Members in ACTION

CASE STUDY

TELETRIAGE EMERGENCY DEPARTMENT PROGRAM

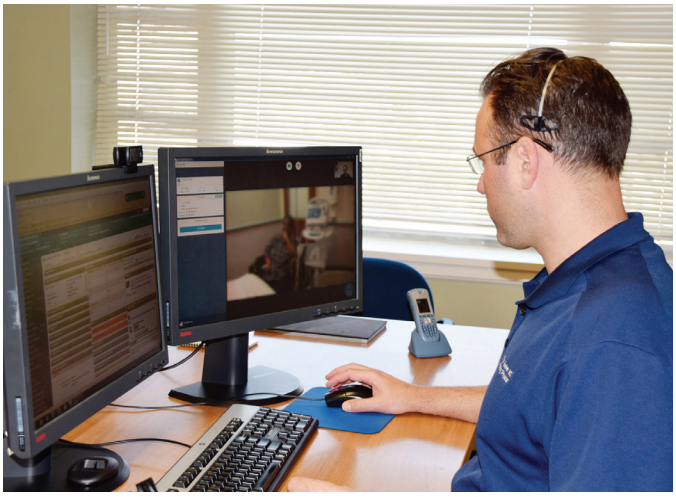
MedStar Washington Hospital Center | Washington, D.C.

Overview

As the largest health care provider in Maryland and the Washington, D.C., region, MedStar Health includes 10 hospitals, nine of which have emergency departments (EDs). The ED at MedStar Washington Hospital Center (Hospital Center) was like many other urban EDs across the country. Complicated work-ups and overcrowding led to long wait times for the more than 90,000 adult patients seeking treatment annually. To address this issue, in 2009 the Hospital Center embedded a "provider in triage" – known as the PIT approach – to assist patients as they entered the ED. Although PIT was not unique to the Hospital Center, the organization executed the effort with notable success. As a result, the ED staff was able to decrease "door-to-doctor" time, reduce the number of patients leaving the ED without being seen, and deliver medications to patients more quickly.

Leaders at MedStar Emergency Physicians (MEP) saw an opportunity to build on the Hospital Center's ED PIT success by implementing what they viewed as a natural step in the evolution of ED care: remote triage. In collaboration with MedStar Institute for Innovation (MI2), MEP partnered with a start-up technology firm to develop a telemedicine portal and flow management system to meet the Hospital Center's needs. By 2015, the Hospital Center launched its TeleTriage pilot to improve the efficiency of care delivery as well as patients' perception of their ED experience.

In the TeleTriage model, a triage nurse interviews the ED patient, then connects to the off-site attending physician and summarizes the patient's symptoms. The physician is located in a remote command center, with two computer screens. One screen displays a secure, live, two-way video and audio connection. The second screen displays the EHR, allowing the on-duty physician to review medical records that inform the diagnostic pathway and treatment plan, to place patient orders, and to document the encounter.



From the off-site command center, Ethan Booker, M.D., FACEP, conducts a TeleTriage visit with a patient at the Hospital Center's ED.

"After listening to the triage nurse's presentation, reviewing the patient's history, and speaking to the patient, the physician then makes a preliminary diagnosis and immediately places orders into the system," says Ethan Booker, M.D., FACEP, attending physician in the Department of Emergency Medicine at the Hospital Center and medical director of the MedStar TeleHealth Innovation Center at MI2. "Instead of returning to the waiting room, the patient then moves to the internal area of the ED for initial diagnostic treatment."

Impact

Before implementation of TeleTriage, physicians working the challenging nine-hour PIT shift often dealt with distracting, ancillary issues that interrupted the delivery of care. But the TeleTriage model allows

physicians to focus on evaluating patients and placing orders. In fact, Booker notes that the maximum processing speed in the traditional PIT model was 10 patients per hour; however, under the TeleTriage model, that number has increased to 20 patients an hour. The percentage of patients triaged in less than 10 minutes also increased from less than 50 percent to about 70 percent.

With more than 30,000 patient visits recorded under the TeleTriage model, the median wait time between the nurse's request for a consult and the time the physician sees the patient on the screen is merely 24 seconds. Furthermore, pre-TeleTriage, the maximum workload per shift was 90 patients while with the new model, that number rose to 137 patients – without using any additional physician resources.

Lessons Learned

Booker notes that although the technical challenges were fairly insignificant, developing the workflow around a telehealth physician was a bit more challenging.

"Initially we were concerned that our more experienced nurses might be less enthusiastic about changing such a long-standing process," he explains. But Booker says leaders appealed to nurses by emphasizing their enhanced role as an advocate. "Under the TeleTriage model, when triage nurses present the patient to the physician, they are able to exercise even more clinical judgment than previously, which the nursing staff embraced," notes Booker.

The overwhelming response by physicians was positive. Most were very pleased that their physical practice environment went from one that was very exhausting and often frustrating to one that allowed them to practice with more focus and efficiency.

Future Goals

Thus far, MedStar Health has expanded TeleTriage to the lower-volume ED at MedStar Good Samaritan Hospital in Baltimore, using the same on-duty physician that monitors the Hospital Center's ED. Booker hopes that in the future, MedStar can expand even further to support all of its EDs with similar programs.

In the interim, to maximize the capacity of the on-duty ED TeleTriage physician, two of MedStar's 14 urgent care centers located throughout Northern Virginia, Washington D.C., and Maryland are piloting a program in which the Hospital Center's TeleTriage physician is available for consultation on difficult cases that may need ED treatment. MedStar's leaders hope to expand this program to all 14 urgent care centers.

"Our numbers and the feedback from medical staff and patients demonstrate the best reasons for our TeleTriage program," says Booker. "We can provide a flexible service to multiple sites to meet irregular demand."

CONTACT

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