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Gonorrhoea antimicrobial stewardship in Tamale, Ghana

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### Background

Delayed or untreated Gonorrhoea has been described to occasioned several health sequelae that affects the quality of human lives. Resistance to extended spectrum cephalosporin has led to the fear of incurable Gonorrhoea. Widespread poor antimicrobial stewardship, especially in lower-income countries such as Ghana, can thwart the frantic global efforts to defeat N. gonorrhoea.

### Aim/Methods

To assess the Gonorrhoea antimicrobial stewardship in Tamale, Ghana. This study was conducted in Tamale involving 24 Drug-stores, six (6) Hospitals and 15 Pharmacies. A well-structured antimicrobial stewardship questionnaire was administered to Dispensing technicians (33), Medical Doctors (14), and Pharmacists (17). Twenty (20) salient questions were administered including reported incidence of sexually transmitted diseases (STDs), suspected Gonorrhoea incidence and its previous and current treatment regimens. Gonorrhoea treatment failures, self-medications and herbal treatments among others were elicited. Data was entered in excel and analyzed using descriptive statistics and presented in tables and charts.

### Results

The average incidence of suspected STDs reported per day was 2.11 (Drug-stores 3.61, Pharmacies 1.64 and Hospitals 1.08). Of this, the average suspected Gonorrhoea cases was 1.44 (Drug-stores 2.26, Pharmacies 1.13, and Hospitals 0.26), while Candidiasis was the second most suspected STD. Gonorrhoea treatment at Drug-stores were mostly via a varied combinations of Ciprofloxacin, Doxycycline, Cefixime, Fluconazole and Cefuroxime sometimes for up to 14 days. Additionally, drug-stores (54%) illegally administer Ceftriaxone (oral/IV/IM) as “start” followed by oral doses of other antimicrobials. Treatment failures leading to increased dosages or change in medications was found to be common while patients generally refuse testing. Pharmacies (81%) and Hospitals (95%) administer Ceftriaxone together with Azithromycin or Metronidazole. Gonorrhoea self-medication is widespread at both Drug-stores and Pharmacies while the use of Gonorrhoea local herbal treatment was described as low.

### Conclusions

Drug-stores are mostly patronised for Gonorrhoea treatment in Tamale, Ghana. Gonorrhoea is highly suspected in STDs incidences and concurrently treated with Candidiasis at Drug-stores and Pharmacies. Illicit administration of prescriptive drugs at Drug-stores threatens Gonorrhoea antimicrobial stewardship. Drug

maladministration due to sales-competition at Drug-stores, is a cradle for gonococcal and other diseases' antimicrobial resistance. This requires the immediate attention of the Ministry of Health, Ghana, to prevent a major catastrophe.