

Title: Web-based point prevalence survey of antimicrobial use and quality indicators at Raleigh Fitkin Memorial Hospital in Eswatini and the implications

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Background: Eswatini is located in Sub-Saharan Africa. There is limited knowledge regarding antimicrobial utilisation among public hospitals across Africa, which is a challenge with rising antimicrobial resistance rates. **Objective:** To undertake a point prevalence survey (PPS) at Raleigh Fitkin Memorial (RFM) Hospital, the leading regional hospital in Eswatini with the findings driving future programmes. **Method:** PPS was undertaken at RFM using the Knack web-based application (App) to speed-up data collection, with antimicrobials categorised according to the World Health Organization Access, Watch, and Reserve classification. Each ward was surveyed in one day using patient files. **Results:** Overall, 68 patient files in 12 wards were surveyed; 88.2% (60/68) received at least one antimicrobial. Prescribed antimicrobials were mainly from the Access group (69.9%), none from the Reserve group. Amoxicillin (24.5%) and ceftriaxone IV (21.6%) were the most prescribed antibiotics. Of concern was that antibiotics were prescribed empirically for all patients (100%) with most administered IV (88.3%; 91/103). In addition, there was no documented switch or stop dates for administered antibiotics or any patient culture or drug sensitivity results recorded. Alongside this, extended courses of antimicrobials were typically administered as part of prophylaxis for surgical patients (80%; 12/15) despite concerns. **Conclusion:** There were considerable concerns with current antimicrobial use. Identified targets included reducing extended administration for surgical prophylaxis, encouraging earlier switching to oral antimicrobials and undertaking sensitivity testing. In addition, routinely documenting stop dates. The App appreciably reduced data collection times and analysis, and could potentially be used in other low- and middle-income countries.

Key words: Antimicrobial utilisation, Antimicrobial resistance, Point Prevalence Survey, Eswatini; web-based mobile App

Conflict of Interest Statement and funding

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