

A Quality Improvement Initiative for Non-Pharmacological Therapy in Dementia

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PROBLEM STATEMENT

Within the United States, approximately 5.7 million people are living with dementia. The combined direct and indirect costs is higher than stroke, diabetes heart disease, hypertension, lung disease, cancer, psychiatric illness and arthritis. Behavioral and psychological symptoms of dementia represents a group of non-cognitive symptoms and behaviors occurring in patients with dementia. According to Cerejeira (2015), it is estimated that BPSD affects up to 90% of all individuals with dementia over the course of their illness, and it is independently associated with:

- poor outcomes
- distress among patients and caregivers
- long-term hospitalization
- increased misuse of medication
- increased falls
- increased health care costs

PROJECT PURPOSE

This is a quality improvement initiative to:

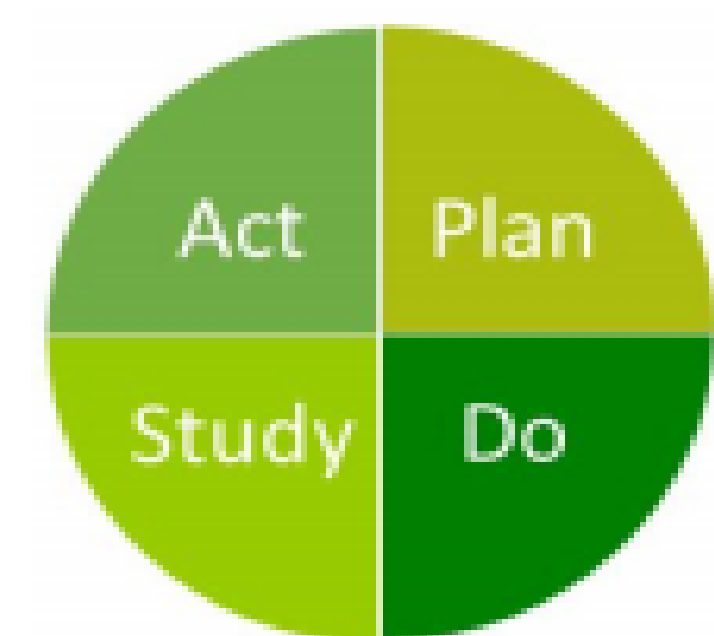
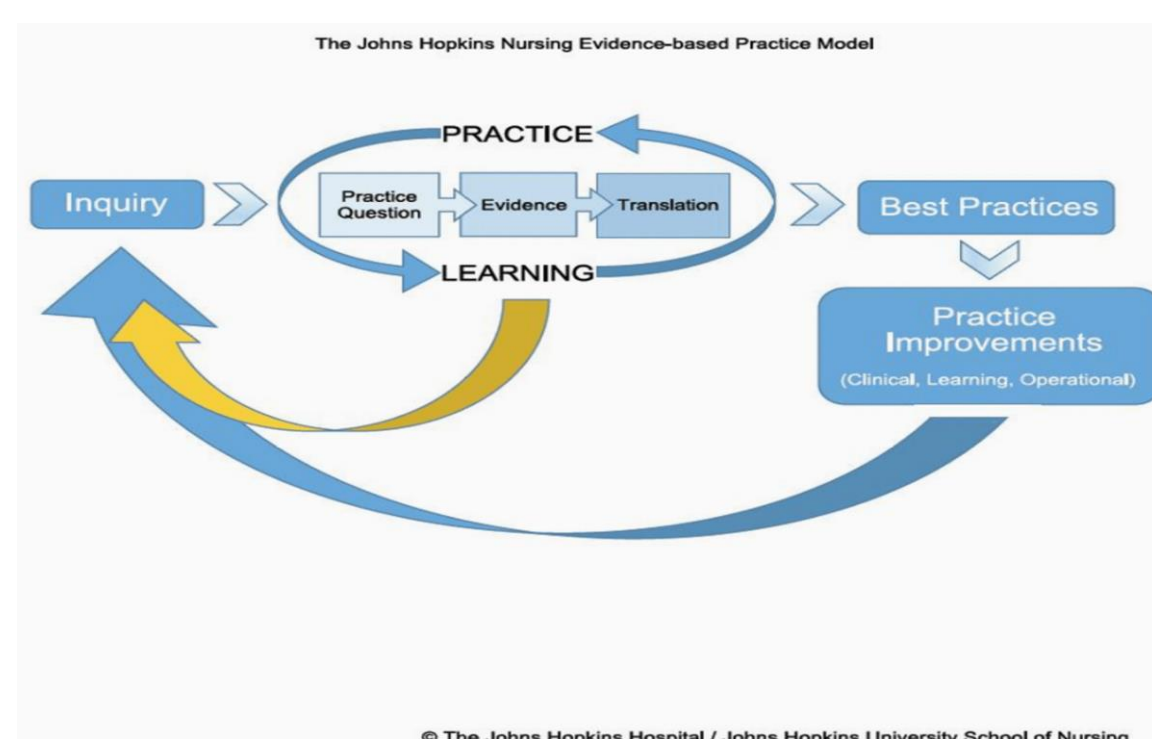
- support agitation screening for dementia patients utilizing the Cohen-Mansfield Agitation Inventory tool (CMAI)
- increase the use of non-pharmacological therapy (NPT) in patients diagnosed with dementia

The Griffith study validates the CMAI observational screening tool as an appropriate and valid measure of agitation for dementia patients in a long term care facility (LTCF). The aim is to decrease pharmacological interventions, increase psychosocial interventions in patient care and treatment plans to answer the question:

- Does the completion of CMAI screening tool for patients diagnosed with dementia living in a LTCF increase non-pharmacological therapy intervention and decrease agitation, polypharmacy and falls?

MODEL/NURSING THEORY

This project is an evidence based practice improvement with Plan-Do-Study-Act approach developed upon Dr. Kristen M. Swanson's middle range theory of caring that focuses on the importance of being mindful of the needs and well-being of participants. It is readily translatable for application to research and practice.



METHODS

This project utilized a pre-post design with data collected at baseline (Phase I) and post-NPT on patients with dementia (Phase II). See Figure 1. The method of this quality improvement initiative was to perform and analyze two comparisons of the CMAI scores; pre-NPT intervention scores and post-NPT intervention scores. The post NPT CMAI score was the outcome measures to determine if there was a reduction in agitation. The preferred type of NPT was ordered and performed in daily 30 minute sessions for 14 days. Review of the patient's medication administration record (MAR) pre-NPT and post-NPT included record of high risk scheduled and pro re nata (PRN) medication for final comparison and effect on poly-pharmacy. Number of falls 14 days pre-NPT were recorded and number of falls 14 days post NPT were recorded for final comparison of falls.

Subjects

Fifty men and women with any subtype of dementia, 65 years of age or older, living in an LTCF, and currently prescribed high risk medications were screened. Patients with active and untreated infections, documented uncontrolled pain, past medical history of schizophrenia, bipolar or mood disorder that precedes dementia diagnosis and/or confirmed Baker Act committed in the last 90 days were excluded. 50 participants were screened and 44 completed 14 days of NPT.

Setting

The quality improvement project was completed at two 120-bed long-term care facilities, one located in Pasco County, Florida and the other in Hillsborough County, Florida. Both facilities offered NPT options including aroma therapy, tactile/hand massage and music therapy.

Tool

The CMAI-short form was used for this project and measures 14 agitation-like behaviors that are most common among dementia patients (see Figure 2). It is observational and the screener rates the frequency of the behaviors. The scale is a range of one through five. A rating of one indicates that the participant never engages in the specific agitated behavior. A rating of five indicates that the participant manifests the behavior on the average of several times an hour. The CMAI screening tool is not actively used in the two specified LTC settings to identify agitation in patients with dementia.

Figure 2

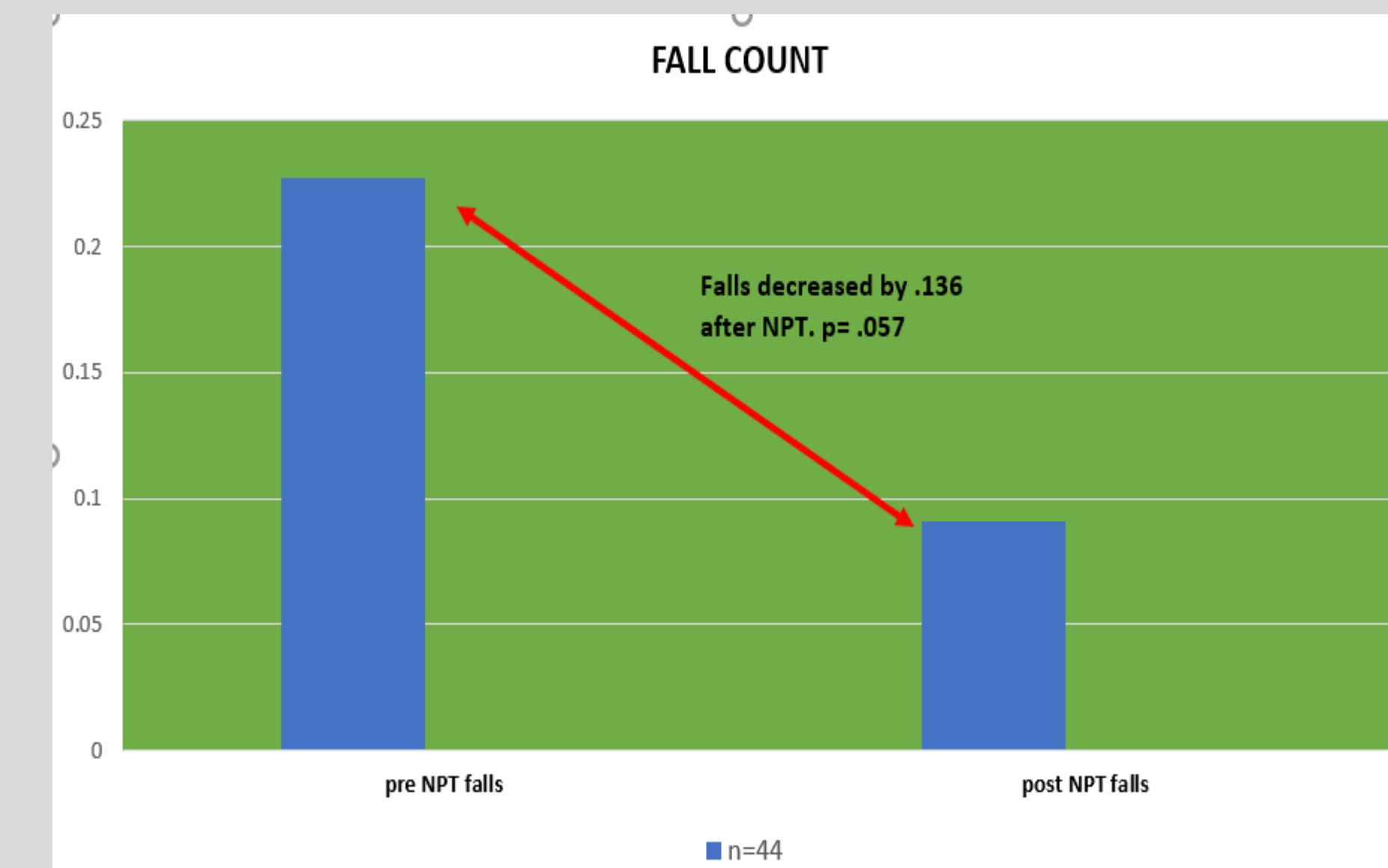
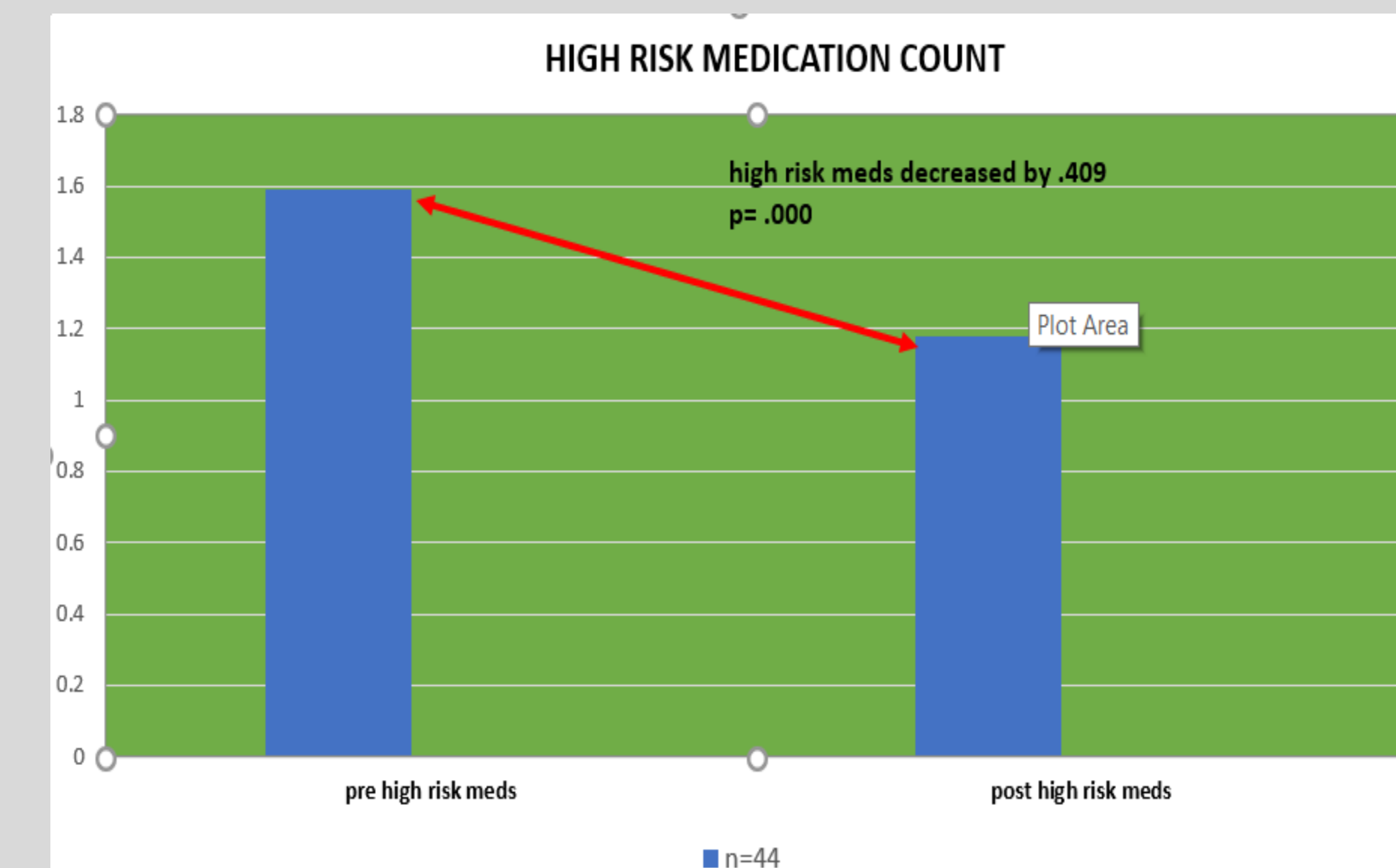
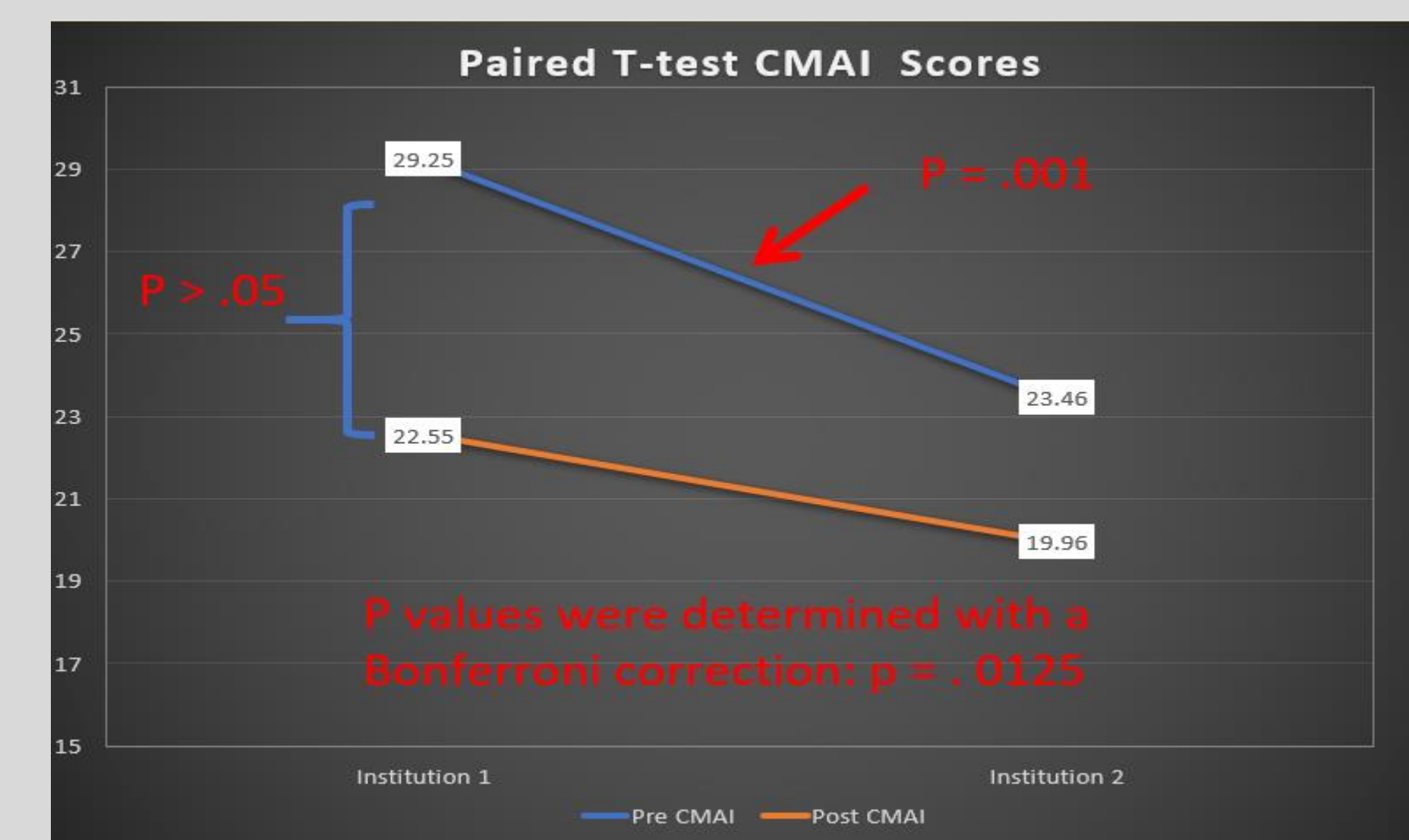
THE COHEN-MANSFIELD AGITATION INVENTORY - short form					
Please read each of the agitated behaviors, and check how often (Item 1-14) they were manifested by the participant over the last 2 weeks. If more than one occurred within a group, add the occurrences, e.g., if falling occurred on 3 days a week, and hitting occurred on 4 days a week, 3 + 4 = 7 days, circle 7, once or several times a day.					
	Never	Less than once a week	Once or several times a week	Once or several times a day	A few times on half an hour or continuous for half an hour or more
1. Cursing or verbal aggression	1	2	3	4	5
2. Hitting (including self), kicking, pushing, shoving, pulling, twisting, shaking, slapping, or shaking (including or mouth)	1	2	3	4	5
3. Cursing or verbal aggression	1	2	3	4	5
4. Other aggressive behaviors or self-abuse including: intentional falling, shaking verbal or physical assault, shouting, cursing, hitting, throwing objects, or other	1	2	3	4	5
5. Pace, restless wandering, trying to go to a different place (e.g., out of the room, hallway)	1	2	3	4	5
6. General restlessness, fidgeting, restlessness, tapping, pacing, or other	1	2	3	4	5
7. Suspiciousness, ideas of persecution	1	2	3	4	5
8. Hoarding things, hoarding	1	2	3	4	5
9. Constant request for attention or help	1	2	3	4	5
10. Wandering, aimless, aimless, or restless	1	2	3	4	5
11. Complaining, complaining, or other	1	2	3	4	5
12. Strange voices, unusual behavior or vocal	1	2	3	4	5
13. Shaking things, throwing	1	2	3	4	5
14. Incontinence	1	2	3	4	5

Figure 1

Phase I	Phase II (within 72hrs of NPT completion)
<input type="checkbox"/> Demographics	<input type="checkbox"/> Date of rescreen
<input type="checkbox"/> Date of admission	<input type="checkbox"/> Current MAR with reconciliation compared to Phase I
<input type="checkbox"/> Date of screen	<input type="checkbox"/> Fall within 30 days
<input type="checkbox"/> Dementia subtype	<input type="checkbox"/> Current infection and type
<input type="checkbox"/> Current medication administration record (MAR), specifically:	<input type="checkbox"/> Hospital admission within last 30 days
<input type="checkbox"/> benzodiazepines, Rx	<input type="checkbox"/> If yes, type
<input type="checkbox"/> opioids, Rx	<input type="checkbox"/> Date NPT ended
<input type="checkbox"/> anticholinergics Rx	<input type="checkbox"/> Was NPT course completed
<input type="checkbox"/> antipsychotics Rx	<input type="checkbox"/> If no, why
<input type="checkbox"/> Fall(s) within 90 days	<input type="checkbox"/> CMAI rescreen score
<input type="checkbox"/> Current infection and type	
<input type="checkbox"/> CMAI screen score	
<input type="checkbox"/> Type of NPT ordered	
<input type="checkbox"/> Date NPT started	

RESULTS

Mean CMAI scores improved by 4.954 post NPT intervention, $P=.000$. Mean high risk med counts improved by .409 post NPT intervention, $P=.000$. Both the mean CMAI scores and the improvement in use of high-risk meds were statistically significant. Number of falls was not significantly improved post NPT intervention, $P=.057$.



DISCUSSION

Utilization of CMAI and implementation of NPT in the long-term care setting is a promising intervention to decrease agitation and decrease high-risk medications (benzodiazepines, anticholinergics, opioids and antipsychotics) in dementia patients. Opportunity exists to standardize the use of the CMAI in LTC to better identify agitation and offer NPT as an alternative in the patient's plan of care.

Implications for Practice

Results suggest that through the emphasis of screening, and treatment reframing in a LTCF, early identification of BPSD utilizing the CMAI tool will increase the use of NPT options, and decreased use of high risk meds and falls for patients diagnosed with dementia.

Sustainability

Further research is needed to determine the best method of identifying BPSD to positively affect its trajectory as it relates to high risk meds and falls. Related declines, complications and outcomes associated with dementia are calling for practice model redesigns and delivery redesign.

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