

Case Study

UMMS Accelerates Patient Transfers with HIPAA-Compliant, Real-Time Communication Platform



Overview

The University of Maryland Medical System (UMMS) provides primary and specialty care at more than 150 locations across the state, including academic, community, and specialty hospitals that together provide 25% of all hospital-based care in Maryland. With over 33,000 transfer requests per year expected to increase to upwards of 76,000, UMMS needed a modern communication platform to replace the outdated and inefficient use of fax machines and frustrating phone tag.

As healthcare technology is introduced, integration and utilization across a health system can be a challenge with a variation of hospital needs and disparities to consider. When used proficiently, a system-wide HIPAA-compliant communication platform can enable healthcare team members miles apart to communicate in real-time decreasing the time for transfer, evaluation, and treatment of a patient with a time sensitive condition.

Facilitating rapid interhospital ED transfer with TigerConnect to treat Central Retinal Artery Occlusion

Central retinal artery occlusion (CRAO) is an ocular emergency. Patients typically present with profound, acute, painless monocular visual



We use TigerConnect to ensure that we are in constant touch with our hospitals throughout the system.

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loss—with 80% of affected individuals having a final visual acuity of counting fingers or worse. CRAO is the ocular analog of a cerebral stroke—and, as such, the clinical approach and management are relatively similar to the management of stroke, in which clinicians treat the acute event, identify the site of vascular occlusion, and try to prevent further occurrences. The incidence of CRAO is approximately 1 to 2 in 100,000 with a male predominance and mean age of 60-65 years. While there is no standard treatment for CRAO, thrombolytic agents have been studied for CRAO treatment including intra-arterial tissue plasminogen activator (tPA), which must be administered within 4.5 hours of the last known normal.

Using the TigerConnect Clinical Collaboration Platform, the University of Maryland Access Center*, the care teams at the University of Maryland School of Medical Centers, and the University of Maryland Shore Medical Center at Chestertown were able to efficiently coordinate care, transport a CRAO patient 75 miles over the Chesapeake Bay from Chestertown to Baltimore, and treat the patient with the administration of tPA and hyperbaric therapy in less than 4 hours.

A 54-year-old male initially arrived at the University of Maryland Shore Medical Center at Chestertown with a complaint of a sudden vision loss in his right eye that began at approximately 8 a.m. This

was an extremely worrisome situation as loss of vision would greatly impact his quality of life and career as a truck driver. When the ED physician at Chestertown recognized the possibility of CRAO, he knew that the patient would need to be transferred to the University of Maryland Medical Center to see an ophthalmologist for evaluation and treatment to achieve the best possible outcome. An integration between the TigerConnect Clinical Collaboration Platform and the health system's EHR (Electronic Health Record) allowed the ED physician to request a transfer via the University of Maryland Access Center through a custom automated workflow known as Order-Initiated Transfer Requests. When a transfer order is submitted through the EHR a priority TigerConnect message is automatically generated, and the ordering physician can have real-time communication with the Access Center Physician On Duty using a TigerConnect advanced feature known as Roles. This feature allows staff to quickly look up and message the right provider without having to know their name or schedule by searching for their clinical role set up by the organization such as "Neurologist On Call".

The Access Center Physician On Duty was able to seamlessly add ophthalmology, neurology and hyperbaric specialists to the existing group message for efficient care coordination. Due to the time-sensitivity of the patient's condition, it was decided that it would be best to fly the patient via

* The University of Maryland Access Center (UMAC) is a shared system resource to facilitate the movement of patients throughout the system. UMAC consists of three divisions: Patient Placement, Transport, and Telehealth. UMAC assists both UMMS and non-UMMS facilities with the process of connecting patients with care rapidly and safely.



The dedication and teamwork shown in the care of this patient, and enabled by collaborative technology workflows, was simply outstanding. I have no doubt that our team gave this patient with a time sensitive emergency the best chance we could for a good outcome.

Mark Sutherland, MD

Medical Director

University of Maryland Access Center

helicopter to stay within the tPA window as ground transportation would be a 4–5-hour delay. In the same group message, the Transfer Coordinator was able to confirm helicopter transport and give updates on ETA. During the wait for the helicopter, the care team was able to prepare for arrival by discussing potential treatment strategies, requesting a rapid COVID test, and securely sharing the patient's health information for real-time decision making.

The patient arrived at University of Maryland Medical Center within the window for tPA treatment with a well-informed care team ready to provide the best care possible. Due to immediate updates received on their mobile device, the ophthalmologist was able to evaluate the patient within 5 minutes from when he landed on the helipad, confirm CRAO, and inform the rest of the team that tPA and antithrombotic treatment were approved. Because the hyperbaric team was also receiving real-time updates, they were able to prepare the chamber for additional hyperbaric oxygen therapy, which the patient later received.

After receiving treatment, the patient was admitted to the ICU for monitoring. His continued treatment plan included outpatient follow-up and repeat

computed tomography angiography in 4 weeks. The total elapsed time from onset to treatment was 3 hours and 22 minutes.

The collaboration and efficiency of this workflow saved a tremendous amount of time not only for the patient, but for the providers as well by eliminating phone calls, wait time, and interruptions to the care of other patients. Several ED Directors and Physicians were surveyed for feedback on the new processes a month after implementation and 68% agreed or strongly agreed that they prefer the TigerConnect workflow vs. phone workflows.

The TigerConnect Clinical Collaboration Platform provided HIPAA-compliant, real-time communication for the geographically dispersed care teams to securely discuss critical patient information, collaborate on treatment strategies, and share updates throughout transport and upon arrival greatly increasing the speed and efficiency of interhospital patient transfer. The University of Maryland Medical System plans to continue optimizing the Order-Initiated Transfer Requests workflow to improve patient safety, drive provider satisfaction, and create a seamless patient transfer process.

Timeline



8:30 am - 54 y/o male truck driver presents to the University of Maryland Shore Medical Center at Chestertown with a complaint of a sudden loss of vision in the right eye that began at 8:00am. Chestertown ED Physician evaluates the patient and determines the need to transfer to UMMC for ophthalmology consult due to possible CRAO



9:10 am - ED Physician submits an Order-Initiated Transfer Request in the EHR that triggers an automated priority TigerConnect message to UMAC



9:13 am - Access Physician on Duty replies in the TigerConnect group message that the ED Charge Nurse at UMMC has been contacted and a transfer can be done. She also notes the need for hyperbaric and neurology consultations for CRAO



9:15 am - Chestertown ED Physician notes that the case is presenting like CRAO but does not have the tools to explore further; expresses that the patient is a truck driver and considered the ramifications this could have on the patient's life



9:18 am - Neurology and hyperbaric specialists are added to the current TigerConnect group message to collaborate in real-time



9:51 am - Access Physician flags for the care team in the group message that there is a 4-5 hour ground transportation delay making the administration of tissue plasminogen activator (tPA) impossible



9:52 am - Care team makes a real-time decision within the TigerConnect group message to transport the patient by helicopter



9:59 am - UMMS Transfer Coordinator enters the TigerConnect chat and informs that the Express Care helicopter will be arriving at Chestertown Medical Center in 23 minutes



10:00 am – 10:27 am - UMMC medical team discusses treatment options within the TigerConnect group message. The flight Team arrives at the Chestertown Medical Center



10:30 am - A quick TigerConnect message confirms to the care team that the flight team has left for Baltimore. Collaboration between the care team continues in the TigerConnect group message as the medication list is shared between teams



10:53 am - The patient lands at UMMC in Baltimore and is taken directly to the Emergency Department. Confirmation is sent to the team via TigerConnect



10:56 am - The neurologist meets the patient and notes that the right pupil was at 2mm and messages the team confirmation of CRAO is needed by an ophthalmologist to proceed with tPA treatment



10:58 am - Ophthalmology evaluates the patient and confirms CRAO for the team



11:22 am - The treatment team collaborates through TigerConnect and is able to deliver tPA to the patient and coordinate time in the hyperbaric chamber for additional treatment



11:30 am - Access Physician and Chestertown ED physician send TigerConnect messages thanking the team for their collaborative efforts and celebrating the efficiency that would help lead to the best possible treatment for the patient

Elapsed time: 3 hrs 22 min - As the patient was well within the window for Thrombolytic therapy, tPA was able to be administered; a Hyperbaric chamber treatment was also done; The patient was admitted to the ICU for monitoring.



About TigerConnect

TigerConnect transforms healthcare with the industry's most widely adopted clinical collaboration platform – uniquely modernizing how doctors, nurses, care teams, patients, and data connect. With solutions spanning care communication, patient engagement, scheduling, alarm notifications, nurse call, and more, TigerConnect accelerates productivity, reduces costs, and improves patient outcomes, safely and securely. Trusted by more than 7,000 healthcare entities for user-friendly yet enterprise-ready solutions, TigerConnect delivers 99.995% verifiable uptime for more than 10 million messages each day.

Contact us

To schedule a demo or learn more about how TigerConnect can improve clinical communication efficiency for your organization, [contact us](#).