

## **Knowledge, Attitudes and Self-reported Practices on Antibiotic Administration Among Nursing Staff Working in Surgical Wards at National Hospital Kandy**

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Nurses play a crucial role in antibiotic administration. Inadequate knowledge, and improper adherence to administration protocols can lead to adverse events to patients and also contribute to antimicrobial resistance (AMR). This study aimed to assess the knowledge, attitudes and self-reported practices on antibiotic administration to include antibiotic stewardship (AMS) and to describe their associated factors among nurses working at surgical units of National Hospital, Kandy. This descriptive cross-sectional study was conducted among 130 nurses working in the surgical units of the National Hospital, Kandy, recruited through convenience sampling. A validated, pre-tested self-administered questionnaire was used to get data on knowledge, attitudes, and self-reported practices regarding antibiotic administration to include AMS. Percentages were calculated for demographic variables and individual responses. Scores for knowledge, attitudes, and practices were calculated and categorized using Bloom's cut-off points: poor (<60%), moderate (60–80%), and good (>80%). Associations between scores and demographic variables were assessed using Chi-square, Fisher's Exact, Mann-Whitney U, and Kruskal-Wallis tests. Among the 130 nurses, 80.8% were female, 53.8% were aged 30–40 years, and 55.4% held diplomas. Nearly half (47.7%) had <5 years of experience. The mean knowledge score was 23.88/34 (SD 3.82), with 64.6% having moderate and 18.5% poor knowledge. Of all 16.9% believed antibiotics treat viral infections, and 32.3% did not recognize nausea/vomiting as signs of anaphylaxis. Only 60.8% reported awareness of AMS as a concept. The mean attitude score was 36.25/45 (SD 3.87), with 53.1% having moderate attitudes. While 96.2% claimed to recognize indications for antibiotics, only 36.2% were likely to report prolonged antibiotic use in chronic wounds to a physician. The mean practice score was 50.71/60 (SD 5.42), with 71.5% demonstrating good practices; 61.5% correctly calculated IV drop rates and 60.0% checked cannula patency. Higher education was significantly associated with better knowledge ( $p = 0.003$ ), but attitudes and practices were not significantly associated with demographic variables. The study identified gaps in knowledge, AMS awareness and practices relating to antibiotic administration. Targeted education and training are needed to enhance their knowledge and improve practices, ensuring patient safety and helping combat antimicrobial resistance.

**Keywords:** Antimicrobial stewardship, nursing education, antibiotic resistance, surgical wards