

Impact of pharmacist-managed warfarin treatment at a rural health system: a retrospective review of cost and benefit





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BACKGROUND

- ~548,000 people had a venous thromboembolism in the United States in 2019¹
- For many of those with a pulmonary embolism, the only sign is sudden death
- Populations at the most risk for developing clots are those with acute illness, cancer, immobility, trauma, or fractures²
- Warfarin has been a mainstay anticoagulant therapy for decades
- The therapeutic range for warfarin can be difficult to manage secondary to diet, medications, and comorbidities
- Providers are left with numerous follow-up visits and in-office testing to ensure that their patients on warfarin remain therapeutic
- Appointment burden can be amplified by provider scarcity in rural areas
- Pharmacist-managed warfarin clinics have emerged as a way to reduce provider burden while maintaining quality of care

OBJECTIVES

<u>Primary Objective</u>: To determine the value of a pharmacist-managed warfarin monitoring program in a rural healthcare setting in regards to impact on provider time burden and patient time in therapeutic range

<u>Secondary Objectives</u>: To determine cost savings for the organization in regards to pharmacist management of patients and management of patients outside of therapeutic range

METHODS

<u>Design</u>: Single center, retrospective study

Performance Site: St. Claire HealthCare, Morehead, KY

Inclusion Criteria: All patients enrolled in the pharmacist-managed outpatient warfarin clinic at St. Claire HealthCare from November 1, 2018 to November 30, 2019 were included for analysis. Patients who did not return for follow-up to clinic after an initial visit were excluded.

RESULTS

Value

- Data analysis demonstrated that pharmacists provided 655 hours of patient care time during the study period
- 77% of those hours were from cardiology clinics whereas the remaining 23% were from primary care clinics
- \$282,390.11 of billable time opened up for other patients
- Revenue collection for the pharmacist-managed warfarin clinic during the study period was \$58,512.67

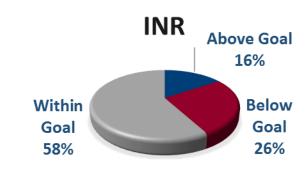
Efficacy

- Point of care International Normalized Ratio (INR) values were within goal range for 57.8% of the recorded collections
- Warfarin is generally considered therapeutic when the patient's INR is within goal range 58% of the time

Safety

• Zero emergency room visits/hospital admissions for the 155 enrolled patients related to thromboembolism or bleeding

RESULTS



* Includes monitoring of newly started warfarin patients

CONCLUSIONS AND FUTURE DIRECTIONS

- Anticoagulation monitoring by trained pharmacists can be considered safe and effective
- Pharmacist-managed warfarin clinics in rural healthcare settings provide a financial benefit to the patient and the health system
- Future investigations comparing efficacy to patients who continue to be monitored in physician offices

DISCLOSURES & ACKNOWLEDGEMENTS

The authors of this presentation have the following to disclose concerning possible financial or personal relationships with commercial entities that may have direct or indirect interest in the subject matter of this presentation:

- 1. Brentney Fields, PharmD: Nothing to disclose
- 2. Stephanie Baker Justice, PharmD, BCPS: Nothing to disclose

1. Nat Rev Cardiol. 2015, 12(8): 464–474. 2. Risk Factors for Venous Thromboembolism. American Heart Association. October 3, 2019.