

University of Maryland Baltimore Graduate School

Announcement of Doctoral Dissertation Defense*

Candidate: **Danielle Lavallee**

Date, Time, and Place: **November 2, 2007 at 1:30pm, Saratoga Building 12th Floor, Room 229**

Dissertation Title: **Assessing the Impact of Incorporating Patient Knowledge and Beliefs into Anticoagulation Therapy Management Services**

Dissertation Abstract**:

Background: Warfarin is indicated for reducing the risk of thrombotic and embolic complications. To achieve optimal therapeutic outcomes and minimize bleed risks associated with warfarin, patients should be maintained within their goal International Normalized Ratio (INR) range. Patient knowledge, health beliefs, literacy and numeracy skills have been demonstrated to affect the quality of INR control. No formal assessment of these parameters currently occurs in anticoagulation management.

Objective: To determine if patients' health knowledge, health beliefs, and health literacy and numeracy of warfarin therapy, when integrated into pharmacists' clinical information, impacts patient INR control and anticoagulation knowledge.

Methods: A single-blinded randomized controlled study was conducted to test the hypothesis that including information on patient's health literacy, numeracy, and anticoagulation knowledge and beliefs improves patient INR control. Patients were recruited from anticoagulation management services at the University of Maryland Medical Center and the Baltimore VA Medical Center. Enrolled patients completed a series of questionnaires assessing individual anticoagulation knowledge and beliefs, literacy and numeracy skills. Only patients in the intervention arm had the information incorporated into the clinical chart used by the pharmacist to manage warfarin therapy.

Results: A total of 160 patients consented and were randomized into the study, representing a 69.2% enrollment rate. Variation in INR readings did not improve as a result of the inclusion of patient information sheets in the charts of the intervention group as compared to patients receiving standard of care (difference = 0.037; $p=0.58$). Patient knowledge of anticoagulation therapy significantly improved in the intervention group as compared to patients receiving standard of care (difference = 0.8 points (measured on a 20 point scale); $p=0.04$).

Discussion: Systematic inclusion of information regarding patient knowledge and beliefs of oral anticoagulation therapy, literacy and numeracy skills did not improve INR control but improved patient knowledge of anticoagulation therapy. The lack of improved clinical outcomes makes this particular intervention difficult to justify in terms of allocating financial and personnel resources.

Conclusion: Patient knowledge can be improved through methods providing opportunities to individualize educational interventions; however, further studies are needed to identify effective interventions to improve INR control and patient outcomes.

Dissertation Committee Chair (name and title): C. Daniel Mullins, PhD

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**The Open Presentation is open to the university community and invitees of the candidate. Any member of the Graduate Faculty may observe the Final Examination. Only committee members may vote. For more information, see Procedures for Examination of the Doctoral Dissertation.*

***You must type your abstract on this form in the space provided.*

Updated: February 24, 2006