Community-Based Pharmacist Anticoagulation Clinic Outcomes Compared with Physician Management

Iryna Kurochka, PharmD[1]; Joseph Jadallah, PharmD[2]; Pramit Nadpara, PhD, MBA, MS, BPharm[3]; Jean-Venable Goode, PharmD, BCPS, FAPhA, FCCP[3]

[1] University of Pittsburgh Medical Center, Pittsburgh, PA. At the time of writing Dr. Kurochka was a Postgraduate Year One Community-Based Pharmacy Resident at Virginia Commonwealth University

[2] Buford Road Pharmacy, Richmond, VA

[3] Virginia Commonwealth University, Richmond, VA

Abstract

Background: Warfarin has many indications; however, it is the only anticoagulant that is indicated for mechanical mitral value and antiphospholipid syndrome. Management may be conducted by pharmacists in medical clinic settings. *Objectives*: To evaluate the percentage difference in the international normalized ratio (INR) target range when managed by a community-based pharmacist with a collaborative practice agreement (CPA) versus a physician and to analyze patient satisfaction of an anticoagulation clinic when managed by a community-based pharmacist with a CPA versus a physician. *Practice Description*: Independent community-based pharmacy. *Practice Innovation*: Community-based pharmacist managed anticoagulation clinic. Pharmacist provides anticoagulation services under a collaborative practice agreement or conducts INR testing and reporting with physician management of anticoagulation. *Methods*: Quasi-experiment study design with retrospective and prospective evaluation of warfarin management and patient satisfaction. A retrospective chart review was conducted of patients enrolled in the anticoagulation clinic from January 1st, 2020 to June 30th, 2022. Patients, 18 years or older with an indication for warfarin and attendance of at least 3 anticoagulation appointments were included. The Time in Therapeutic Range (TTR) was determined using the traditional method. TTR differences across the two groups were reported using descriptive, bi-variate, and multivariate statistics. All statistical tests were conducted using SAS 9.0. Patient satisfaction was collected for 6 months using a survey created by the investigators. Survey consisted of 18 questions using a 3-point Likert scale. Survey was assessed using descriptive statistics. *Results*: Thirty-seven patients met the inclusion criteria, 26 were in the pharmacist management group with 609 appointments, and 11 patients were in the physician management group with 123 appointments. There was no statistical significance for the time in the therapeutic range between the pharmacist-managed group (60.7%) and the physician-managed group (59.4%); p-value of <0.829. Results of the satisfaction survey suggest that patients slightly prefer management by a pharmacist over a physician. *Conclusion*: Community-based pharmacist warfarin management of time in therapeutic range was equivalent to physician management and with similar patient satisfaction.

Keywords: Community-based practice, Anticoagulation

Background

Warfarin is recommended for the prevention of venous thromboembolism, systemic embolism, and stroke associated with atrial fibrillation. It is the only anticoagulant that is indicated for mechanical mitral value and antiphospholipid syndrome.[1] Warfarin is one of the two anticoagulant medications that are safe in patients with chronic kidney disease and end-stage kidney disease. Warfarin is a beneficial anticoagulant because it has a reversal agent, Vitamin K, that can be administered in a clinical setting or at home. The cash price of warfarin therapy is more affordable for patients compared to direct oral anticoagulants (DOACs). Warfarin efficacy is monitored by the international normalized ratio (INR). INR goal is 2-3 in most cases but differs based on the disease state being treated and specific patient factors.[2]

Corresponding Author:
Jean-Venable Goode, PharmD, BCPS, FAPhA, FCCP
Virginia Commonwealth University, Richmond, VA 23298
Phone: 267-804-2118
Email: jrgoode@vcu.edu

Currently, there is no goal for time in therapeutic range of INR values expressed as a percentage. Based on previous trials most participants were in a Time in Therapeutic Range (TTR) from 60%-70%.[2-4] TTR signifies how long a patient is optimally anticoagulated based on their INR goal range. There is an increased risk that a patient can have a clot if they are below their INR goal or there is an increased risk of bleeding if the patient is above their goal. A desirable TTR is 100%, however, it is unrealistic in most cases due to multiple factors affecting warfarin, such as diet, stress, alcohol, drug-drug intereactions.

Each year, approximately 2 million people in the U.S. are prescribed warfarin. Around 35,000 to 45,000 patients who are receiving warfarin go to the hospital emergency department for treatment of adverse drug events from warfarin therapy.[5] The average healthcare cost for hospitalization based on warfarin-related bleeding is $10,819 per person.[6] Inpatient, outpatient, and pharmacy healthcare costs for out-of-range INR ranged from $3,419 to $ 5,126 per patient.[7]

Patients require multiple appointments for the initiation of warfarin to achieve the goal INR range. Dose adjustments also

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require multiple appointments if the patient is out of range due to possible changes in diet (decrease or increase vitamin K intake), changes in alcohol intake, changes in smoking habits, changes in medication, unknown reasons, or if warfarin is held for a procedure and needs to be reinitiated. In the ambulatory care setting, pharmacist-run anticoagulation clinics improved control, expressed by a percentage of time in the therapeutic range (50.4% vs 35%).[8] Patients also had a better safety profile with a decrease in significant bleeding, major or fatal bleeding, or thromboembolic events.[8] Due to the intensity and frequency of monitoring, a community-based pharmacy is an ideal location for patients to receive therapeutic monitoring for warfarin. Patients have greater access to care and can schedule same-day point-of-care testing based on their symptoms and the availability of the pharmacist. Limited studies are available about pharmacist-led anticoagulation management in a community-based pharmacy setting.[9-11]

Objectives

To evaluate the percentage difference in the international normalized ratio (INR) target range when managed by a community-based pharmacist with a collaborative practice agreement (CPA) versus a physician and to analyze patient satisfaction of an anticoagulation clinic when managed by a community-based pharmacist with a CPA versus a physician.

Practice Description

Buford Road Pharmacy is an independent community-based pharmacy established in 1958 and located in Richmond, Virginia near three major hospital systems including an academic teaching hospital. Buford Road Pharmacy primarily serves older adults in the community, as well as nursing homes, and hospice patients. Buford Road Pharmacy offers a variety of pharmacist-led services for patients, including immunizations, a weight loss clinic, pre-travel health consultations, an anticoagulation clinic, hormone replacement injection administration, antipsychotic medication injection administration, adherence counseling, prescription device or medication counseling, and a medication synchronization program. Other services include compounding, wholesale, and home health departments.

The pharmacy and clinic are located in the same building. The full-time pharmacists are trained to staff the clinic, if the clinic pharmacist is on vacation or sick. The pharmacist in the pharmacy dispenses medication, compounds medication, provides patient counseling, and manages the medication synchronization program. The pharmacist in the clinic is in charge of immunizations, the anticoagulation clinic, injectable medication administration, pre-travel health consultations, and counseling patients.

Buford Road Pharmacy employs 3 full-time pharmacists, 2 part-time pharmacists, and 1 community-based pharmacy resident. On Monday-Friday, there are two staff pharmacists in the pharmacy and one pharmacist in the clinic. The hours of operation for the anticoagulation clinic are 9 am to 5 pm on Monday to Friday. The clinic is closed on Saturday, however, the staff pharmacist in the pharmacy can perform clinic services at their discretion based on availability, workflow, and workload. The pharmacist on Saturday can schedule patients on Monday through Friday if they are not available for the service.

Practice Innovation Description

The pharmacist-led anticoagulation clinic was established in 2006. A signed collaborative practice agreement (CPA) is the first step of implementing a pharmacist-led anticoagulation service. At that time, there was one signed CPA with one physician. The protocol allowed pharmacists to measure the international normalized ratio (INR) using a point-of-care device and adjust the warfarin dose per the dosing protocol agreed upon by the pharmacist and physician. However, if a new warfarin dose needed to be prescribed or if a medication refill was needed, the pharmacist had to contact the physician to implement the dose adjustment. Currently, 21 physicians have signed a CPA and the protocol has been revised for pharmacists to manage warfarin dosing and prescribe warfarin including dosage changes and refills per the agreed-upon protocol under the physician's National Provider Identification (NPI). Pharmacists also provide INR testing for patients even if a CPA is not established with a physician. For this process, the pharmacist checks the INR and reports the result to the physician for dose adjustment.

Patients are referred to the anticoagulation clinic through word-of-mouth or by a physician. The service is marketed on social media platforms and radio outlets. A signed CPA is the first step of the pharmacist-managed anticoagulation process. Per the CPA, the physician has to send a referral to the pharmacy via fax for each patient the physician wants the pharmacist to manage under the CPA. The referral includes patient name, patient's goal and dose of warfarin. The referral also has a section for physician comments to pharmacist.

During the initial appointment, all relevant data is gathered. If the pharmacist has an established CPA with the physician, then the pharmacist can administer the POC test, evaluate the result and adjust the warfarin dose based on the standing protocol. If the pharmacist does not have an established CPA with a physician, then the pharmacist contacts the physician for a referral for a POC test and educate the physician about the CPA process. If the physician is not interested in a CPA, the physician provides the patient with the necessary information for dose adjustment. The pharmacist provides information on diet, drug-drug interactions, and signs/symptoms of bleeding and bruising to patients during all appointments, regardless if there is an established CPA or not.

The service was cash-based until March 2022 when patients were offered the option of billing the service through Mobile Mediclaim to decrease outpatient costs. Mobile Mediclaim is an

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electronic clinical record system that allows a pharmacist to bill medical insurance for an appointment with a pharmacist. Mobile Mediclaim was in the trial period from March 2022 to June 2023. Mobile Mediclaim had a dedicated pharmacist to include proper codes and evaluate data.

Methods

A quasi-experimental study design with retrospective chart review and prospective evaluation of patient satisfaction was conducted at an independent pharmacy in Richmond, Virginia. A retrospective chart review was completed for patients enrolled in the anticoagulation clinic from January 1st 2020 to June 30th 2023. The inclusion criteria were any patient 18 years or older, attendance of at least 3 anticoagulation appointments during the data collection period, and an indication for warfarin dosing. A minimum of 3 anticoagulation appointments was selected to allow for an adjustment period after the patient was enrolled in the anticoagulation service. Exclusion criteria were patients younger than 18 years old and attendance of fewer than 3 appointments.

A manual chart review was conducted of all anticoagulation patients to extract the patient's age, biological sex, INR goal (as established per diagnosis), INR values and reason for out of range result (diet change, alcohol change, medication change, procedural hold/restart or unknown). Diagnosis, comorbidities, and other demographic information were not included or accessible at the time of retrospective review. Each patient's chart was accessed once for the retrospective review. Data gathered was de-identified to protect patient's privacy and confidentiality per the Health Insurance Portability and Accountability Act (HIPAA) and recorded in a spreadsheet for analysis. The patient data set was divided into the two comparator groups based on the retrospective chart review. Two groups were compared: pharmacist adjusting the warfarin dose in real-time through the CPA or by the patient's physician after the INR is measured using the point of care test, CoaguChek.

TTR was determined using the traditional method (number of days in range/total monitored days).[12] A TTR of ≥70% is defined as good anticoagulation control and a TTR of <70% is defined as poor anticoagulation control.[13] TTR can be crucial for patient safety outcomes. Patients who are out of range are likely to have a greater risk of an event (stroke, bleeding) than patients who are in range.[14] TTR was selected to discern how many patients were maintained at the INR goal when comparing both groups since patients have different INR goals based on diagnosis, risk of bleeding, and risk of clotting. TTR (%) differences across the two groups (pharmacist-managed vs. physician-managed) were reported using descriptive, bi-variate, and multivariate statistics. All statistical tests were conducted using Statistical Analysis Software (SAS) 9.0. SAS is a software that was created for data management and advanced analytics among with multiple different business functions and artificial intelligence.[15] A Wilcoxon-Mann-Whitney test was used to compare TTR between the pharmacist-managed and the physician-managed group. Given the small sample size, our data were not normally distributed, and hence non-parametric statistical tests were relied upon to analyze the data.

The satisfaction of patients enrolled in the anticoagulation clinic was collected prospectively from January 2023 to June 2023 using a survey created by the investigators (Appendix A). The survey was separate from retrospective chart review and may have not included the same patients. The satisfaction survey was included in this study to discern if there is a difference in patient satisfaction between pharmacist and physician anticoagulation management. The survey consisted of 18 questions about the satisfaction of the appointment, education provided, and ability to obtain INR range after changes in alcohol consumption and/or diet procedural holds or a medication change. Demographic information collected included age, ethnicity, sex, and duration of warfarin use. Opinions on the survey were assessed using a 3-point Likert scale (satisfied, neither satisfied nor unsatisfied, and unsatisfied). A 3-point Likert scale was chosen for ease of use due to only three response options. The goal of the survey was to be brief and concise while gathering relevant information about patient satisfaction with the anticoagulation service provided by pharmacists and physicians. A 5-point Likert scale may have increased reliability and validity, but is more complex and time-consuming for patients to complete than a 3-point Likert scale. Open-ended responses were also captured to assess why they prefer a community-based pharmacy for this service and how the service can be improved. The survey was assessed using descriptive statistics.

Results

Thirty-seven patients met the inclusion criteria, 26 were in the pharmacist management group with 609 appointments, and 11 patients were in the physician management group with 123 appointments. The patients in the pharmacist management group had a median age of 70.5 years (SD ±16.8) and the patients in the physician management group had a median age of 69 years (SD ±11.2). There was no statistical significance for the time in the therapeutic range between the pharmacist-managed group (60.7%) and the physician-managed group (59.4%); p-value of <0.829 (Figure 1). Based on the primary reason for the INR out-of-range result of no known reason, there was no difference between the pharmacist-managed group (48.1%) and physician-managed group (53%)

The satisfaction survey was offered to thirty-three patients who were receiving anticoagulation services, with 5 responses (15%). There were 3 participants in the pharmacist group and 2 participants in the physician group (Table 2). The results for the pharmacist group showed that all three participants were satisfied with INR management, the timing of warfarin dose adjustment, counseling provided, the ability to schedule an

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appointment, the number of visits with a provider, knowledge of the provider, and prescription sent to the pharmacy. For the physician group, satisfaction was more mixed with one participant identifying as neither satisfied nor dissatisfied with several categories. A sub-group analysis was not conducted due to the small number of participants in the satisfaction survey. (Table 3).

Discussion

The results of our study are consistent with pharmacists providing the same level of care to anticoagulation patients in terms of the percentage of time in therapeutic range and similar satisfaction between pharmacist and physician anticoagulation management. Studies in the ambulatory care setting found a slightly higher percentage of TTR for the pharmacist-managed groups versus the physician-managed group whereas in our study there was no difference in TTR.[2,4,17] The studies in the ambulatory care setting had more patients than this study (66, 112 and 122), respectively. Larger number of patients may have allowed detection of smaller differences than our study with only 37 patients. In the ambulatory care setting studies, anticoagulation patients had a better safety profile with a decrease in significant bleeding, major or fatal bleeding, or thromboembolic events when a pharmacist was engaged in warfarin management compared to when a physician was engaged in warfarin management.[2,4,17]

Pharmacists are a crucial part of the healthcare team. Patients with pharmacists who are part of an interprofessional healthcare team have better therapeutic results than patients who do not have pharmacists on their interprofessional team.[16] A study conducted in an ambulatory care setting in a tertiary hospital in Saudi Arabia found that the TTR was higher in the pharmacist-led management group (87.27%) than in the physician-led management group (52.48%).[2] Another study conducted in a family clinic in Canada showed that the TTR was higher in the pharmacist-led management group (73%) than the physician-led group (65%).[4] Lastly, a study in an ambulatory care center in the United States found that the TTR was higher in the pharmacist-led management group (66%) than the physician-led management group (56.6%).[17] Pharmacists in an ambulatory care setting can manage anticoagulation just as well, if not better, than a physician. Pharmacists in ambulatory care settings have managed anticoagulation longer than pharmacists in community care settings. Differences between the results from the community-based pharmacy anticoagulation clinic versus an ambulatory care clinic could be due to the small sample size of the study, and multiple pharmacists providing care in the community setting vs one standard pharmacist in an ambulatory care setting. Another explanation is that the studies in ambulatory care centers were in different geographical locations which had different training of pharmacists and physicians compared to the U.S. and pharmacists with different scopes of practice. Further research on pharmacist community-based anticoagulation clinics compared to a physician anticoagulation clinic should be conducted with a larger sample size. The data in this study was collected over 2.5 years. Further research can assess INR data over a period that is longer than 2.5 years to assess if there is a greater difference in anticoagulation management. Anticoagulation management is difficult and highly variable, however, pharmacists in the community-based setting can manage anticoagulation similar to physicians.

Based on the results of this study, patients showed no difference in TTR when managed by a pharmacist or by a physician. This could be due to multiple reasons, with the first being that pharmacists and physicians have similar training in anticoagulation therapy in terms of pharmacology, counseling, dosing, and monitoring. Another explanation is that the protocol for the anticoagulation management by pharmacists was approved by physicians and it was created through evidence-based management. In terms of out-of-range results, there was no difference for unknown reasons of out-of-range results, however, the pharmacist group had more out-of-range results due to diet than the physician group. There is no clear reason for this difference. The physician group had more patients with bridging than the pharmacist group. It is unclear why there were more cases of bridging in the physician group compared to the pharmacist group. More research would be needed to assess the differences between the out-of-range results.

In terms of the satisfaction survey, patients were slightly more satisfied with the pharmacist monitoring their INR than a physician monitoring their INR. Neither group was unsatisfied with the pharmacist nor physician monitoring their INR, however, the patients in the pharmacist group where consistently satisfied with the service provided by the pharmacist. The patients in the physician group answered “neither satisfied, nor unsatisfied” more frequently than those in the pharmacist group. These results show the pharmacists can provide the same level of care with anticoagulation management in terms of patient satisfaction. There is no literature on patient satisfaction of anticoagulation management with a community-based pharmacist compared to a physician. In New Zealand, a study was conducted to assess the patient satisfaction of a community pharmacist led anticoagulation management service and the results showed that 94.5% of the patients were satisfied with five-dimensions studied (patient-centered communication, confidence in pharmacist competence, patient-pharmacist relationship, confidence in the community pharmacist-led anticoagulation management services, and pharmacy environment).[18] Another satisfaction study showed that 96% of patients were satisfied with pharmacist education on warfarin adherence, the necessity for INR testing, and the risk of bleeding.[19] In the same study, all the physicians who completed a satisfaction survey were satisfied with the care that their patients received from the pharmacists and with the competence of the pharmacist to

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provide care.[19] The results of this study are consistent with the satisfaction of anticoagulation management by pharmacists in a clinic-based setting. Due to the small sample size of this study, further research should be conducted with a larger patient population to verify these results.

A limitation of this study is that is not generalizable because it is based on one independent pharmacy in Richmond, Virginia. The results are subject to change based on location, training of the pharmacist, and demographics of research subjects. Demographics of the patient in the chart review were not documented during the anticoagulation appointments. Data was retrieved from time during the COVID-19 pandemic, which could have resulted in a decrease in patient follow-up due to fear of contracting COVID-19 from an in-person visit. A limitation of the satisfaction survey was that a 5-point Likert scale was not used which could have increased sensitivity and decreased bias due to a higher number of choices provided to the patient. Another limitation is the number of participants who completed the satisfaction survey. A small sample size may not be representative of the general population and drawing a conclusion based on a small sample size limits generalizability and can lead to unreliable findings. The survey was provided to the participant by a pharmacist which could have led the patient to have socially desirable bias where the participant could have inflated their answers to favor the environment where the survey was administered. A mitigation strategy may involve the satisfaction surveys to be delivered to patients via post-office or electronic mail which would allow the participant to fill out the survey in a neutral environment and anonymously submit the survey to the researcher.

In the future, a prospective study should be conducted to assess the difference in the time in the therapeutic range between physician-managed and community-based pharmacist-managed anticoagulation clinics to increase the generalizability of the data. The study should employ a longer time frame to capture more patients or data points. A study with more patients and more complete demographic data will allow for subanalysis opportunities and comparison of patient characteristics. Future studies should also assess barriers to participant completion of a satisfaction survey including mitigating the barriers or biases.

Future Implications

These results will be used by the independent pharmacy to expand the pharmacist-managed anticoagulation clinic by using the data to market the CPA anticoagulation service to other physician offices. It will also be used to increase the number of CPAs. The establishment of further CPAs increases access to care for patients and can decrease the time for medication adjustments. Additionally, the availability of point-of-care tests in community-based pharmacies can be an advantage for patients who do not want an intravenous laboratory INR test.

Conclusion

This study showed that community-based pharmacist warfarin management of time in therapeutic range was equivalent to physician management and with similar patient satisfaction. As community-based pharmacists expand patient care services, evidence of equivalent care has both policy and payment implications. A community-based pharmacist anticoagulation service is a viable option to increase access to care for anticoagulation patients.

Conflict of Interest: We declare no conflicts of interest or financial interests that the authors or members of their immediate families have in any product or service discussed in the manuscript, including grants (pending or received), employment, gifts, stock holdings or options, honoraria, consultancies, expert testimony, patents, and royalties.

Disclaimer: The statements, opinions, and data contained in all publications are those of the authors.

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Table 1: Primary Reason for Out-of-Range Result

	Pharmacist Managed	Physician Managed	Total
Bridging	3 (1.1%)	8 (9%)	11 (2.9%)
Diet Changes	58 (20.1%)	7 (8%)	65 (17.3%)
Drug Interaction	29 (10.2%)	12 (13%)	41 (10.9%)
Extra Dose	4 (1.4%)	1 (1%)	5 (1.3%)
Illness	4 (1.4%)	1 (1%)	5 (1.3%)
Missed Dose	33 (12%)	10 (11%)	43 (11.5%)
New Start	1 (0.4%)	1 (1%)	2 (0.1%)
No Known Reason	136 (48.1%)	50 (53%)	186 (50%)
Procedural Hold	9 (3.2%)	3 (3%)	12 (3.2%)
Restart	6 (2.1%)	0 (0%)	6 (1.5%)
Total	283	93	376

Table 2: Demographics of participants in the satisfaction survey group

Demographics		**Pharmacist (n=3)**	**Physician (n=2)**
Sex	Male	2 (66%)	1 (50%)
	Female	1 (33%)	1 (50%)
Age (Years)		67	70.5
Ethnicity		Caucasian	Caucasian
Clinic Patient (Years)		4.5	5
Warfarin Prescription (Years)		11	7
Buford Road Pharmacy Patient	Yes	1 (33%)	0 (0%)
	No	2 (66%)	2 (100%)

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Table 3: Results of patient satisfaction with the pharmacist managing their anticoagulation versus a physician managing their anticoagulation

	Pharmacist Led Group (N=3)			Physician Led Group (N=2)		
Satisfaction	Satisfied	Neither Satisfied Nor Unsatisfied	Unsatisfied	Satisfied	Neither Satisfied Nor Unsatisfied	Unsatisfied
How satisfied are you with your INR management of your INR?	3			2		
How satisfied are you with the timing of your warfarin dose adjustments?	3			1	1	
How satisfied are you with the counseling provided during your appointment?	3			2		
How satisfied are you with your ability to schedule an appointment?	3			2		
How satisfied are you with the number of visits with your provider?	3			2		
How satisfied are you with the knowledge of the provider?	3			2		
How satisfied are you with the speed of your prescription being sent to the pharmacy?	3			2		
How satisfied are you with the counseling provided during your appointment?	3			2		
How satisfied are you with information provided on how food affects INR?	3			1	1	
How satisfied are you with information provided on the symptoms of bleeding?	3			1	1	
How satisfied are you with information provided on the symptoms of clotting?	3			1	1	
How satisfied are you with information provided on when to see a doctor or go emergency room?	2	1		1	1	

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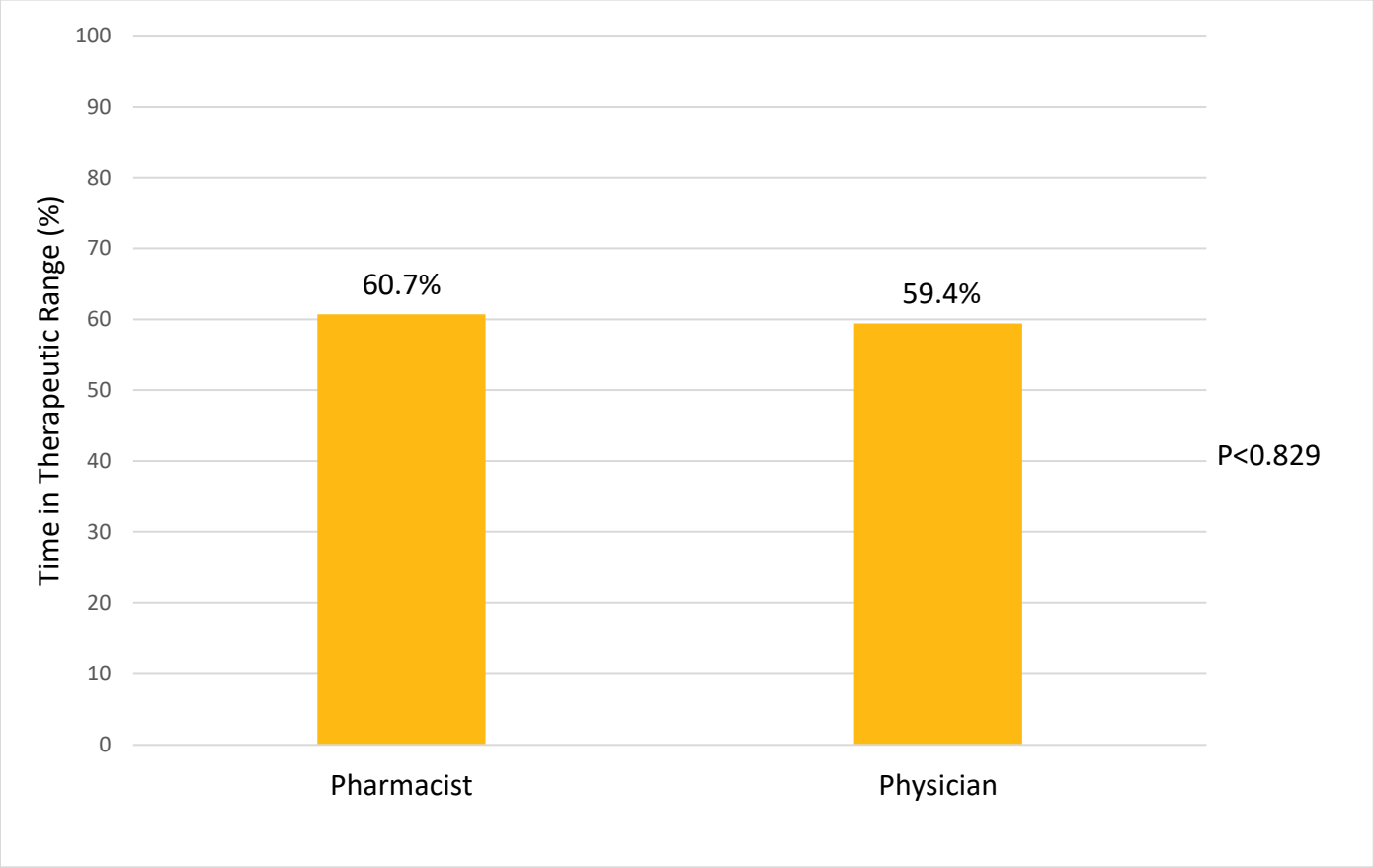
Figure 1: Percent of Therapeutic Time in Range (TTR) when INR dosing was managed by a pharmacist verses a physician.



Appendix A

What is your ethnicity?

- Caucasian
- African-American
- Latino or Hispanic
- Asian
- Native American
- Native Hawaiian or Pacific Islander
- Two or More
- Other/Unknown
- Prefer not to say

(Please Circle One)
Male or Female
What is your age?_____
How many years have you been a patient with the clinic?_____
Are you a patient of Buford Road Pharmacy? Yes or No (circle one)
How long have you been on warfarin?_____
Do you get your warfarin dose adjusted by your: Physician or Pharmacist_(circle one)_____

Questions about the **pharmacist** :	Satisfied	Neither Satisfied nor Unsatisfied	Unsatisfied
How satisfied are you with your INR management of your INR?			
How satisfied are you with the timing of your warfarin dose adjustments?			
How satisfied are you with the counseling provided during your appointment?			
How satisfied are you with your ability to schedule an appointment?			
How satisfied are you with the number of visits with your provider?			
How satisfied are you with the knowledge of the pharmacist?			
How satisfied are you with the speed of your prescription being sent to the pharmacy?			
How satisfied are you with the counseling provided during your appointment?			
How satisfied are you with information provided on how food affects INR?			
How satisfied are you with information provided on the symptoms of bleeding?			
How satisfied are you with information provided on the symptoms of clotting?			
How satisfied are you with information provided on when to see a doctor or go emergency room?			

Questions about the **physician** :	Satisfied	Neither Satisfied nor Unsatisfied	Unsatisfied
How satisfied are you with your INR management of your INR?			
How satisfied are you with the timing of your warfarin dose adjustments?			
How satisfied are you with the counseling provided during your appointment?			
How satisfied are you with your ability to physician after you receive an INR result from the pharmacy?			
How satisfied are you with the number of visits with your provider?			
How satisfied are you with the knowledge of the pharmacist?			
How satisfied are you with the speed of your prescription being sent to the pharmacy?			
How satisfied are you with the counseling provided during your appointment?			
How satisfied are you with information provided on how food affects INR?			
How satisfied are you with information provided on the symptoms of bleeding?			
How satisfied are you with information provided on the symptoms of clotting?			
How satisfied are you with information provided on when to see a doctor or go emergency room?			

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Questions about the management INR management	Satisfied	Neither Satisfied nor Unsatisfied	Unsatisfied	Not applicable to me
How satisfied are you with the time to get your INR in range after dietary changes?				
How satisfied are you with the time to get your INR in range after a change in alcohol intake?				
How satisfied are you with the time to get your INR in range after a medication change?				
How satisfied are you with the time to get your INR in range after a procedure?				

Questions about the Burford Road Pharmacy :	Satisfied	Neither Satisfied nor Unsatisfied	Unsatisfied
How satisfied are you with the cleanliness of the pharmacy?			
How satisfied are with the friendliness of the staff?			
How satisfied are you with the waiting time before the appointment?			
How satisfied are you with the pharmacy?			

Why do you come to Buford Road Pharmacy?

_____
_____
_____

How can we improve this service?

_____
_____
_____