



## A Drive-thru Anticoagulation Testing Clinic during COVID-19 Pandemic

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### ABSTRACT

As COVID-19 started to spread rapidly in their community, a team of nurses at South Miami Hospital initiated a drive-thru anticoagulation testing process to provide safe access to care for patients on anticoagulation therapy, requiring Internationalized Ratio (INR) testing. This article describes the implementation of a drive-thru anticoagulation testing process and implications for best practices during a pandemic crisis.

**Keywords:** Anticoagulation, COVID-19, Coronavirus

### BACKGROUND

COVID-19 has significantly changed healthcare delivery. As the novel coronavirus, SARS-CoV-2, started to spread rapidly around the world, scientists tried to understand the transmissibility of this virus and governments began to implement measures to slow down the pandemic. A study on the first known person-to-person transmission of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in the United States of America revealed that extended, unprotected exposure led to COVID-19 transmission from one individual to another (Ghinai et al., 2020). Another study indicated that transmissions occurred in community settings (Pung et al., 2020). More evidence suggested the transmissibility of the virus by asymptomatic and pre-asymptomatic carriers (Huff & Singh, 2020).

Following the Centers for Disease Control (CDC) and states' recommendations, healthcare systems in the United States implemented rigorous measures to protect human lives and prevent the transmission of COVID-19. Some of the safety measures implemented immediately by the Anticoagulation Clinic included restricting visitors, social distancing, mandating face covering, and ensuring employees' appropriate use of personal protective equipment (PPE).

**Figure 1**

*Anticoagulation clinic team*



### FACING THE CHALLENGE

The Anticoagulation Clinic opened in 2007, and grew quickly, exceeding 500 patient visits monthly. The clinic improved patient outcomes, reduced warfarin-related adverse drug reactions (ADRs), and warfarin-related hospital readmissions by 71%. However, once SARS-CoV-2

# COVID-19 Special Edition

invaded the lives of Americans, the clinic's patient care process was no longer effective. The census dropped acutely from the once normal 25 – 30 patient visits to 10 patient visits daily, as the pandemic spread into Miami-Dade County. Consequently, a team of nurses caring for these patients, consisting of a nurse manager, an office supervisor, two advanced practice registered nurses (APRN), four registered nurses (RN), a clinical educator, and four clerical staff members became increasingly concerned for their long-term patients needing INR testing for safe anticoagulation therapy (Figure 1). According to The Joint Commission National Patient Safety Goal NPSG.03.03.01, EP 1, anticoagulation medications have a higher risk for causing harm to patients due to the complex dosing, insufficient monitoring, and poor patient compliance making the clinic's efforts to keep their patients safe vitally important (The Joint Commission, 2018).

## NURSES INGENUITY TO CARE FOR PATIENTS

The clinic's team rallied to ensure patients were and felt safe despite the great stress and fear that the COVID-19 had brought. Along with the reports that drive-thru COVID-19 testing had become available in other parts of the country, the clinic's educator suggested a drive-thru testing process for the Anticoagulation Clinic patients. As soon as the team received approval by key administrators, a new process arose from the pandemic crisis.

With the new process, patients do not need to come into the hospital clinic to receive testing and care (Figure 2). The day before appointments, nurses make reminder calls as usual, with additional dialogue that included new COVID-19 screening questions, location of the drive-thru site, requirement of wearing facial covering/mask, and instructions to lower only the patient's window to prevent airborne exposure from a draft during the appointment. Upon arrival, the patient's temperature is checked, registration process is completed, two required patient identifiers are confirmed with the patient, and the point of care equipment is prepared. The nurses wear CDC recommended PPE during any transactions with the patients. Additionally, nurses provide

**Figure 2**

*Anticoagulation clinic new testing process*



diet recommendations, medication education, and address patients' concerns as the capillary sample is collected. Using the point of care equipment, the INR result along with any pertinent information is then reported via phone to one of the two registered nurses (RNs) seated inside the clinic. The receiving RNs already have the patient's account and visit history available on their computer monitors. They determine whether medication dosing changes are necessary, seek feedback from the APRN, reconcile the home medication list, document any information received on the patient through report, and schedule the next visit.

The drive-thru anticoagulation testing process provides patients with both a convenient and safe testing environment to alleviate the fear of entering the hospital as well as a sense of normalcy that comes with seeing the familiar nurses' faces and receiving the professional care to which they are accustomed. This sentiment has been echoed by the resounding "thank-you" appreciations received from the patients who have trusted the RNs' guidance with their thera-

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py prior to and now, during this COVID-19 pandemic crisis.

## IMPACT OF THE DRIVE-THROUGH ANTI-COAGULATION CLINIC

Results from a recent patient satisfaction survey administered to the clinic patients indicated that most of the surveyed patients (61%) would not have come to their regular clinic visit inside the hospital and that they had no intention of getting checked anywhere else until after the pandemic had passed. All surveyed patients gave the drive-through clinic new testing process the highest satisfaction score. Clinic patients were also satisfied with the drive-thru turnaround time, which is considerably less than the traditional process. A routine visit that used to take between 30 to 45 minutes to park, register, wait, and be seen now takes, on average, less than of  $\leq 15$  minutes.

## CONCLUSION AND IMPLICATIONS FOR PRACTICE

The drive-thru anticoagulation testing process was created to provide safe and effective care for patients taking warfarin. Since social distancing is one of the most essential strategies to prevent transmission of the virus (Qian & Jiang, 2020), driving-thru instead of coming into the clinic, helped our patients feel safe and at ease. Moreover, the use of masks provides effective protection against the virus (Liang et al., 2020). The team knew that their patients' lives were at risk if they were not being managed appropriately during the COVID-19 pandemic. By implementing an innovative drive-through process to facilitate INR testing, the patient experience has improved, and the number of cancellations has decreased. Furthermore, the clinic staff continues to work with minimum adjustments to their daily routine.

This initiative exemplifies the values, mission, and vision of this healthcare system and of the leaders who uphold and prioritize the lives of the patients and community served every day, even during the chaos caused by a global pandemic.

## DECLARATION OF INTEREST

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

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# COVID-19 Special Edition

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