**Pharmacist Oversight, Feedback, and Education of Family Medicine Resident Warfarin Management**

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**Background:** Within the Carilion Clinic Family Medicine residency, the resident physicians are responsible for the management of patient’s warfarin therapy. It was noted that there was high variability in the completion of key steps, such as workflow documentation, communication with patients on the planned dosing regimen, and scheduling subsequent follow-up visits.

**Objective:** The purpose of this study is to have pharmacists provide education and implement a systematic workflow for the residents to follow when managing warfarin.

**Methods:** Focused educational sessions during physician resident orientation (July 2021) were provided on the ideal systematic work-flow process. This utilized an anticoagulation navigator built within the EMR to assist the resident in managing and documenting the encounter in a consistent fashion. This study was a dual-center, quasi-experimental analysis with a pre-test/post-test design of warfarin management in the family medicine resident clinics. Data was collected over a 3-month period. INR checks after this education were considered the post-test group (August 1, 2021 to October 31, 2021). The pre-test group included patients with INR checks in the same 3-month time span a year prior (August 1, 2020 to October 31, 2020). The primary outcome was the mean percent of time the ideal systematic work-flow process was followed. Secondary endpoints included: the mean percent for each step completed in the ideal process, percentage of patients who INR values were <1.5 or >5.0 (high-risk values), percentage of patients with therapeutic INR values, mean number of INR measurements per patient (in days), mean interval after a sub-therapeutic INR ≤ 1.5 to next INR (in days), and mean interval after supra-therapeutic INR ≥4 to next INR (in days). Safety endpoints included bleeding events, thromboembolic events, and death.

**Results:** 22 patients met inclusion criteria with atrial fibrillation (63%) and INR goal of 2-3 (86%) being the most common indication and target INR goal. There were minor differences in the patient population with most of the patients being male (59%) and white (100%). The average age for patients enrolled was 65 years old. There were no differences noted in the primary outcome (84% vs. 86%). Of the secondary outcomes, it was noted that there was a slight increase in compliance among all endpoints in the post-test group except for appropriate follow-up appointments scheduled (83% vs. 69%). There were no differences in safety outcomes among both test groups.

**Conclusion:** Despite the intervention placed by pharmacists, there was still inconsistency in the workflow of warfarin management. Overall, residents used the anticoagulation navigator most of the time, but the appropriate follow-up goal was not met. It was noted that most residents did not utilize the predefined note outlined in their orientation education, which may have contributed to inconsistent appointment scheduling. This project has identified potential gaps in the education regarding teaching anticoagulation workflow and has given new direction to future steps.