



A novel multidisciplinary approach to vancomycin trough monitoring involving automatic generation of trough orders, pharmacist validation of trough orders, and inclusion of trough orders in the nursing medication administration record was successful in significantly improving timing of vancomycin trough levels” Peyko and Friedman-Jakubovics (2018).

Abstract:

Purpose: A novel approach to vancomycin level monitoring is described.

Methods: Vancomycin trough orders were added to the medication ordering system of a large teaching hospital and were generated when vancomycin was ordered. Pharmacists adjusted the order time so that the level was drawn appropriately. After pharmacist validation, the trough order appeared within the nursing medication list, and nurses were required to document when the level was drawn. Outcomes were evaluated before (retrospective group) and after (prospective group) implementation of this initiative.

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Results: Among all patients for whom a vancomycin level was drawn, 24.0% of patients in the retrospective group had their first vancomycin level drawn within 2 hours of true trough, compared with 87.2% of patients in the prospective group ( $p < 0.0001$ ). Among all patients receiving vancomycin, significantly more patients in the prospective group had a level drawn within 2 hours of the true trough compared with the retrospective group (71.9% versus 20.6%,  $p < 0.0001$ ). Further, significantly more patients in the prospective group had a vancomycin level ordered compared with the retrospective group (100.0% versus 90.8%,  $p < 0.0001$ ). The mean  $\pm$  S.D. time from true trough that vancomycin levels were drawn was much longer in the retrospective group ( $184.9 \pm 84.8$  minutes versus  $58.3 \pm 60.7$  minutes in the prospective group,  $p < 0.0001$ ).

Conclusion: A novel multidisciplinary approach to vancomycin trough monitoring involving automatic generation of trough orders, pharmacist validation of trough orders, and inclusion of trough orders in the nursing medication administration record was successful in significantly improving timing of vancomycin trough levels.

#### Reference:

Peyko, V. and Friedman-Jakubovics, M. (2018) Novel approach to vancomycin level monitoring: Impact of a multidisciplinary monitoring system on timing of vancomycin levels. *American Journal of Health-System Pharmacy*. 75(3), p.121-126.

DOI: <https://doi.org/10.2146/ajhp160760>

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