

Assessment of drive-up anticoagulation pharmacy visits on clinical outcomes and patient satisfaction



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Abstract

Little is known about the impact of non-traditional visits on time in therapeutic range (TTR) or patient acceptance for anticoagulation visits. Ascension St. Vincent utilized drive-up anticoagulation visits during the 2020 COVID-19 pandemic. Results indicate that while average TTR was lower in the drive-up setting, it remained above predetermined standard of quality anticoagulation control.

Background

- Prior to the COVID-19 pandemic, patients were seen for anticoagulation management inside the clinic, typically in 15 minute appointments
- During the pandemic, anticoagulation visits were conducted outside at the patient’s car to promote social distancing, with the verbal portion of the visit occurring over the phone on the previous day
- TTR is used as a marker of clinical efficacy in many major anticoagulation trials
- CHEST guidelines for Antithrombotic Therapy for Atrial Fibrillation recommend that in patients on warfarin, a TTR >70% indicates good quality anticoagulation control¹

Objectives

- Determine the difference in TTR in patients when seen in the clinic (2019) and in the drive-up (2020)
- Compare reported incidence of adverse bleeding events and patient satisfaction scores between the 2019 and 2020 study period

Methods

- Retrospective chart review performed on patients seen in the clinic April 2, 2019 - June 12, 2019 and the same patients in the drive-up April 2, 2020 - June 12, 2020 at Medication Management Services (MMS) Indianapolis, MMS Carmel, MMS Fishers, or the Primary Care Center Indianapolis.
- Deidentified patient satisfaction surveys were handed out to patients in the MMS Indianapolis subgroup
- Excluded patients if:
 - Discontinuation of warfarin between the study period and start of trial (patient records inaccessible)
 - Patients started warfarin within 14 days before the start of study period
- Data collected included the following within the study time frame:
 - Patient demographics
 - TTR in 2019 and 2020
 - Number of adverse bleeding events reported in each year
 - ICD-10 codes were used to determine number of hospitalizations associated with bleeding or clotting events
 - Number of visits in each year

Table 1. Patient Demographics (n = 522)

Clinic Site	n (%)
MMS Indianapolis	316 (60.5)
MMS Carmel	105 (20.1)
MMS Fishers	94 (18)
PCC Indianapolis	7 (1.3)

Figure 1. TTR 2019 vs 2020

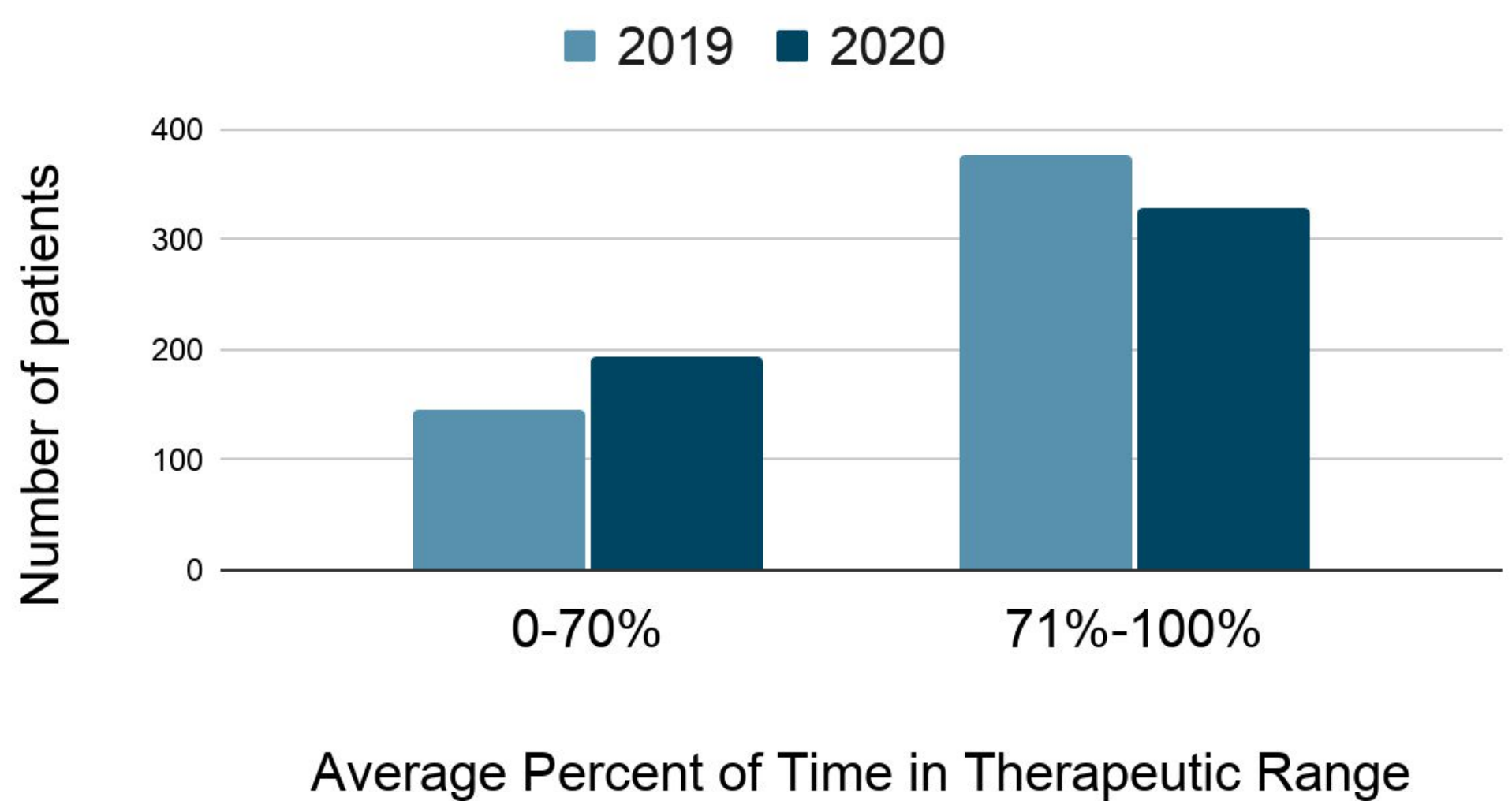
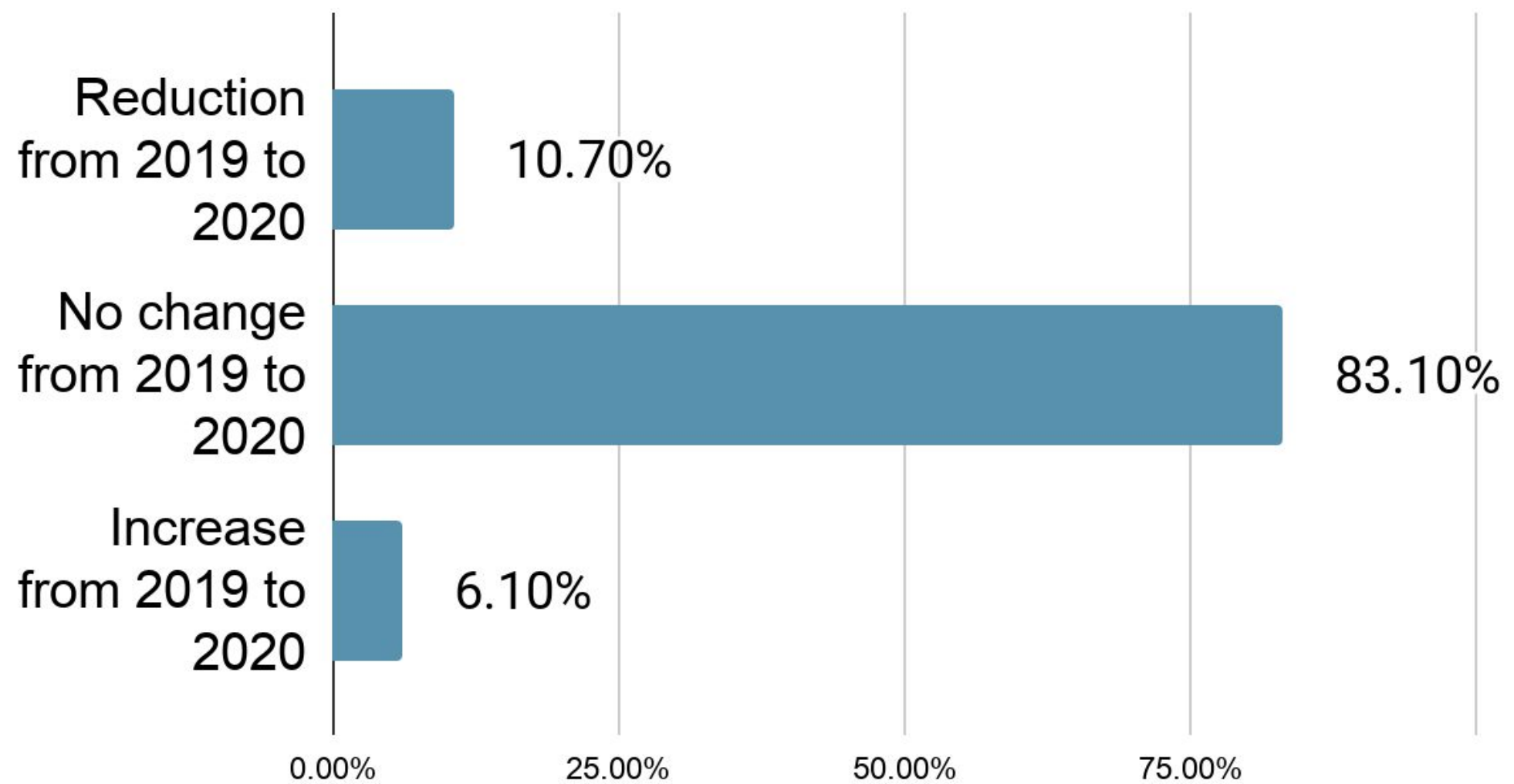


Figure 2. Adverse Bleeding Events



Results

- 522 patients met inclusion criteria. Population demographics are listed in Table 1
- Primary Outcome: TTR for all sites ($p < 0.001$)
 - 2019: Median 95.7% (Mean: 81.3%)
 - 2020: Median 84.3% (Mean: 74.8%)
- Number of patients experiencing bleeding events is found in Figure 2
- On average, patients had 1 less visit in 2020 than in 2019
- There were not enough hospitalizations to determine any difference
- Survey responses indicated that patients were satisfied by the quality of care they received in the drive-up but some patients believed the staff did not communicate clearly or perform the visits in a timely manner
- If the world experienced another pandemic, 72.6% of patients would prefer the drive-up, while only 29.7% would prefer the drive-up if there were no concerns for a pandemic

Discussion

- TTR does not differentiate between values far outside therapeutic range vs. values slightly out of range²
- Despite a statistically significant difference, the mean TTR in 2020 was above the 70% marker of good quality control
- Lifestyle changes during pandemic could have impacted TTR in 2020
- Less elective surgeries in 2020 may have resulted in less patients having to hold warfarin

Conclusions

- TTR for patients in the drive up was statistically less than TTR for patients seen in-clinic, though not clinically significant
- Patients overall preferred in-clinic visits if there were no concerns for a pandemic, but did not feel that the drive-up visits affected the quality of their care

Implications

This is the first study done at Ascension St. Vincent to assess the clinical safety and efficacy of non-traditional anticoagulation visits. If there were another pandemic, patients indicated they would prefer being seen in the drive-up. Further studies are needed to confirm these trends which cannot be generalized to the broader population.

1. Kearon C, Akl EA, Ornelas J, et al. Antithrombotic Therapy for VTE Disease. *Chest*. 2016;149(2):315-352. doi:10.1016/j.chest.2015.11.026
2. Reiffel J. Time in the Therapeutic Range (TTR): An Overly Simplified Conundrum. *Journal of Innovations in Cardiac Rhythm Management*. 2017;8(3):2643-2646. doi:10.19102/icrm.2017.080302