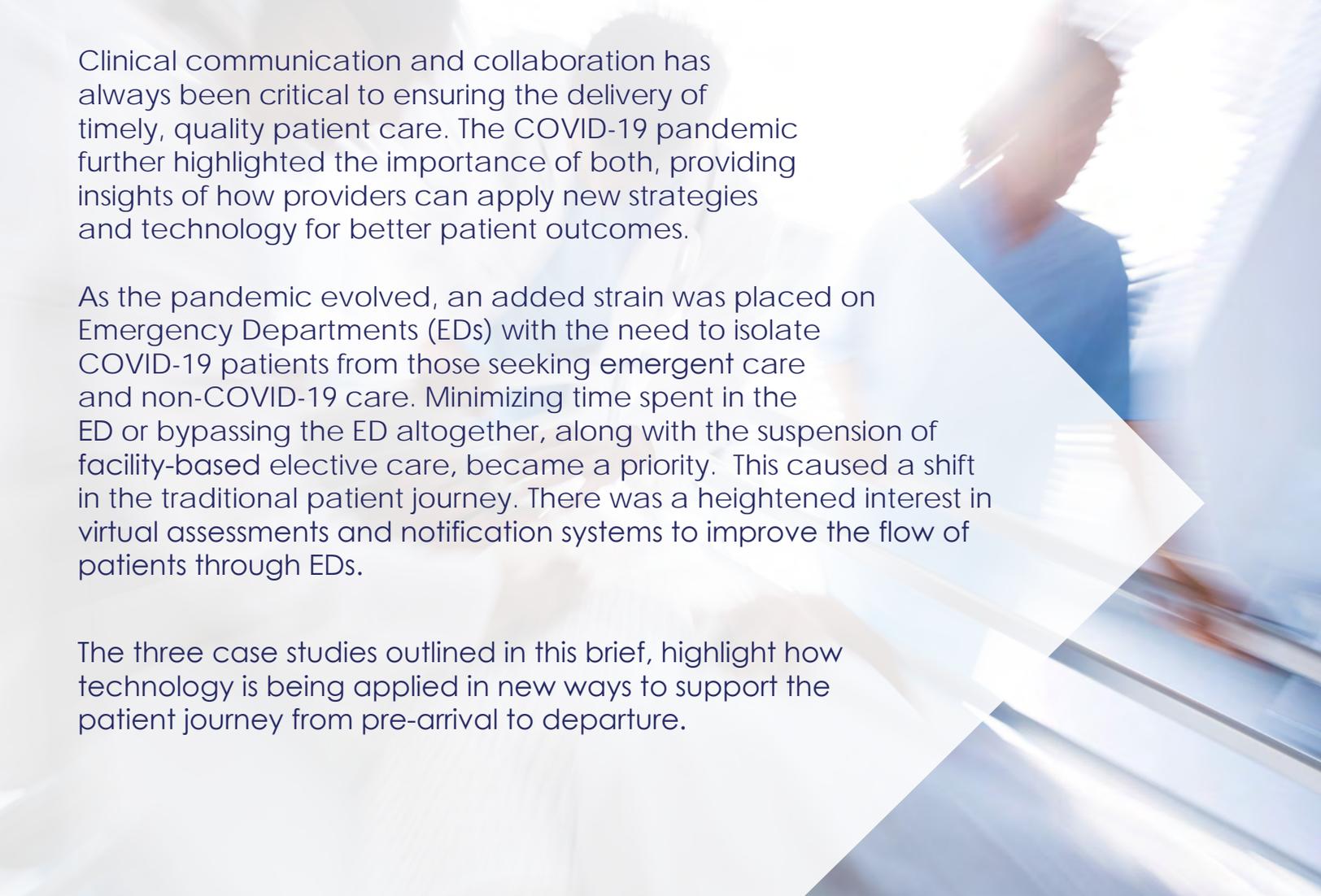




# Clinical Communication and Collaboration: Redefining the Patient Journey for Better Outcomes





Clinical communication and collaboration has always been critical to ensuring the delivery of timely, quality patient care. The COVID-19 pandemic further highlighted the importance of both, providing insights of how providers can apply new strategies and technology for better patient outcomes.

As the pandemic evolved, an added strain was placed on Emergency Departments (EDs) with the need to isolate COVID-19 patients from those seeking emergent care and non-COVID-19 care. Minimizing time spent in the ED or bypassing the ED altogether, along with the suspension of facility-based elective care, became a priority. This caused a shift in the traditional patient journey. There was a heightened interest in virtual assessments and notification systems to improve the flow of patients through EDs.

The three case studies outlined in this brief, highlight how technology is being applied in new ways to support the patient journey from pre-arrival to departure.

## **Tools to Address Collaboration and Communication Challenges in Workflow**

Tools that improve collaboration and workflow are of great value to provider executives. Recently, Everbridge surveyed more than 100 provider executives about their internal challenges with existing workflow. More than one-third of survey participants (37%) indicated that collaboration among staff members was their top priority, followed by hand-offs between care team members.<sup>1</sup>

### **Coordinated Patient Hub**

A coordinated patient hub is crucial for delivering quality patient care. All members of the care team benefit from having timely information about patient arrival, patient care, and patient discharge. The ability to send notifications to remote care team members from this hub is invaluable. Unfortunately, the EMS team is not usually included in the patient hub. Studies have suggested that better coordination of care and communication between acute and post-acute care providers have the most potential to reduce hospital readmission rates.<sup>2</sup>

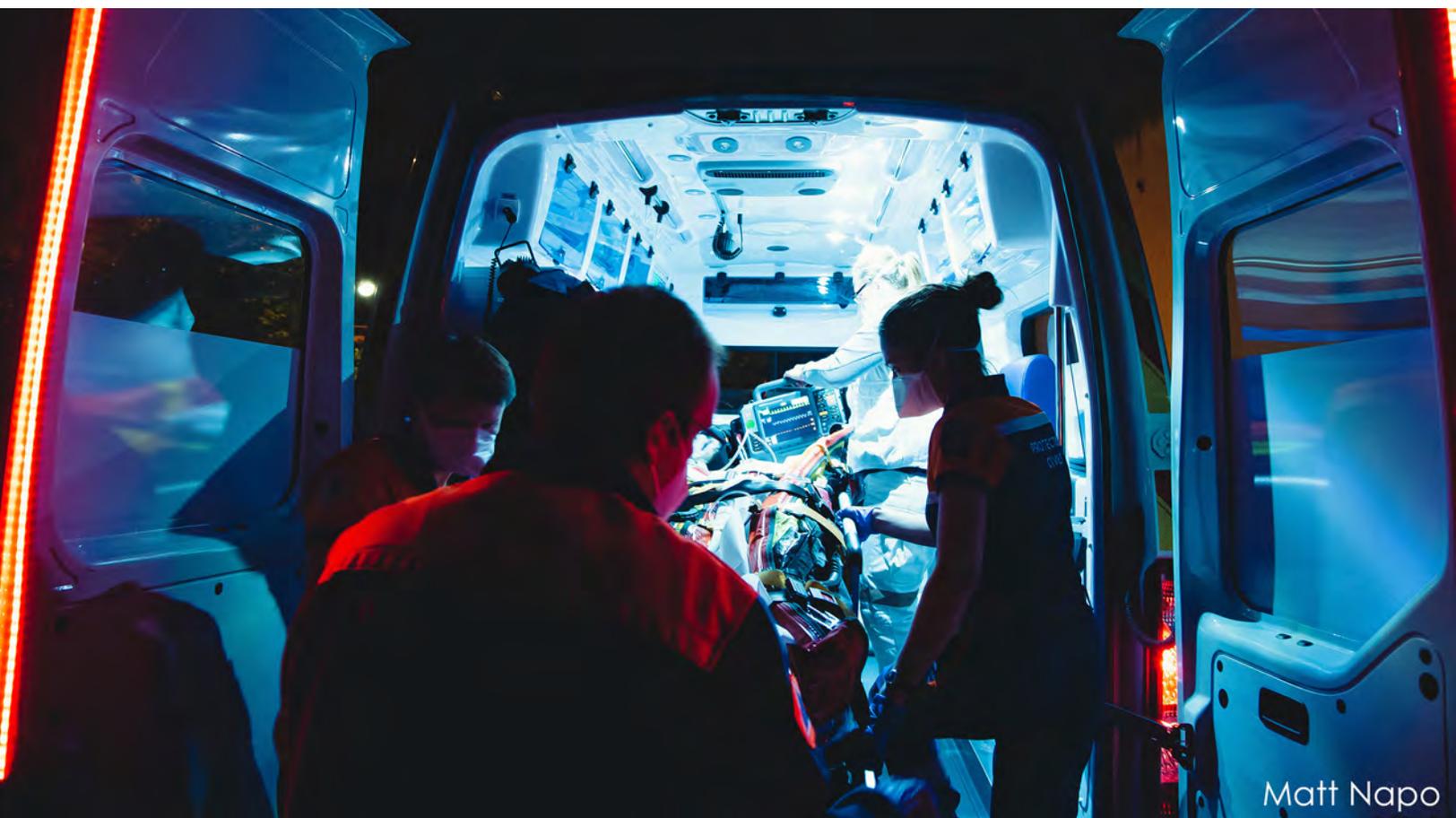
Some complex workflows have a high potential for communication failure. For example, ST-segment elevation myocardial infarction (STEMI) or severe heart attacks, strokes, and traumas require clinical collaboration and communication, particularly for remote care team members such as EMS, so that the patient's health does not deteriorate. In these types of cases, automated processes can positively impact the patient journey and reduce care costs. It is helpful to leverage workflow efficiencies that provide multiple patient touchpoints through one platform.

### **Using Virtual Assessments with EMS to Improve Care**

Assessing patients before they arrive at the hospital is becoming more commonplace. The use of telehealth for virtual consultations from ambulances and other remote locations is increasing as executives recognize the value this brings. When asked about the impact of increased telehealth visits on their workflows, more than half (61%) of respondents are conducting pre-and post-hospital consults via telehealth. Organizations are employing the use of telehealth to address communication challenges in both the emergency department and intensive care units.

- Almost a third (30%) are leveraging telehealth for screening and triaging patients before they arrive at the emergency room
- More than a third of organizations (36%) are using telehealth technologies for tele-intensive care unit (ICU) consultations<sup>3</sup>

Incorporating virtual assessments into the workflow improves care and removes delays for patients.



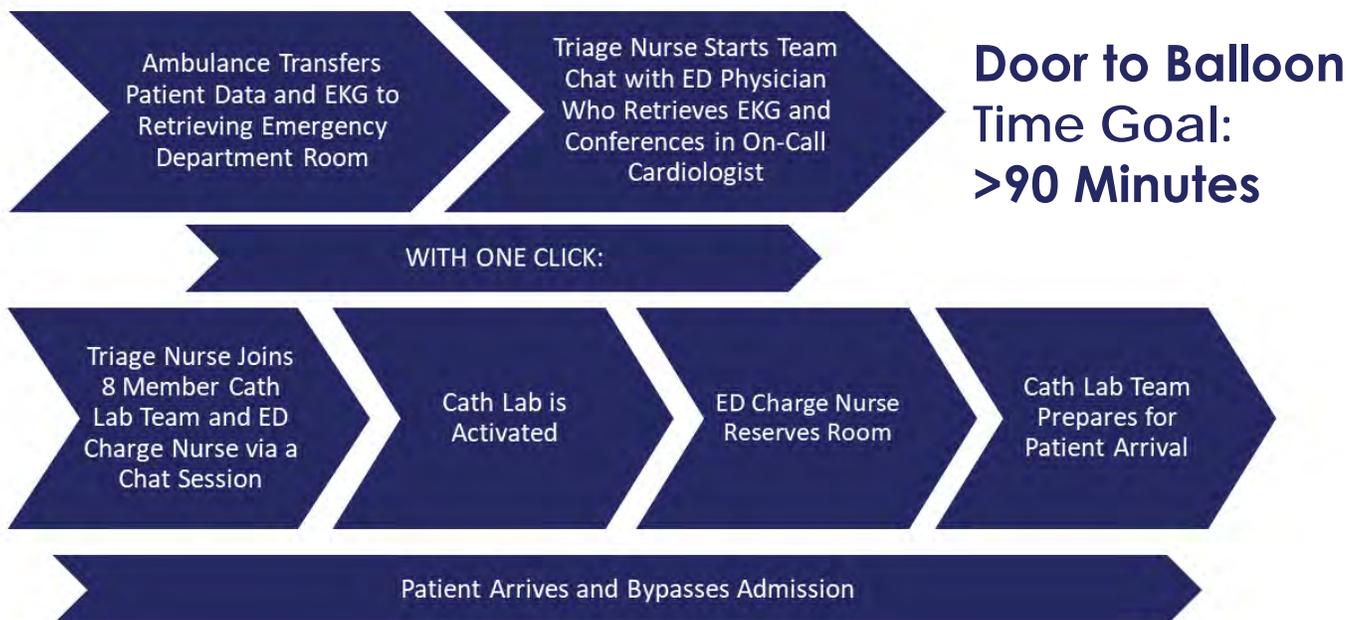
# Case Study #1 – Reducing Door-to-Balloon Time for STEMI Patients in a New York Hospital

A New York hospital wanted to automate and improve its manual workflow for STEMI or severe heart attack patients. The initial workflow was inefficient and there was a potential for handoff breakdowns between care team members. Communication methods such as phones, e-mail, and pagers would sometimes lead to delayed responses due to unanswered e-mails and pages, or games of phone-tag between care teams. The hospital wanted to improve the communication between EMS and the care team, so patients would receive quality treatment without delay. To do this, the team wanted to notify the STEMI team on site that a potential STEMI patient was en route to the hospital.

The hospital implemented a clinical communication and collaboration plan by incorporating a notification system with the EMS team to assess if STEMI care was appropriate. When a patient with suspected STEMI was on her way to the hospital, the EMS team contacted the on-call cardiologist, who made the determination if the treatment was necessary. If yes, the cardiologist notified the operator to activate the STEMI process and the STEMI team in the hospital was also notified. This advance notification process and virtual assessment reduced the hospital's door-to-balloon<sup>4</sup> time to less than 90 minutes.

The workflow below shows how effective communication and collaboration optimizes decision making, reducing onset to treatment time.

## STEMI Team Communication and Collaboration Result



Effective communication and collaboration optimizes decision-making reducing onset to treatment time in high-acuity cases such as STEMI, when the door-to-balloon time goal of less than 90 minutes needs to be secured.

## Case Study #2: Reducing Door-to-Needle Time for Stroke Patients

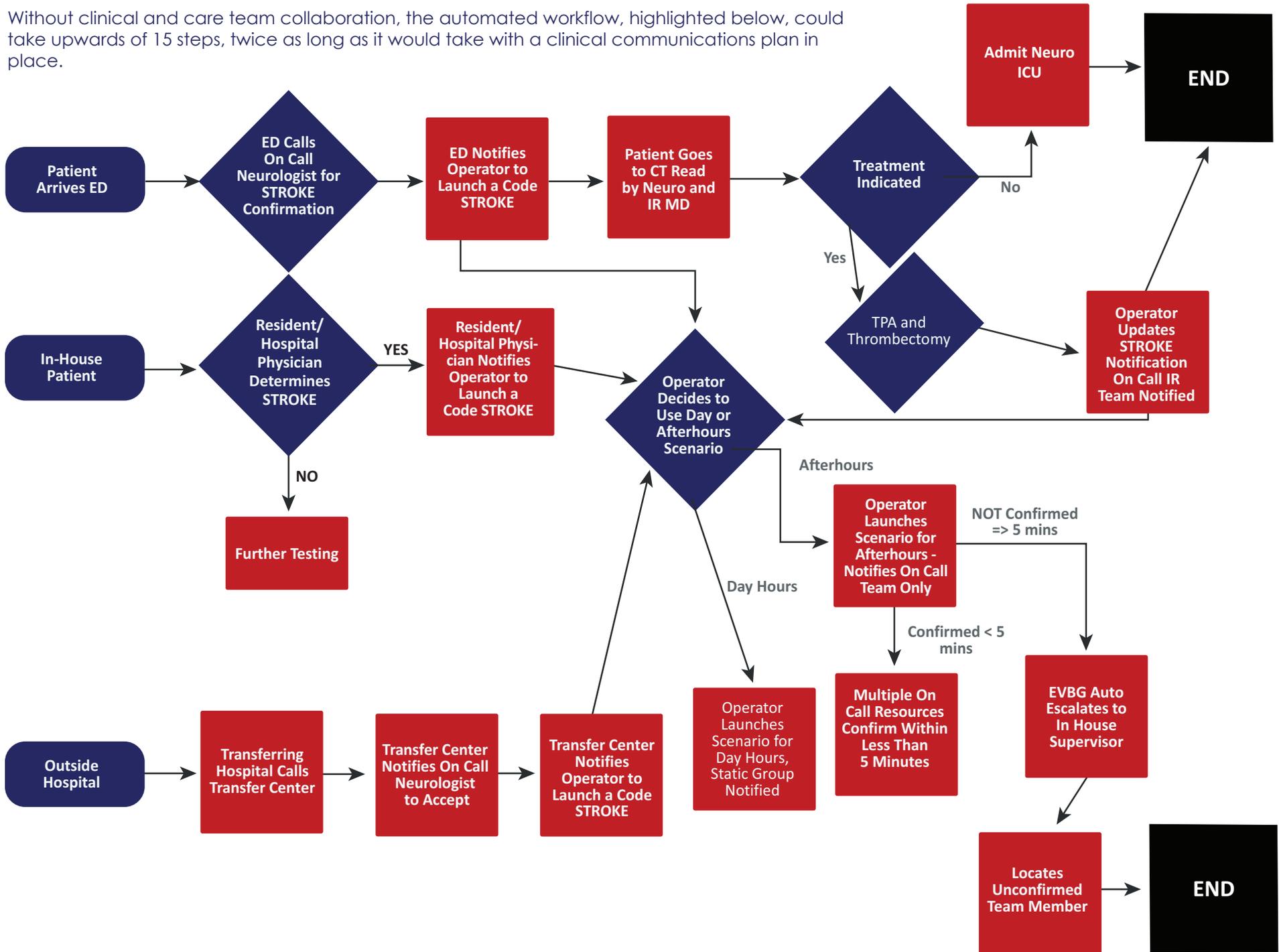
For patients who have suffered a stroke, every second matters. Door to needle time<sup>6</sup> determines the quality of recovery and ultimately, patient survival. One hospital improved its workflow by using pre-hospital notifications and virtual assessments to improve collaboration amongst the care team. Everbridge worked with a hospital system's stroke program to outfit ambulances with iPads so that an on-call neurologist could do a virtual stroke assessment while the patient was en route to the hospital. This allowed the patient to be triaged in advance. A notification is sent to the care team prior to the patient's arrival so they can prepare treatment and save valuable minutes.

This process resulted in a reduction in door-to-needle time by seven minutes and 45 seconds and saved an average of \$4,500 per inpatient stay.<sup>7</sup> Saving almost eight minutes is potentially the difference between a patient walking out of the emergency department instead of leaving in a wheelchair.



# Automated Code Stroke Workflow

Without clinical and care team collaboration, the automated workflow, highlighted below, could take upwards of 15 steps, twice as long as it would take with a clinical communications plan in place.



## Case Study #3 – Patient Care After Discharge: Communication, Collaboration, and Cost Savings

Coordinating care after discharge should be a seamless part of the patient care journey, as any breakdown in communication – from patient intake to bed management, care management, scheduling and delivery of diagnostic and therapeutic interventions to discharge planning – can compromise care.<sup>8</sup>

One teaching hospital improved communication and clinical collaboration in a home setting (i.e., post discharge). Providing hospital care at home can improve outcomes for patients discharged from the emergency room and decrease the overall cost of the patient's care. In the Hospital Without Walls model, patients are continuously monitored and seen by a physician or nurse either at home or virtually. In the past, there were barriers to this model of care, such as safety concerns, quality of care, and lack of reimbursement.



### Some of the findings from the case study include:

- Cost – The cost for patients who remained at home was 20-30% less than if they were in the hospital.
- Lower Readmission Rate – Patients treated at home had a readmission rate of 11%, whereas the patients that had been treated in an inpatient setting had a 36% readmission rate.
- Reduced services – Patients saw a reduction in services such as labs and X-rays, which is another cost reduction (e.g., labs – 6% vs. 22%).
- Faster Recovery – Patients walked more at home and were able to sleep more comfortably in their beds, leading to a faster recovery.

## Conclusion

Secure clinical communication and care team collaboration provides an instant way to connect all patient care team members through a single platform. Healthcare systems that continually improve and invest in clinical communication and collaboration technologies are building resilience for the future. Improving workflow efficiencies and clinical collaboration across care teams has been shown to enhance timely delivery of care, improve patient outcomes and decrease costs. The case studies discussed in this report demonstrate the value of collaboration and clinical communication for providing responsive, proactive, and efficient care in the clinical setting and at home.

## **About eHealth Initiative & Foundation**

eHealth Initiative Foundation (eHI) convenes executives from every stakeholder group in healthcare to discuss, identify and share best practices to transform the delivery of healthcare using technology and innovation. eHI, along with its coalition of members, focuses on education, research, and advocacy to promote the use and sharing of data to improve health care. Our vision is to harmonize new technology and care models in a way that improves population health and consumer experiences. eHI has become a go-to resource for the industry through its eHealth Resource Center. For more information, visit [ehidc.org](http://ehidc.org).

## **About Everbridge**

Everbridge, Inc. (NASDAQ: EVBG) is a global software company that provides enterprise software applications that automate and accelerate organizations' operational response to critical events in order to Keep People Safe and Organizations Running™. During public safety threats such as active shooter situations, terrorist attacks or severe weather conditions, as well as critical business events including IT outages, cyber-attacks or other incidents such as product recalls or supply-chain interruptions, over 5,800 global customers rely on the Company's Critical Event Management Platform to quickly and reliably aggregate and assess threat data, locate people at risk and responders able to assist, automate the execution of pre-defined communications processes through the secure delivery to over 100 different communication modalities, and track progress on executing response plans. Everbridge serves 8 of the 10 largest U.S. cities, 9 of the 10 largest U.S.-based investment banks, 47 of the 50 busiest North American airports, 9 of the 10 largest global consulting firms, 8 of the 10 largest global automakers, 9 of the 10 largest U.S.-based health care providers, and 7 of the 10 largest technology companies in the world. Everbridge is based in Boston with additional offices in 25 cities around the globe. For more information visit [www.everbridge.com](http://www.everbridge.com)

## Endnotes

- 1) Everbridge. (2021, April 14). COVID-19: Lessons Learned that can be Applied to Value-Based Care [Slide 8]. Wwww.Ehidc.Org. <https://www.ehidc.org>
- 2) Source: The consequences of poor communication during transitions from hospital to skilled nursing facility: a qualitative study. King BJ, Gilmore-Bykovskyi AL, Roiland RA, Polnaszek BE, Bowers BJ, Kind AJ, J Am Geriatr Soc. 2013 Jul; 61(7):1095-102.
- 3) Everbridge. (2021, April 14). COVID-19: Lessons Learned that can be Applied to Value-Based Care [Slide 8]. Wwww.Ehidc.Org. <https://www.ehidc.org>
- 4) Defined as the time it takes for a heart attack victim to receive a treatment called balloon angioplasty moment, they walk through the hospital doors.
- 5) Everbridge. (2019, December). Care Coordination: Many Patient Touchpoints, One Strategy for Success.
- 6) The time from presentation of patient with symptoms at the hospital to the start of IVT, can therefore be used to evaluate the quality of the acute stroke care provided by each hospital
- 7) Sensabaugh, Natalie. "COVID-19: Lessons Learned that can be Applied to Value-Based Care" Virtual webinar. April 14, 2021
- 8) Everbridge. (2019, December). Care Coordination: Many Patient Touchpoints, One Strategy for Success.