

Behavioral Intervention Algorithm for Neuropsychiatric Symptoms in Dementia

Introduction

- Mismanagement of challenging behaviors associated with dementia can lead to decreased quality of life, improper assessment and treatment, and acceleration of disease.¹
- Neuropsychiatric symptoms occur in 97% of people with dementia at some point in the course of the disease.²
- On medical unit Zones 31, 41, and 51 at Mercy, the mismanagement of neuropsychiatric symptoms with dementia leads to frequent Behavioral Emergency Response Team (BERT) or Code Green calls and longer stays in the hospital.
- Confidence and attitudes about dementia care likely contribute to mismanagement of this population.

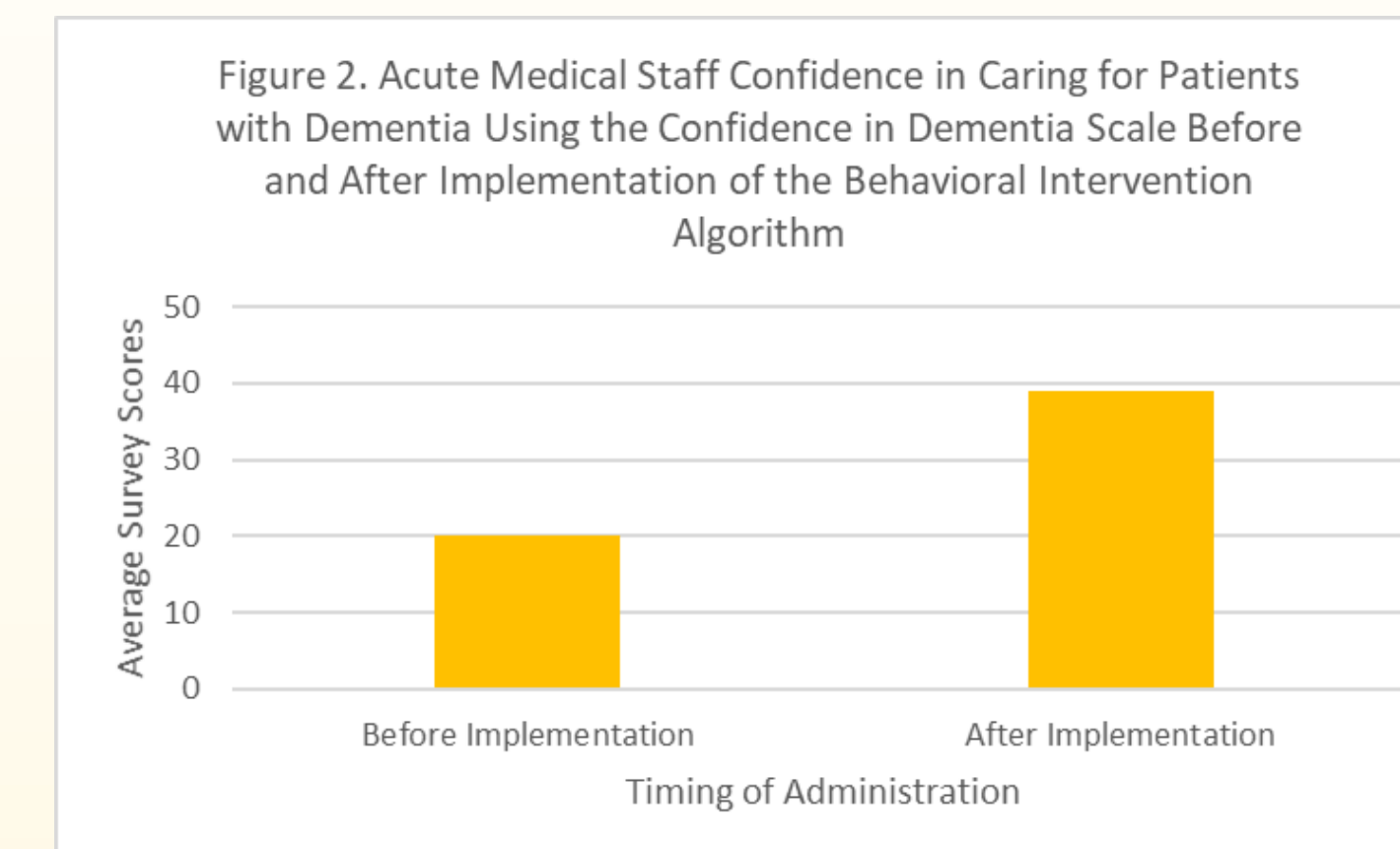
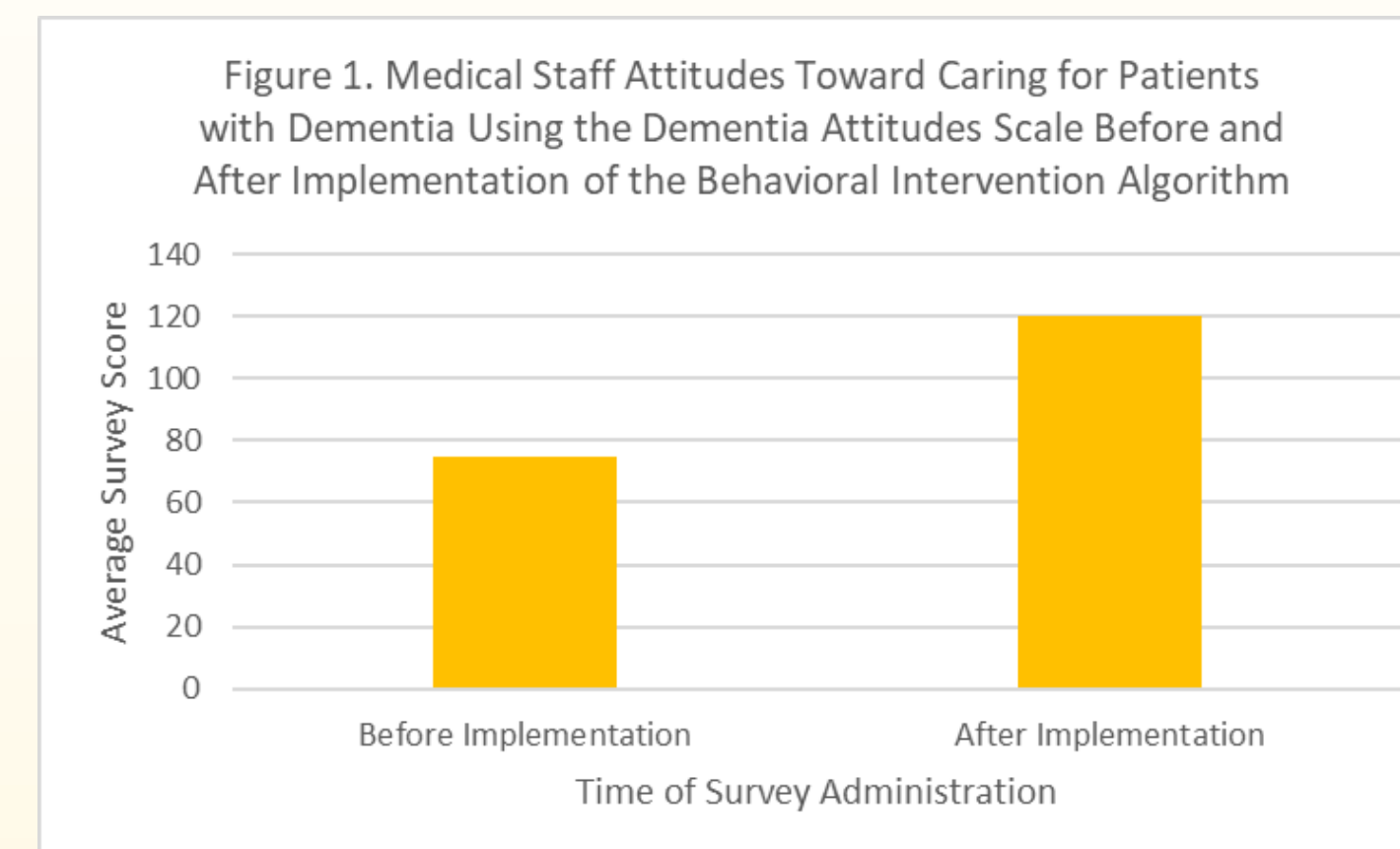
Purpose

- Purpose: To create an evidence-based behavioral intervention algorithm to safely guide management of challenging behaviors associated with dementia on acute medical units
- **Objective 1:** to improve attitudes and confidence of nurses and techs on medical units caring for patients with dementia
- **Objective 2:** reduce lengths of stay for patients with dementia
- **Objective 3:** reduce number of BERT/Code Green calls for patients with dementia

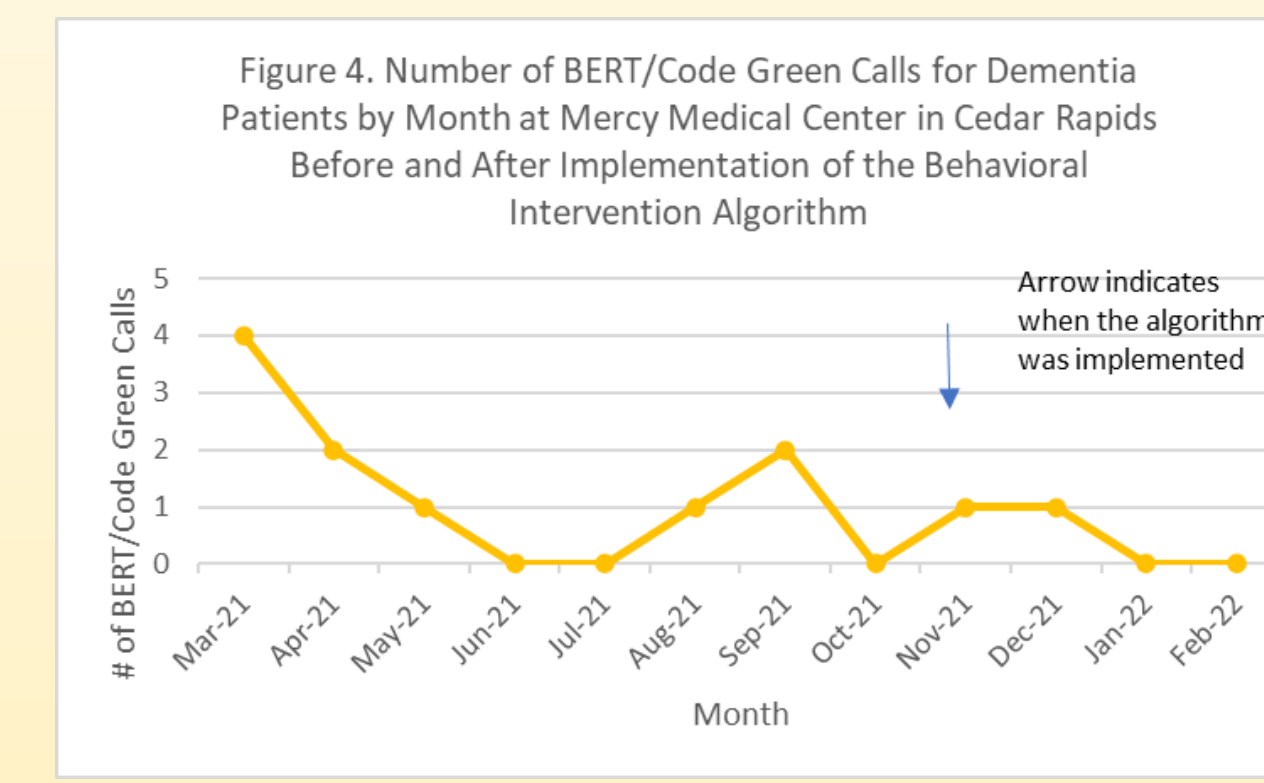
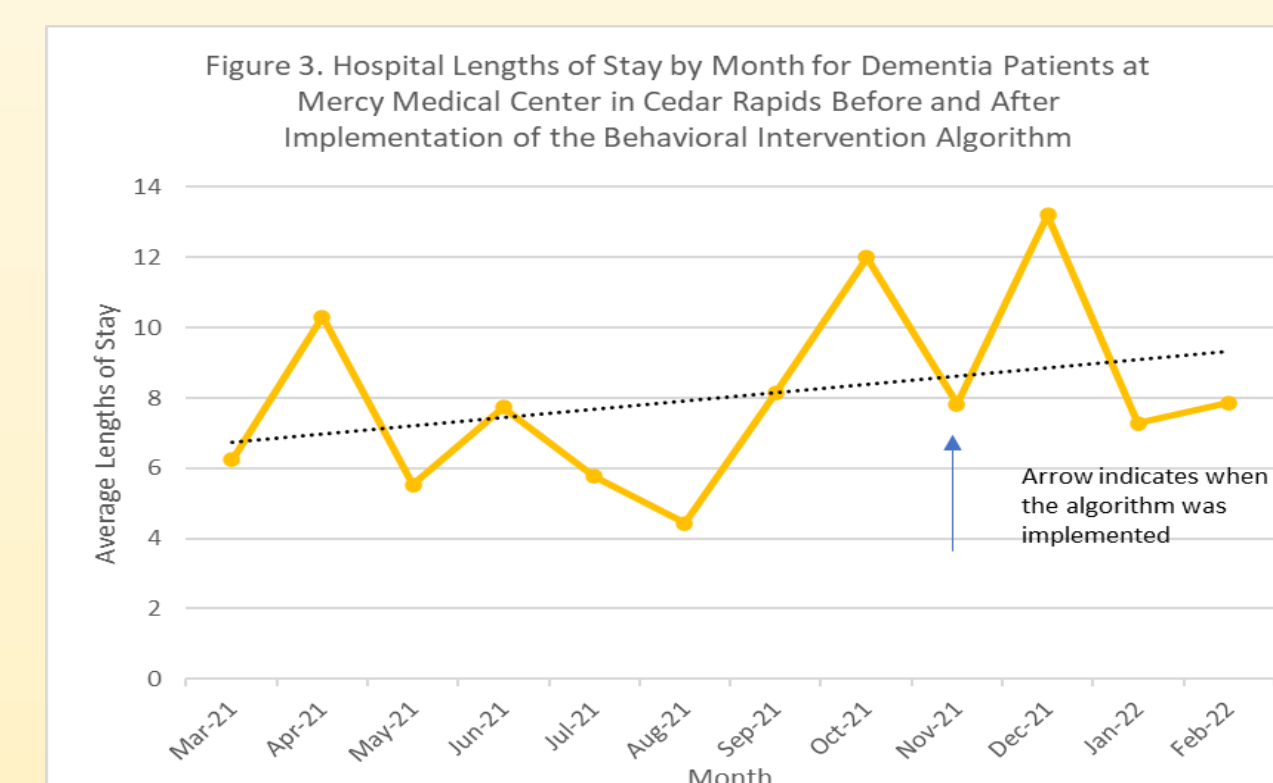
Methods

- IRB approval was received from the Mercy Medical Center and St. Luke's Hospital Institutional Review Committee
- Setting: Medical unit Zones 31, 41, and 51 at Mercy Medical Center in Cedar Rapids
- Population: Dementia patients with neuropsychiatric symptoms on inpatient medical units
- The algorithm was created using evidence-based research, then printed in pocket-sized format and laminated.
- Education about the algorithm was provided to the medical units via a PowerPoint presentation.
- The Dementia Attitudes Scale and Confidence in Dementia Scale were collected before and after implementation of the algorithm^{3,4}
- Hospital reports were run for number of BERT/Code Green calls and lengths of stay before and after implementation of the algorithm

Outcomes



- **Objective 1:** Overall average scores were calculated for both surveys for the pre-implementation period (N=36) and the post-implementation period (N=30).



- **Objective 2**
- **Objective 3**

Evaluation

Objective 1:

- Using the Welch's t-test (95% confidence interval), there was statistically significant improvement in both overall attitudes ($p=0.00002$) and confidence ($p=0.0002$) when caring for patients with dementia
- 7 of 20 Attitudes survey questions showed statistically significant improvement ($p<0.05$). Common themes included fear/discomfort being around people with dementia, frustration in caring for people with dementia, and avoidance of agitation with dementia.
- 5 of 9 Confidence survey questions showed statistically significant improvement. Common themes included comfort in interacting with and understanding the needs of patients with dementia, managing agitation, and maintaining safety.

Objective 2:

- Average hospital lengths of stay did not decrease following implementation of the algorithm.
- External factors like capacity and capability of placement facilities likely contributed to lengths of stay

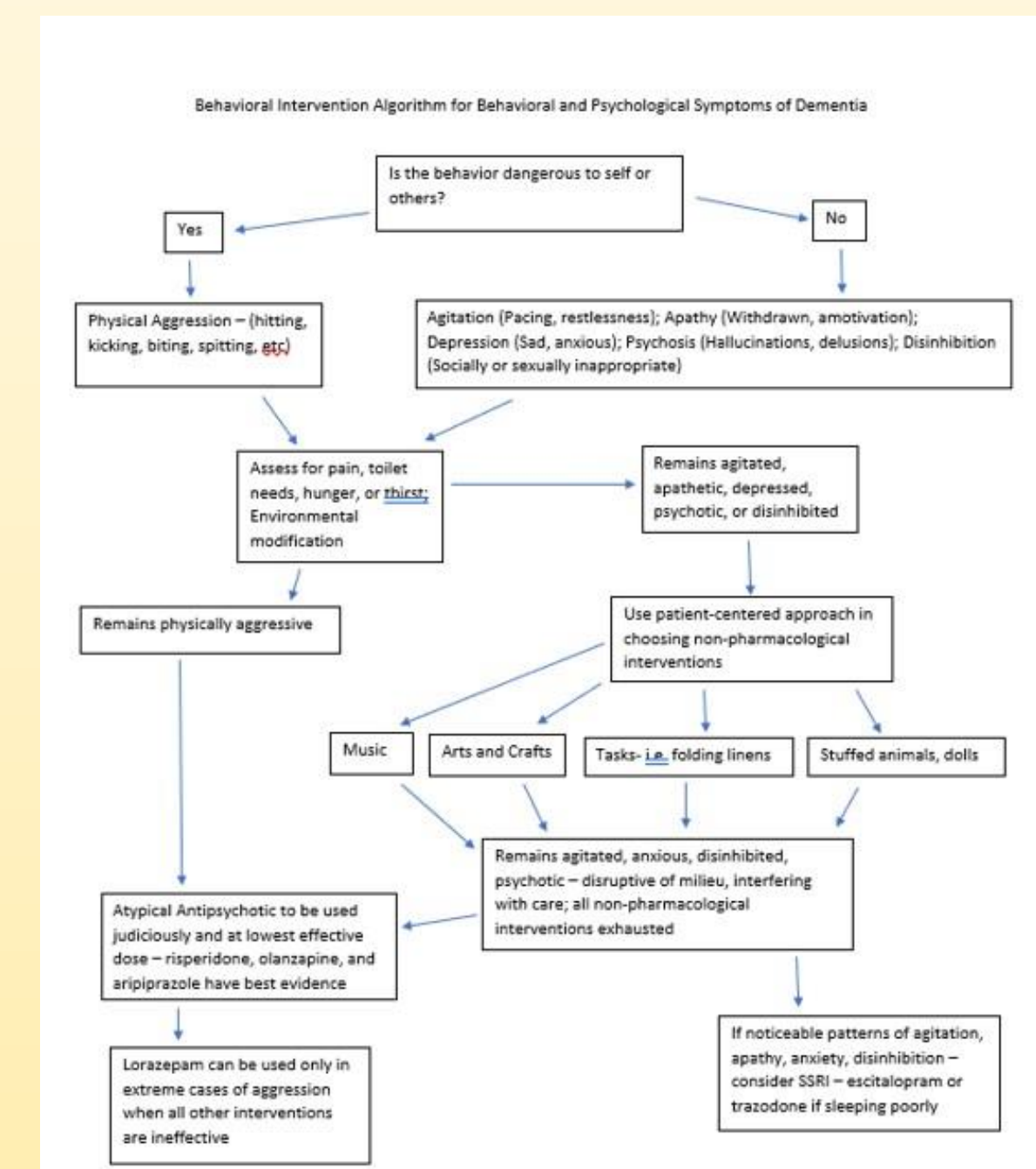
Objective 3:

- Analysis of numbers of BERT/Code Green calls is inconclusive due to missed documentation of occurrences by Mercy Access nurses leading to inaccuracy of reports.

Conclusions

- The Behavioral Intervention Algorithm promotes the use of a person-centered approach for caring for the dementia population by guiding health care workers in caring for physical, emotional, and social needs.
- The algorithm can lead to improvement of attitudes and confidence of hospital staff caring for patients with dementia by helping them to better understand needs, be less fearful and avoidant of symptoms like agitation, and be less frustrated when providing care.
- Plans for dissemination include application for publication in the peer-reviewed *Geriatric Nursing* journal because it publishes management advice, among other topics, associated with the care of both acute and chronic illnesses in older adults.⁵

- Limitations include small sample size; data collected only from Mercy Medical Center; delay of implementation while awaiting the IRB process; high hospital staff turnover; and Covid-19 restrictions. These limitations may affect generalizability of results.



References

1. Wolf, M.U., Goldberg, Y., & Freedman, M. (2018). Aggression and agitation in dementia. *Continuum Journal*, 24(3), 783-803. DOI: 10.1212/CON.0000000000000605
2. Gerlach, L.B. & Kales, H.C. (2020). Managing behavioral and psychological symptoms of dementia. *Clinics in Geriatric Medicine*, 36(2), 315-327. <https://doi.org/10.1016/j.cger.2019.11.010>
3. O'Connor, M.L. & McFadden, S.H. (2010). Development and psychometric validation of the dementia attitudes scale. *International Journal of Alzheimer's Disease*, 2010(454218). doi:10.4061/2010/454218
4. Elvish, R., Burrow, S., Cawley, R., Harney, K., Graham, P., Pilling, M., Gregory, J., Roach, P., Fossey, J., & Keady, J. (2014). 'Getting to know me': The development and evaluation of a training programme for enhancing skills in the care of people with dementia in general hospital settings. *Aging and Mental Health*, 18(4), 481-488. <http://dx.doi.org/10.1080/13607863.2013.856860>
5. Resnick, B. (2022). *Geriatric Nursing*. Elsevier. Retrieved from <https://www.journals.elsevier.com/geriatric-nursing>

Acknowledgements

I would like to acknowledge Mercy Medical Center and Dr. Sundara Munagala for their support of my project. I would also like to acknowledge Andrea Bedal, Becky Prier, and Julie Watson, the nurse managers of the units participating in the project. I would like to acknowledge John Deere of Waterloo for donating printing and laminating supplies and my husband, Nathan Scachette, for donating his time to print and laminate all of the pocket-sized algorithms. Finally, I would like to acknowledge my brother, Jared Roach, and his significant other, Ashley Michelussi, for assisting me in the statistical analyses.