

Presentation Type:

Poster Presentation

Road to Increasing AMR: A Study on Antibiotics Prescribing Pattern

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Background: Infectious diseases and the rapid emergence of multidrug-resistant pathogens continue to pose a threat to global health. The development of antimicrobial-resistant organisms is an alarming issue caused by inappropriate use of antibiotic agents. It is estimated that death from antimicrobial resistant pathogens could increase >10-fold to ~10 million deaths annually by 2050 if action is not taken. "It is essential to have reliable data on how medicines are used in order to identify areas to develop targeted interventions" (WHO 2011). Investigating antimicrobial use in hospitals is the first step in evaluating the underlying causes of

AMR. In Sierra Leone, no other study related to antibiotic prescribing patterns in hospital setting has been undertaken. **Objective:** To investigate antibiotic prescription patterns using the WHO hospital antimicrobial use indicator tool at the Kingharman Hospital for 1 month. **Methods:** Data were collected from patient charts for 1 month, January 1–31, 2019. A data extraction tool was used to capture information on patient demographics, diagnosis, and antibiotics prescription details regarding dosage, duration, and frequency of administration. The tool adopted 6 selected indicators from the WHO antimicrobial use manual to measure the extent of antibiotic use in hospital and performance among prescribers. **Results:** Of the 189 charts reviewed, 175 included antibiotic prescriptions. The percentage of prescriptions involving antibiotics was 92.5%. The average number of drugs prescribed was 2, with an average duration of 5.2 days. Moreover, 50.5% of antibiotics prescribed were generic, and 96.6% were from the Ministry of Health and Sanitation Essential Medicine List (EML). The most commonly used antibiotics were ciprofloxacin (38.8%), followed

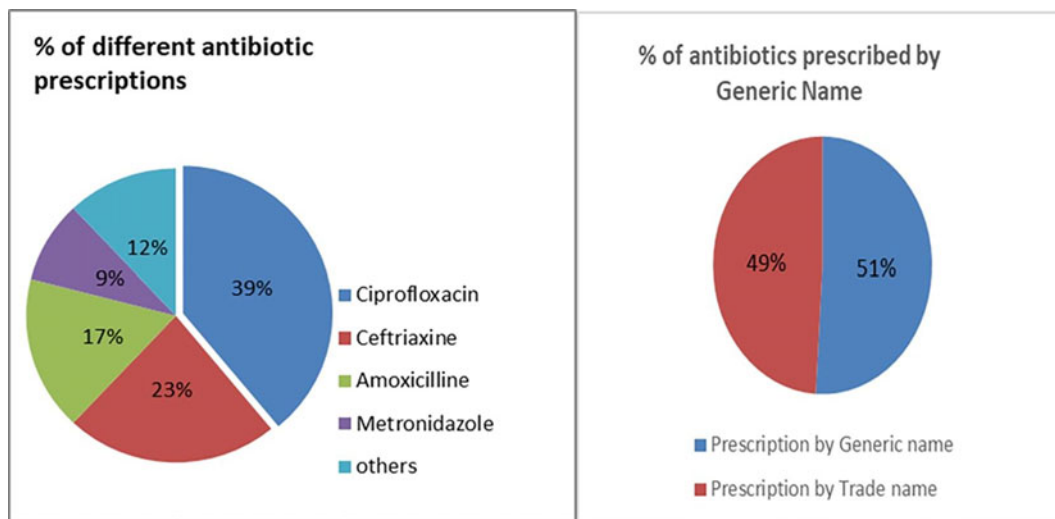


Fig. 1.

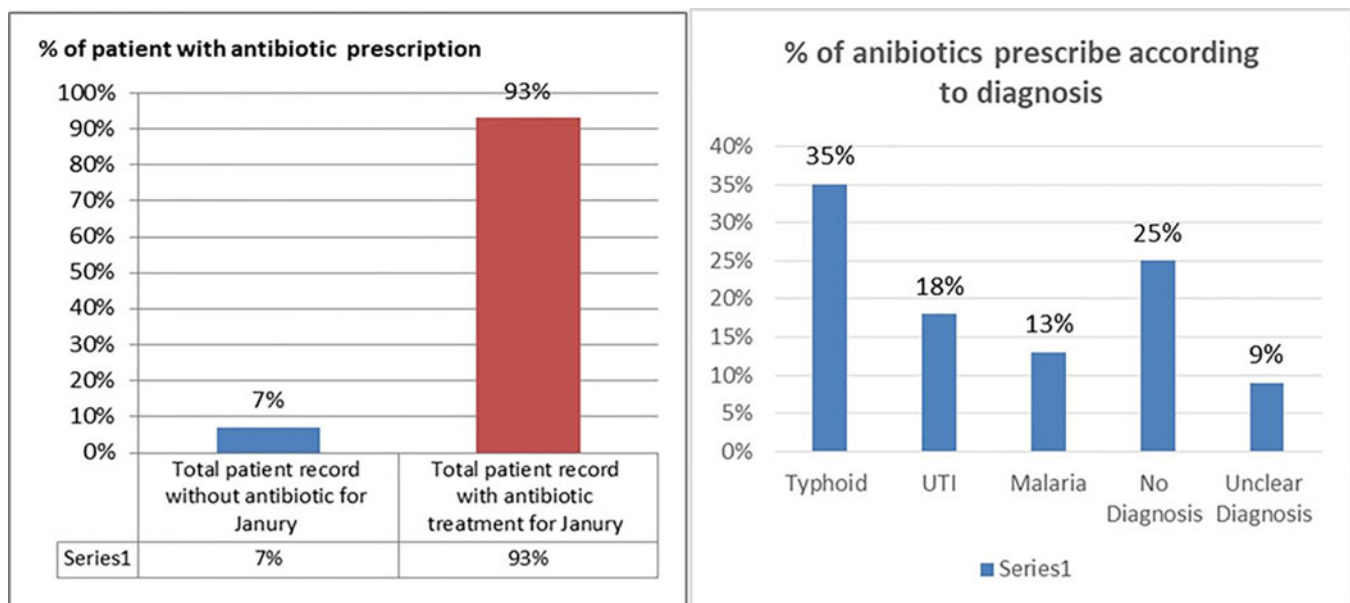


Fig. 2

by ceftriaxone (23.0%), amoxicillin (16.8%), metronidazole (8.5%), and others (12.7%). Typhoid accounted for 34.8% of broad-spectrum antibiotics, UTI accounted for 17.7%, malaria accounted for 12.5%, 25.5% were unspecified, and 9.5% were for unclear diagnoses. Typically, combinations of fluoroquinolones and cephalosporins were used to treat typhoid and UTIs. **Conclusions:** This cross-sectional study represents a broad picture of antibiotic prescribing patterns at the King Harman Hospital. There was no strict adherence to the WHO recommended prescribing guidelines. These findings also indicate the degree of irrational and inappropriate prescribing of broad-spectrum antibiotics. This study highlights the need for a comprehensive assessment of antimicrobial use to gain a better understanding of national antibiotic use and to guide interventions to reducing AMR.

Funding: None

Disclosures: None

If I am discussing specific healthcare products or services, I will use generic names to extent possible. If I need to use trade names, I will use trade names from several companies when available, and not just trade names from any single company.

Disagree

Christiana Kallon

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Poster Presentation

Staphylococcal Decolonization to Prevent Surgical Site Infection: Is There a Role in colorectal surgery?

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Background: Colorectal surgery is associated with a high risk of surgical site infections (SSIs), with an incidence ranging from 16.9% to 20%, and SSIs are associated with significant morbidity and mortality, prolonged length of hospitalization, and increased health care costs. Staphylococcal decolonization is an attempt to alter the microbiome to prevent staphylococcal and other skin flora from accessing the surgical site, and This practice effectively reduces SSIs in orthopedic, neurologic, and cardiac surgeries. A staphylococcal decolonization protocol was enacted in colorectal surgeries at our institution beginning in October 2016. We compared patient outcomes between patients who did and did not undergo preoperative staphylococcal decolonization. **Methods:** All patients undergoing nonemergent NHSN-defined colorectal procedures from July 2015 until June 2019 at a tertiary-care medical center were included in this retrospective study. Staphylococcal decolonization was performed using chlorhexidine 2% body wash solution, mupirocin nasal ointment, and chlorhexidine 0.12% oral rinse all twice daily for 5 days prior to surgery. All SSIs were defined by NSHN criteria. The primary outcome was SSI, and secondary outcomes were superficial wound infection (SIP) and organ-space infection (IAB). Predictive variables included decolonization status (yes or no), age, gender, body mass index, procedure duration, American Society of Anesthesiologists (ASA) score, diabetes, smoking, and surgical oncology service. Surgical antimicrobial

prophylaxis with cefazolin and metronidazole OR cefoxitin, and chlorhexidine skin preparation were standard throughout the study period. Univariate analysis was performed using a χ^2 or *t* test. Multivariable logistic regression was performed to control for all clinically important variables above. All statistical analyses were done using SAS version 9.4 software (Cary, NC). **Results:** In total, 1,139 patients underwent nonemergent colorectal surgery from July 2015 to June 2019. There were 74 SSIs: 42 IABs and 32 SIPs. Decolonization was performed in 332 of 1,139 cases (29%). There was no difference in overall SSIs between those decolonized and not decolonized ($P = .50$). However, SIPs were reduced in the group receiving decolonization: 1.2% (4 of 332) versus 3.5% (28 of 807) ($P = .04$). When controlling for known SSI risk factors, those not receiving decolonization remained at increased risk of SIPs (OR, 3.79; 95% CI, 1.14–12.61; $P = .03$). **Conclusions:** Staphylococcal decolonization may prevent a subset of SSIs in patients undergoing colorectal surgery.

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Status of Infection Prevention and Control in Selected Hospitals in Sierra Leone

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Background: Improved infection prevention and control (IPC) reduces healthcare-associated infections (HAIs). Following the Ebola virus disease (EVD) outbreak in West Africa (2014–2016), Sierra Leone made substantial investments in strengthening IPC in health facilities. The WHO identified 8 core components of IPC and developed an accompanying assessment framework (IPCAF) to monitor IPC capacity and progress. The IPCAF reflects the 8 WHO core components of IPC. The core component constitute a consistent universal outline that supports guidance to healthcare decision makers and service providers at national and international levels. We conducted an in-depth assessment of IPC practices in Sierra Leone using the IPCAF tool. **Methods:** This assessment was conducted in July 2019 over a 2-week period. Data were collected through interview with IPC focal persons as well as observations and corroboration of document and immediate feedback on findings given to facilities through brief exit meetings. All areas of the facility were assessed (ie, all wards, operation theatres, laboratories maternity units, sterile service departments, waste management units, etc). The main objective was to identify the gaps and challenges faced by health facilities. Each component was scored based on the responses and observations, with the scores ranging from zero to 100 and the maximum score was 800. The IPCAF allocated hospitals to 4 different “IPC levels”: inadequate, basic, intermediate, and advanced. **Results:** Moreover, 13 hospitals were assessed, including 12 primary level hospitals and 1 secondary level hospital. The median score was 367. 5 (IQR, 110), which corresponds to a basic level of IPC. Primary-level hospitals scored higher (median, 373; IQR, 112.5) compared to secondary-level hospitals (median, 280; IQR, 0). The lowest score was in healthcare-associated infection surveillance (median, 0; IQR, 5), and the highest score was in the built environment, availability of materials, and equipment to support IPC (median, 62.5; IQR, 22.5). **Conclusions:** The assessment provides a baseline of the status of IPC in Sierra Leone