

# Antimicrobials, Multiple Drug Resistance & Antibiotics Resistance

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## Impact of vancomycin monitoring on patient safety outcome

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**Introduction:** Vancomycin levels in the blood should be kept within a specific range to give the optimal antimicrobial killing and avoid resistance and toxicities. We aimed to evaluate the safety of vancomycin monitoring.

**Methods:** This is a retrospective cohort study conducted at a single tertiary Prince Sultan Medical Military City, Riyadh, Saudi Arabia. The patients included were adults that were treated with vancomycin intravenously for more than 24 hours for suspected or proven infections. The primary outcome was the development of nephrotoxicity. Secondary outcomes included appropriate vancomycin initial dosing, sampling time, interpretation of vancomycin levels, and the development of other adverse reactions.

**Results:** A total of 100 patients were enrolled in the study. Nephrotoxicity was identified to be about 3.8% (n=2). There was significant difference in the appropriateness of vancomycin initial dosing, sampling time, interpretation of vancomycin level, and other adverse reactions ( $P<0.001$ ).

**Conclusion:** Appropriate vancomycin initial dosing, sampling time, and interpretation of vancomycin levels are crucial aspects of vancomycin dosing and monitoring.

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