Chattanooga-based Erlanger Health System is a large public health care system that provides air and ground ambulance service to residents across a 50,000-mile region. The system is composed of six hospitals including an academic teaching hospital and level one trauma center. As Erlanger prepared to consolidate from 15 medical record systems to one, the main objective was patient safety, particularly reducing medical and pharmacy errors, and duplicate testing. Improving provider workflow and documentation efficiency in the new electronic health record (EHR) was imperative. Erlanger decided to leverage EHR technology to reduce administrative burden and provider frustrations and improve workflow efficiency.

Erlanger Health created and deployed an intervention bundle for ambulatory care in May 2017, and for inpatient care in October 2017. Physician and nurse advisory councils within the health system and an interprofessional EHR implementation team drove the development.

EHR implementation at Erlanger focused on three goals:

**Decrease provider documentation burden**
To minimize typing and clicks, specialty-specific Epic NoteWriter templates were created, and speech recognition software is now available to all providers. Specialists who were concerned about reduced efficiency transitioning from paper to EHR-based templates received help from scribes to make the change.

**Automate repetitive tasks**
Physicians from primary care specialties created EHR-based protocols for staff-driven medication refills. Inpatient plan of care protocols were created for members of the care team who are not physicians. For example, respiratory therapists can deliver inhaler therapy. In addition, the EHR now automatically sends emergency department (ED) visit and hospital discharge summaries to predesignated outpatient providers.

**Increase EHR usability**
The EHR was enhanced to increase usability in several ways. A standard screen is used across all

**Impact**
Physicians and other clinicians spend less time on documentation and more time on delivering high-value patient care. Care protocols have empowered allied health professionals to take a more active role in care delivery and reduced time delays in providing care to patients. The interventions led to a change in culture, shifting from traditional care roles to better coordinated, team-based patient care.

The AHA Physician Alliance provides resources to connect hospitals with work being done across the field to address the individual, environmental, and systemic factors that contribute to burnout and to foster resilience and well-being. You may find more case studies at our knowledge hub.
care settings for medication reconciliation. Buttons are embedded in the EHR menu for commonly accessed screens to reduce time spent by clinicians and staff toggling between screens when writing progress notes. A dashboard is now viewable by all team members to monitor care components as they are completed for the inpatient admission process. In addition, charts have been formatted to enhance readability. For example, when a provider opens an old progress note, the patient assessment and plan are immediately visible with the other note sections condensed.

**Results**

About 83 percent of clinical encounters are now closed within one day of the appointment. The average time to authorize a medication refill has decreased to 1.2 days. Communicating discharge information between the ED or hospital and outpatient providers has improved through use of automated discharge summaries.

**Lessons learned**

Preparation is key. Erlanger chose to delay using the EHR for patient billing by six months after the transition to the new records system. The health system addressed documentation hiccups with insurers and vigorously prepared employees for upcoming workflow changes. Preparation involved offering listening sessions, using peer super-users to teach other colleagues, and hiring 100 additional FTE for EHR implementation. As a result, there were no overall revenue losses from EHR implementation.

Don’t reinvent the wheel when customizing the EHR interface for employees. Develop a screen in the EHR for the care team, and then customize the processes and responsibilities for each individual team’s role.

**Future Goals**

Erlanger Health will expand and scale care team member roles. For example, a program that empowered pharmacy technicians to complete the medication reconciliation process for patients in the ED program will now be expanded to the pre-operative setting.

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