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ignite outcomes improvement

Quick Registration Dramatically Reduces Delays in ED Patient Care

PATIENT REGISTRATION IS A CRITICAL STEP IN THE ED WORKFLOW

In 2012, the ED visit rate in the U.S. was 42 visits per 100 people.[1] ED patient registration is an essential step in the ED workflow—a requirement for initiating EHR documentation with impacts on patient safety. Misidentifying patients during registration compromises patient safety because caregivers make treatment decisions using historical data in the EHR. The ED registration process must include reliable identification of patients to ensure the information obtained and entered into the EHR is associated with the correct person.[2] Timeliness is another important ED registration factor. A lengthy registration process can delay patients getting much-needed treatment.

Mission Health is a community hospital system that serves the 18 westernmost counties of North Carolina. The system comprises six hospitals, including the flagship Mission Hospital. Mission Health's Emergency Services include western North Carolina's designated Level II Trauma Center at Mission Hospital, select telehealth specialties at regional hospitals with medical direction provided by Mission Hospital-based specialists, ground transportation by Regional Transport Services (RTS), and air transport provided by Mountain Area Medical Airlift (MAMA)—both transportation services can provide transport for neonatal patients.

Mission strives to provide world-class care to people and their families when they need it most. Mission's Aim is to get every person to the desired outcome, first without harm, also without waste, and always with an exceptional experience for each person, family, and team member.

LENGTHY ED REGISTRATION PROCESS DELAYS ED THROUGHPUT

As part of its ongoing performance improvement work, Mission evaluated its ED registration process to find that it was lengthy and contributed to ED throughput delays. The time from patient arrival to accurate patient identification took over three minutes to complete.

Several factors contributed to Mission's lengthy registration process, including the fact that registration staff asked patients 17 questions before they could be assessed by clinical staff, and they collected a variety of data in addition to patient identification (e.g., social security numbers, pharmacy information, home addresses, and advance directive information).

Mission's lengthy ED registration process resulted in patients waiting in line for as long as 15 minutes to be checked into the ED to receive treatment. Mission realized it needed a quicker registration process to reduce delays in ED patient care and improve patient safety.

> " The lengthy registration process delayed treatment for the fifth person in line. On average, the fifth person in line was waiting at least 15 minutes to be checked in. That small amount of time could make all the difference in the world in saving someone's life. "
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> Rick Lee, MSN, RN, CEN, NE-BC Executive Director, Emergency Services

DATA-DRIVEN APPROACH REVEALS THE BENEFITS OF QUICK REGISTRATION

Mission set out to improve its ED registration process by engaging frontline staff in evaluating the ED workflow. Based on observations and value stream mapping of the registration process, and frontline staff feedback, Mission redesigned the registration process to ensure meaningful tasks were implemented to improve workflow.

Mission's redesigned, quick registration process reduced the number of questions asked immediately upon patient presentation to the ED from 17 to three: name, date of birth, and chief complaint. Registration staff asked the remaining questions at the patient bedside during their ED stay, reducing unnecessary delays in registration and more rapidly moving patients through care, while ensuring patient safety and compliance.

Mission used the Health Catalyst® Analytics Platform, including the Late-Binding™ Data Warehouse and broad suite of analytics applications, to evaluate the impact of the quick registration process, assessing both the time required to complete registration and impacts on ED throughput and length of stay (LOS).

RESULTS

In a little over one year, Mission's quick registration process has improved patient safety by ensuring timely accurate patient information is made available for care, dramatically reducing delays in ED patient care:

- 70 percent relative reduction in the time to complete registration. Today, registration staff complete accurate patient identification and registration in less than one minute.

- 33 percent relative improvement in time from patient arrival to triage start time.

- 24 percent relative reduction in median LOS for discharged patients, 15 percent relative reduction for admitted patients, and 42 percent relative reduction in median LOS for behavioral health patients.

    - Reductions in LOS were supported by a comprehensive redesign of the triage process, ED workflow changes, and the changes in the registration process.

WHAT'S NEXT

Mission will continue its interdisciplinary approach to improve registration workflow and outcomes. It plans to pilot a payment processing system at the patient bedside to reduce the time required to process payments in the ED. 〰

REFERENCES

1. Hing, E. & Pinyao, R. (2016). Emergency department use in the country's five most populous states and the total united states, 2012, NCHS data brief no. 252. *Centers for Disease Control and Prevention.* Retrieved from https://www.cdc.gov/nchs/products/databriefs/db252.htm

2. Ash, J., Singh, H., & Sittig, D. (2016). Self-assessment: Patient identification. *The Office of the National Coordinator for Health Information Technology.* Retrieved from https://www.healthit.gov/safer/sites/safer/files/guides/safer_patient_identification.pdf

ABOUT HEALTH CATALYST

Health Catalyst is a next-generation data, analytics, and decision support company committed to being a catalyst for massive, sustained improvements in healthcare outcomes. We are the leaders in a new era of advanced predictive analytics for population health and value-based care. with a suite of machine learning-driven solutions, decades of outcomes-improvement expertise, and an unparalleled ability to integrate data from across the healthcare ecosystem. Our proven data warehousing and analytics platform helps improve quality, add efficiency and lower costs in support of more than 85 million patients and growing, ranging from the largest US health system to forward-thinking physician practices. Our technology and professional services can help you keep patients engaged and healthy in their homes and workplaces, and we can help you optimize care delivery to those patients when it becomes necessary. We are grateful to be recognized by Fortune, Gallup, Glassdoor, Modern Healthcare and a host of others as a Best Place to Work in technology and healthcare.

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