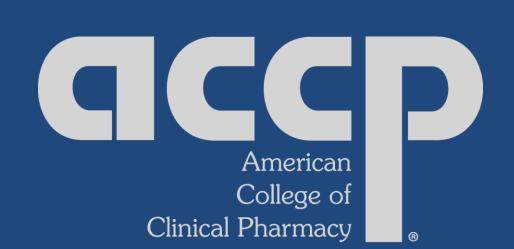


Incorporation of a vancomycin nomogram into a standard vancomycin dosing protocol at a community hospital:

effect on vancomycin utilization and safety



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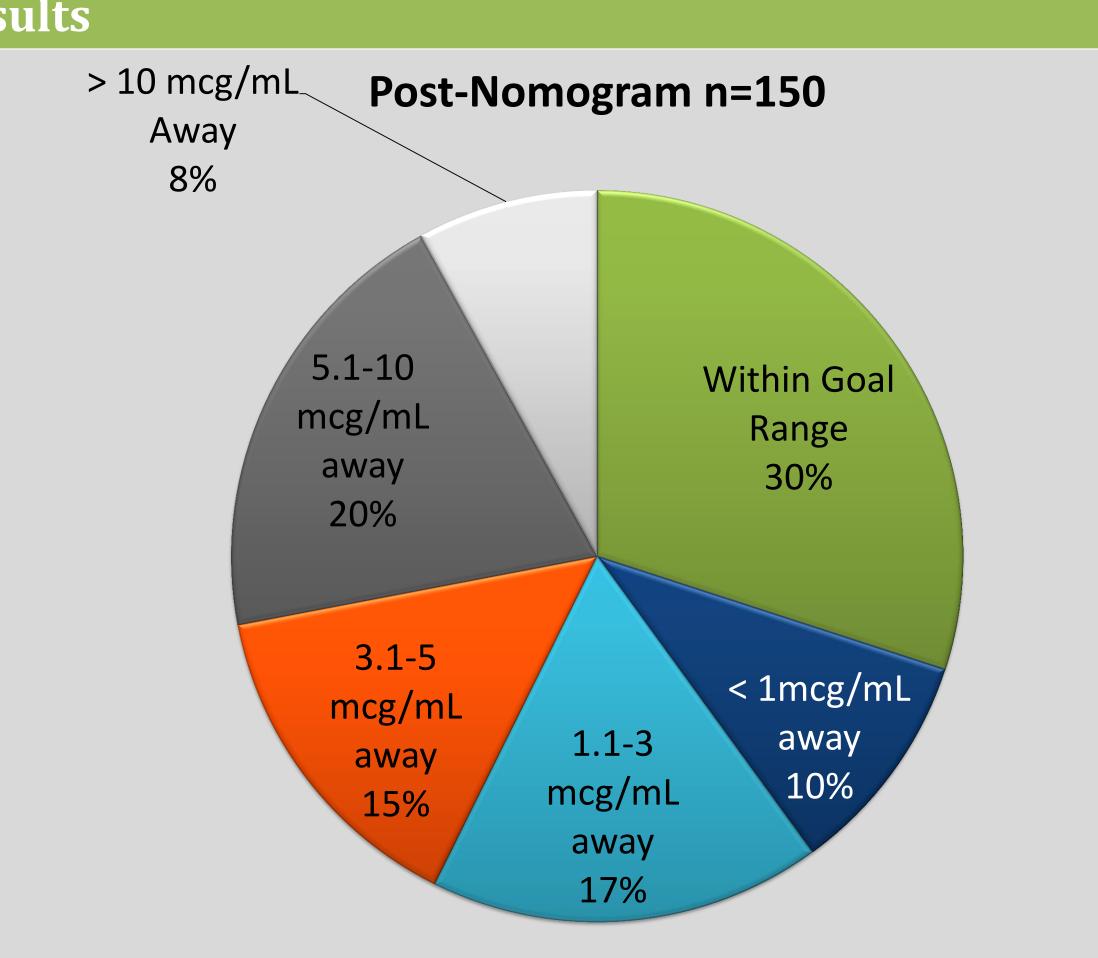
Background

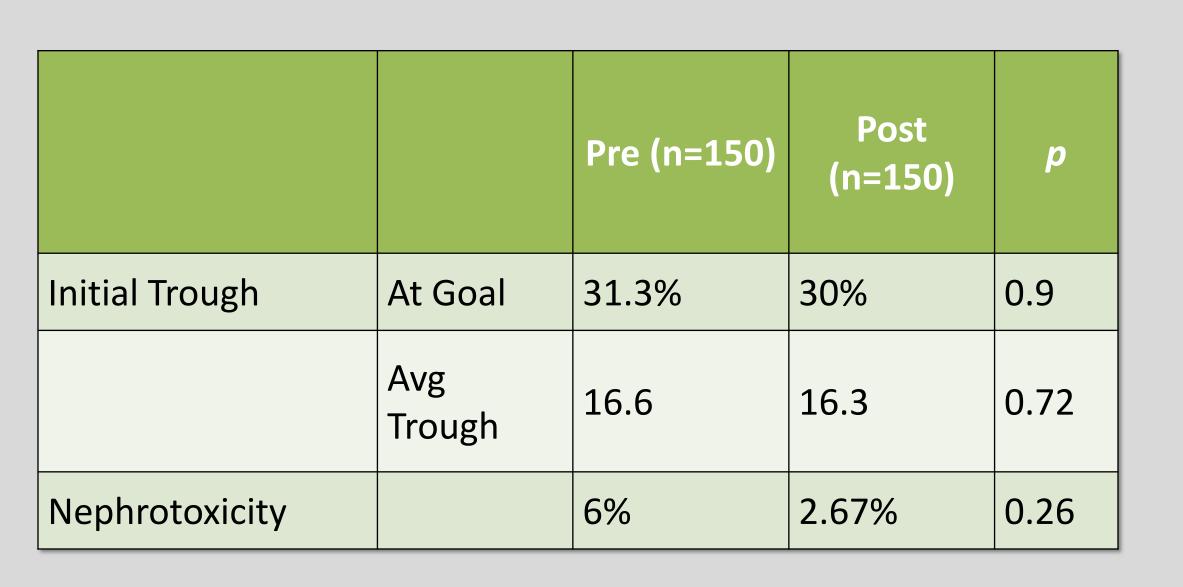
- Pharmacists are consulted to dose > 90% of vancomycin at our institution
- Our current practice requires pharmacists to select initial vancomycin doses using population-based pharmacokinetic equations
- Using these equations and completing the required documentation can be a time-consuming and laborious task
- Increasing demands on time led to a review of opportunities to make dosing and documentation more efficient
- The use of dosing nomograms for initial dosing of vancomycin has been shown to maintain efficacy and safety while decreasing pharmacist time spent
- We are adapting a validated vancomycin dosing nomogram to match our current vancomycin dosing practices, and incorporating it into our pharmacokinetic dosing protocol

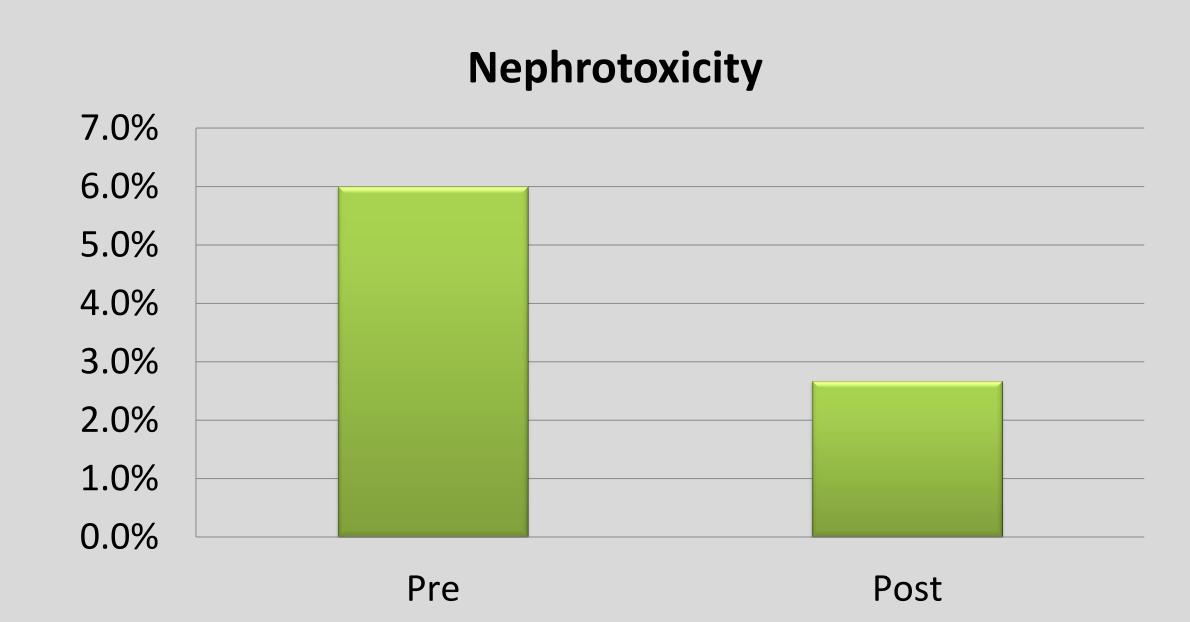
Purpose and Objectives

- Incorporation of a vancomycin dosing nomogram into the pharmacokinetic dosing protocol at our institution will result in comparable rates of initial vancomycin goal trough achievement and nephrotoxicity.
- Primary Objective
 - Evaluation of goal trough achievement rates
- Secondary Objective
 - Evaluation of nephrotoxicity rates

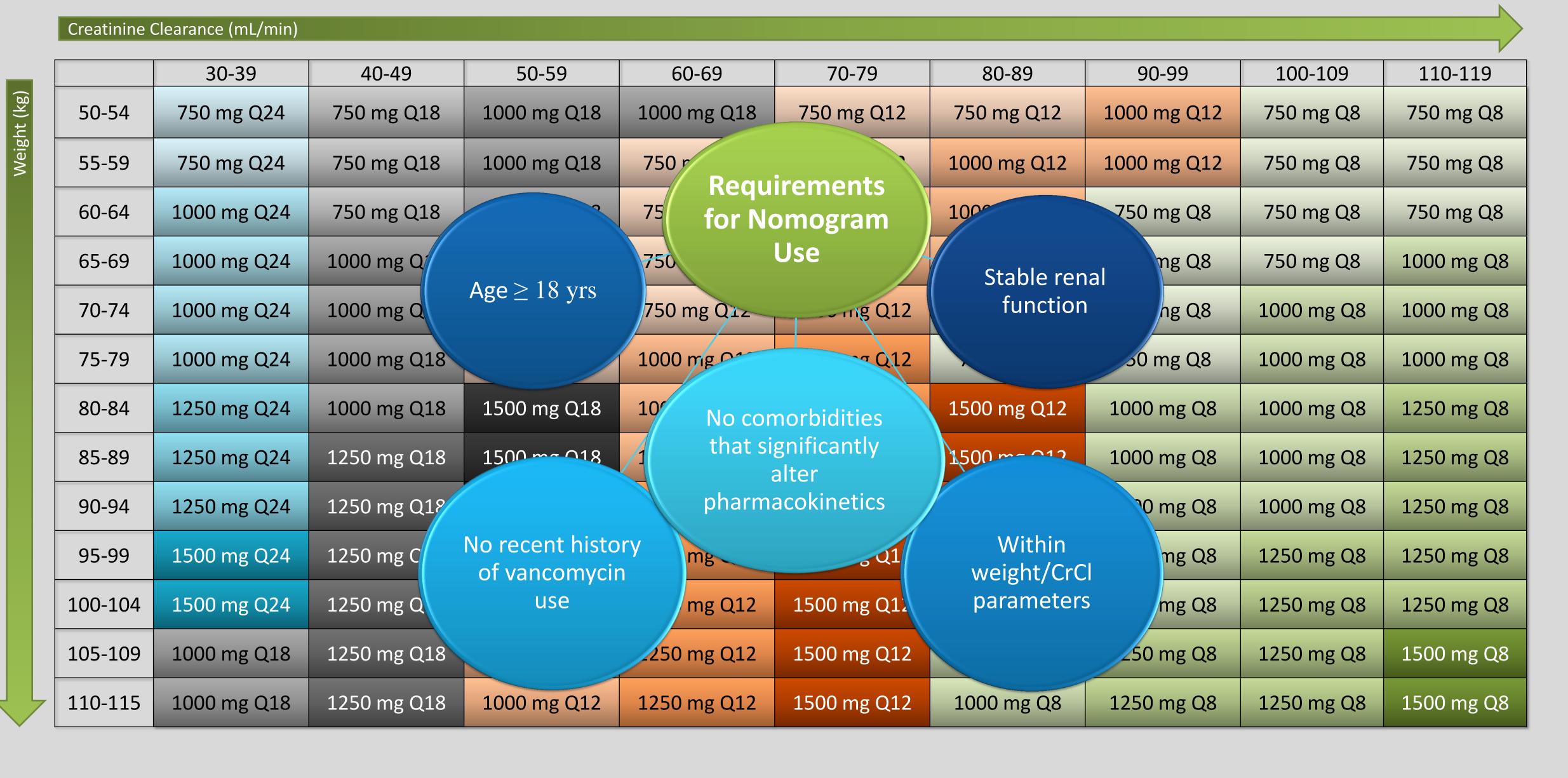
Results Pre-Nomogram n=150 mcg/mL Away 5.1-10 mcg/mL Within Goal away Range 15% away < 1mcg/mL 1.1-3 away mcg/mL away

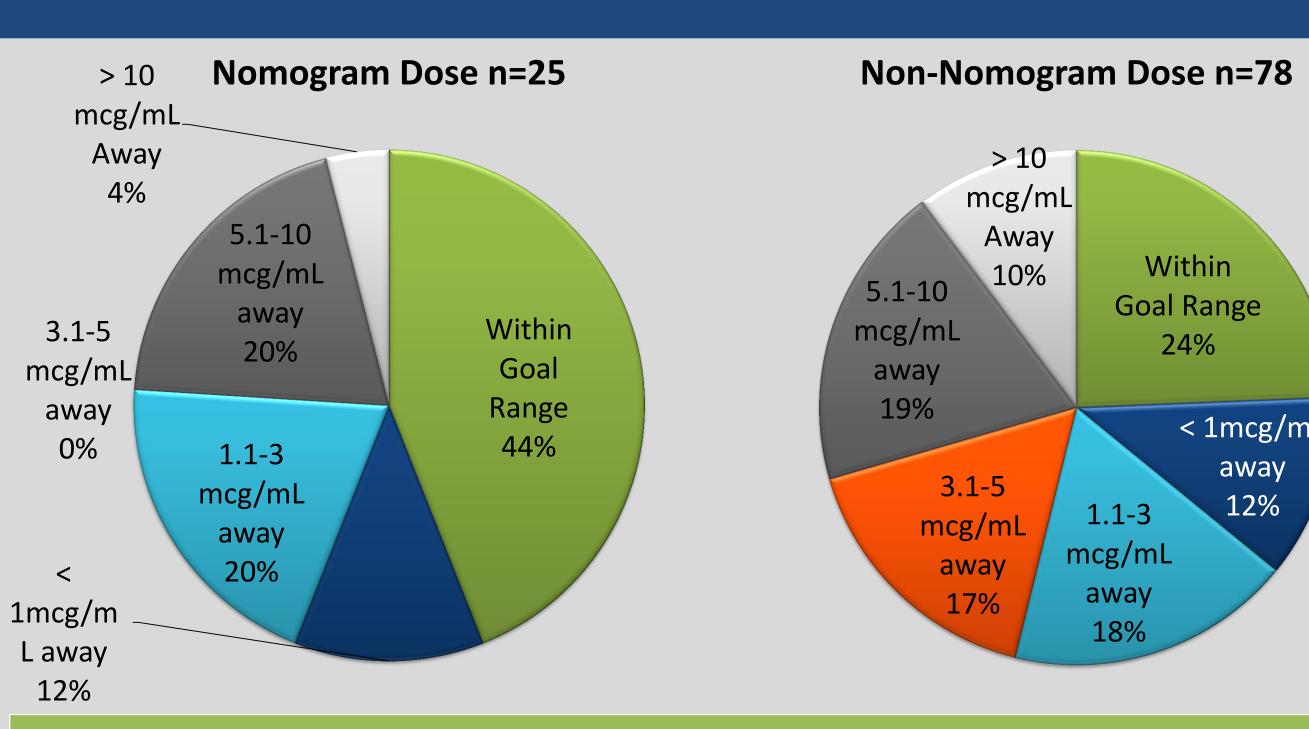






Methods Randomized Pre-Exclusions Nomogram N=231 Cystic Fibrosis Baseline CrCl < 30</p> mL/min Evaluated Excluded Inclusion Nomogran N=228 Age ≥ 18 years old Receive vancomycin Excluded at CoxHealth N=150 N=78 ≥ 1 vancomycin trough level drawn and reported Qualified for Failed to Qualify Nomogram 📗 Other Dose





Discussion

We saw no significant change in our rates of vancomycin goal trough achievement rates or nephrotoxicity after implementation of a dosing nomogram into our protocol. However, we had very limited utilization of the nomogram, even in patients who qualified. A subgroup analysis suggests that the nomogram was equally effective in attaining vancomycin goal troughs, with no difference in nephrotoxicity. Future studies should focus on directly evaluating the nomogram compared to non-nomogram dosing.

With the limited evidence supporting intensive monitoring and adjustment of vancomycin dosing regimens to attain narrow serum levels, utilization of a dosing nomogram for qualifying patients is a safe and effective alternative to more intensive monitoring.

Conclusion

- Implementation of vancomycin dosing nomogram for empiric dosing did not adversely affect goal trough achievement rates or nephrotoxicity
- Limited by the small number of nomogram-dosed patients

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