Chest Pain Protocol for Critical Access Hospital Emergency Department

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The current "Chest Pain Protocol" policy is not up to date with the current standards established by the American College of Cardiology or American Heart Association. Gulati et al. (2021) emphasized that although most patients arriving with chest pain will not have a cardiac cause, the evaluation of all patients should focus on the early identification or exclusion of life-threatening causes. While collaborating with larger outside receiving entities with cardiac catheter intervention capabilities, it has been determined that the initial response in this rural critical access hospital setting could be improved. In response, a new policy for chest pain intervention in the critical access hospital emergency department will be developed and implemented.

Current policy limits the triage/emergency department nurse to complete only an EKG for a patient entering the emergency department with a primary complaint of chest pain. No other orders are initiated by the nurse until the physician has assessed the patient. While being mindful of resources available, early intervention is necessary utilizing evidence-based medicine (EBM). DeNisco (2024) stated that the wide range of variability in clinical practice, the complexity of diagnostic testing and medical decision-making, and the overwhelming volumes of scientific literature to be weighed, a significant percentage of clinical management decisions are not supported by reliable evidence of effectiveness. It appears such may be the case with the current Chest Pain Protocol. With only one provider and one nurse in the emergency department, the potential for delayed response to emergency situations exists.

Chest pain is a frequent cause for emergency department visits in the United States (Gulati et al., 2021). Further, emergency departments are feeling pressure exerted by the Centers for Medicare and Medicaid Service (CMS) value-based purchasing program requiring reportable

times to various evidence-based benchmark criteria, impacting reimbursement (Gottlieb, et al., 2021). Emergency room nurses receive specialized training to correctly triage and prioritize patient needs. Nurses should be supported in autonomously performing to the full extent of their scope. As Suamchaiyaphum et al. (2024) concluded, triage accuracy improves the allocation of limited resources, and the effective treatment of patients is indicative of the quality of emergency care. Again, in effort to provide the best, most-timely clinical care possible and to ensure optimal patient outcomes, a new evidence-based policy for patients presenting at the emergency department with chest pain shall be developed.

Stakeholders

Stakeholders involved in this process include patients, families, direct care staff in the emergency department, hospital-owned ambulance service, local, regional, and national leaders within the organization, and larger regional organizations receiving patients in transfer. Any potential patient in the local geography that might potentially present to the emergency department with a chest pain episode should be considered primary stakeholders. Staff working with the internal EMS system and emergency department are also stakeholders impacted by the current and potential future policy change being reviewed. Facilitating timely an appropriate care is the highest priority for frontline staff. Staff become frustrated with delays in providing care while awaiting orders from providers in patients that would benefit from standard protocol intervention. Further, local, regional, and national leaders within the organization can optimally impact patient outcomes by implementing clinical best-practices to their patients. Larger regional locations anticipating patients in transfer stand to benefit from being better prepared to receive patients in need of urgent cardiac catheterization and intervention resulting in optimal outcomes.

One additional stakeholder includes insurance providers responsible for assisting in the cost-burden of care. Resource utilization must be considered in practice and policy changes.

Policy Options

While not likely the best option, doing nothing to change and staying with the current protocol would be an option. In reviewing the information provided herein, it is notable that the current process is not effective in promptly treating patients with a primary complaint of chest pain on arrival. In reviewing the comprehensive data provided by Gulati et al. (2021), chest pain protocols are intended to add structure to the process of clinical evaluation. Such protocols are collectively referred to as Consensus Decision Pathways (CDPs). When compared to clinical assessment alone, CDPs for chest pain suggestive of myocardial ischemia have been shown to decrease unnecessary testing and reduce admissions while maintaining high sensitivity for detection of acute myocardial injury and 30-day MACE. According to Kontos et al. (2022), CDPs should include measurements of hs-cTn at specific timepoints and are designed to allow safe disposition of low-risk patients with chest pain in an expedited and efficient manner. A multidisciplinary approach to CDPs will lead to successful implementation. Any adopted CDP should be specific to the type of troponin monitored, conventional (cTn) or high-sensitivity cardiac troponin (hs-cTn) as sampling timeframes and normal values differ.

In reviewing the data and research available, it is most feasible for facilities to invest in CDPs involving the newly developed and highly accurate point of care (POC) hs-cTn technology. The triage process of a patient with acute chest pain should focus on rapid identification and intervention in patients with life-threatening conditions such as acute coronary syndrome, aortic dissection, and pulmonary embolism (Kontos et al., 2022). This technology can give a prompt and accurate snapshot of the current troponin level of a patient experiencing chest

pain with the ease of a finger stick. As the technology is highly sensitive, the timeframes for serial values are compressed, ruling out cardiac cause faster and more efficiently. A simple process for implementation with the triage process would include completion of hs-cTn and EKG within 10-minutes of arrival to rule out immediate life-threatening cause of chest pain. EKG standards are defined by the AHA and American College of Cardiology Joint Committee on Clinical Practice Guidelines (Gulati et al., 2021). Both steps could be efficiently completed by the triage RN and reported immediately to the provider for further guidance. Following such steps, the cardiac algorithms provided by the American Heart Association and American College of Cardiology should be followed for each type of chest pain presentation should be followed in collaboration with the physician. Further, the ambulance service should be provided and trained with the technology of the hs-cTn to obtain in route to the emergency department for timely intervention.

Advanced Practice Registered Nurse (APRN) Role as Change Agent

Leadership is one of the overarching domains outlined by the American Organization for Nurse Leaders (AONL) (Roussel et al., 2023). Challenges related to change will inevitably arise. Transformational leaders such as APRNs can work in unison with other team members to address such challenges and implement higher practice standards successfully. Albert et al. (2022) eloquently illustrated the role APRNs can play considering change as spiritually aware leaders recognize that being open to the challenges and opportunities embedded in the endless process of change is critical to personal growth. How the APRN handles change will encourage others to continue their own journey of discernment and development. According to Roussel et al. (2023), the IOM (2010) report recommended that nursing should be full partners, with physicians and other health professionals in redesigning healthcare in the United States.

Factors of Influence

Implementing a new emergency protocol involving new technology in the ED requires consideration of several factors that can influence the process and its success. Some factors of influence include organizational support, staff readiness, technological availability, patient-centered considerations, legal and regulatory compliance, quality improvement potential, and cultural factors. Organizational support starts with strong backing from hospital administration and leadership buy-in. Resource allocation and policy and procedure alignment further align organizational support. Training, education, and encouraging buy-in from ED staff will prove critical to the successful implementation of a new protocol. Ensuring improved workflow management will enhance buy-in. New technology purchase, maintenance and upkeep will be one of the largest factors of influence in this change. Capital upgrades can be a hard sell, but clinical evidence to support the need will assist in justifying the expense. While all the factors discussed may be influential, perhaps the most-influential is the impact the changes can have on patient-centered outcomes. With a goal of providing effective, timely, and appropriate care at the forefront, updating the protocol is of great value. While the proposed interventions follow the standards outlined by the AHA/American College of Cardiology Joint Committee, the legal and regulatory compliance factor will just need to be defined and monitored. Cultural opportunities may be assuaged by the patient-centered approach to the need for change. Improving patient outcomes is the catalyst for this process and as such, a healthy staff culture will accept the needed changes as being in patients' best interests while also preventing unnecessary workups, limiting overutilization of resources and improve ED stay times.

Conclusion

As practices, technologies, and patient demographics continue to evolve, organizations must focus on the best evidence-based practices to best meet patient needs while also working to balance the Iron Triangle of Healthcare concerning cost, quality, and access to care (DeNisco, 2024). In reviewing the background, evidence, and available technologies surrounding the issue of an ineffective chest pain protocol, the proposed changes should be considered for advancement. This process will require collaboration and planning across multiple departments prior to being fully implemented. Given the number of patients presenting through the emergency department with a primary complaint of chest pain, it is necessary to adapt the approach to quickly differentiate patients in a true cardiac emergency from those that present with non-cardiac causes of pain.

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