

The Impact of Deep-breathing on Anxiety

Anita S. Asnani ADN, RN
Lehigh Valley Health Network, Anita.Asnani@lvhn.org

Deanna Stoudt ADN, RN
Lehigh Valley Health Network, Deanna.Stoudt@lvhn.org

Follow this and additional works at: <https://scholarlyworks.lvhn.org/patient-care-services-nursing>

Let us know how access to this document benefits you

Published In/Presented At

Asnani, A. Stoudt, D. (2019, November 7). *The Impact of Deep-breathing on Anxiety*. Poster Presented at: LVHN Vizient/AACN Nurse Residency Program Graduation, Lehigh Valley Health Network, Allentown, PA.

This Poster is brought to you for free and open access by LVHN Scholarly Works. It has been accepted for inclusion in LVHN Scholarly Works by an authorized administrator. For more information, please contact LibraryServices@lvhn.org.

The Impact of Deep-breathing on Anxiety

Anita Asnani, ADN, RN and Deanna Stoudt, ADN, RN

Lehigh Valley Health Network, Allentown, Pennsylvania

BACKGROUND

- Deep-breathing has a positive affect on an individual's physical health as well as mental health (Ma et al., 2017)
- Deep-breathing is “an efficient integrative body-mind training for dealing with stress and psychosomatic condition” (Ma et al., 2017, p. 1)
- There are medications that help with anxiety, but have negative side effects and can lead to addiction (as cited in Jerath et al., 2015)

PICO

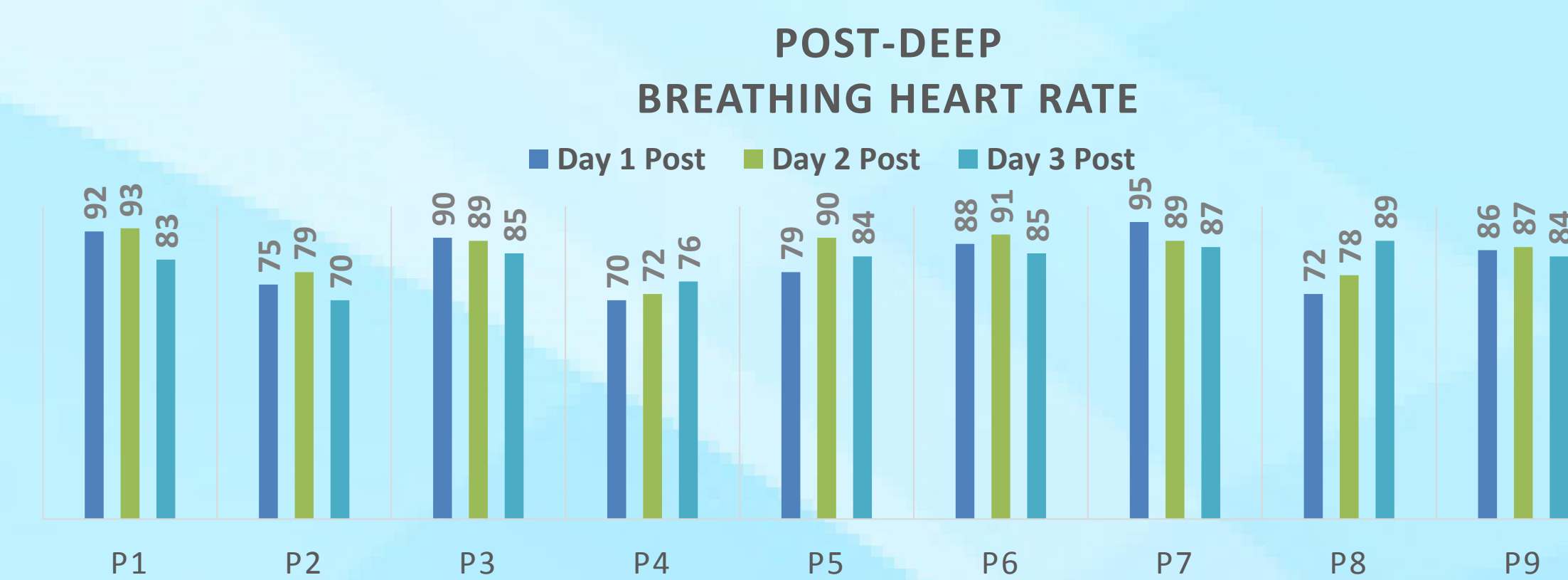
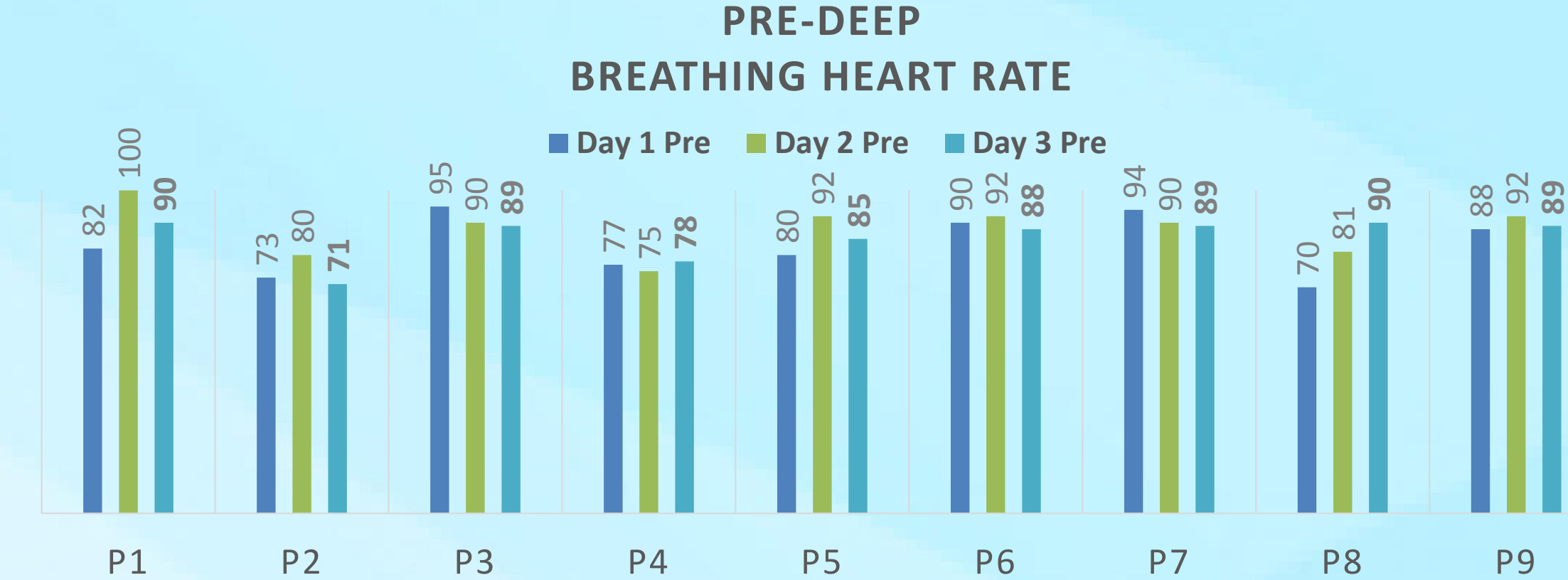
- In behavioral health patients with moderate anxiety, do two minutes of focused deep-breathing compared to no intervention effect patients' heart rate?
- P- Behavioral Health patients with moderate anxiety as measured by the GAD-7
- I- Two minutes of focused deep-breathing
- C- No intervention
- O- Patients' heart rate two minutes post intervention

EVIDENCE

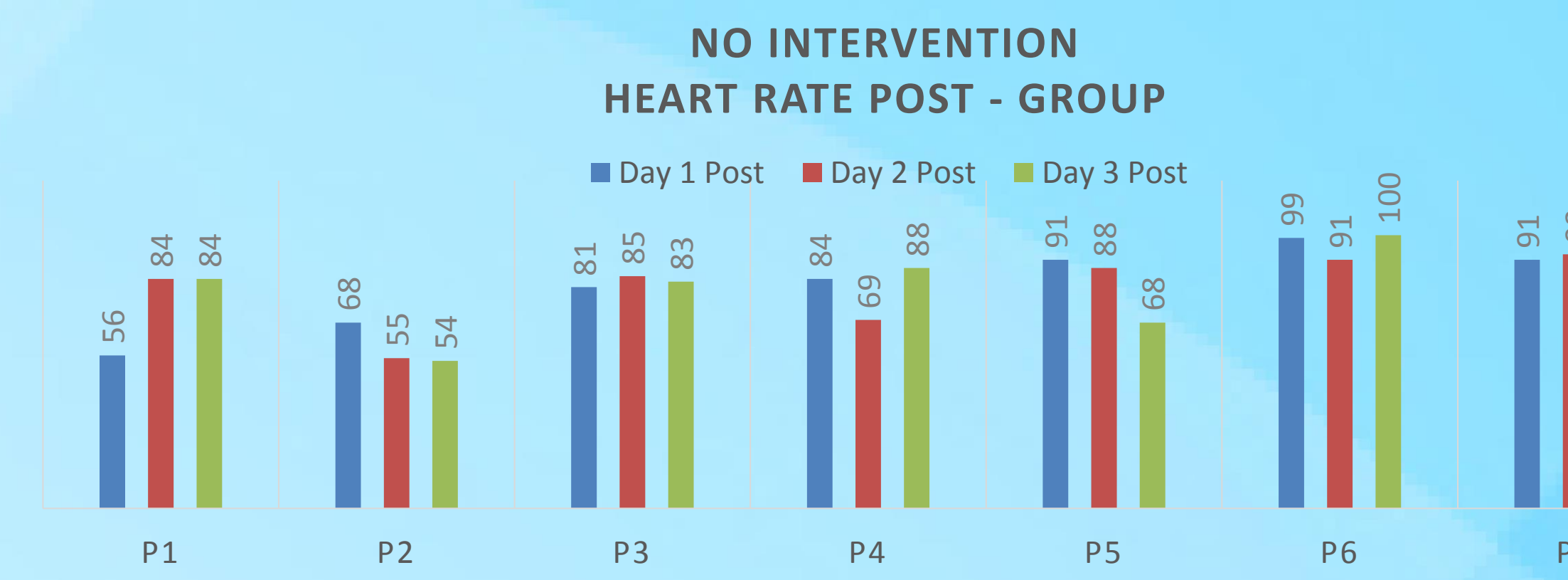
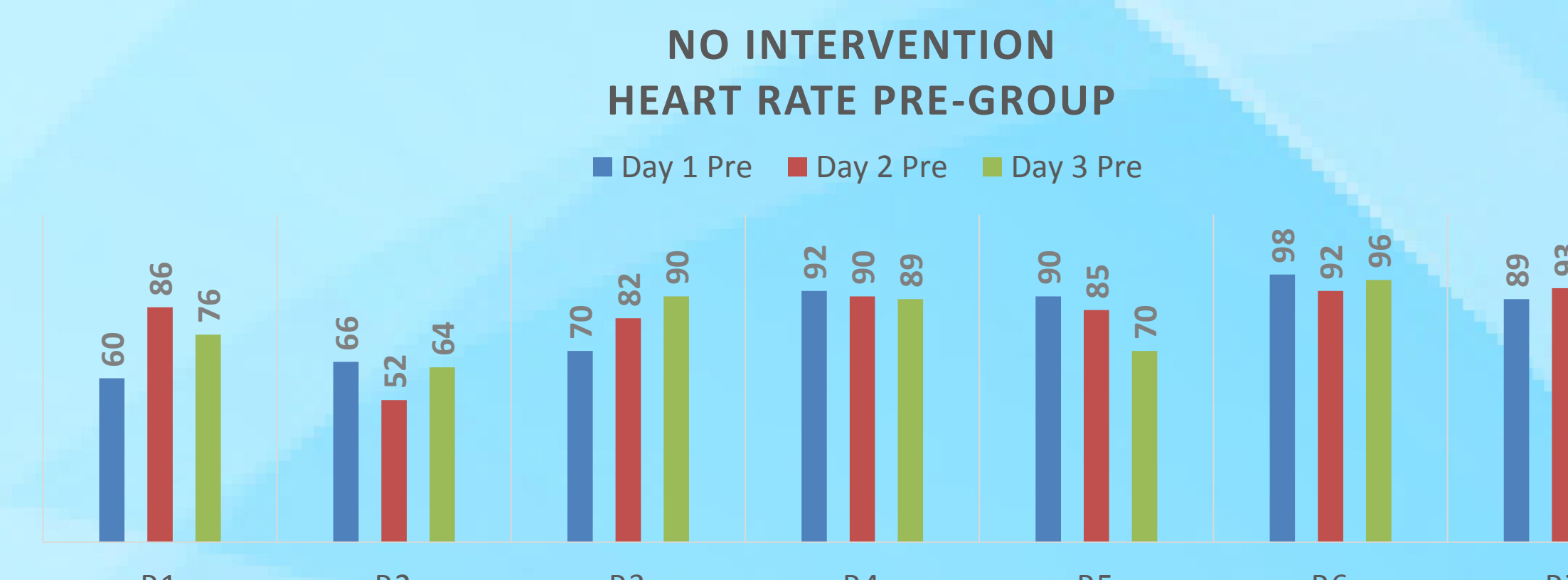
- Anxiety has an excitatory effect on the body and brain, which can be seen “in the amygdala and hypothalamic-pituitary-adrenal axis” (as cited in Jerath et al., 2015, p. 109).
- Anxiety leads to “increased heart rate, respiration rate, and blood pressure” (as cited in Jerath et al., 2015, p. 109)
- Changes are seen when performing deep-breathing exercises, such as “increased comfort, relaxation, pleasantness, vigor, alertness, and reduced symptoms of arousal, anxiety, depression, anger, and confusion” (Zaccaro et al., 2018, p. 353).

OUTCOMES

Effects of Deep Breathing on Heart Rate



Effects of No Intervention on Heart Rate



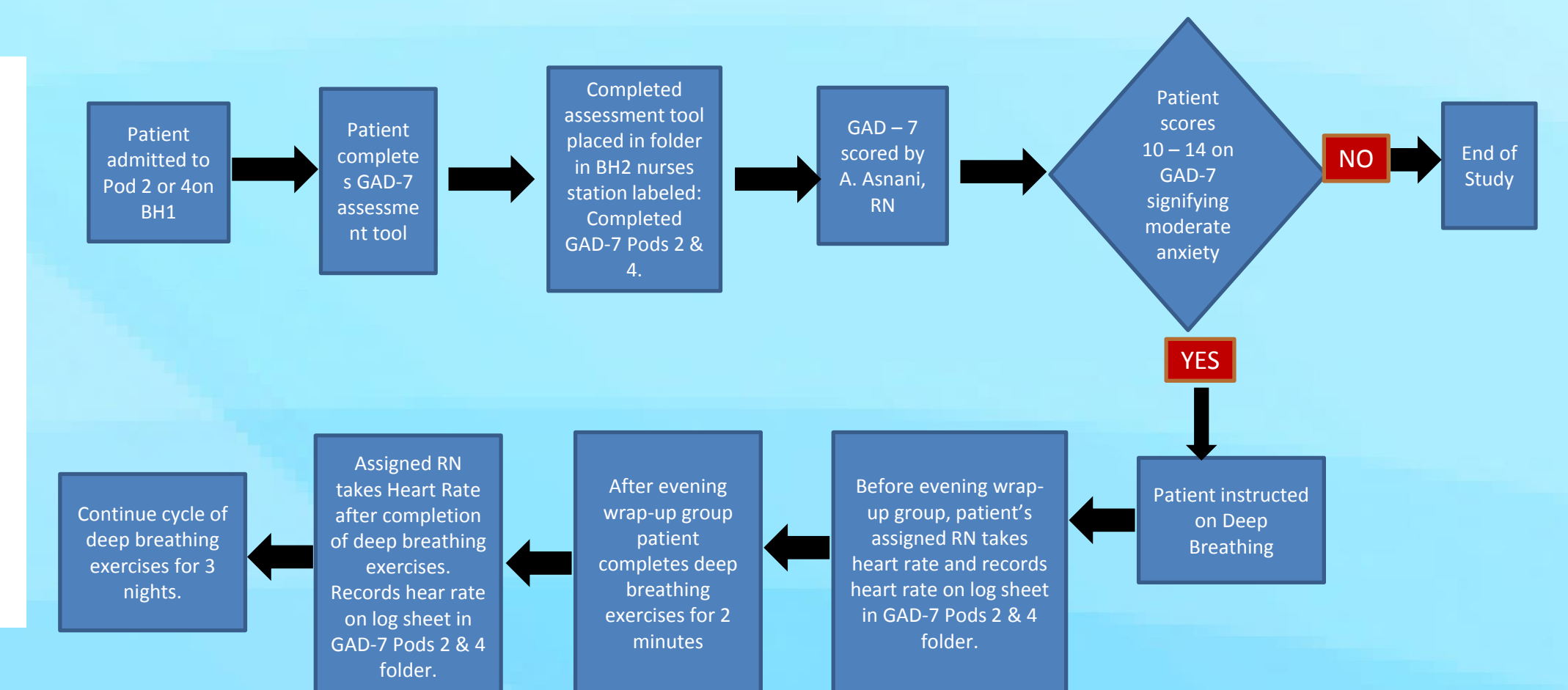
Conclusion

Based on the results above, 100% of the patients who practiced deep breathing exercises experienced a decrease in heart rate post deep-breathing. Only 43% (3 out of 7) patients in the “No Intervention” group experienced a decrease in heart rate.

IMPLEMENTATION

- Patients on the unit were assessed for anxiety by using the Generalized Anxiety Disorder-7 scale (GAD-7).
 - Patients scoring 10-14 on the GAD-7 are considered having moderate anxiety
- Patients with moderate anxiety on Pods 2 and 4 of BH1 will perform deep-breathing exercise
 - Patient heart rate taken prior to start of evening wrap-up group.
 - After wrap-up group patient performs deep-breathing for two minutes
 - Patient's heart rate reassessed and recorded after deep-breathing

Over the last two weeks, how often have you been bothered by the following problems?	Not at all	Several days	More than half the days	Nearly every day
1. Feeling nervous, anxious, or on edge	0	1	2	3
2. Not being able to sleep or control worry	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it is hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid, as if something awful might happen	0	1	2	3
Column totals	*	*	*	*
Total score				



- Patients with moderate anxiety on Pods 1 and 3 of BH1 will have no intervention.
 - Patient heart rate taken prior to start of evening wrap-up group.
 - After wrap-up group patients heart rate taken again and recorded.

NEXT STEPS

- Work with unit management to provide staff with education on deep-breathing techniques, and to incorporate techniques into nursing practice.

REFERENCES

Jerath, R., Crawford, M.W., Barnes, V.A., & Harden, K. (2015). Self-regulation of breathing as a primary treatment for anxiety. *Applied Psychophysiology and Biofeedback Journal*, 40(2), 107-115. doi: 10.1007/s10484-015-9279-8.

Ma, X., Yue, Z.Q., Gong, Z.Q., Zhang, H., Duan, N.Y., Shi, Y.T., Wei, G.X., & Li, Y.F. (2017). The effect of diaphragmatic breathing on attention, negative affect and stress in healthy adults. *Frontiers in Psychology*, 8(874), 1-12. doi: 10.3389/fpsyg.2017.00874.

Zaccaro, A., Piarulli, A., Laurino, M., Garbella, E., Menicucci, D., Neri, B., & Gemignani, A. (2018). How breath-control can change your life: A systematic review on psycho-physiological correlates of slow breathing. *Frontiers in Human Neuroscience*, 12(353), 1-16. doi: 10.3389/fnhum.2018.00353.