



Baseline Antimicrobial Use Point Prevalence Survey at Goroka Provincial Hospital in Papua New Guinea: Findings and Implications

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Abstract text

Background: Inappropriate antimicrobial prescribing can potentially lead to the spread of antimicrobial resistance, numerous adverse effects, and increased healthcare costs. We conducted a baseline antimicrobial use point prevalence survey (AMU PPS) in Goroka Provincial Hospital (GPH) to estimate the prevalence of antimicrobial use and assess antimicrobial prescribing practices.

Methods: A cross sectional PPS was conducted across all inpatient wards in GPH. Patient data on antimicrobial use was extracted from medical records using the AMU PPS tool adapted from the Hospital National Antimicrobial Prescribing Survey (NAPS). NAPS database was used for data entry and validation. All statistical analyses were performed by using SPSS Version 26.

Results: Among the patients surveyed, 126 out of 220 (57.3%) were prescribed antimicrobials. There was a total of 233 antimicrobial prescriptions among which 45.9% (n=107) were compliant with the treatment guidelines, 11.6% (n=27) did not comply, 0.9% (n=2) were for directed therapy, and 41.6% (n=98) were not assessable. Compliance with the treatment guidelines was significantly associated with the indication for antimicrobial use (<0.05). 63.9% (n=149) of indications were documented while only 7.3% (n=17) had review or stop date documented. The documentation of indications significantly varied with age (<0.05). The percentage of surgical prophylaxis given for greater than 24 hours was 62.5% (n=10 out of 16). Overall, 57.1% (n=133) of the prescriptions were deemed to be appropriate, 28.8% (n=67) inappropriate, and 14.2% (n=33) not assessable. Gender was significantly associated with indication for the antimicrobial use (<0.05).

Discussion: Performing an AMU PPS can provide valuable insight into antimicrobial prescribing practices in the hospital, revealing specific areas to direct antimicrobial stewardship (AMS) efforts. GPH identified the priority areas to be addressed including the availability of treatment guidelines, microbiology laboratory utilization, documentation of indication and review or stop date, surgical antibiotic surgical prophylaxis.