Vital Signs are VITAL: Identifying Frequency and Barriers of Missed Vital Signs

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RELEVANCE

Literature supports the standard frequency for obtaining and documenting vital signs (VS) in the pediatric acute care hospital setting to be every four hours. Despite hospitals having established policies regarding the frequency of VS assessment, research suggests that nurses fail to comply with the routine collection of VS. In a prospective cohort study, Oliver, Powell, Edwards, & Mason (2010) evaluated VS recordings collected in 1,000 children and found that blood-pressure measurements were collected only 25% of the time. The literature review has indicated a gap in more current existing research on this topic.

PURPOSE

The purpose of the project was to:

- Identify the frequency of missed VS in one community pediatric acute care unit.
- Explore barriers to obtaining full VS every four hours.
- Increase staff awareness regarding the acuity of acute care patients and the potential risk of missing early signs of patient decompensation when omitting VS.

METHODS

- One Registered Nurse collected VS data from electronic medical records over a period of 6 months (January - June 2024).
- Nurses and patient care assistants completed an electronic survey to identify perceived barriers to obtaining full VS and to understand factors associated with missed VS documentation.
- A staff Registered Nurse presented the VS data and survey results to pediatric acute care nursing and unlicensed support staff and hospital professional governance council meetings to bring awareness to this patient safety issue.

Reference: Valentino, K., Campos, G. J., Acker, K. A., & Dolan, P. (2020). Abnormal Vital Sign Recognition and Provider Notification in the Pediatric Emergency Department. *Journal of pediatric health care : official publication of National Association of Pediatric Nurse Associates & Practitioners, 34*(6), 522–534. https://doi.org/10.1016/j.pedhc.2020.05.005

RESULTS

- More than 225 events of missed VS were found on 98 patients with time lapses from 4 to 36 hours. Of the events, approximately 8% required calling the Rapid Response Team and transfer to the pediatric intensive care unit (Figure 1).
- The vulnerable less than 1-year old age group made up 50% of the patients with missed VS while the 1- to 4-year-old group made up 45% (Figure 2).
- Survey results revealed barriers to obtaining vital signs as caregiver refusal 93%, patient moving/crying 82%, patient refusal 32%, staffing 32%, patient sleeping 14%, and equipment 18%. If VS were unable to be obtained, 36% of staff skipped VS assessment until the next scheduled time (Figure 3).
- After presenting the data to staff, a decrease in the frequency of documenting unable to obtain and patient/parent refused was observed. Missed VS from July to September 2024 were noted on 12 patients, an 87% decrease in missed VS post-intervention.

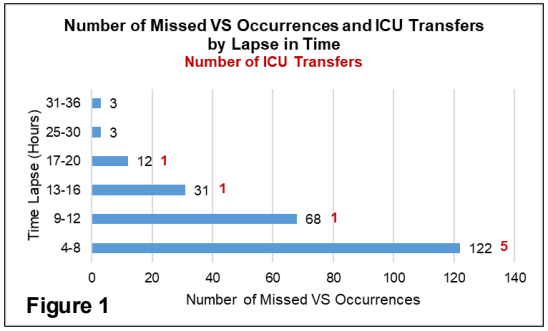

Figure 1

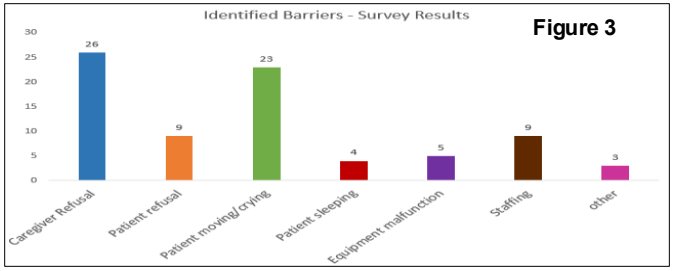

Figure 3

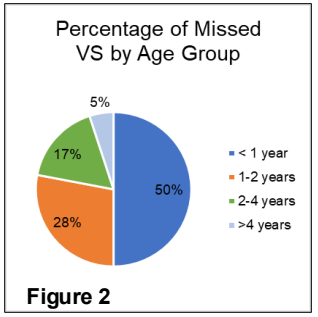

Figure 2

NEXT STEPS

The community pediatric acute care department's fiscal year 2025 goal is to increase the VS assessment compliance rate to 90% by September 30, 2025.

- Additional data was collected by auditing 78 patient medical records for the week of January 12, 2025.
- Based on the medical record audits, the VS assessment compliance rate was 69%.
- A fishbone diagram was created to identify additional barriers to obtaining VS every 4 hours.
- A video will be created to demonstrate scripting for discussing importance of obtaining VS with families of patients refusing VS.
- Education will be provided on tips to use when having difficulty obtaining VS.

CONCLUSION

Pediatric acute care patients have the potential to decompensate. Obtaining VS every 4 hours helps clinicians identify early signs of distress. Transparency in missed VS data reporting to staff supports communicating clear expectations regarding VS assessment and can enhance staff accountability to improve patient outcomes and safety.