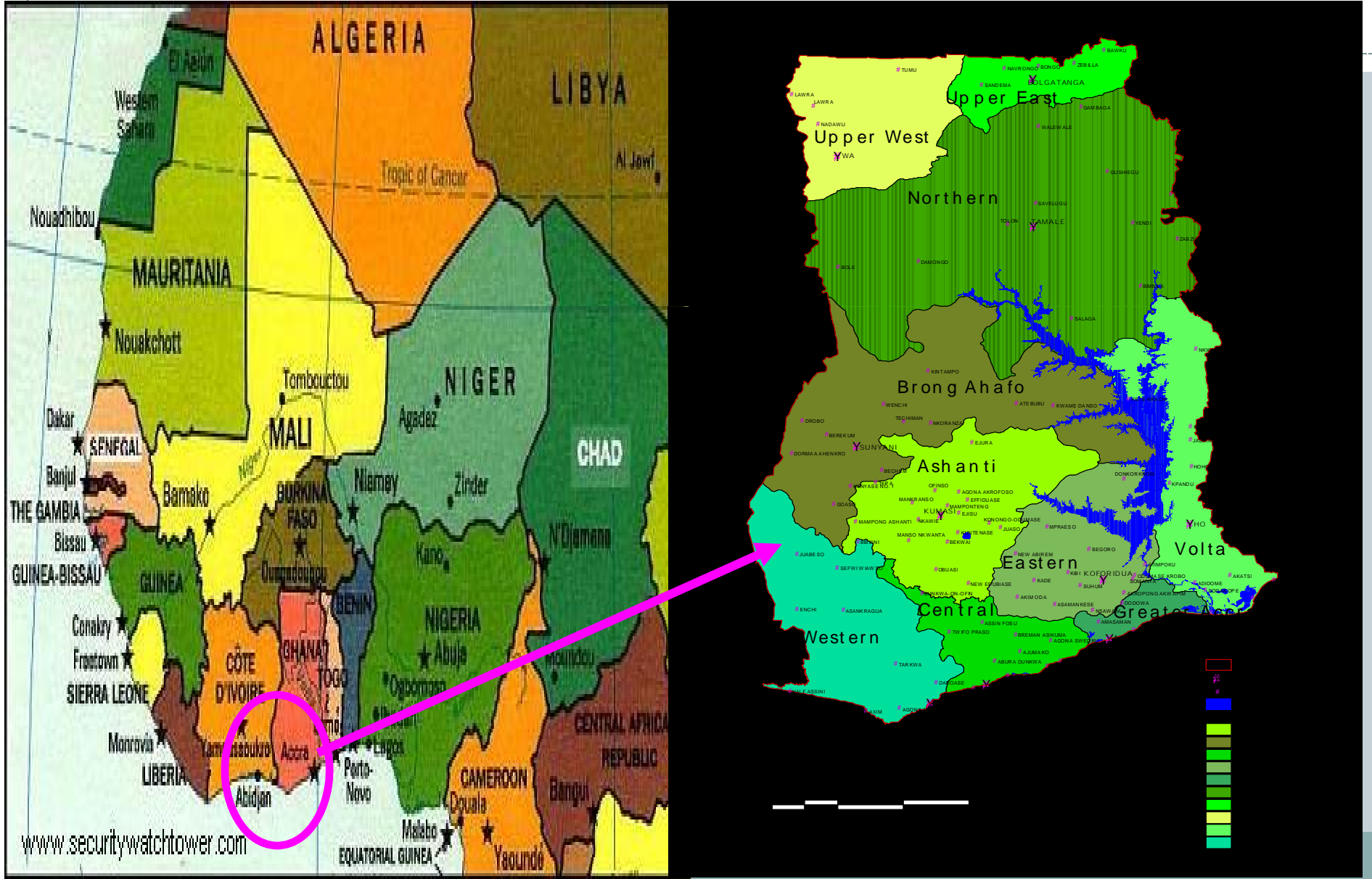
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Outline

- Demographics of Ghana
- Malaria disease burden & Intervention strategies for malaria control
- Study objectives
- Materials & Methods
- Results
- Conclusions & Recommendations
- Acknowledgements

THE COUNTRY GHANA



- ❑ Ghana is a small West African country, comparable in size to Oregon in the US
- ❑ It is bordered on the West by Cote D'Ivoire, the North by Burkina Faso, East by Togo and South by the Gulf of Guinea (Atlantic Ocean).
- ❑ Covers an area of about 284,000 sq km and has population of about 24million.
- ❑ 38% of the population are below 5 years of age, 58% between the ages of 15 to 64years and 4%, sixty five years and above.
- ❑ Life expectancy is about 60years, 58 for men and slightly higher than 60 for women

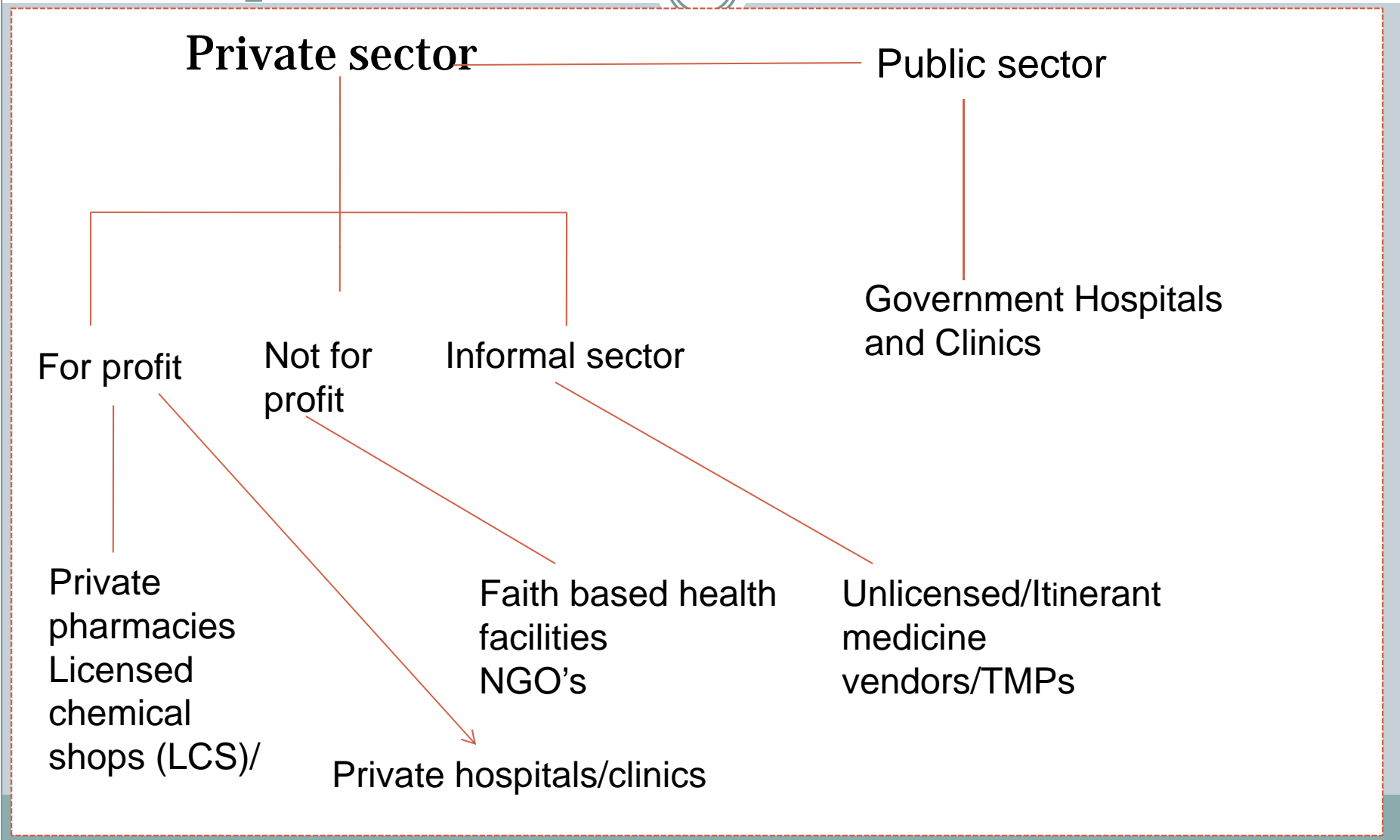
Malaria disease burden in Ghana

- ❑ Malaria accounts for about **40%** of outpatient consultations in health care facilities
 - ❑ Close to **60%** of under-five hospital admissions
 - ❑ **8%** of hospital admissions in pregnant women
 - ❑ & **7%** of disability adjusted life years lost (MOH data 2009)
 - ❑ It is a major cause of deaths in children less than 5 yrs & in pregnant women.
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- ❖ Deaths and disabilities from malaria are reported to be high among the poor and people in rural areas where access to preventive and curative interventions for malaria control is a challenge

Intervention strategies for prevention, treatment & control of malaria

- ❑ Integrated vector control & other disease prevention strategies
 - Promotion of widespread use of Insecticide treated bed nets,
 - Improving environmental sanitation to destroy breeding sites of mosquitoes,
 - The use of mosquito repellents /Indoor residual spraying intervention
- ❑ Case management
 - Prompt diagnoses/case recognition at home & primary care facilities
 - & use of effective medicines for cases of uncomplicated malaria
 - Prompt referral and use of effective medicines for case management of severe malaria in referral institutions
- ❑ Intermittent preventive therapy for pregnant women
- ❑ Support for research on the prevention, treatment & control of malaria^{2,3}

Structure of the Health System/ Sources of medicines & other commodities for prevention & control of malaria



Legally recognized outlets for stocking & supply of medicines & other tools/materials for malaria control

- **Hospitals/Clinics:** Includes public and private facilities that provide primary care, secondary, or tertiary health services
- **Community Pharmacies** – These are retail outlets authorized legally to supply both prescription and over-the-counter (OTC) medicines
- Community pharmacies are largely urban based
- **Licensed Chemical Shops** – Outlets authorized to supply OTC & other essential medicines for common diseases like malaria, coughs and colds etc
- The Licensed chemical shops are usually located in rural or peri-urban areas where pharmacy businesses may not be viable

Background to study

- ❑ With its strategic position in the health system medicine outlets & their practitioners (Particularly those in the retail sector) could play a valuable role to promote access to proven effective interventions for malaria control
- ❑ To achieve the above this, appropriate infrastructure that meets to acceptable standards for medicines management and supply are crucial
- ❑ The outlets must also be adequately resourced (human, commodities including medicines) and efficiently regulated for safe practices

Study Objectives



- To evaluate the medicine outlets of both the public and private sector facilities and assess
 - i) the available infrastructure and settings for pharmaceutical services
 - ii) The availability & supply of antimalarials in the outlets & how it conforms to national policy recommendations
 - iii) The human resource available in the outlets, their knowledge and practices for prevention, treatment and control of malaria

- **The overall goal was to assess how all the above conformed to the recommendations in the national policies, guidelines & strategies for malaria control**

& thus recommend how practices in the outlets could be improved to support the national programmes for the prevention, management and control of malaria

Materials & Methods

- ❑ Design :- Cross sectional study
- ❑ Settings :- 130 medicine outlets comprising 31 Hospitals/Clinics , 35 Community Pharmacies and 64 Licensed Chemical Shops
- ❑ The outlets were selected from two different geographic & socio-economically diverse regions in Ghana (The Ashanti & Northern regions)
- ❑ The study outlets were selected from both urban and rural settings in the study areas
- ❑ Selection of the outlets was informed by the number of the various types of outlets available in the study areas [Consent was sought from the administrators (hospitals/clinics), Owners/Superintendent Pharmacists of the retail medicine outlets before data collection proceeded]

Slide 12

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Different sampling techniques were used to select adequate number of outlets for the study.

In areas where the hospitals/clinics & pharmacies were few, all the eligible outlets that consented were recruited for the study.

In areas with high concentration of the different types of outlets, Random sampling procedures were used

In the rural settings, all the outlets on the main road leading to the hospitals/clinics were included in the study

HOD, 11/06/2011

Data Collection

- Data was obtained on the quality of the available infrastructure for medicines storage & supply as well as pharmaceutical services
- Others were: the available human resource & their academic/professional qualification
- The availability & supply of medicines for malaria therapy as well as the knowledge and practices of the staff in the outlets for the prevention & management of malaria
- Study indicators were based national standards for pharmaceutical practices & the national policy and intervention strategies for the prevention and control of malaria in Ghana

• Methodological approaches



- Combination of methods including inspection/observation of the outlets
- Review of facility records, and staff interviews were used for data collection
- Regarding the staff interviews, the most Snr staff in-charge of the outlet at the time of data collection was chosen

Results



Infrastructure

- **81% of the outlets (n=106) satisfied the standards criteria for acceptable or good infrastructure for pharmaceutical services**

Fig 1. A community pharmacy with good infrastructure, good stock of antimalarials & other commodities for malaria control services



Fig 2. A community pharmacy with acceptable infrastructure, good stock of antimalarials and qualified practitioners



Fig.3 A hospital pharmacy with acceptable infrastructure and adequate resources for malaria control services



Fig. 4 A retail medicine outlet with poor infrastructure



Availability & supply of medicines for malaria therapy



- Chloroquine, amodiaquine, S/P & artemisinin as non-combination drugs (i.e non-policy recommended) were highly available and often supplied for uncomplicated malaria therapy, particularly in the retail medicine outlets (Buabeng et al 2008)
- Less than 45% of all the outlets had ACTs in stock. (Availability was poorest in the LCS)
- Less than 10% of all the outlets strictly adhered to policy recommendations for the selection and supply of medicines for malaria therapy (Buabeng et al 2008).

Medicine outlets personnel & their knowledge and practices

- ❑ 55% of the personnel had no professional training as pharmaceutical service providers (Buabeng KO et al 2010).
- ❑ Majority (Over 80%), including both professionals and non professionals could recognise malaria illness and advice clients on behaviours and practices for malaria prevention.
- ❑ Very few (20%) and mainly professionals were adequately skilled to both recognise and manage malaria illness as recommended by the national treatment guidelines (Buabeng KO et al 2010)

Conclusion



- The infrastructure and settings for pharmaceutical services were satisfactory but could be further improved and utilized to facilitate access to appropriate tools and interventions for malaria control.
- Significant shortfalls were identified, regarding the availability and supply of effective medicines for malaria control.
- Majority of the staff assessed were inadequately skilled to appropriately manage malaria illnesses.

Recommendations and implications for Pharmaceutical Policy & malaria control practices



- Pragmatic education and regulatory interventions should be directed towards the medicine outlets and their practitioners to contribute efficiently towards malaria control in Ghana
- Part of the interventions should target knowledge improvement of practitioners on current initiatives, policies and strategies for malaria control in Ghana
- Another focus must be to strengthen the skills and practices for malaria case detection and therapeutic management, including appropriate referral of complicated cases

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