

Analysis of Nursing Documentation After Pennsylvania Trauma Systems Foundation Significant Issue Report at Lehigh Valley Hospital- Muhlenberg

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Background

Nursing documentation of trauma patient vital signs taken within 10 minutes of arrival, recording of hourly trauma patient vital signs, and hourly neurological status documentation for trauma patients with suspected neck or head injury are some of the requirements for hospital trauma accreditation by the Pennsylvania Trauma Systems Foundation (PTSF). The PTSF recently performed a site review at Lehigh Valley Hospital- Muhlenberg (LVH-M) for accreditation as a Level II Trauma Center. Nursing documentation in these areas was found to be a "Significant Issue" during this review, requiring action plan development to ensure resolution. Several corrective actions were subsequently initiated to improve compliance of nursing documentation in these areas.

Problem Statement

Nursing documentation of vitals taken within 10 minutes of arrival, hourly recorded vitals, and hourly neurological monitoring for trauma patients at LVH-M was found to have compliance significantly under target at the on-site visit from PTSF and documentation of improvement via corrective actions must be demonstrated to ensure ongoing accreditation.

Methods

- Weekly retrospective chart reviews were performed for September 1-September 26 (Period 1), September 27-October 31 (Period 2), November 1-November 28 (Period 3), and November 29-December 31 (Period 4) of 2021
- Inclusion criteria: All emergency department (ED) trauma patients >12 years old assessed via Level 1 or 2 trauma activation or via consult to the Trauma service
- Percent compliance for vitals taken within 10 minutes of patient arrival (V10), neurological documentation (N) of all patients suspected of having head or neck injury, and hourly vitals (HV) was recorded
- Subset analysis of Level 1 and 2 trauma activation vs. consult percent compliance in the above domains was completed
- Percent compliance was assessed for improvement over time
- Goal compliance is **80% for all domains**

Results

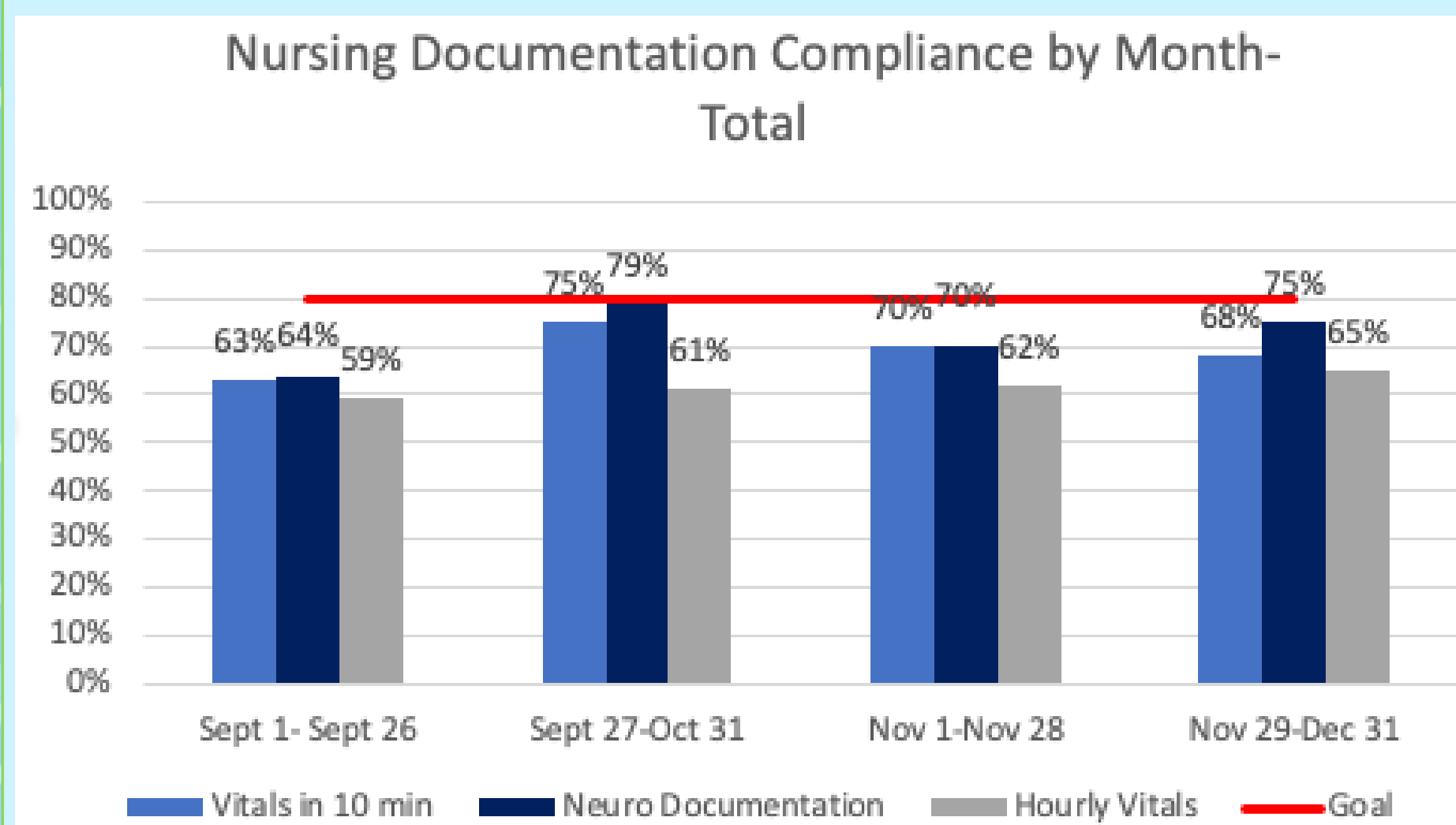


Fig. 1- Nursing Documentation Compliance by month; includes data from both consults and trauma activations. N=277

Documentation by Week	Vitals in 10 min	Neuro Documentation	Hourly Vitals
Sept 1-Sept 5	55%	33%	55%
Sept 6-Sept 12	61%	75%	50%
Sept 13-Sept 19	56%	60%	56%
Sept 20-Sept 26	81%	80%	73%
Sept 27-Oct 3	74%	74%	78%
Oct 4-Oct 10	87%	100%	47%
Oct 11-Oct 17	76%	88%	71%
Oct 18-Oct 24	76%	67%	53%
Oct 25-Oct 31	64%	67%	57%
Nov 1-Nov 7	60%	33%	64%
Nov 8-Nov 14	82%	80%	55%
Nov 15-Nov 21	58%	67%	74%
Nov 22-Nov 28	80%	100%	53%
Nov 29-Dec 5	76%	67%	71%
Dec 6-Dec 12	73%	100%	59%
Dec 13-Dec 19	53%	60%	73%
Dec 20-Dec 26	75%	50%	60%
Dec 27-Dec 31	64%	100%	64%

Fig. 2- Nursing documentation compliance in percentage by week; includes both consults and trauma activations. Bolded data meet goal of 80%. N=277.

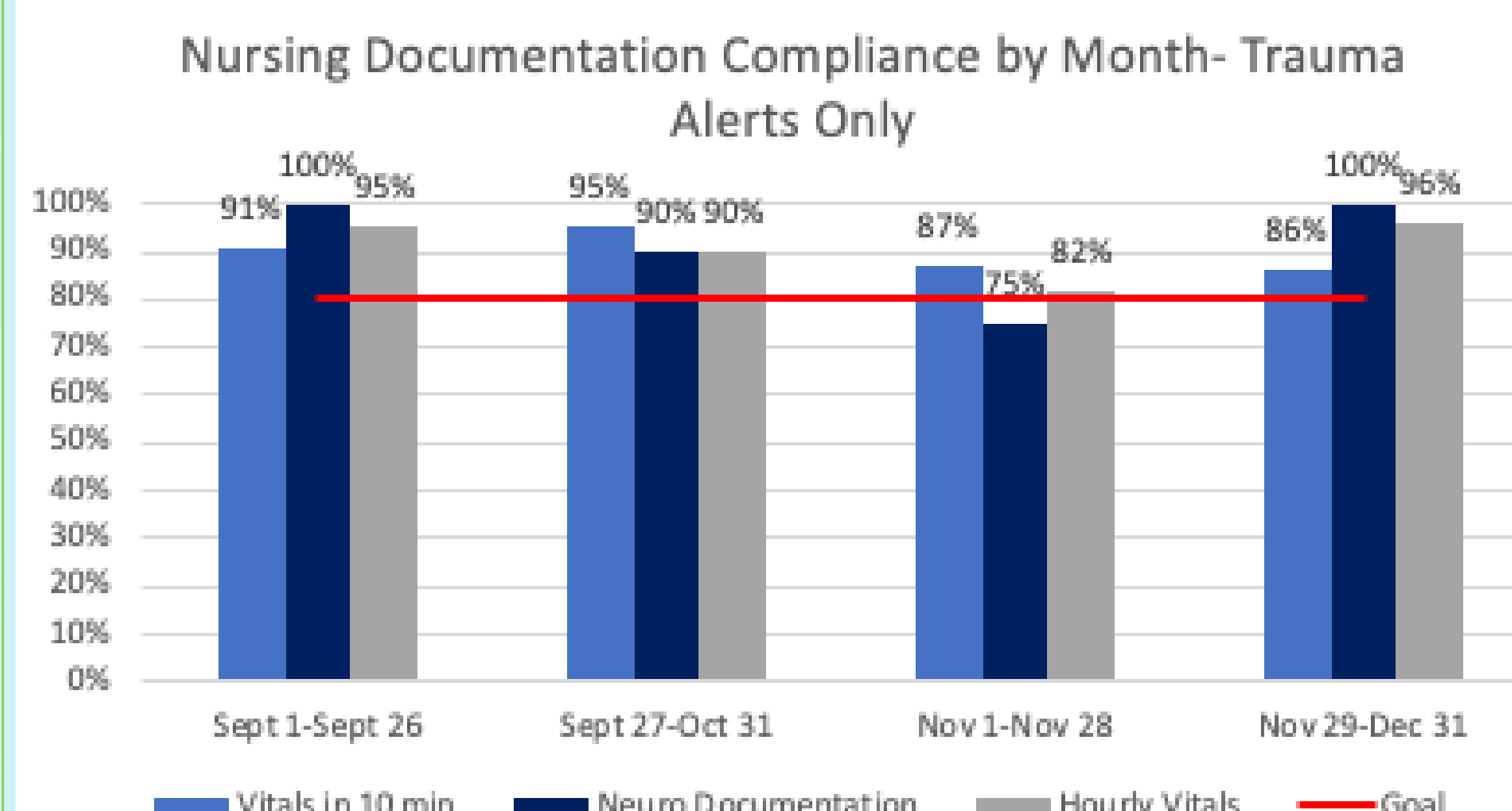


Fig. 3- Nursing documentation by month, including Level 1 and 2 trauma activations, excluding consults. N=73.

Discussion

- No months to date have met the 80% compliance goal for V10, N, or HV when all eligible patients from consults and Trauma Alerts are included
- When divided into patients assessed as trauma alerts, compliance is much improved with most months well above 80%, averaging approximately 90.7%
- Averaging Periods 1, 2, 3, and 4, N compliance was the highest of the three domains at approximately 72%. HV were the least consistent, averaging 61.8%. V10 averaged 69%.
- Explanations for higher compliance with trauma activations may include a more overt history of trauma in patients arriving as trauma alerts, discrepancies related to waiting room times not seen with trauma alert patients, and lower time to admission order seen in trauma alert patients compared to consult patients
- Limitations: COVID setting and related increased length of stay in ED, resource limitations, nursing shortage; may skew data and not be a true representation of the system at full capacity
- SELECT:**
 - Health Systems: Assessment of a system and identification of areas for improvement, PDSA cycle in action
 - Leadership: Input from several domains (Emergency Department, Trauma, nursing, physician), buy-in, nursing leadership initiating change, influence
- Self-Directed Learning:** Understanding Trauma Center accreditation process, understanding impact of different care providers (nursing, techs, physicians) and resource limitation on patient care; resource identification and appraisal

Conclusions

This project highlights the unique challenges associated with initiating change in an existing system that is stressed by the context of a global pandemic and unprecedented staffing shortages. The data gleaned from the subset analysis revealed a positive change in documentation compliance with regards to trauma activation patients, but nursing documentation for patients assessed as consults to the trauma service remains under goal. The breakdown helps to identify the specific patient population responsible for compliance challenges and will allow for more dedicated action plan initiation targeted at this group.

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