

2018

Orthostatic Blood Pressure Monitoring

Carla Olson

St. Cloud Hospital, CentraCare Health, olsonca@centracare.com

Follow this and additional works at: https://digitalcommons.centracare.com/nursing_posters



Part of the [Other Nursing Commons](#)

Recommended Citation

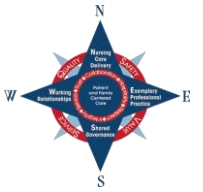
Olson, Carla, "Orthostatic Blood Pressure Monitoring" (2018). *Nursing Posters*. 91.
https://digitalcommons.centracare.com/nursing_posters/91

This Book is brought to you for free and open access by the Posters and Scholarly Works at DigitalCommons@CentraCare Health. It has been accepted for inclusion in Nursing Posters by an authorized administrator of DigitalCommons@CentraCare Health. For more information, please contact schlepers@centracare.com.



Orthostatic Blood Pressure Monitoring

Carla Olson-BSN, RN-BC, CMSRN
St Cloud Hospital, St. Cloud, Minnesota



Purpose Statement

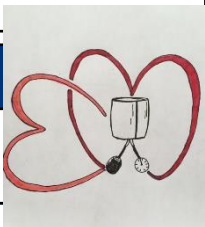
To apply the evidence of orthostatic blood (O B/P) pressure monitoring techniques as compared to inconsistent O B/P monitoring. Enhance the knowledge and skill of staff completing O B/P to promote consistent technique and reliable assessment data. Identify and modify order sets which include O B/P monitoring to ensure the order is written for use based on the evidence.

Synthesis of Evidence

- Orthostatic blood pressure changes that are unrecognized places patients at risk for falls as well as contributes to mortality. It has been identified that there is variation in the process for competing orthostatic blood pressures.
- Variation in practices may contribute to inaccurate/unrecognized changes. Multiple RNs, LPNs and PCAs were interviewed on the process of completing orthostatic blood pressures. Data collected from these 28 interviews identified significant process variations in technique (position changes) and timing of blood pressure readings.
- An evidence based practice project was completed on Orthostatic Blood Pressure Monitoring which included searching the literature for the evidence to support the process to complete orthostatic blood pressures.
- The Centers for Disease Control and Prevention (CDC) has published a guideline for measuring orthostatic blood pressures. The recommendation from this project is to utilize the CDC's guideline as the standard for orthostatic blood pressure completions. Provider input support this change. Order sets and nursing orders were modified to align with the CDC guideline.

Team Members

- Carla Olson-BSN, RN-BC, CMSRN
- Carolyn Ruegamer-BSN, RN



Pre/Post Measures

Pre Data

Measures	RN's 12	LPN's 4	PCA's 11
Pre procedure • Lie flat for 5 mins	3/12	0/4	0/11
Procedure • Lying measure blood pressure and heart rate • Have patient stand • Repeat blood pressure and heart rate at 1 and 3 minutes	0/12	0/4	0/11
Post procedure –result recognition • Ask patients if experiencing any symptoms of lightheadedness or dizziness • Verbalize criteria for abnormal orthostatic blood pressure	2/12	1/4	1/11

Post Data

Measures	RN's 12	LPN's 3	PCA's 8
Pre procedure • Lie flat for 5 mins	12/12	3/3	8/8
Procedure • Lying measure blood pressure and heart rate • Have patient stand • Repeat blood pressure and heart rate at 1 and 3 minutes	12/12	3/3	7/8
Post procedure –result recognition • Ask patients if experiencing any symptoms of lightheadedness or dizziness • Verbalize criteria for abnormal orthostatic blood pressure	9/12	3/3	3/8

EBP Practice Change

Process to complete Orthostatic Blood Pressures

- Have the patient lie down for a minimum of 5 minutes.
- Measure blood pressure and pulse rate.
- Have the patient stand (note no sitting).
- Repeat blood pressure and pulse rate measurements after standing at 1 and 3 minutes.
- Document each measurement with the correct position/time
- A drop in BP of ≥ 20 mm Hg, or in diastolic BP of ≥ 10 mm Hg, or patient reporting experiencing lightheadedness or dizziness is considered abnormal.

References

Carlson, J. (1999). Assessment of orthostatic blood pressure: Measurement technique and clinical applications. *Southern Medical Journal*, 92(2), 167-173 pp. Retrieved from: <http://web.b.ebscohost.com/akin.css.edu/ehost/pdfviewer/pdfviewer?sid=46712fa2-c80c-45e1-8535-d2661019f051%40sessionmgr113&vid=4&hid=115>

CDC. (2017). *STEADI materials for healthcare providers*. Retrieved from <https://www.cdc.gov/steadi/materials.html>

Davis, K. (2010). The clinical assessment of orthostatic hypotension. *Reviews in clinical Gerontology* 20(3),171-182

Feldstein, C. & Weder.A (2102). Orthostatic hypotension: a common, serious and under recognized problem in hospitalized patients. *Journal of the American Society of Hypertension*, 6(1), 27-39, doi: 10.1016/j.jash.2011.08.008

Guss, D., Abdelnur, D., & Hemingway, T. (2007). The impact of arm position on the measurement of orthostatic blood pressure. *The Journal of Emergency Medicine*, 34 (4), 377-382, doi:10.1016/j.jemermed.2007.05.049

Lee. Y. (2013). Orthostatic hypotension in older people. *Journal of the American Association of Nurse Practitioners*, 25(9),451-458 7p,doi:10.1002/2327-6924.12026

Tabara Y., Kohara K., Azechi T., Ohnishi M., Ueki S., Yano H., Nakura J., & Miki T. (2005). Effect of time standing up on orthostatic blood pressure change in the elderly: the J-SHIPP Study. *Geriatr Gerontol Int*, 5:254-258

Witting, M. & Hydorn, S. (2013) Variation in orthostatic vital sign testing in an urban academic emergency department. *Journal of Emergency Nursing*, 39 (6)19-622. doi:/10.1016/j.jen.2012.08.017