

Accuracy of Vancomycin Prescribing in an Irish Teaching Hospital

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Background

- Initial vancomycin dosing is based on weight and renal function.
- Subsequent dosing should be guided by therapeutic drug monitoring (TDM).
- Online calculator and detailed prescribing guidelines are available in our hospital.
- Correct dosing is important to both ensure adequate treatment of infection and prevent toxicity.

Methods

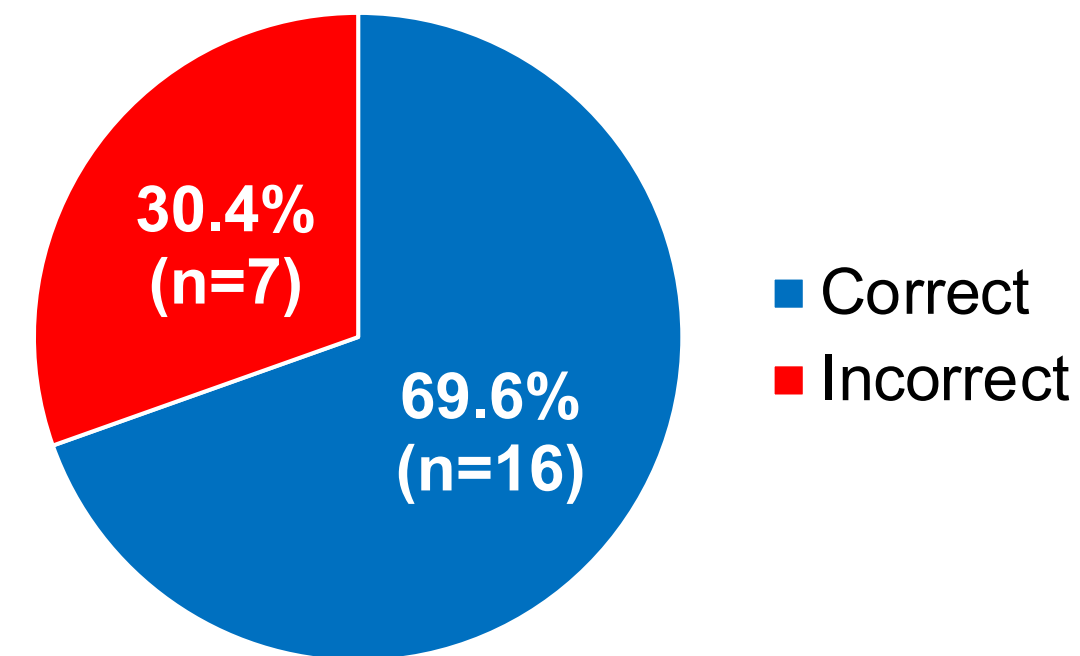
- Retrospective analysis of drug charts and medical notes of patients prescribed intravenous vancomycin between 01/09/2021 – 31/10/2021.
- Compliance with local vancomycin prescribing guidelines assessed.
- Exclusions: patients in the ICU and dialysis-dependent patients.

Results

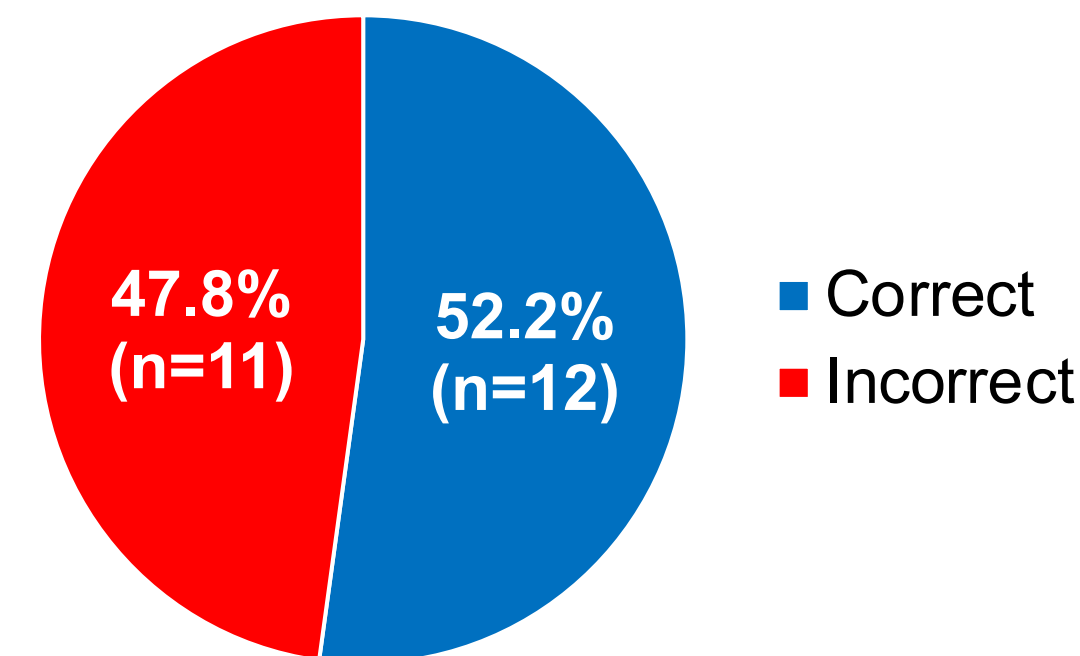
- 26 patient charts were assessed.
- Vancomycin was prescribed empirically for 76.9% (n=18).
- Indication was either in line with local guidelines or direct microbiology advice for 76.9% (n=20).
- Dose calculation via online calculator was possible for 88.5% (n=23). Of these, loading doses were correct for 69.6% (n=16) and initial maintenance doses were correct for 52.2% (n=12).
- Calculator unsuitable for 3 patients at extremes of weight.
- Duration of therapy required TDM in 22 patients. Of these, 72.7% (n=16) were taken at the correct time.
- In the 10 cases where a dose change was indicated, this was made correctly for 80% (n=8).

Results

Loading Doses



Initial Maintenance Doses



Discussion

- Indication for vancomycin was mostly in line with either local guidelines or direct microbiology advice.
- Despite availability of an online vancomycin prescribing calculator, vancomycin is frequently prescribed at incorrect doses, suggesting calculator is not used.
- Compliance with vancomycin calculator use could be improved by making it accessible on mobile devices.

References

- McGillicuddy J. Adult Medicines Guide, Tallaght University Hospital. Jan 2020



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