The Importance of a Standardized Pre-block Timeout Process: A Quality Improvement Project

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Introduction: Regional anesthesia is becoming an integral part of anesthetic care across the United States, with many centers utilizing nerve blockade as a primary anesthetic. Previous studies have demonstrated that a pre-operative timeout process before regional anesthesia helps to reduce wrong-site procedures[(1)]. Following several surgical wrong-site procedures, the Joint Commission developed guidelines recommending a surgical Universal Protocol in an attempt to reduce these occurrences. However, the applicability of the Universal Protocol to regional anesthesia was not well defined[(2)]. Still other studies have determined three important steps prior to nerve blockade: verify the correct site using multiple sources, including the patient, physically mark the site, and perform a pre-block timeout[(3)]. The American Society of Regional Anesthesia appointed a task force to create a 9-point checklist specifically for nerve block timeouts; to our knowledge, this was last updated in 2014[(2)]. Despite this, we found that at our own institution there is some variability in which items are discussed during the pre-block timeout process. The regional section in our facility is large, with many faculty members, fellows, residents, and nursing staff involved in this process. The diversity of experiences and techniques amongst regional team members introduces variance in how vital components of patient care, such as pre-block timeouts, are performed. Our goal for this quality improvement project was to assess our current practices regarding nerve block timeout and attempt to achieve some standardization in an effort to improve patient safety. We expected that by implementing a standardized checklist for timeouts we would be able to more consistently discuss details important to patient safety.

The process measure for this quality improvement project was to discuss a formal checklist of items during every pre-block timeout. The outcome measure was to quantify the percentage of time each checklist item is being covered and ultimately improve patient safety. The balancing measure was increased time spent doing nerve block timeouts and possible decreased workflow efficiency.

Methods: We used a Plan, Do, Study, Act approach for our project. As there was no expected deviation from the standard of care, this QI project did not require IRB approval. We started by collecting data regarding our current practices. Next, following the review of current literature, we developed a standardized checklist of items to be covered during timeouts. We then educated our regional team about the implementation of the checklist and displayed the checklist on laminated cards in each of our block

bays at our outpatient surgery center. Next, we collected data assessing compliance with the new checklist and solicited feedback regarding limitations to implementation. We are now working to adapt our checklist based on feedback.

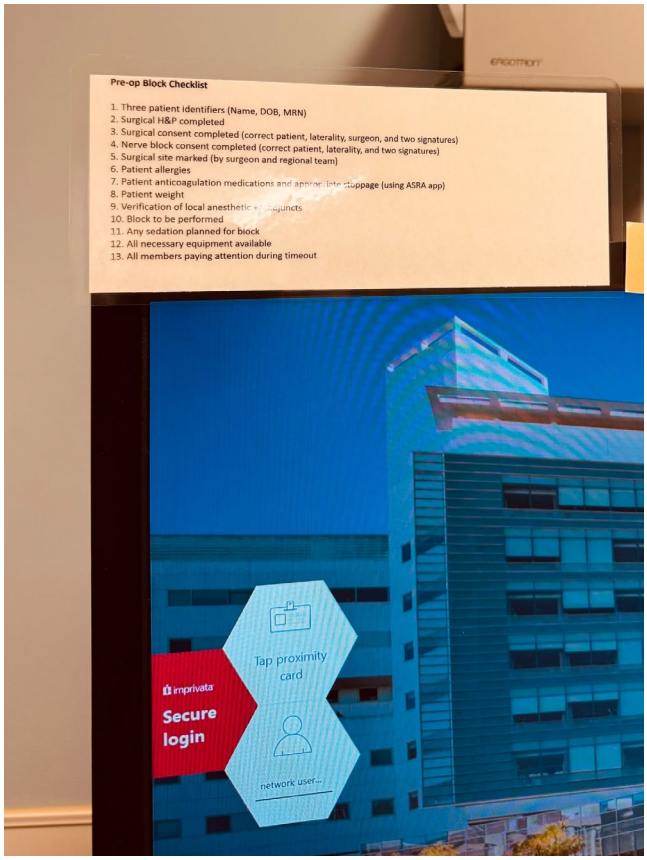
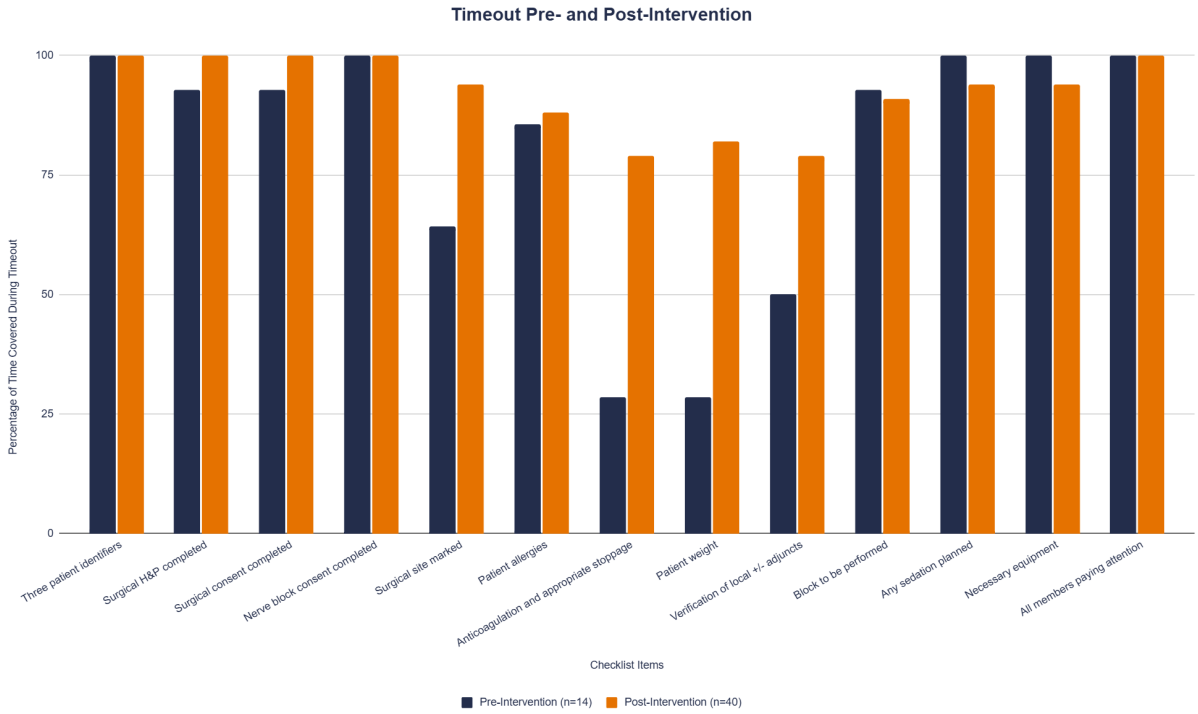


Image 1: Laminated checklist displayed on computers in an attempt to efficiently integrate this process into our workflow.

Results:



Discussion: Following the integration of a standardized checklist for pre-block timeouts, several checklist items were largely unchanged - there were high rates of coverage pre- and post-intervention. Some checklist items were greatly improved by implementation of the checklist. Several checklist items slightly decreased - we have attributed this to large differences in sample size pre- (14) vs post-intervention (40). The overall feedback from the regional team was positive - most providers noted that integration of the checklist did not significantly affect their workflow efficiency. One suggestion for improvement involved having a two provider timeout, where the attending physician supervising the nerve block initiates the timeout process and covers the first 8 checklist items and then the trainee performing the nerve block (resident or fellow) covers checklist items 9-13. This two provider timeout makes sense, as the trainee is often responsible for drawing up medications; likewise, having multiple providers verbally participating may help to encourage engagement by all involved team members.

Future plans may include expansion of this pre-block timeout checklist to the main operating rooms at our facility and our outpatient orthopedic center. Additionally, we may place the checklist on our ultrasound machines or create badge cards for our regional team members to utilize when performing nerve blocks in the post-anesthesia care unit or on inpatient floor units. Finally, we hope to discuss current timeout practices with colleagues at other institutions in an attempt to further improve and standardize our process.

References:

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