



Summary brief

October 2022

Four in ten patients are not prescribed antibiotics as recommended in standard treatment guidelines for uncomplicated urinary tract infection in a Ghanaian hospital¹

¹Reference: Owusu, H.; Thekkur, P.; Ashubwe-Jalemba, J.; Hedidor, G.K.; Corquaye, O.; Aggor, A.; Steele-Dadzie, A.; Ankrah, D. Compliance to Guidelines in Prescribing Empirical Antibiotics for Individuals with Uncomplicated Urinary Tract Infection in a Primary Health Facility of Ghana, 2019–2021. *Int. J. Environ. Res. Public Health* **2022**, *19*, 12413. <https://doi.org/10.3390/ijerph191912413>

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Key Messages

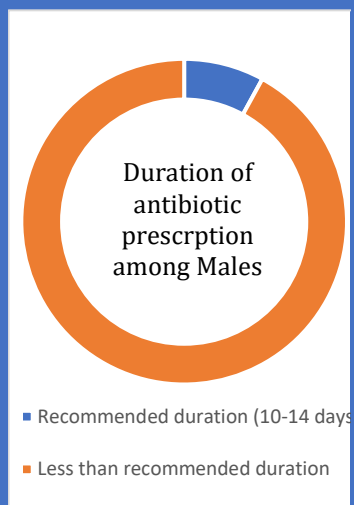
- More than three-fourths of patients with uncomplicated urinary tract infection (UTI) were initiated on antibiotics without drug susceptibility testing (empirical) at the Korle Bu Polyclinic
- Of those prescribed empirical antibiotics, only six in ten patients received the antibiotic in the dose, frequency and duration as recommended in the standard treatment guidelines (STG) of Ghana.
- Men were five times more likely **not** to be prescribed as per STG compared to females as they were prescribed antibiotics for less than the recommended duration of 10-14 days.
- Management of the Korle Bu teaching hospital should consider setting-up a feedback-audit system to ensure adherence to STG
- As global evidence shows that there is no additional advantage of prescribing empirical antibiotics for longer duration in male patients with uncomplicated UTI, the Ministry of Health should consider revising the STG as per local evidence

What is the problem and why is it important?

- The inappropriate use of antibiotics is a global public health threat since it results in the spread of antimicrobial resistance (AMR).
- Uncomplicated UTI is one of the major causes of outpatient visits in Ghana and accounts for the majority of antibiotics prescribed in primary care facilities.
- Antibiotics are prescribed empirically to patients with uncomplicated UTI as drug susceptibility tests remain unavailable
- Irrational prescription of empirical antibiotics can contribute to AMR among UTI pathogens.
- In Ghana, STG is available for management of uncomplicated UTI, but little information is available on the compliance to guidelines
- As such this study is an assessment of compliance to STG in a primary care facility.

Uncomplicated UTI occurs in patients who have a normal, unobstructed genitourinary tract, **no history of recent instrumentation, with symptoms confined to the lower urinary tract.**

Men were five times more likely to be prescribed an antibiotic not in line with STG as compared to women



How did we measure it?

- All patients treated for uncomplicated UTI at Korle Bu Polyclinic from October 2019 to October 2021 were included
- Prescription details of the included patients were extracted from the electronic medical records (EMR).
- We developed a computer programme to check whether empirical antibiotic prescriptions adhered to Ghana's STG:
 - Ciprofloxacin of 500mg every 12 hours for seven days in females and 10-14 days in males or
 - Cefuroxime 250-500 mg every 12 hours for 5-7 days in females and 10-14 days in males.
- The proportions of patients prescribed the right empirical antibiotic in the dose, frequency and duration in line with STG were calculated.
- We also analysed differences in the results obtained across patient and prescriber characteristics.

What did we find?

- 83% of all patients with uncomplicated UTI were prescribed an empirical antibiotic.
- Only 60% were prescribed antibiotics in the dose, frequency and duration as recommended in the STG.
- Men were five times more likely to be prescribed an antibiotic not in line with STG as compared to women
- In 92% of men the antibiotics were prescribed for a lesser duration compared to the recommended duration of 10-14 days.
- In 9% of the patients an additional single dose of an injectable antibiotic contrary to the STG recommendation was prescribed.

Implications

- As about four out of ten patients were prescribed antibiotics not in line with STG, we conclude that compliance to STG was low.
- To improve compliance to STG, the hospital management of Korle Bu Polyclinic can take the actions outlined below:
 - Instituting an audit feedback system by leveraging on EMR
 - Promoting similar efforts to assess compliance to STG for other diseases.
 - Setting up an anti-microbial stewardship (AMS) team to assess and act on irrational antibiotic use in the facility.
- As evidence shows that there is no additional advantage of prescribing empirical antibiotics for a longer duration in men, the Ministry of Health should consider revising the STG for the management of uncomplicated UTI.

