High Level Results

- Improved nursing chart completeness rate by 56% in six months.
- Provider utilization of Emergency Department Information System (EDIS) usage jumped 40 points in sixth months.
- 9 out of 11 ER physicians document electronically.
- Reduced medication reconciliation time from 75 minutes to less than 30 minutes.
- Reduced amount of time for triage from 30 minutes to 18 minutes.

Taking Ownership of the Emergency Department EHR

Burgess Health Center improved their ED through a LEAN process and working with their EHR provider.

Background

The adoption of electronic health record (EHR) systems in the emergency department setting has lagged behind general implementation for a variety of reasons. Some claim that the time needed to document the required information takes away from patient care[1] while others feel that not all meaningful use criteria is relevant to (Emergency Departments) EDs when it comes to patient care.[2]

The most recent available data for EHR system use in the ED setting shows that while 84% of EDs utilized an EHR system in 2011, only 14% were able to support at least nine Stage 1 Meaningful Use objectives.[3]

For Iowa-based Burgess Health Center, the decision of which EHR to use in their emergency department came down to the comfort of their providers and the belief that the system they selected would do what they needed.

Burgess made the decision to utilize the Evident EDIS solution because their providers were familiar with the system, which means there was a minimal learning curve.

"The reason we went with EDIS and not another system is the doctors said they didn't want to learn another system," Grady Warner, director of information technology at Burgess said. "They wanted the information to flow from ER down to the floor."

When Burgess went live in August of 2015, the urgency of the looming Meaningful Use deadline meant they went right into Evident EDIS without the opportunity to make the solution theirs.

"I felt like it was overwhelming. We felt rushed, and we knew why we had to rush," said Kate Garred, clinical analyst at BHC. "We had a Meaningful Use deadline. So that's why we decided to take the documents as-is."

"When we put EDIS in place, we turned it all on, and it was way too much." said Warner.

On the floor of the emergency room, the staff knew that something had to change if they were going to improve their situation.

"When we first started, I would look at the documentation and I couldn't even tell what was done for that patient in the ER," said Director of Emergency Services, Karla Copple. "Sometimes I couldn't even tell what they came in for or what happened when they left."

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- Drew Schramm, Paramedic

Challenges

The initial rollout of EDIS was met with issues, including workflow, report appearance and user buy-in. With no set standard of work, the entire ER staff was creating their own charting processes, which left Burgess with missing documents and charges, as well as taking valuable time from the staff.

"Initially everyone had their own way of charting because there were 15 different ways of doing it," said Burgess RN Jesse Marr.

"They wanted a document they could be proud of and that told the patient's story," added Garred.

Solution

For BHC, they needed to make the EDIS solution work for them. They approached this need using LEAN methodology principals designed to bring together the various stakeholders to create their own ER workflow. One that not only made sense, but improved the use of down-stream users. At its core a LEAN program is:

1. Respect for people
2. Eliminating waste

"One of the things I think was a driving force was that one of our doctors really felt that the folks in the ER had to do this electronically," Warner said. "When ER patients are admitted, they will typically be cared for by other physicians. If the ER stay is dictated, the attending physician may not have any documentation from the ER visit. This is more challenging during nights, weekends and holidays as we don't have transcription staff on duty."

Rhonda Miller, a physician's assistant at Burgess, saw first-hand the delay dictating could cause.

"I'm faster at dictating, but when you dictate, some of the charts were not done for days, so you had no idea what went on," said Miller. "Now, the charts are done and you can see what's ordered with the results all online instead of doing the paper shuffle. You can see what has happened as far as when they came in or the last time the patient was there."

Some of the processes the Burgess team reviewed included:

- Nursing documentation and charge capture
- Medication reconciliation
- Physician documentation and physician charge capture

Paramedic Drew Schramm was part of the LEAN steering committee, and he said that after several bumps, the team has been able to create a standard of work for staff to follow, which has improved the workflow of the ER staff.

"Our LEAN team has been able to develop a process where we can smoothly start a patient in the ER, document on that patient, post documents and complete everything effectively," said Schramm.

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Results

After deciding on the areas to tackle, the BHC staff worked to create a process that would positively affect the outcome for both users and patients.

For nursing documentation, Burgess focused on several areas, including:

- Streamlined documents
- Creating a standard of work
- An improved summary report
- Enhanced communication procedures

Streamlining the documents was the tip of the spear for BHC. The deep dive into this section of EDIS allowed them to reduce their triage document from 111 questions down to 42 questions while they took their nursing assessment document down to 175 questions from 475.

When this was combined with education of the new standard of work, staff members knew exactly what and where to chart. When BHC first began tracking their chart completeness range in March 2017, they were at 39% completion. As of August of the same year, they were averaging 95% completion.

"When we started the LEAN process, we asked, 'what do we need to legally have in the document, why are we opening every section and reviewing it,'" said Warner. "A lot of it was getting the weeds out of the way and saying this is truly all we need to document on most patients. That reduced the number of components in the triage document and the time it takes to do it."

When patients would enter the ER, the Burgess staff was spending about 75 minutes on each admission. The LEAN process, helped them cut admission time by more than half, taking it down to under 30 minutes per admission in August.

"We are a rural hospital and there were a lot of extra components in the triage form that we didn't need or we don't do. We were having to dig through and look to see what needed to be charted," said Marr. "The time difference is huge. Now the nurse can quickly go to the next patient."

Medication Reconciliation is a challenge for ERs everywhere as they struggle to get patients to bring an updated med list and/or bring their medications with them. For Burgess, the ER staff utilized Evident to reduce the amount of time needed to ensure that they were receiving the necessary information without spending extra time rechecking the medication list.

"The ER tracked that they confirmed the meds in Evident if they were given good face-to-face information. If they did not get reliable information, then it was up to the floor to complete," Warner said. "The floor knows that if a med has a green checkmark that they should not need to recheck those meds, though it still is a work in progress."

For many facilities, physician adoption and satisfaction with the tools they are using remains one of the hardest obstacles to overcome. With the number of physicians that staff the BHC emergency room, the team knew it was going to take some work. They focused their energy on:

- Streamlined documents
- Utilize electronic charting
- Enhance custom documents/reports
- Create ED Order Sets and protocols for nursing

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- Jesse Marr, RN

"Overall, now with the system, I can see a patient and document everything in less than 10 minutes. The order entries and other improvements made our lives a lot easier."

- Dr. Peter Daher, Physician

"We have our custom document, which is called 'ED Physician Documentation'," said Garred. "It actually only has one section in it, so everything is built off of it. It has its own custom report that goes with it to make it pull the way they want it. I would say that 80-percent of the documents that come out of the emergency department use our custom template."

To this point, BHC has seen success on the physician front, taking their Provider utilization of EDIS from 55% in March 2017 to 95% in August of 2017. The provider charge capture did even better, going from 55% to 97% in the same timeframe.

"We never completely lost the providers/nursing staff, which was good, and that's why we didn't quit. We knew if we did, we would never get them back on board," Garred said. "Now we have complete buy-in from our regular users. Our numbers are around 96-percent for all visits done electronically."

Attending physician Dr. Peter Daher saw that there were things that could be enhanced with the initial system, but has also seen the improvements that have been made.

"When this came about, the initial system had issues," said Dr. Daher. "Overall, now with the system, I can see a patient and document everything in less than 10 minutes. The order entries and other improvements made our lives a lot easier."

The thorough work the Burgess team has put into their documentation has also received positive reviews from the receiving physicians.

"We've been getting better feedback that the documentation is useful," said Warner. "Even within our own clinics, the nurses and the doctors that have to do follow-ups with their own patients are saying that they can use this now. You can see the story and get the pertinent information out."

Looking Ahead

With all of the success Burgess Health Center has seen with EDIS in conjunction with their LEAN process, they know that they have to keep working to improve their processes. Continued monitoring, data gathering and review of workflows are standard processes for BHC and they will soon move on to reviewing and improving privacy and security aspects of their process. They also have insight into what it takes to successfully launch EDIS and how to make it work for them.

"I would advise any facility that was doing this to really take the time on the front end to start with the nursing documents," said Garred. "There are really only two. Look at those and really look at what you need to document, hide some of the information so it's not overwhelming to your staff."

"The majority of our success here has come down to us implementing a process and trying to stick to it as much as possible," said Schramm. "We actually self-audit every chart that goes through the ER. It's less on the sharpness of the axe and more on the skill of the user."

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[1] https://www.healthline.com/health-news/electronic-health-records-creating-problems-for-emergency-rooms#1
[2] http://www.medscape.com/viewarticle/840065n
[3] https://www.cdc.gov/nchs/data/databriefs/db187.htm