Ready Reliable Military Healthcare

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This proposal, directed toward the Veteran's Affairs (VA) Chief Nurse, the Department of Defense (DoD) Inpatient Squadron Commander, and the Emergency Department (ED) Medical Director, will discuss the value of Health Information Technology (HIT) and the positive impact the technology will promise to provide better care while promoting better health, and more effective stewardship of federal resources throughout the hospital.

The Joint Commission (2012) revised standards LD.04.03.11 and PC.01.01.01 have an improved focus on the importance of patient throughput and better representation of data and metrics used to monitor, manage, and identify patient flow issues throughout the hospital. Furthermore, The Joint Commission (2012) identified patient flow issues that might often originate in the ED; however, they may not be the source of the throughput problems.

The HIT currently used throughout the hospital can provide valuable, real-time Electronic health record (EHR)-generated workload data house supervisors can leverage to make staffing decisions to improve patient outcomes and staff satisfaction. Utilizing our current EHR software will enable both the DoD and the VA to strengthen the joint venture collaboration and commitment to both DoD and VA beneficiaries by ensuring accountability in both the ED and inpatient units in improving patient throughput, patient outcomes, and staff satisfaction.

Proposed SMART Goal

Specific

House supervisors will use HIT to monitor ED for overcrowding, staffing issues, and throughput concerns. This will be accomplished with First Net, which is already being used in the ED. We will begin to monitor median arrival to discharge or admission time. Comparatively, house supervisors will also monitor the percentage of patients who leave without being seen

(LWBS). Additionally, house supervisors will leverage the house-wide scheduling and staffing system, Clairvia, which is already used for staff scheduling. Clairvia will automatically generate predictive demand data based on trends and workload acuity data to drive staffing decisions, improving patient care and staff satisfaction throughout the hospital.

Measurable

According to Institute for Healthcare Improvement (IHI) measurement strategy guidelines, LWBS is a measurement strategy used to identify ways to improve patient flow (2018). Median time from arrival in ED to transfer to an inpatient bed is defined as the time in hours from when a patient presents to the ED to the physical arrival of the patient to an inpatient room or discharge from the facility. Cerner First Net will be utilized to track and monitor the data for the ED and can be retrospectively analyzed similarly for comparison. Clairvia will be used for acuity workload scores and predictive data for inpatient units. A five-point Likert scale will be used to survey the staff regarding the perception of workload appropriateness with EHR-generated workload acuity scores.

Achievable

As an MHS Genesis system administrator and current house supervisor, I will educate other house supervisors, management, and charge nurses one-on-one. Working groups can be created during the administrative and training days to provide additional instruction. Super-users will be identified and trained in each unit to serve as peer experts for education and implementation.

Relevant

Improving patient flow is related to better patient outcomes and greater staff satisfaction. Establishing nursing assignments is a complex process requiring constantly changing

information. However, the nurse-to-patient ratio is not the only connection between staffing and patient safety (Phillips et al.,2021). The efficiency of this process can be improved by quantifiable, real-time data provided by the EHR system. Improved staffing decreases healthcare-associated infections, pressure injuries, and falls, which have devastating health consequences and are costly for our facility.

Timed

Metrics for ED throughput, such as median time from ED to bed and the number of patients considered LWBS, will be tracked weekly and trended on a run chart to show how implemented changes may affect throughput metrics over six months. EHR-generated workload scores will be generated every four hours based upon orders, charting, and the specific information the built-in algorithm determines as factors to workload. These scores will be trended for six months. Nurses will be surveyed at the end of their shift for the overall perception of workload appropriateness before initiating the EHR-generated staffing methodology using a five-point Likert scale. Over six months, nurses will be surveyed using the same scale every shift to determine the effectiveness of the EHR-generated workload score on staff satisfaction related to the level of satisfaction with workload appropriateness before implementing the EHR-generated workload score.

Value of Health Information Technology

Providing Better Care

Nursing demands are highly variable and sometimes unpredictable; however, many studies have shown the association between staffing, increased adverse patient outcomes, and staff burnout (Womack et al., 2020). In the ED, inadequate staffing is associated with significant delays in triage, vitals, lab work, medications, procedures, and discharge (Ramsey et al., 2018).

Furthermore, Ramsey et al. found direct evidence correlating increased LOS and the percentage of patients who LWBS to decreased patient satisfaction (2018). The HIT available with EHR-generated workload scores and predictive staffing analysis has the promise of supporting our facility in its commitment to high reliability and patient-centered care.

Promoting Better Health

Patient safety is closely tied to nursing workload and staffing ratios (Phillips et al., 2021). Missed nursing care is a term used to describe nursing care that is delayed or unable to be completed because a nurse cannot meet the demands of the workload and is associated with increased falls, healthcare-acquired infections, and pressure ulcers (Phillips et al., 2021). As a result, improving staffing based on EHR-generated workload scores has the potential to improve patient outcomes and job satisfaction for staff while at the same time benefiting the hospital by decreasing the financial burden of healthcare-acquired infections and injuries.

Stewardship of Federal Resources

Workload estimation tools such as the EHR-generated work intensity score can provide quantifiable data to support the reallocation of staff as deemed necessary by the house supervisor to support safer staffing, reducing adverse healthcare-associated injuries and infections and financial burden. Real-time demand data allows house supervisors to maximize staffing and reallocate staff members when EHR generated-workload intensity scores are higher. This data supports the decision-making process to balance stewardship of federal resources, positive patient outcomes, and staff satisfaction.

Unfulfilled Promises of Health Information Technology

Although EHR-generated workload intensity scores provide valuable data, they do not consider factors such as frequency of call lights, proximity of room assignments on a given ward,

or staff skill level (Womack et al., 2020). Many staff nurses may be reluctant to trust an EHR-generated workload score because of factors they believe are not accurately captured. Since the workload acuity scores are automatically calculated every four hours and depend on accurate and timely charting, the score may be inaccurate because charting is not completed in time.

Developing Skills to Become a Meaningful User

To change the way nursing assignments have always been made, all house supervisors, hospital managers, and charge nurses must become meaningful users of the software available. House supervisors will work closely with site integrators to ensure they are proficient with the technology to provide staff support and education. Unit-specific education will be disseminated to unit management, and super-users will be identified and specially trained on each unit to be on-site peer experts in each of our inpatient units.

Conclusions

In summary, using our software to its full potential will enable leadership from the VA and DoD to improve staff satisfaction, patient throughput, and patient outcomes. When staff satisfaction is higher, our patients are healthier because they receive better care. Workload-generated intensity scores provide a powerful tool we can use to support staffing decisions to drive down the rates of healthcare-acquired infections, pressure injuries, and falls. Preventing injuries and maximizing our resources to provide better care and promote better health allows us to continue to be good stewards of federal resources. Collaboration between the VA and DoD on this process improvement project will provide a cohesive foundation for continued commitment to delivering ready, reliable care to improve military healthcare.

References

Institute for Healthcare Improvement. (2018). *Improving hospital-wide patient flow: Measurement strategy.* Retrieved September 18, 2022, from https://www.ihi.org/resources/_layouts/download.aspx?SourceURL=%2fresources%2fKnowledge+Center+Assets%2fMeasures+-+HospitalFlowMeasurementGuide_524e8973-2aa0-490c-a486-a6d730c6be61%2fFlow+Measurement+Strategy.doc

Phillips, J., Malliaris, A., & Bakerjian, D. (2021). Nursing and patient safety. *Agency for Healthcare Research and Quality.* https://psnet.ahrq.gov/primer/nursing-and-patient-safety

Ramsey, Z., Palter, J. S., Hardwick, J., Moskoff, J., Christian, E. L., & Bailitz, J. (2018). Decreased nursing staffing adversely affects emergency department throughput metrics. *The Western Journal of Emergency Medicine*, *19*(3), 496–500. https://doi.org/10.5811/westjem.2018.1.36327

The Joint Commission. (2012). Patient flow through the emergency department. *R3 Report,(4), 1-5.* https://www.jointcommission.org/standards/r3-report/r3-report-issue-4-patient-flow-through-the-emergency-department/

Womack, D., Warren, C., Hayes, M., Stoyles, S., & Eldredge, D. (2021). Evaluation of electronic health record-generated work intensity scores and nurse perceptions of workload appropriateness. *Computers, Informatics, Nursing: CIN, 39(6), 306–311.* https://doi.org/10.1097/CIN.0000000000000687