

The Evidence Integration Triangle for Management of Behavioral Psychological Symptoms of
Dementia

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Abstract

Problem and Purpose

Behavioral Psychological Symptoms of Dementia (BPSD) are described as symptoms of apathy, agitation, inappropriate vocalization, aggression, wandering, and resistance to care. Incorrectly managing BPSD can lead to the improper administration of psychotropic medications, which can negatively impact the health and quality of life for residents with dementia. The purpose of this quality improvement project was to implement the Evidence Integration Triangle for Management of Behavioral Psychological Symptoms of Dementia (EIT-4-BPSD) in a nursing home. The Evidence Integration Triangle is a four-step implementation framework that includes participatory implementation processes, provision of practical, evidence-based interventions, and pragmatic measures of progress towards goals.

Methods

The EIT-4-BPSD was implemented over a ten-week period. The four steps included: Step 1: Assessment of the environment and policies; Step 2: Education of staff; Step 3: Establishing person-centered care plans; and Step 4: Mentoring and motivating staff. Outcomes were evaluated pre and post-implementation. Resident outcomes were obtained from the Minimum Data Set National Database and included: use of psychotropic medications and falls. Staff outcomes included knowledge of person-centered behavioral approaches for BPSD based on a 10-item multiple-choice test. Facility outcomes included evaluation of a random sample of five de-identified care plans to evaluate for evidence of incorporation of person-centered approaches to managing BPSD.

Results

Patient outcomes revealed a 12.5% decrease in the administration of psychotropic medications and a 5.6% decrease in falls. Nurse's post-test knowledge of person-centered management of BPSD increased from 63.5% to 70% post-implementation. Evidence of established person-centered care plans increased from 40% at baseline to 90% post-implementation.

Conclusion

The EIT-4-BPSD intervention was practical to implement and provided the staff with information and resources to help integrate person-centered behavioral approaches into care plans and routine clinical care. Ongoing work by the nurse champion is needed to continue to maintain the focus on the use of person-centered behavioral approaches.

Introduction

Behavioral Psychological Symptoms of Dementia (BPSD) are described as symptoms of inappropriate vocalization, wandering, agitation, aggression, apathy, and resistance to care. (Maust, Kim, Chiang, & Kales, 2018). BPSD affects 98% of individuals with dementia, and 33% of the cost is attributed to BPSD management (Kales, Gitlin, & Lyketsos, 2014). Managing BPSD can be challenging for both staff and family members, leading to an increase in stress and burnout. Psychotropic medications are often administered to residents in long-term care facilities for the management of BPSD. Consequently, psychotropic medications can cause adverse events, including an increase in mortality, falls, cardiovascular events, functional decline, and hospitalizations (Chiu, Bero, Hessol, Lexchin, & Harrington, 2015). The Centers for Medicare and Medicaid Services (CMS) established the National Partnership to Improve Dementia Care in Nursing Homes by encouraging facilities to use non-pharmacological person-centered interventions as first-line treatment for the management of BPSD (Maust et al., 2018).

Despite these national strategies, psychotropic medications continued to be administered, and person-centered behavioral approaches were not being implemented for residents with dementia. Less than 2% of long-term care facilities consistently applied person-centered behavioral approaches (Resnick et al., 2016). The Nursing Home Compare Website (2018) evaluates percentage rates of psychotropic medication use, and resident falls between long-term care facilities, the state of Maryland, and the national average to allow consumers to compare quality between long-term care facilities to improve quality of care for residents suffering from BPSD (Lucas & Bowblis, 2016). The percentage of long-stay residents who receive antipsychotic medications at the long-term care facility was 14.6% (CMS, 2018) as compared to the Maryland state average of 12.6% (CMS, 2018), and the national average of 15.0% (CMS,

2018). The percentage of long-stay residents who experienced one or more falls with significant injury was 7.5% (CMS, 2019) as compared to the Maryland state average of 2.7% (CMS, 2019), and the national average of 3.4% (CMS, 2019). When comparing these results, residents who received psychotropic medications at the long-term care facility is almost as high as the national average and above the average in the state of Maryland. Furthermore, the resident fall rate at the long-term care facility was more than doubled compared to both the state of Maryland and the national average. These percentages indicated a necessity for the long-term care facility to develop an action plan to improve nurse's clinical practice in the management of BPSD.

The purpose of this quality improvement (QI) project was to implement the Evidence Integration Triangle for Management of Behavioral Psychological Symptoms of Dementia (EIT-4-BPSD) in a nursing home. The Evidence Integration Triangle is a four-step implementation framework that includes participatory implementation processes performed between the Doctor of Nursing Practice (DNP) student and stakeholders, provision of practical, evidence-based interventions, and pragmatic measures of progress towards goals. The EIT-4-BPSD will guide nurses to utilize person-centered behavioral approaches to reduce BPSD and to decrease psychotropic medication use.

Theoretical Framework

To promote change amongst nurses in the nursing home, three middle range and practice theories were incorporated into the implementation of EIT-4-BPSD. The theories used in this project are: The Social Cognitive Theory, Social-Ecological Theory, and Evidence Integration Triangle.

The Social Cognitive Theory (SCT) considered both how behavioral patterns are learned and patterns of behaviors, once comprehended, are regulated (Ziegler et al., 2005, p. 33). In the

implementation of EIT-4-BPSD, SCT was used to enhance staff efficacy by the four major concepts of the Self-Efficacy Theory. The Self-Efficacy Theory was based on the Social Cognitive Theory, which described how a person's traits, behavior, and environment make up an individual's personality (Resnick, 2017, pg. 79). The four major concepts of the Self Efficacy Theory include: enactive attainment, vicarious experience, verbal persuasion, and physiological feedback (Resnick, 2017, pg. 81). These four major concepts were used during education sessions. The DNP student discussed with nurses how to identify symptoms of BPSD, perform person-centered behavioral approaches, provide motivation and support to minimize frustration, and share success updates when nurses are performing person-centered behavioral approaches appropriately.

The Social-Ecological Theory emphasized multiple levels of influence and the idea that behaviors both shape and are shaped by the social environment (Office Behavioral and Social Sciences Research, n.d.). The major concepts of the Social-Ecological Theory include individual, interpersonal, organizational, community, and public policy (Office of Behavioral and Social Sciences Research, n.d.). These major concepts were used by the DNP student and nurse champion when they assessed both the long-term care facility's environment for patient safety and policies for evidence of support using person-centered behavioral approaches. It is imperative to detect barriers and deficiencies within the environment and policy to integrate person-centered behavioral approaches effectively.

Evidence Integration Triangle (EIT) is an implementation framework used to guide translation, implementation, prevention efforts, and policymaking into a practical application (Glasgow, Green, Taylor, & Stange, 2012). EIT is composed of three major concepts that include: participatory implementation process with stakeholders, implementation of evidence

approaches, and practical progress measures (Resnick et al., 2018). In EIT-4-BPSD, evidence-based practice guidelines on person-centered behavioral approaches and involvement of key stakeholders (Medical Director, Director of Nursing, Nurse Practitioner, Pharmacist, and Social Work) were integrated into the EIT implementation framework. With active participation and engagement, the DNP student and nurse champion implemented the four steps of the EIT-4-BPSD framework to assure that person-centered behavioral approaches to manage BPSD are sustainably integrated into routine clinical practice at the long-term care facility.

Literature Review

Three studies were analyzed to determine if the EIT-4-BPSD is an effective implementation strategy for the assessment and management of BPSD. All studies took place in a long-term care facility. Also, all studies were consistent in their inclusion/exclusion criteria. Inclusion criteria included residents over the age of 55, who are English speaking, shown to have cognitive impairment, and exhibit at least one symptom of BPSD in the past month. Exclusion criteria included residents not enrolled in hospice and are not in the nursing community for short-stay rehabilitation.

Resnick et al. (2016) conducted a pilot study of the EIT-4-BPSD to assess the efficacy of the implementation strategy in the long-term care facility. This study compared findings pre and post-implementation of EIT-4-BPSD. The study took place in two long-term care facilities. A total of 21 residents participated in the study. The EIT-4-BPSD was implemented by the nurse facilitator, nurse champion, and stakeholders while using the four-step approach which includes: Step 1: Assessment of environment and policy; Step 2: Staff education; Step 3: Establishment of person-centered care plans; and Step 4: Mentoring/motivating staff. Results showed a significant decrease in agitation ($P=0.001$) and improvement in the quality of life ($P=0.001$). In addition,

improvements were seen in environment quality scores (from 20.00 to 21.50; higher scores indicate improved environment quality), facility's policy scores (from 16.50 to 21.00; higher scores indicate a greater number of policies supporting person-centered behavioral approaches), care plan scores (from 4.24 to 4.72; higher scores indicate improvement in incorporating person-centered behavioral intervention in care plans), and improved mean score of nursing staff member's knowledge on assessment and management of BPSD (73%). Based on the evidence, this study showed improvement in BPSD (agitation) and quality of life among residents. Evidence has also shown changes were made by stakeholders in the environment and policy to promote patient safety and support person-centered behavioral approaches.

Coon et al. (2014) conducted a systematic review of 27 studies, which consisted of 19,300 residents with dementia; however, the sample information was not provided in all studies. This study assessed for the efficacy of educational programs and in-reach services in reducing inappropriate prescribing of antipsychotics to residents with dementia in long-term care facilities. Four studies (randomized and controlled studies) showed a decrease in medication use in the intervention group (12%) compared to the controlled group (20%). Furthermore, two studies (randomized and controlled studies) showed better multidisciplinary teamwork by spending more time supporting nursing staff members. Both studies showed reductions in prescription rates (19%; $P=0.007$) and 16%; $P < 0.0001$). Based on the evidence, educational programs and in-reach services resulted in improvements in the collaboration amongst stakeholders to integrate person-centered behavioral approaches successfully. In addition, there was a reduction in the administration of "as needed" psychotropic medications.

Barbosa, Sousa, Nolan, & Figueiredo (2015) conducted a systematic review to assess the impact of person-centered care approaches on stress, burnout, and job satisfaction of staff caring

for residents with dementia in long-term care facilities. Seven experimental/quasi-experimental studies were reviewed using 26-300 residents. One of the seven studies integrated behavioral oriented approaches such as simplifying tasks and using one-step instructions to residents when providing daily care. One study showed a decrease in one aspect of burnout called de-personalization (pre: $M=1.71$, $SD=1.36$; post: $M=1.16$, $SD=0.43$, $P= <0.05$). Barbosa et al. (2015) demonstrated a positive impact on nursing staff members when using person-centered behavioral approaches. Person-centered behavioral approaches can prepare nursing staff members to manage BPSD appropriately by focusing on the resident's needs rather than the task at hand, which can lead to an increase in nurse's confidence and fulfillment as they provide care to their residents. Essentially, this resulted in an increase in job satisfaction and a decrease in stress and burnout.

Weaknesses and limitations of the Coon et al. study (2014) included small sample sizes and poor data collection from staff and residents due to residents withdrawing from the study and staff members leaving the long-term facility due to stress associated with increased workload. This limitation caused attrition bias and became a threat to internal validity of the study. Barbosa et al. (2015) showed potential reporting bias due to using only studies published in peer-reviewed journals. In addition, post-only studies were included, and reduced quality. Overall, despite the weaknesses, all three studies show positive clinical outcomes when nursing staff members utilize patient-centered behavioral approaches to decrease BPSD in residents living in a long-term care facility. Similar recommendations with all studies include continuing on-going research, developing education programs, and mentoring and motivating nursing staff members.

Methods

The EIT-4-BPSD was implemented in a nursing home. The DNP student worked with the nurse champion to implement the EIT-4-BPSD over a ten-week period. The four steps in the EIT-4-BPSD included: Step 1: Assessment of the environment and policies; Step 2: Staff education; Step 3: Establishing person-centered care plans; and Step 4: Mentoring and motivating staff. Outcomes were evaluated pre and post-implementation of EIT-4-BPSD. Resident outcomes were obtained from the Minimum Data Set National Database and included: use of psychotropic medications and resident falls. Staff outcomes included knowledge of person-centered behavioral approaches for BPSD based on a 10-item multiple-choice test and evidence of performing person-center care approaches based on direct observation of 20 random staff-resident care interactions. Facility outcomes included assessments of the environment and policies for evidence of patient safety and support for the implementation of person-centered behavioral interventions for BPSD; and evaluation of a random sample of 5 care plans to evaluate these for proof of incorporation of person-centered approaches to BPSD.

Inclusion criteria included: residents living in a participating long-term care facility, who are 55 years of age and older, English speaking, who exhibited at least one BPSD within the past month as reported by nursing staff and have signs of cognitive impairment. Exclusion criteria included: residents who are enrolled in hospice and not living in the long-term care facility for short-stay rehabilitation care.

The DNP student provided brief education sessions for nurses during their monthly mandatory staff meetings. Topics discussed during the education session included: symptoms of BPSD, assessment of BPSD, establishing person-centered care plans, and learning how to communicate effectively with residents with BPSD. The DNP student provided resource binders

containing additional resources on BPSD from the nursing home toolkit website. Binders were placed at each nursing station. The DNP student guided the nurse champion on how to assess and manage residents with BPSD and to assess care plans to ensure care plans are person-centered. Subsequently, the DNP student and nurse champion assessed care plans biweekly to establish whether nurses are focusing on symptoms associated with BPSD and if interventions provided to residents are person-centered. Examples of person-centered behavioral approaches included: therapeutic communication, step-by-step instructions, and active listening.

Scores from environment and policy assessments were collected by using the Environment Assessment Checklist and Policy Assessment Checklist. Scores on nurse's knowledge of BPSD were collected using the Knowledge of Person-Centered Behavioral Approaches for BPSD Post-Test. Scores on person-centered care plans were collected using the Checklist for Evidence of Use of Person-Centered Approaches to Manage BPSD in Care Plans. Scores on observing nurses performing person-centered behavioral approaches to residents were collected using the Behavioral Interventions for BPSD Checklist.

Data were analyzed using the tools mentioned previously. In the Environment Assessment Checklist and Policy Assessment Checklist, higher scores indicate improvement in environmental quality and a more significant number of policies supporting person-centered behavioral approaches (Resnick et al., 2018). Mean scores on the Knowledge of Behavioral Interventions for BPSD of 80% or higher indicates understanding the knowledge provided on BPSD (Resnick et al., 2018). Higher scores in the use of Behavioral Interventions for BPSD Checklist indicate that nursing staff members are improving in performing person-centered behavioral approaches with residents (Resnick et al., 2018). Higher scores in the Checklist for Evidence of Use of Person-Centered Care Approaches to Manage BPSD in Care Plans indicate

an increase in nursing staff members are performing person-centered behavioral approaches properly (Resnick et al., 2018).

Results

Resident outcomes revealed a 12.5% decrease in the administration of psychotropic medications and a 5.6% decrease in falls. The nurse's post-test knowledge of person-centered management of BPSD increased from 63.5% at baseline to 70% post-implementation. Evidence of established person-centered care plans increased from 40% at baseline to 90% post-implementation. Observations of care interactions indicated that staff was providing person-centered behavioral approaches during all care interactions pre and post-implementation of EIT-4-BPSD. Facility outcomes showed no changes in the environment and policy assessments pre and post-implementation of EIT-4-BPSD.

The key facilitator during the implementation phase was the nurse champion. During monthly mandatory staff meetings, the nurse champion reinforced to nurses about the importance of performing person-centered behavioral approaches to residents. Furthermore, the nurse champion emphasized the importance of establishing person-centered care plans by ensuring nurses are specifying symptom(s) of BPSD the resident exhibits and describe intervention(s) performed to manage that particular symptom(s) of BPSD. The DNP student's original plan was to conduct staff huddles twice daily to reinforce how to manage BPSD; however, due to the nurse's routine schedule, staff huddles were not performed; thus, causing a barrier during the implementation phase. As a result, the DNP student provided staff education to nurses only during their monthly mandatory staff meetings.

Discussion

The EIT-4-BPSD was practical to implement and provided nurses with information and resources to help integrate person-centered behavioral approaches into routine care. Similar to other publications, this QI project showed decrease percentage rates in psychotropic medications, an increase in nurse's knowledge on BPSD, and improvement in establishing person-centered care plans. This QI project focused on the use of person-centered behavioral approaches, which increased nurse's awareness to use person-centered behavioral approaches as the first-line treatment rather than requesting psychotropic medications to manage the resident's behaviors. As a result, resident outcomes showed a decrease in the use of psychotropic medications, and falls. In addition, staff outcomes showed nurse's average score from the Knowledge Post-Test increased from pre to post implementation.

There was increasing evidence of established person-centered care plans in the long-term care facility. The changes noted in care plans reflect evidence of the adoption of utilizing person-centered behavioral approaches for the management of BPSD. Observations of care interactions indicated that nurses were provided person-centered behavioral approaches during all care interactions pre and post-implementation. There were no changes in mean percentage scores shown in the environment and policy assessment. This is due to the time allotted to implement EIT-4-BPSD. There were some limitations and challenges while implementing EIT-4-BPSD. The implementation of EIT-4-BPSD took place in one long-term care facility and focused only on nurses caring for residents with BPSD; thus, findings cannot be generalized to all residents and all long-term care facilities. Other challenges included: lack of engagement from one stakeholder, staff turnover, and loss of residents to follow-up.

Conclusion

EIT-4-BPSD shows evidence of feasibility and has the potential to make a positive impact in long-term care facilities to help guide nurses to use person-centered behavioral approaches for the management of BPSD. Ongoing work by the nurse champion is needed to maintain the focus on the use of behavioral strategies. The DNP student mentored and guided the nurse champion throughout the phases of EIT-4-BPSD. Therefore, the nurse champion can motivate and guide nursing staff members in continuing to provide person-centered behavioral approaches and establishing person-centered care plans by on-going education during monthly staff meetings. A committee at the long-term care facility can be developed for nursing staff members interested in maintaining person-centered behavioral approaches to assess and manage residents with BPSD.

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Appendix A

Evidence Review Table

Study	Author/Year	Study Objective	Design	Sample (N)	Intervention	Outcomes Studied	Results	Level/Quality
1	Barbosa et al. (2015)	To assess the impact of person-centered approaches on stress, burnout, and job satisfaction of staff caring for people with dementia in a long-term care facility	Systematic Review: experimental and quasi-experimental	7 Studies ranged from 26-300	Behavioral oriented approaches (n=2)	Stress Burnout Job Satisfaction	1 study found significant reduction in 1 aspect of burnout (depersonalization)	2B
2	Coon et al. (2014)	To evaluate the efficacy of interventions utilized to decrease inappropriate prescribing of antipsychotics to the elderly	Systematic Review with RCT, Pre/Post studies, and controlled clinical trial	22 studies reviewed	Evaluate the effectiveness of educational programs, in-reach services, medication review, and multicomponent interventions	A decrease in antipsychotic use. Extensive electronic searches were augmented, searching	Antipsychotic prescription rates were seen to fall as a result of the four interventions (educational programs, in-reach services, medication	2B

		with dementia in residential care			to reduce inappropriate prescribing of antipsychotics	for all included articles. Unable to perform a meta-analysis of RCT because of the variety of formats in which these data presented	review, and multicomponent intervention	
3	Kales et al. (2014)	To evaluate the elements of care for BPSD. Construct an approach to manage BPSD. Discuss how approaches can be utilized in practice	Literature review from an expert panel	N/A	Provide staff education by utilizing the DICE approach method on how to manage patients suffering from BPSD	Cognition Agitation Resistiveness Quality of life	EIT-4-BPSD can facilitate a change in how BPSD is prevented and managed in long-term care	5B
4	Resnick et al. (2016)	To pilot test the EIT-4-BPSD intervention to help nursing staff	Single group repeated measures study	21 residents in two nursing homes	A research facilitator worked with the facility's champion and a stakeholder	Resident: Agitation Aggression Resistiveness	Limited to small sample size. Results suggested a small but significant	4B

		integrate behavioral interventions in their routine care			team to implement the four steps of EIT-4-BPSD. Findings were compared pre/post-implementation	Nursing Staff: Knowledge Performance Job satisfaction	improvement in BPSD among residents concerning decreasing agitation and improving quality of life and a trend toward decreasing depressive symptoms and resistive behavior	
5	Resnick et al. (2018)	To facilitate improvement in nursing staff education by performing person-centered behavioral approaches to residents who have BPSD	Cluster RCT	625 residents within 50 nursing home communities	EIT-4-BPSD: -Assessment of Environment and policy -Staff education -Establish care plans -Mentor and motivate	Resident: Agitation Aggression Resistiveness Depression Anxiety Nursing staff: Knowledge Performance Job satisfaction	EIT-4-BPSD can facilitate a change in how BPSD is prevented and managed in long-term settings. Volunteers communities from 2 states included and focused on residents with BPSD. Results cannot be generalized to all residents and	2B

							nursing home communities	
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Appendix B

Pre/Post EIT-4-BPSD Implementation Table

Variables	Pre EIT-4-BPSD	Post EIT-4-BPSD
% Psychotropic Medication Use		
Long-term care facility	13.4%	12.5%
MD Average	12.2%	12.2%
National Average	14.5%	14.5%
% Fall Rates		
Long-term care facility	7.6%	5.6%
MD Average	2.7%	2.7%
National Average	3.4%	3.4%
Environment Assessment	79%	79%
Policy Assessment	71%	71%
BPSD Knowledge Post-Test	63.5%	70%
Evidence of Person-Centered Behavioral Approaches in Care Plans	40%	90%
Observation on Use of Person-Centered Behavioral Approaches	100%	100%

Appendix C

An assessment of the environment will be done by the Internal Champion after initial training. This will be reviewed with the Research Nurse Facilitator during the next monthly visit. The assessment is done using the Environmental Assessment. *Of note this is also an outcome measure but as such is completed independently by research evaluators in the both the treatment and control facilities.*

Environmental Assessment

	Date	
Item	Yes	No
1. The use of an intercom is minimized (for emergency use only).		
2. Resident rooms are personalized.		
3. Accommodations are provided for family to stay overnight with the resident in special circumstances.		
4. Communal areas are homelike.		
5. Ambient air temperature is appropriate.		
6. Lighting sources decrease glare and enhance visual acuity.		
7. Resident /family have access to refrigerator, microwave, snacks, and fluids.		
8. Private areas are available for family members and friends to visit with the resident.		
9. Walking areas are free of clutter.		
10. Walking areas have rest spots available.		
11. Walking paths lead to meaningful destinations.		
12. Outdoor spaces are available and support safe ambulation.		

13. Cues in the environment encourage physical activity (e.g., distance markers)		
14. Safe assistive mobility devices are accessible.		
15. Supplies to promote cognitive stimulation and diversion (music, art supplies, manipulatives, etc.) are accessible.		
16. Seating is available in residents' rooms and height is appropriate (Between 80 to 120% of lower leg length)		
17. Bed height is appropriate (between 80 to 120% of lower leg length)		
18. Toilet height is appropriate (between 80 to 120% of lower leg length)		
19. Communal areas have adequate seating.		
20. Noise is well-controlled.		
21. Flooring is even.		
22. The olfactory environment is pleasing to the residents, families and staff.		
23. Color tonal contrast is utilized to cue important areas (floor/wall, toilets, sinks) and to facilitate independent eating.		
24. Bathing facilities are warm and inviting.		

Appendix D

Assessment of Policy/Protocols will also be done by the Internal Champion after initial training. This will be reviewed with the Research Nurse Facilitator during the next monthly visit. The assessment is done using the Policy/Protocols Assessment. *Of note this is also an outcome measure but as such is completed independently by research evaluators in the both the treatment and control facilities.*

Policy/Protocols Assessment

	Date	
Item	Yes	No
1. A mission statement or philosophy describes a commitment to resident self-direction.		
2. Policy supports unlimited visiting hours.		
3. A patient/family orientation provides information on leadership, staff roles, complaint mechanism, meals, etc.		
4. Patient and family education, provided upon admission and annually addresses: function –focused care, significant changes to report, fall prevention, and restraint alternatives.		
5. A comprehensive assessment of resident preferences including meals, routines, recreation, physical activity, family involvement, and spiritual/religious expression is conducted.		
6. A process to support resident preferences in food and access to alternatives is consistently implemented.		
7. A policy is implemented to facilitate consistent labeling and access of sensory aides.		
8. The policy regarding indwelling urinary catheters is consistent with CDC guidelines.		

<p>9. Safety rounds include an evaluation of bed safety consistent with the <i>Guidance for Industry and FDA Staff; Hospital Bed System Dimensional and Assessment Guidance to Reduce Entrapment</i>.</p>		
<p>10. A policy related to use of free space (corridors, kitchens) optimizes function and physical activity.</p>		
<p>11. “Hand-off” communication between acute care and other settings describe cognitive function and physical function.</p>		
<p>12. Information provided to optimize function and physical activity.</p>		
<p>13. Nursing, recreation, rehabilitation, and social service staff training and competencies include assessment of cognitive and physical function, and role-specific approaches to promote function.</p>		
<p>14. Prospective employees are interviewed by residents and staff; dimensions evaluating a philosophy of self-direction are used.</p>		
<p>15. The performance improvement plan includes a transdisciplinary approach and resident involvement.</p>		
<p>16. Nursing assistants are involved in shift report, care planning, and performance improvement activity.</p>		
<p>17. The resident’s social profile is communicated to nursing assistants and other disciplines including environmental and food service staff.</p>		
<p>Clinical protocols</p>		
<p>18. A delirium protocol includes screening and preventive measures of screening, physical activity, therapeutic recreation, and nutrition/hydration.</p>		
<p>19. The pressure ulcer prevention protocol optimizes function, physical activity, and</p>		

incorporates resident preference.		
20. The fall prevention protocol optimizes function, physical activity, and incorporates resident preference.		
21. The change in resident condition protocol includes a systematic nursing assessment and blueprint for communication with the medical provider.		
22. Care plans include specific, individualized goals that address how the resident is optimizing function and physical activity during all care interactions.		
23. The protocol for psychoactive medication use includes a decision-tree with alternatives to chemical restraints and emphasizes communication, function and physical activity, and engagement in meaningful therapeutic recreation.		
24. A policy regarding alternatives to physical restraints includes a decision tree and emphasizes communication, function and physical activity, and engagement in meaningful therapeutic recreation.		

Appendix E

Intervention Materials for Use with Staff (registered nurses, licensed practical nurses and certified nurse assistants)

Knowledge of Person Centered Behavioral Approaches for BPSD will be used to assure that the staff working directly with residents have the knowledge to provide behavioral approaches. Testing will be done after education is provided and the test results will be reviewed with each individual by the Internal Champion to reinforce learning and correct wrong answers. This will assure learning has occurred.

Knowledge of Person Centered Behavioral Approaches for BPSD Test

1. The resident is resisting having you brush her teeth and has her mouth shut tight. You could:
 - a. provide care more quickly and then leave her alone
 - b. role model brushing teeth and give her a soft toothbrush to use
 - c. skip tooth brushing today and say resident refused
 - d. bring in another nursing assistant to help you

2. The resident is wandering up and down the hall and wandering into others rooms
 - a. shut all the doors to the rooms
 - b. provide some pleasant rest spots in the hallways
 - c. make the exit sign large so she knows where it is
 - d. decrease stimulation in the area

3. The resident is threatening to hit you if you come in her room and touch her clothes
 - a. run and get the director of nursing and charge nurse to help
 - b. bring the resident out into the hallway with others
 - c. calmly inform the resident what you are doing
 - d. shut the resident's door and stay nearby till the resident quiets down and then reapproach

4. The resident is repeating the same sentence again and again and upsetting others in the activity room
 - a. remove him from the room and current stimulation of the activities

- b. bring him closer to the group leader
 - c. ask him to be quiet for a few minutes
 - d. repeat the sentence back to him to see if it will stop him.
5. The resident is screaming at you when you go in to start her shower-LEAVE ME ALONE he screamed!
- a. have two other come help you
 - b. provide a warm, pleasant smelling bath area for her
 - c. skip the bath today
 - d. let her scream but proceed with the bath knowing she always refuses and there is no choice
6. You are setting up an activity room to prevent behavioral symptoms associated with dementia. You might include:
- a. activities that help people be physically active such as Physical Activity Bingo; music for dancing
 - b. a television to leave on all day for noise
 - c. a radio to leave on all day for noise and stimulation
 - d. puzzles
7. Evaluating residents' physical capability includes assessment of:
- a. cognitive status, range of motion, chair rise
 - b. range of motion, finger to nose, muscle strength
 - c. chair rise, balance, cognitive status
 - d. finger to nose, fall risk, range of motion
8. The best approach when working with residents with BPSD is to provide:
- a. less talk and less touch
 - b. quick care interactions
 - c. silent care interactions-no talking
 - d. the least amount of care interactions possible
9. The best way to engage someone with memory problems in an activity (e.g. getting up from a chair) is to:
- a. tell them all the steps of the activity at once
 - b. model the activity

- c. tell them to just do it-you know they can!
- d. grab them and show them how to do the activity

10. The resident keeps getting up from her wheelchair and the alarm keeps going off you:

- a. tell her to sit down as she might fall
- b. give her a magazine to read
- c. place her next to you in the nursing station
- d. encourage her to stand and take her for a walk

Appendix F

The observational measure, **Use of Behavioral Interventions for BPSD**, will be done with all staff at baseline and then between 4 and 6 months and 10 to 12 months post implementation of the EIT-4-BPSD intervention. This is done by the internal champion and used as a tool to provide immediate feedback to staff to provide positive reinforcement and/or to talk about ways in which they might have done an interaction differently. It is not meant to be punitive but to be used as a learning tool.

Use of Behavioral Interventions for BPSD

Skill/Care Interaction	Performed	Not Performed	Not observed
1. Apathetic behavior	1	0	-
2. Agitation	1	0	-
3. Inappropriate or disruptive vocalization	1	0	-
4. Aggressive behavior	1	0	-
5. Wandering	1	0	-
6. Repetitive behavior	1	0	-
7. Resistance to care (personal care; medications; etc.)	1	0	-
8. Sexually inappropriate behaviors	1	0	-

Appendix G

Scoring Guidelines for Use of Behavioral Interventions for BPSD

Skills Inventory	Performed (examples)	Not performed (examples)	Not observed
1. Apathetic behavior	<ul style="list-style-type: none"> -Tries to engage the person in creative activities -Gives instructions slowly; breaks down tasks -Remains positive and calm -Encourages participation and gives praise often -Avoids excess stimulation 	<ul style="list-style-type: none"> -Just completes the task at hand -Ignores the residents -Gets frustrated and yells at resident to help with care activity 	-Behavior not observed
2. Agitation	<ul style="list-style-type: none"> -Provides step-by-step guidance in a calm and positive tone if resident seems frustrated or agitated. -Changes activity -Offers reassurance in a calm voice 	<ul style="list-style-type: none"> -Ignores the resident -Tries to redirect the resident into a more stimulating/over stimulating environment -Leaves the resident alone in his or her room 	-Behavior not observed
3. Inappropriate or disruptive vocalization	<ul style="list-style-type: none"> -Doesn't get frustrated with the individual or tell them to "stop". -Listens to what person is saying and tries to identify a concrete need -Redirects the person to preferred activities. 	<ul style="list-style-type: none"> -Tells the person to stop or shut up. -Ignores the vocalization. -Puts the resident in his or her room alone to not bother others. 	-Behavior not observed
4. Aggressive behavior	<ul style="list-style-type: none"> -Explains to the person briefly what is happening during care interactions-using a few words and actions as possible. -Removes any residents/staff in area who may be in danger -Watches body language and voice-keeping a pleasant face and non- defensive posture. 	<ul style="list-style-type: none"> -Tells the resident to control him or herself. -Tries to grab the resident's arms to keep him or her from hitting. -Approaches the resident quickly and tries to take him or her to another room; into activities. 	-Behavior not observed

	<ul style="list-style-type: none"> -Speaks in slow, firm but not loud voice. -Approaches the resident quietly and from the side, not the front. -Initiates a “time out” if resident is safe and leaves them alone until the situation de-escalates -Tries immediate distraction to de-escalate the situation. -Evaluates the resident for unmet needs and attempts to meet the resident’s need. -Reduces stimulation in the environment and promotes a calm environment. -Provides and encourages appropriate activities (e.g., exercise), in a safe environment 	<ul style="list-style-type: none"> -Continues with the care interaction to complete the task regardless of the behavior. 	
5. Wandering	<ul style="list-style-type: none"> -Ensures that the area the person wanders in is safe. -Creates “rest stations” -Reduces unnecessary/unsafe objects at the rest stations. -Schedules outdoor or off-unit activities if frequently exit seeking. -Duplicates items such as pocketbooks if the person is continuously seeking these items. 	<ul style="list-style-type: none"> -Tells the person to stop wandering and sit down. -Tries to stop the person from wandering by taking shoes or shutting the door. 	-Behavior not observed.
6. Repetitive behavior	<ul style="list-style-type: none"> -Maintains a consistent routine with the person. -Pays attention to the person while he or she is repeating. 	<ul style="list-style-type: none"> -Ignores the questions being repeatedly asked. 	-Behavior not observed.

	<ul style="list-style-type: none"> -Ignores behaviors that are not harmful. -Tries to replace annoying behaviors. -Provides visual cues and responses to repetitive questions (e.g., has a daily calendar) 	<ul style="list-style-type: none"> -Tells the person to stop the repetitive statements or behaviors. -Stops the person from clapping or tapping. -Provides excessive stimulation. 	
7. Resistance to care (personal care; medications; etc.)	<ul style="list-style-type: none"> -Assumes a non-threatening posture, smiles and provides limited information about care interaction. -Provides pleasant visual cues for the activity. -Keeps arms open (not crossed) -Approaches the resident from the side and doesn't stand over the resident to provide care. -Provides less talking and more visual cueing. -Encourages the resident to do as much as possible for him or herself. -Knows and utilizes the resident's personal preferences with regard to care activity. -Ensures appropriate position to do self-care. -Reduces other distractions during care. 	<ul style="list-style-type: none"> -Provides "baby talk" when delivering care. -Proceeds with task completion even when there is resistance. -Ignores the resident's requests/preferences. 	-Behavior not observed.
8. Sexually inappropriate behaviors	<ul style="list-style-type: none"> -Remains calm and professional. -Puts resident in a private area -Provides clothing that prevents inappropriate behavior. 	<ul style="list-style-type: none"> -Yells at the resident that their behavior is inappropriate and they must stop. 	-Behavior not observed.

	-Nicely lets the resident know his or her behavior makes you and others uncomfortable and that you will return later.	-Ignores the behavior and just moves all the other residents away from the individual.	
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Appendix H

Checklist for Evidence of Use of Person-Centered Care Approaches to Manage BPSD in Care Plans

Behavior Addressed in the Care plan	Evidence of Person Center Care Interventions to Manage BPSD Included in Care plan	Yes	No
1. Apathetic behavior	a. Inclusion of resident preferences in facilitating daily activity (e.g., inclusion of pets; holiday related activities; work related activities) b. Use of function focused care approaches during person care interactions	1	0
2. Agitation	a. Inclusion of person’s preferences for activity/distraction. b. Guidelines for how to communicate during care and other interactions. c. Use of environmental preferences (e.g., appropriate levels of stimulation) d. Guidelines for how to provide care in a way that will decrease agitation (e.g., timing, location, temperature of water, etc.). e. Plan for care approaches when agitation does occur.	1	0

<p>3. Inappropriate or disruptive vocalization</p>	<p>a. Use of person’s preferences for distraction and to avoid boredom.</p> <p>b. Guidelines for how to communicate during care and other interactions when being disruptive.</p> <p>c. Use of environmental preferences (e.g., appropriate levels of stimulation) to avoid disruptive vocalizations.</p> <p>d. Guidelines for how to provide care in a way that will decrease disruptive vocalizations(e.g., timing, location, temperature of water etc).</p> <p>e. Plan for care approaches when disruptive vocalizations are occurring.</p>	<p>1</p>	<p>0</p>
<p>4. Aggressive behavior</p>	<p>a. Use of person’s preferences for activity/distraction and to avoid boredom.</p> <p>b. Guidelines for how to communicate during care and other interactions to avoid aggressive behavior.</p> <p>c. Use of environmental preferences to prevent aggressive behavior (e.g., appropriate levels of stimulation, open areas for walking/physical activity, avoidance of crowded areas).</p> <p>d. Guidelines for how to provide care in a way that will prevent or decrease aggressive behavior (e.g., timing, location, temperature of water, etc.).</p>	<p>1</p>	<p>0</p>

	e. Plan for care approaches when aggressive behavior does occur.		
5. Wandering	<p>a. Use of person's preferences for activity to avoid boredom and prevent wandering.</p> <p>b. Safety plan in care plan to allow for safe wandering (e.g., access to locked open area).</p> <p>c. Plan to assure that personal needs are met (e.g., that the individual eats and drinks; has rest periods).</p>	1	0
6. Repetitive behavior	<p>a. Use of person's preferences for activity/distraction to avoid boredom.</p> <p>b. Guidelines for how to communicate during care so that function is optimized, and repetitive behavior redirected.</p> <p>c. Use of environmental preferences (e.g., appropriate levels of stimulation) to prevent repetitive behaviors.</p> <p>d. Guidelines for how to provide care in a way that will optimize function and include individual in care activity yet avoid repetitive behavior.</p> <p>e. Plan for care approaches when repetitive behavior is occurring.</p>	1	0
7. Resistance to care (personal care; medications; etc.)	a. Use of person's preferences related to personal care (e.g., bathing time preferences, type of bathing, ways to facilitate medication administration).	1	0

	<p>b. Use of function focused care approaches during all care interactions.</p> <p>c. Use of environmental preferences (e.g. private areas for personal care; warm bath environments, pleasant dining areas).</p> <p>d. Plan for care approaches when resistance does occur.</p>		
<p>8. Sexually inappropriate behaviors</p>	<p>a. Use of physical environment and personal clothing options to prevent inappropriate behaviors.</p> <p>b. Plan for specific caregivers to work with the individual and ways in which to provide care interactions that will decrease risk of inappropriate behaviors.</p> <p>c. Use of preferences for activities to provide distraction and avoid boredom and facilitate physical activity.</p> <p>e. Plan for how to react/communicate and respond to episodes of inappropriate sexual behavior.</p>	<p>1</p>	<p>0</p>
<p>Total Score</p>			

