

Availability and use of therapeutic interchange policies in managing antimicrobial shortages among South African public sector hospitals; findings and implications

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Background: Therapeutic interchange policies in hospitals are useful in dealing with antimicrobial shortages and minimising resistance rates. However, the extent of antimicrobial shortages and availability of therapeutic interchange policies is unknown among public sector hospitals in South Africa, which is a concern. This study aimed to ascertain the extent of antimicrobial shortages among public sector hospitals, the presence of current therapeutic interchange policies and the role of pharmacists in the process to guide future practice.

Methods: A quantitative and descriptive study was conducted with a target population of 403 public sector hospitals. Data were collected from hospital pharmacists using an electronic questionnaire administered via SurveyMonkey™. The main outcome measure was the prevalence of public sector hospitals with antimicrobial shortages over the past six months and the prevalence of hospitals with therapeutic interchange policies.

Results: The response rate was 33.5%. Most (83.3%) hospitals had experienced shortages in the previous six months. Antimicrobials commonly reported as out of stock included cloxacillin (54.3%), benzathine benzylpenicillin (54.2%), erythromycin (39.6%) and ceftriaxone (38.0%). Reasons for shortages included pharmaceutical companies with supply constraints (85.3%) and an inefficient supply system. Only 42.4% had therapeutic interchange policies, and 88.9% contacted the prescriber when there was a need for substitution.

Conclusions: Antimicrobial shortages are prevalent in South African public sector hospitals with penicillins and cephalosporins being the most affected. Therapeutic interchange policies are not available at most hospitals. Effective strategies are required to improve communication between pharmacists and prescribers to ensure safe, appropriate and therapeutically equivalent alternatives are available.