

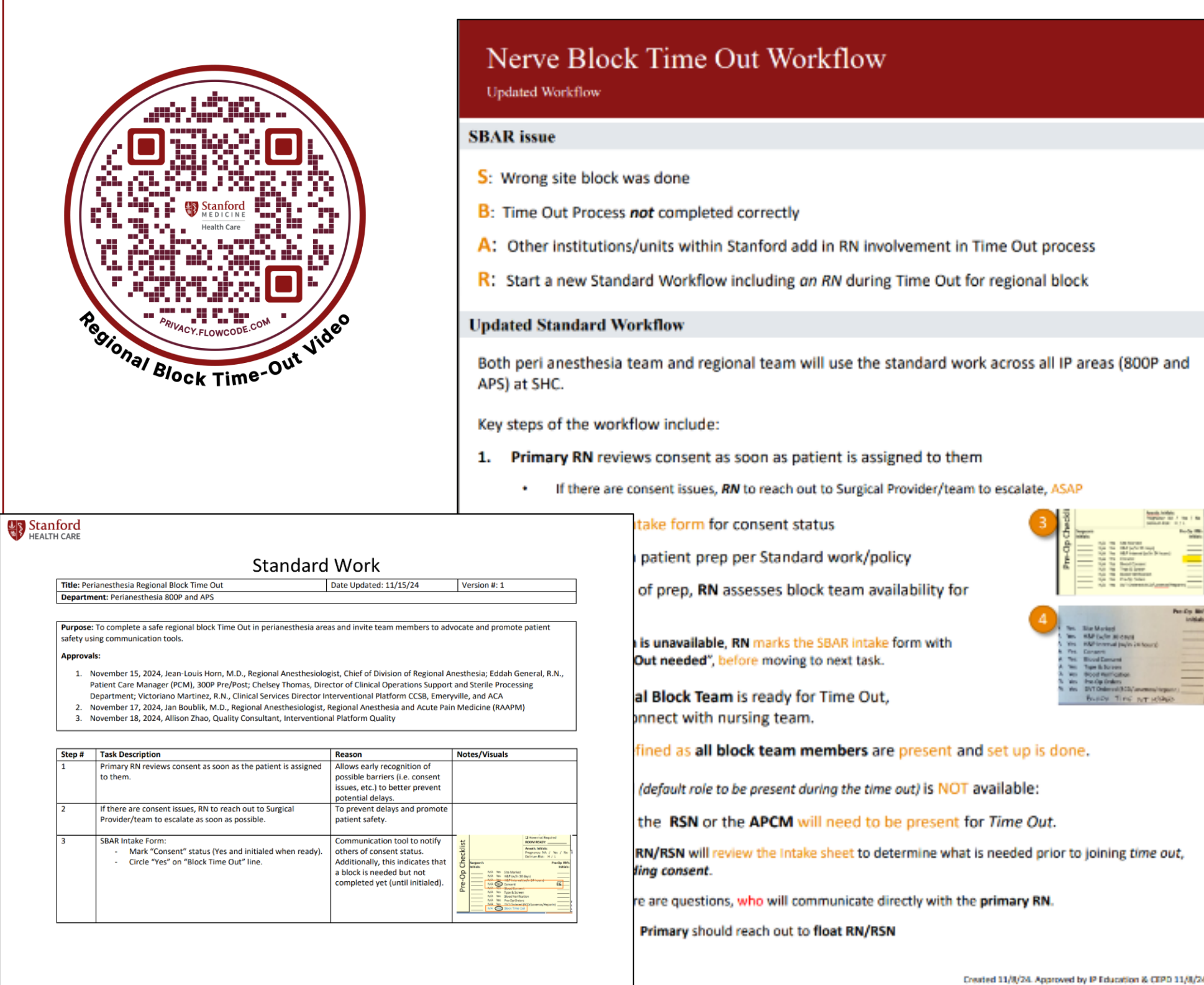
Introduction

Wrong-site regional nerve blocks occur more often than wrong-site surgical procedures, making standardized safety practices essential in the Perianesthesia setting. Implementing a Regional Nerve Block Time-Out protocol supports accurate verification of the patient, procedure, and site while strengthening interdisciplinary communication. This initiative promotes a culture of safety and accountability and helps improve patient outcomes in regional anesthesia.

Materials and Methods

A baseline assessment of existing workflows revealed inconsistent adherence to time-out procedures before regional nerve blocks. To address these gaps, the team implemented a structured improvement process:

- ✓ Development of a standardized time-out checklist and inclusion in Electronic Health Record
- ✓ Key verification: patient identity, procedure, laterality, site
- ✓ Multidisciplinary training sessions
- ✓ Focus on rationale, expectations, and hands-on practice
- ✓ Creation of educational materials (One Point Lessons, Standard work, video)



Nerve Block Time Out Workflow
Updated Workflow

SBAR Issue

- S:** Wrong site block was done
- B:** Time Out Process **not** completed correctly
- A:** Other institutions/units within Stanford add in RN involvement in Time Out process
- R:** Start a new Standard Workflow including on RN during Time Out for regional block

Updated Standard Workflow
Both peri anesthesia team and regional team will use the standard work across all IP areas (BOOP and APS) at SHC.

Key steps of the workflow include:

1. Primary RN reviews consent as soon as patient is assigned to them
 - If there are consent issues, RN to reach out to Surgical Provider/team to escalate, OSCP

Standard Work

1. Review the patient's consent form for the procedure and ensure it is signed and dated.

2. Verify the patient's identity, procedure, and site.

3. Verify the patient's allergies and ensure they are documented in the EHR.

4. Verify the patient's vital signs and ensure they are within acceptable parameters.

5. Verify the patient's level of consciousness and ensure they are awake and oriented.

6. Verify the patient's pain level and ensure it is documented in the EHR.

7. Verify the patient's temperature and ensure it is within acceptable parameters.

8. Verify the patient's oxygen saturation and ensure it is within acceptable parameters.

9. Verify the patient's heart rate and ensure it is within acceptable parameters.

10. Verify the patient's blood pressure and ensure it is within acceptable parameters.

11. Verify the patient's respiratory rate and ensure it is within acceptable parameters.

12. Verify the patient's level of sedation and ensure it is documented in the EHR.

13. Verify the patient's level of analgesia and ensure it is documented in the EHR.

14. Verify the patient's level of hydration and ensure it is documented in the EHR.

15. Verify the patient's level of electrolyte balance and ensure it is documented in the EHR.

16. Verify the patient's level of renal function and ensure it is documented in the EHR.

17. Verify the patient's level of liver function and ensure it is documented in the EHR.

18. Verify the patient's level of coagulation and ensure it is documented in the EHR.

19. Verify the patient's level of hemoglobin and ensure it is documented in the EHR.

20. Verify the patient's level of hematocrit and ensure it is documented in the EHR.

21. Verify the patient's level of hemoglobin A1c and ensure it is documented in the EHR.

22. Verify the patient's level of blood glucose and ensure it is documented in the EHR.

23. Verify the patient's level of electrolyte balance and ensure it is documented in the EHR.

24. Verify the patient's level of renal function and ensure it is documented in the EHR.

25. Verify the patient's level of liver function and ensure it is documented in the EHR.

26. Verify the patient's level of coagulation and ensure it is documented in the EHR.

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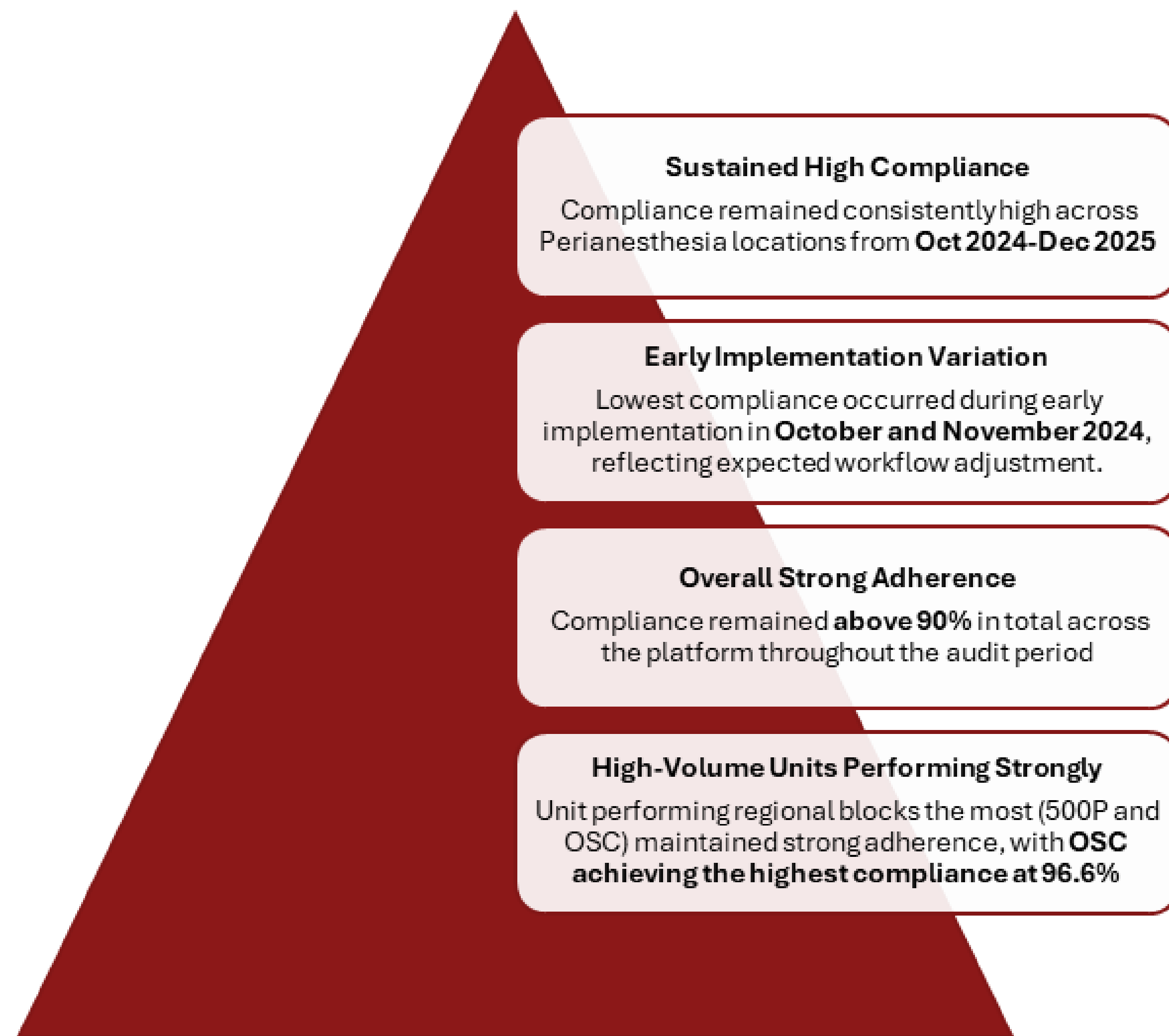
After implementation, compliance was monitored through:

- ✓ Regular compliance audits
- ✓ Identifying gaps and trends
- ✓ Providing prompt feedback
- ✓ Supporting standardization
- ✓ Strengthen the safety culture around regional anesthesia care

Results

Implementation of the Regional Nerve Block Time-Out protocol led to a measurable increase in compliance with verification practices.

- ✓ We monitored regional block time-out compliance across multiple Perianesthesia locations from October 2024 – December 2025.
- ✓ Compliance stayed high overall, with a few early and intermittent dips, at some locations.
- ✓ The lowest audit compliance overall was at the initiation of the project in October and November 2024.
- ✓ Each unit completed their own audits.
- ✓ The two units who saw the most regional blocks included 500P and Outpatient Surgery Center (OSC), had a mean compliance rate of 92%.
- ✓ While 500P may have done more audits, OSC had the highest compliance overall with time-outs.



Regional Block Timeout Compliance by Location

Percentage of Audits Achieving 100% Compliance (7 out of 7 Questions)

Location	Total Audits	100% Compliant	% Achieving 100%
500P Pre/Post	520	455	87.5%
Lane Pre/Post	110	103	93.6%
300P Pre/Post	68	58	85.3%
Interventional Platform OSC Periop	175	169	96.6%
SHC (Emeryville) OR/PACU	99	92	92.9%

Compliance by Question/Organization

Question/Organization	Compliant	Non-Compliant	Findings	Compliance Rate
All required components of the time out were completed	605	0	0	100% (605/605)
The individual leading the time out verbally confirms with the team the patient identity using 2 patient identifiers	605	0	0	100% (605/605)
All team members introductions with name and role	605	0	0	100% (605/605)
The individual leading the time out verbally confirmed the procedure based on the consent	605	0	0	100% (605/605)
The individual leading the time out verbally confirmed the site marked as "Block"	604	1	1	100% (604/605)
All team members are attentive and activity has ceased for the duration of the time out	598	7	7	99% (598/605)
Time out documented in EPIC appropriately?	592	13	13	98% (592/605)

Discussion

The implementation of the Regional Nerve Block Time-Out protocol demonstrates how structured verification processes can strengthen patient safety. Achieving the compliance goal by the end of the audit period reflects strong adoption among both nursing and anesthesia teams. Staff feedback also highlighted improved communication, greater confidence in verification practices, and increased willingness to speak up during time-outs; reinforcing psychological safety and shared accountability. These results show that a standardized, team-based approach can significantly improve adherence to safety protocols and reduce the risk of wrong-site procedures. Continued education, reinforcement, and integration into broader safety standards will be essential to sustaining these gains and ensuring reliable regional anesthesia workflows.

Future Directions

Future efforts will focus on fully integrating the Regional Nerve Block Time-Out protocol into the organization's patient safety culture, so it becomes a routine and expected element of care. Key priorities include hardwiring the protocol into daily practice through standardized workflows, documentation, and visual cues; reinforcing a culture of shared accountability and psychological safety so all team members feel empowered to speak up; expanding education through orientation, annual competencies, and simulation training; and aligning the protocol with broader high-reliability and zero-harm safety initiatives across the organization.

Key Lessons

- ✓ Variability in practice exists without a standardized time-out protocol
- ✓ Multidisciplinary education increases situational awareness and fosters teamwork
- ✓ Structured checklists reduce ambiguity and promote consistent verification behaviors
- ✓ Continuous monitoring and prompt feedback sustain practice improvements
- ✓ Nursing leadership plays a pivotal role in reinforcing accountability and culture change

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References

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