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Consulting

Case study

Improving ED operational performance at FirstHealth Moore Regional Hospital

Who/where

FirstHealth Moore Regional Hospital (Moore Regional) is an acute care, not-for-profit hospital that serves as the referral center for a 15-county region. Pinehurst, NC.

Challenge

Moore Regional asked Philips to conduct an assessment of their ED to review perceived inefficiencies, identify and implement performance improvements, and enhance the patient experience.

Solution

Philips led a comprehensive ED assessment, implemented targeted performance improvement processes, and provided interim ED leadership.

Moore Regional is a 402-bed, acute care, not-for-profit hospital serving a 15-county region in the Carolinas. They reached out to Philips to help address operational inefficiencies in their ED. A comprehensive ED assessment identified several areas for process improvement and training.

An onsite consultant provided exceptional interim ED leadership including daily staff management, team mentoring, and EMR implementation. The Moore Regional management team then requested a dedicated performance improvement (PI) program. Our PI consultant worked to recommend, develop, and implement process changes including front-end optimization, direct bedding, Emergency Severity Index[1] triage training, and split-flow vertical care.

Results*

Reduced LWBS by 83.6%
(6.46% to 1.06%)

Reduced arrival-to-triage by 62.0%
(13 to 5 mins)

Reduced arrival-to-room by 87.0%
(31 to 4 mins)

Reduced arrival-to-provider by 64.0% (47 to 17 mins)

Direct bedding improved by 169% (24.3% to 65.3%)

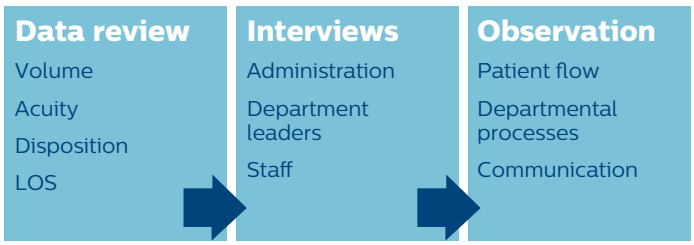
Improved patient experience
(overall rating of ER care by 95%)

Moore Regional has been providing quality patient-centered care for decades. Recently, they experienced a decline in ED volume and an unexpected vacancy in their ED leadership team. They asked Philips to assist by supplying interim leadership to fill the ED Clinical Manager vacancy and helping them focus on direct bedding and other process improvements.

Assessment

Philips consultants completed a comprehensive assessment of Moore Regional's ED processes and performance metrics. The review was based on data analytics and included staff interviews, team shadowing, and patient flow.

Assessment methodology



Observations from the assessment included: the known ED volume decrease (1.8% from 2015 to 2016); a high left without being seen (LWBS) rate of 6.46%, representing a lost opportunity of approximately $10 million in potential collectable revenue; and a high ED length of stay.[2]

The assessment also identified several areas of opportunity for performance improvement including:

- Arrival and Reception
- Triage Practice and Execution
- Direct Bedding
- EMS Bedding
- Split-Flow (vertical care) model
- Leadership Development

After the EMR go-live was completed, the Moore Regional team considered moving to implement those improvement opportunities most critical to operational success. However, an imminent EPIC EMR go-live launch and vacancy in ED leadership taxed internal resources and threatened to postpone action. They requested a Philips consultant to fill the ED leadership vacancy to support the EMR go-live and provide daily departmental oversight.

> "The Philips consultant quickly became part of our ED team. She provided exceptional staff leadership, improved communications, and helped implement direct bedding processes."
>
> Karen Robeano, RN, DNP
> VP for Patient Care Services and CNO
> FirstHealth Moore Regional Hospital

Interim ED Leadership

Our consultant joined Moore Regional as Interim ED Clinical Manager. With a master's degree in informatics and skills as an EPIC analyst, her first priority was to help bring the EMR project to completion. Concurrently, she began to address the performance improvement initiatives. She was impressed by the team's high level of engagement, attention to detail, and eagerness to implement direct bedding and improve other operational processes.

Together with the ED staff and leadership, she reviewed results of the initial assessment, discussed existing processes and performance metrics, and prioritized those areas of improvement likely to provide the best ROI. A draft plan for implementation began to emerge.

ED Performance Improvement

A Philips performance improvement (PI) consultant joined the team for an agreed 20-week engagement. His focus was to identify the gaps between the current and ideal state and confirm the project plan would improve specific and overall ED performance as well as the patient experience. The team (ED staff, leadership, and the PI consultant) agreed to create, implement, and standardize processes, remove all inconsistencies, define roles, assign accountability, and establish new communication practices.

1. The Emergency Severity Index (ESI) is a five-level emergency department triage algorithm initially developed and maintained by the Agency for Healthcare Research and Quality (AHRQ).
2. Additional collected revenue may be derived in whole or part from shortened wait times, work flow improvements, decrease in patients who leave without being seen, among other factors. Projection is based on the reported collectable revenues for admitted and discharged emergency room patients (excluding OB and surgical admissions). A weighted average is applied based on the individual's admission and discharged percentages. A reduction in left without being seen (LWBS) rates can mean additional ED volumes. The difference from baseline rate and measured LWBS rate Improvement is multiplied by annual volume and the blended collected revenue rate to calculate a projection of additional annualized collected revenue. Philips does not make any determination as to the medical necessity or appropriateness of hospital billing. Results are not predictive of results in other cases. Results may vary.

They reviewed best-practices and benchmark data from same-size hospitals to set target and stretch goals. At weekly meetings, metrics were evaluated to determine what was working and what required modification. Rapid-cycle-testing provided top-notch results for each initiative. Team participation was strong and consistent, marked by involvement of the medical director and key nursing staff and administrative representatives.

Throughout the entire process, the team engaged the broader ED staff. Everyone was aware of the progress and all data was transparent. In this fashion, performance improvement success was wholly embraced by Moore Regional and positioned for long-term sustainability.

Guided by the PI consultant, the ED team focused its efforts in the following areas:

ESI Triage Training
The goal was to educate and validate competency of 100% of the ED nursing staff on the 5-level Emergency Severity Index (ESI) Triage System.[1] Our consultant completed nine, 4-hour ESI Triage training classes with all RNs of Moore Regional. The education included inter-rater reliability and a train-the-trainer course to support a sustainable learning program. Clinical and behavioral performance expectations for triage nurses were also agreed upon.

Front-end process optimization
Working collaboratively with the ED staff and leadership, the PI consultant also focused on improving front-end operations and implementing a direct bedding process.

To revise the triage process and improve patient care, clinical decision-making was relocated to the reception area. A 'First Look Nurse' approach was implemented in which the nurse makes a quick assessment of the patient, designates an ESI level, and assigns the patient to an available, appropriate treatment space. This rapid RN triage, conducted in conjunction with registration, was the first step carried out in the direct bedding process.

Additional processes were created to expedite the time in which patients were examined. Physicians and nurses worked together to establish a new routine for full, rapid bedside triage.

"The Philips consultants provided exceptional recommendations. They listened to our challenges and helped to improve our ED performance and patient experience."

David Kilarski
CEO
FirstHealth of Carolinas

The collaborative approach created a parallel process that expedited patient treatment, increased patient satisfaction, and improved operational efficiency. *Arrival-to-room time decreased from a baseline of 31 minutes to a consistent 4 minutes – an 87% improvement.**

Split-Flow Vertical Care
Another opportunity to improve the patient experience included implementation of a Split-Flow Vertical Care model. This philosophy suggests that the low-acuity patient who walks-in 'vertically' will be treated fully and quickly, but not assigned to a bed.

Collaborating with the ED physicians, the team defined the types of patients appropriate for split-flow vertical care and facilitated the staff's increased utilization of protocol orders to initiate care prior to the patient being seen by a physician. Patients were directed to a new vertical flow waiting area rather than to a bed and assured they would be taken care of by either a nurse practitioner or a PA working under the direction of a physician. Specific scripting was developed to tactfully inform patients that they would be cared for quickly, but without a compromise to safety and quality.

Leadership Development
Three of the Clinical Nurse Leaders (CNL) were new to their position. Our PI consultant worked closely with each CNL to help them define how their role differentiated from, but aligned with the existing Charge Nurse role. In addition to operational oversight, new responsibilities included evidence-based practice, safety, quality, risk reduction, and cost containment.

The PI consultant provided leadership mentoring and coaching to the new CNLs to support their transition into the new role.

Project extension

The Moore Regional team was pleased with the impact the Philips consultants had on their ED performance and requested an extension of the PI project. The consultant stayed on and focused his efforts on standardized work processes for front-end operations as well as EMS arrival and room turnover processes to further support the split-flow vertical care model.

Challenges associated with treatment space availability for patients arriving via EMS resulted in delays upon ambulance arrival. New lines of communication were established to help staff assign emergent cases to a bed without a negative impact on walk-in traffic.

The consultant also recommended improvements to the ED radiology turn-around process, designed to decrease the length of time for a patient to receive an X-ray and to have those results available for the ER physician to determine patient disposition.

At completion, a transition plan focusing on sustainability was established. Post-project follow-up included weekly metric updates sent to the consultant for review and feedback along with on-site consultant meetings at 6, 12, and 18 months.

Results*

As a result of the Philips consulting engagement, FirstHealth Moore Regional Hospital was able to:

- Educate all nurses on ESI Triage
- Improve front-end and EMS arrival processes
- Implement Split-Flow Vertical Care
- Reduce LWBS and LOS
- Improve ED/Radiology processes
- Support CNL professional growth
- Improve the patient experience

The integrated process changes resulted in significant performance improvements including the below:

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Learn more

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For more information, please visit **www.philips.com/healthcareconsulting**.

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* Results from case studies are not predictive of results in other cases. Results in other cases may vary.