

# Geriatric Practice Leadership Institute (GPLI) Final Project Summary

The utilization of evidence-based nonpharmacologic care practices for behavioral expressions in a memory care unit.

**ALG Senior** 

## Behavioral Expressions - Background

- Formerly referred to as behavioral and psychological symptoms of Dementia (BPSD)
- Communicate discomfort or distress and are displayed through behaviors such as agitation, apathy, anxiety, irritability, or depression.
- Commonly treated with antipsychotics, benzodiazepines, and anticonvulsant medications which are generally unadvisable due to limited evidence of effectiveness as well as increased risk of serious side effects including mortality.
- The use of psychotropics in response to behavioral expressions continues despite an FDA black box warning.



## Purpose

 The purpose of ALG Senior's GPLI Project is to employ nonpharmacologic interventions, when indicated, to reduce the incidence of behavioral expressions and thus, the use of off label drug therapy. We anticipate a decreased fall rate will accompany due to the increased fall risk associated with the common pharmacologic interventions in response to behavioral expressions.



## ALG Senior's 2021 GPLI Team

- Kevin O'Neil, MD Chief Medical Officer, ALG Senior
- Sheryl Zimmerman, PhD Gerontologist & Professor, UNC Chapel Hill
- Rick Grimes Executive Vice President, ALG Senior
- Michelle Kronquist, PsyD Director of Psychological Services, ALG Senior
- Lisa Horton, CDP Director of Clinical Systems & Compliance, ALG Senior
- Todd King, PharmD Senior Director of Clinical Support Services, Omnicare

## Training and Development Consultant:

• Kimberly Ward, MPH – Project Manager, Sheps Center for Health Research, UNC Chapel Hill



# Project Design

- Setting Memory Care Unit with a census of 34 residents
- Selection of participants
  - The Cohen-Mansfield Agitation Inventory, Long Form was used to select 9 residents of focus.
  - For the residents of focus, behavioral expressions occurring once or twice a week or more will be addressed.
- Training and Development
  - Community staff received onsite training on behavioral expressions as well as four evidence-based, nonpharmacologic care practices that can be used preventatively or responsively to behavioral expressions.
- Baseline data was collected at the commencement of the project and will be collected for the 9 residents of focus throughout the 3-month project implementation period.



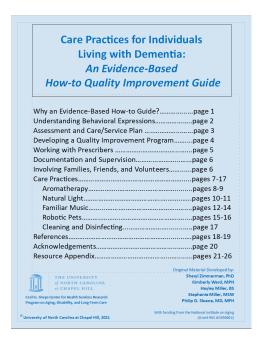
# Project Materials Developed

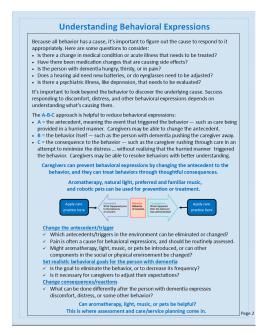
- Primary Training Guide: Care Practices for Individuals Living with Dementia: An Evidence-Based How-to Guide (Zimmerman, 2018)
- Poster Care Practices for Persons with Dementia
- Cue cards care practices for staff
- Forms
  - Behavioral Expression Evaluation (Cohen-Mansfield, 1989)
  - Behavioral Expression Care Plan
  - Care Log
- Surveys
  - Resident
  - Family/POA
  - Staff



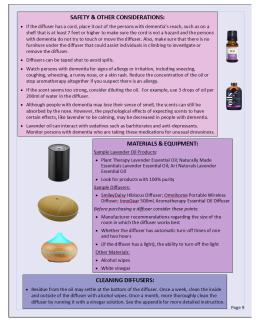
# Primary Training Guide

Introduction to behavioral expressions, four nonpharmacologic care practices, as well as procedures for evaluation, care planning, documentation, and communication with resident's family and healthcare providers.











## Poster and Cue Cards

Posters summarizing the care practices were displayed in staff bathrooms and breakrooms. Color coding corresponds to the training guide and cue cards.



## **AROMATHERAPY**



#### How do I keep residents safe while using aromatherapy?

- If the diffuser has a cord, place it out of reach such as on a shelf that is at least 7 feet high, to make sure the cord is not a hazard and residents don't try to touch or move it
- Make sure there is no furniture under the diffuser that could be used to climb on to touch or remove the diffuser
- Diffusers can be taped shut to avoid spills
- Watch residents for signs of allergy or irritation, including sneezing, coughing, wheezing, a runny nose, or a skin rash
- If the scent seems too strong, consider diluting the oil (adding more water)

#### Why should I use aromatherapy?

 To help prevent behaviors such as agitation, anxiety, and sundowning (late day confusion)

#### How long should I use it?

 Application for two hours in the afternoon may reduce sundowning

#### How do I use the diffuser?

- Use diffusers daily in common living spaces occupied by persons with dementia
- Fill the diffuser with 200 ml of water and 6 drops of lavender oil
- Turn on the diffuser and set it to turn off automatically after two hours

#### What are other considerations I should know?

 Lavender oil can interact with sedatives such as barbiturates and anti-depressants; monitor residents who are taking these medications for unusual drowsiness

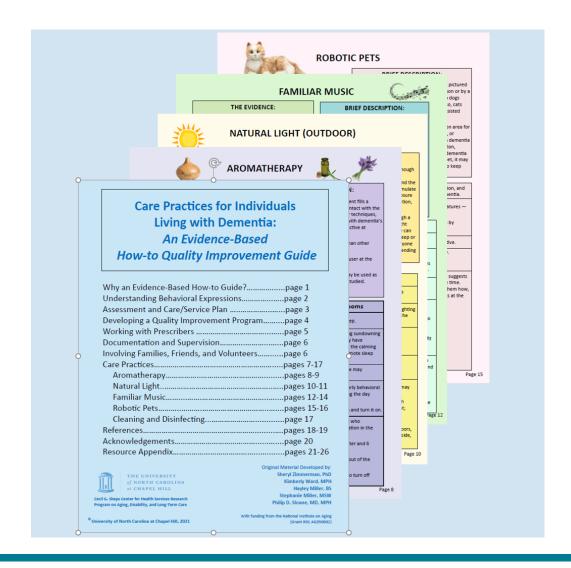
#### How do I clean the diffuser?

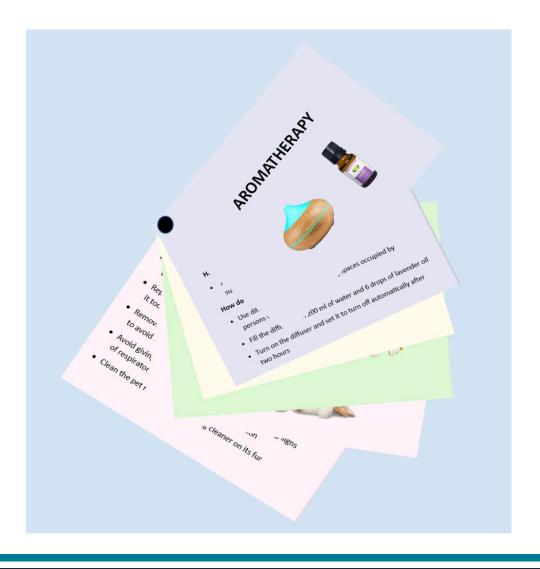
- Once a week, clean the inside and outside of the diffuser with alcohol wipes
- Once a month, more thoroughly clean the diffuser by running it with a vinegar solution instead of the oil; for details, see the appendix in the Care Practices for Individuals Living with Dementia: An Evidence-Based How-to Quality Improvement Guide

Cue cards for each care practice were placed on a ring to be carried by staff. Each card is 4.2"x5.4". Cards 1-4 shown.



# All materials are color-coded by care practice







# Behavioral Expression Evaluation

- The Cohen-Mansfield Agitation Inventory, Long Form was entered as a form in Matrix Care, the Electronic Health Record utilized by ALG Senior.
- The Behavioral Expression Evaluation
  was completed for all residents at the
  commencement of the project. Based on
  this data, nine residents were selected as
  residents of focus for the project.
- The Evaluation will be completed at the end of each month for the three-month data collection period.

SERVATION INFORMATION	
eator:	
servation Date:	Date Recorded:
mpleted Date:	Completed By:
SCRIPTION	
SERVATION DETAIL	
hen-Mansfield Agitation Inventory (CMAI)* Lon	g
ysical / Aggressive	
ting (including self)	
□ 1- Never	5 - Daily
2 - Less than once a week - every couple of weeks	☐ 6- Several times a day
☐ 3- Once or twice a week ☐ 4 - More than 3 times a week	□ 7- Several times a hour
king	
□ 1 - Never	□ 5 - Daily
2 - Less than once a week - every couple of weeks	6 - Several times a day
3 - Once or twice a week	7 - Several times a hour
4 - More than 3 times a week	
abbing onto people	
☐ 1 - Never ☐ 2 - Less than once a week - every couple of weeks	5 - Daily
2 - Less than once a week - every couple of weeks     3 - Once or twice a week	7 - Several times a hour
☐ 4 - More than 3 times a week	
shing	
□ 1 - Never	□ 5 - Daily
2 - Less than once a week - every couple of weeks	☐ 6 - Several times a day
<ul> <li>3 - Once or twice a week</li> </ul>	7 - Several times a hour
☐ 4 - More than 3 times a week	
rowing things	
□ 1-1Never	5 - Daily
2 - Less than once a week - every couple of weeks     3 - Once or twice a week	☐ 6 - Several times a day ☐ 7 - Several times a hour
☐ 4 - More than 3 times a week	, - Several times a noti
ing	
□ 1- Never	□ 5 - Daily
2 - Less than once a week - every couple of weeks	☐ 6 - Several times a day
3 - Once or twice a week	7 - Several times a hour
4 - More than 3 times a week	

	ng	
	1 - Never	5 - Daily
	2 - Less than once a week - every couple of weeks	6 - Several times a day
	3 - Once or twice a week	7 - Several times a hour
	4 - More than 3 times a week	
Spitting		
	1 - Never	5 - Daily
	2 - Less than once a week - every couple of weeks	☐ 6 - Several times a day
	3 - Once or twice a week	7 - Several times a hour
	4 - More than 3 times a week	
Hurting	self or others	
	1 - Never	5 - Daily
	2 - Less than once a week - every couple of weeks	☐ 6 -Several times a day
	3 - Once or twice a week	7 - Several times a hour
	4 - More than 3 times a week	
Tearing	things or destroying property	
	1 - Never	5 - Daily
	2 - Less than once a week - every couple of weeks	□ 6 - Several times a day
	3 - Once or twice a week	7 - Several times a hour
	4 - More than 3 times a week	
Making	physical sexual advances	
	1 - Never	☐ 5 - Daily
П	2 - Less than once a week - every couple of weeks	☐ 6 - Several times a day
	3 - Once or twice a week	7 - Several times a hour
	4 - More than 3 times a week	
Physica	nl / Non - Aggressive	
	aimless wandering	
	1 - Never	☐ 5 - Daily
-	2 - Less than once a week - every couple of weeks	□ 6 - Several times a day
	3 - Once or twice a week	7 - Several times a hour
	4 - More than 3 times a week	
Inappro	priate dress or disrobing	
	1 - Never	5 - Daily
E	2 - Less than once a week - every couple of weeks	□ 6 - Savaral times a day
п	3 - Once or twice a week	7 - Several times a hour
	4 - More than 3 times a week	2 7 - Several limes a nom
	o get to a different place	
Trying t	o get to a different place	□ 5 Daily
Trying to	1 - Never	□ 5 - Daily □ 6 - Several times a day
Trying to	1 - Never 2 - Less than once a week - every couple of weeks	☐ 6 -Several times a day
Trying to	1 - Never	□ 5 - Daily □ 6 - Several times a day □ 7 - Several times a hour
Trying to	Never     - Less than once a week - every couple of weeks     - Once or twice a week     - More than 3 times a week	☐ 6 -Several times a day
Trying to	Never     Less than once a week - every couple of weeks     Once or twice a week     More than 3 times a week     Inal falling / Placing Self on the Floor	6 - Several times a day 7 - Several times a hour
Trying to	Never     Less han once a week - every couple of weeks     Once or twice a week     More than 3 times a week     Mora than 5 times a week     India falling / Placing Self on the Floor	6 - Several times a day 7 - Several times a hour
Trying to	1 - Never 2 - Less than once a week - every couple of weeks 3 - Once or twice a week 4 - More than 3 times a week maif aliting / Paicing Setf on the Floor 1 - Never 2 - Less than once a week - every couple of weeks	G 6-Several times a day 7 - Several times a hour
Intentio	Never     Less than once a week - every couple of weeks     Once or twice a week     More than 3 times a week     More than 5 times a week     Install falling / Placing Self on the Floor     Never     Never     Less than once a week - every couple of weeks     Once or twice a week	6 - Several times a day 7 - Several times a hour
Intentio	1 - Never 2 - Less than once a week - every couple of weeks 3 - Once or twice a week 3 - Once or twice a week 4 - More than 3 times a week nal falling / Placing Self on the Floor 1 - Never 2 - Less than once a week - every couple of weeks 3 - Once or twice a week 4 - More than 3 times a week	G 6-Several times a day 7 - Several times a hour
Trying to	1. Never 2. Less than once a week - every couple of weeks 3. Once or twice a week 4. More than 3 times a week malfalling / Placing Self on the Floor 1. Never 2. Less than once a week - every couple of weeks 3. Once or twice a week drinking inappropriate substance	6 - S-evenl times a day 7 - Sevenl times a hour 5 - Daily 6 - S-evenl times a day 7 - Sevenl times a hour
Intentio	1. Never 2. Less than once a week - every couple of weeks 3. Once or twice a week 3. Once or twice a week 4. More than 3 uners a week nal falling / Placing Self on the Floor 1. Never 2. Less than once a week - every couple of weeks 3. Once or twice a week 4. More than 5 unes a week drinking inappropriate substance 1. Never	6 - Several times a day 7 - Several times a hour 5 - Daily 6 - Several times a day 7 - Several times a hour
Intentio	1. Never 2. Less than once a week - every couple of weeks 3. Once or twice a week 3. Once or twice a week 4. More than 3 uners a week nal falling / Placing Self on the Floor 1. Never 2. Less than once a week - every couple of weeks 3. Once or twice a week 4. More than 5 unes a week drinking inappropriate substance 1. Never	6 - Several times a day 7 - Several times a hour 5 - Daily 6 - Several times a day 7 - Several times a hour
Intentio	1. Never 2. Less than once a week - every couple of weeks 3. Once or twice a week 4. More than 3 times a week malfalling / Placing Self on the Floor 1. Never 2. Less than once a week - every couple of weeks 3. Once or twice a week drinking inappropriate substance	6 - Several times a day 7 - Several times a hour 5 - Daily 6 - Several times a day 7 - Several times a hour



# Behavioral Expression Care Plan

Also entered as a form in Matrix Care.

Follows the SBAR format described in the training guide.

Staff are trained to complete a Behavioral Expression Care Plan for each behavior rated as 3 or higher (occurring once or twice a week or more).

Intervention choices are limited to the four nonpharmacologic care practices introduced in the training guide.

Observation desident Name:	MR#:U/R/B:	Fequency
reator:		☐ Exacerbation of Chronic Illness ☐ I don't know
Observation Date:	Date Recorded:	Evidence-based interventions – You MUST select at least 1 intervention (Recommendation)
Completed Date:	Completed By:	☐ Aromatherapy ☐ Familiar Music ☐ Natural Light ☐ Robotic Pets
DESCRIPTION		Why was this intervention selected?
		How will the intervention be used? (preventatively/scheduled or responsively/after the behavioral expression has occurred)
		Safety awareness emblem was placed on name plate to alert staff that safety measures are required.  Behavioral Expression Banner added to Matrix Care to alert staff that resident has behavior interventions in
BSERVATION DETAIL		place?  □ Date Added
Sehavioral Expression Care Plan/SBAR		Order(s) have been added to Matrix Care
What type of behavioral expression is the resident disp	playing?(Situation)	order(s) nate been added to madrix eare
☐ Hitting (including self)	☐ Eating / drinking inappropriate substance	
□ Kicking	<ul> <li>Handling things inappropriately</li> </ul>	ADDITIONAL OBSERVATION INFO
Grabbing onto people	☐ Hiding things	The state of the s
☐ Pushing ☐ Throwing things	☐ Hoarding things ☐ Performing repetitive mannerisms	
☐ Throwing things ☐ Biting	General restlessness	
Scratching	☐ Screaming	
Scratching  Spitting	Making verbal sexual advances	
☐ Hurting self or others	Cursing or verbal aggression	
<ul> <li>Tearing things or destroying property</li> </ul>	Repetitive sentences or questions	
<ul> <li>Making physical sexual advances</li> </ul>	<ul> <li>Strange noises (inappropriate laughter or crying, weeping, moaning)</li> </ul>	Completed By: Date:
☐ Pacing, aimless wandering	Complaining	
Inappropriate dress or disrobing	☐ Negativism (bad attitude, doesn't like anything, nothing is right)	
Trying to get to a different place	Constant unwarranted request for attention or help	
☐ Intentional falling	Other - Explain	
ocation of the behavioral expression (Situation)		
Resident Room	Outside at Facility - onsite	
Resident Bathroom	☐ Hallway	
☐ Facility Bathroom / Spa Room	☐ Another Resident Room	
Dining Room	Outside Facility - during transportation	
☐ Day Room ☐ Activity Room	□ Other - location	
*		
What time did the behavioral expression occur? (Situal	tion)	
That time did the bending a supression occur (ortal		
What happened prior to the behavioral expression? Wh	hat was the resident doing and what was hannening	
round them?(Background)	yy	
,		



# Behavioral Expression Care Log

Utilization of care practices to prevent or in response to behavioral expressions are documented in Matrix Care using the Behavioral Expression Care Log.

Observation	
Resident Name:	MR#:U/R/B:
OBSERVATION INFORMATION	
Creator:	
Observation Date:	Date Recorded:
Completed Date:	Completed By:
DESCRIPTION	
OBSERVATION DETAIL	
Care Practices for Individuals Living wit	th Domentia, Care Lea
	I, write the date, length of time, and mark an 'X' in the
challenges, and / or reasons why care	e 'Notes' column to describe successes, helpful strategic practices were not successful. The more information you nducted the better; consider using the 5 W's and 1 H: w
Length of time used (minutes)	
Less than 10 Minutes	30-45 Minutes
☐ 10-20 Minutes ☐ 20-30 minutes	☐ 45-60 Minutes ☐ Other - specify
Practiced used	
☐ Aromatherapy ☐ Natural Light	☐ Familiar Music ☐ Robotic Pets
	lenges, and / or reason why care practices were not successful
Describe successes, helpful strategies, chall Consider using the 5 W's and 1 H: who, who	tenges, and / or reason why care practices were not successful at, when, where, why, how.
Describe successes, helpful strategies, chall Consider using the 5 W's and 1 H: who, who	lenges, and / or reason why care practices were not successful at, when, where, why, how.
Describe successes, helpful strategies, chall Consider using the 5 W's and 1 H: who, wh: ADDITIONAL OBSERVATION INFO	lenges, and / or reason wny care practices were not successful at, when, where, why, how.
Consider using the 5 W's and 1 H: who, wh	lenges, and / or reason why care practices were not successful at, when, where, why, how.
Consider using the 5 W's and 1 H: who, wh	lenges, and / or reason why care practices were not successful at, when, where, why, how.
Consider using the 5 W's and 1 H: who, wh	lenges, and / or reason wny care practices were not successful at, when, where, why, how.
Consider using the 5 W's and 1 H: who, wh	lenges, and / or reason why care practices were not successful at, when, where, why, how.
Consider using the 5 W's and 1 H: who, who	at, when, where, why, how.
Consider using the 5 W's and 1 H: who, who	at, when, where, why, how.
Consider using the 5 W's and 1 H: who, who	at, when, where, why, how.
Consider using the 5 W's and 1 H: who, who	at, when, where, why, how.
Consider using the 5 W's and 1 H: who, who	at, when, where, why, how.
Consider using the 5 W's and 1 H: who, wh	at, when, where, why, how.



# Surveys

## <u>Staff</u>

## House

#### MEMORY CARE

## House Staff Survey

House has been selected to take part in a project designed to improve the quality of care we provide to our seniors. As a part of this project, you have learned to recognize the behavioral expressions (verbal or physical aggression, wandering, hoarding, etc.) that commonly occur in individuals diagnosed with Dementia. You have also learned about four new care practices that can be used to prevent or respond to behavioral expressions.

We would like to ask you a few questions that you can answer as frankly as possible. Your responses are confidential, and you cannot be identified.

Thank you for your feedback!

- 1) Do you feel comfortable reporting/documenting when residents display behavioral expressions?
  - a. Always
  - b. Sometimes
  - c. Never
  - 2) Do you feel that your job is satisfying?
    - a. Always
    - b. Sometimes
    - c. Never

3) Do you feel that you receive recognition for the work you do?

- a. Always
- b. Sometimes
- c. Never
- 4) Do you plan to continue your career in a senior living setting (such as a nursing home or adult care home)?
  - a. Always
  - b. Sometimes
  - c. Never

## **Resident**

### House

#### MEMORY CARE

### House Resident Survey

We would like to ask you a few questions. Please answer as frankly as possible.

Your responses are confidential, and you cannot be identified.

Thank you for your feedback!

1) Do you feel well cared for at

House?

- a. Yes
- b. No
- c. I'm not sure
- 2) Would you recommend living at House to others?
  - a. Yes
  - b. No
  - c. I'm not sure
- 4) What could be done to make you happier at

House?

## Family/POA

## House

#### MEMORY CAR

## House Family/POA\* Survey

House has been selected to take part in a project designed to improve the quality of care we provide to our seniors. As a part of this project, our associates have learned to recognize the behavioral expressions (verbal or physical aggression, wandering, hoarding, etc.) that commonly occur in individuals diagnosed with Dementia and learned to use four new care practices for the prevention of (or in response to) those behaviors.

We would like to ask you a few questions that you can answer as frankly as possible. Your responses are confidential, and you cannot be identified. Thank you for your feedback!

- 1) Does your loved one experience behavioral expressions?
  - a. Yes
  - b. No
  - c. I'm not sure
- 2) Do you feel that your loved one is well cared for at House?
  - a. Yes
  - b. No
  - c. I'm not sure
- 3) Would you recommend
- House to others?
- a. Yes
- b. Maybe
- c. No
- 4) You are the resident's (son, daughter, sibling, friend, POA)?

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\*POA = Power of Attorney



# **Education and Training**

- Onsite training Education on behavioral expressions and the four care practices was provided in June 2021 by two authors of the guide, Sheryl Zimmerman, PhD and Kimberly Ward, MPH.
- In progress:
  - Zoom training Documentation/data collection
  - Zoom meeting Collaborative care planning GPLI team members will meet with community staff to collaborate on the completion of Behavioral Expression Care Plans.



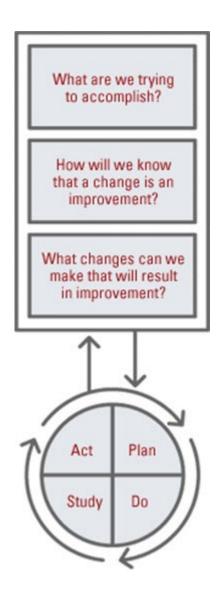
## Data Collection Period

- 3 months
  - Anticipated start date October 25<sup>th</sup>, 2021.
- CMAI's completed at the end of each month for the 9 residents of focus.
- Data analysis will address:
  - Incidence of behavioral expressions measured via CMAI scores as well as Care Log entries.
  - Effectiveness of nonpharmacologic care practice measured by review of Care Log entries.
  - Utilization of psychotropic medications with a focus on antipsychotics, benzodiazepines and anticonvulsants.
  - Fall rates.
  - Resident, Staff and Family/POA Surveys Pre and post project implementation.



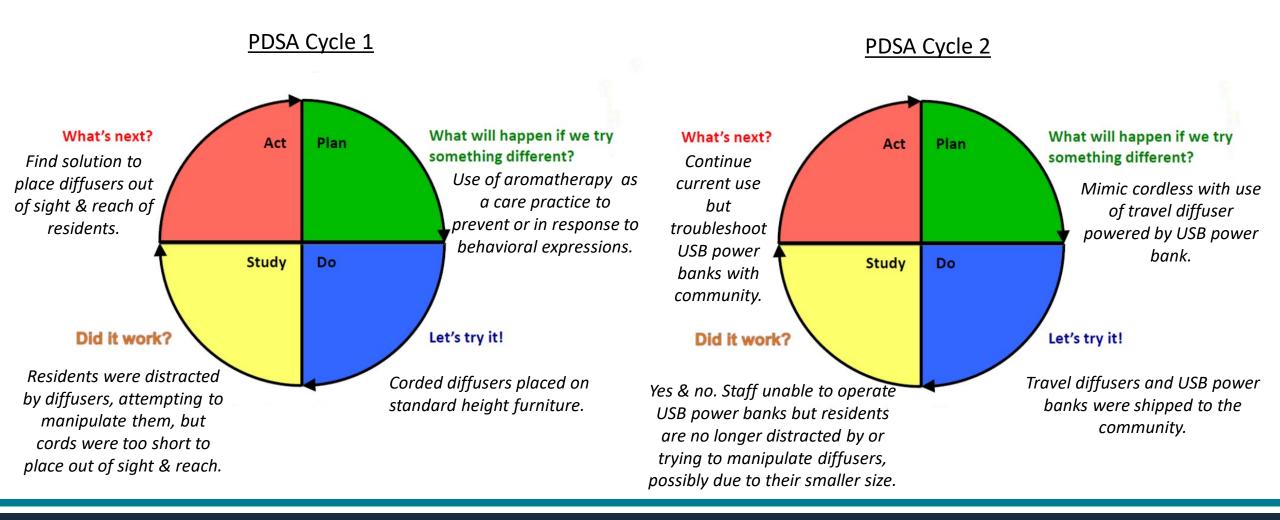
## Plan-Do-Study-Act Summary

- ALG Senior has completed one PDSA cycle:
  - Community began experimenting with care practices after the materials arrived.
  - Feedback from community that residents were distracted by the aromatherapy diffusers but the cords were too short to place out of sight/reach.
  - Truly cordless diffusers were not available.
  - Solution:
    - travel diffusers operated via USB power bank.
      - 30,800 mAh Power banks run diffusers for >12 hours and display charge level digitally.
- The Change allowed for the use of diffusers to be used out of sight and reach of residents and thus, for the aromatherapy care practice to be utilized.





# ALG Senior PDSA Cycle



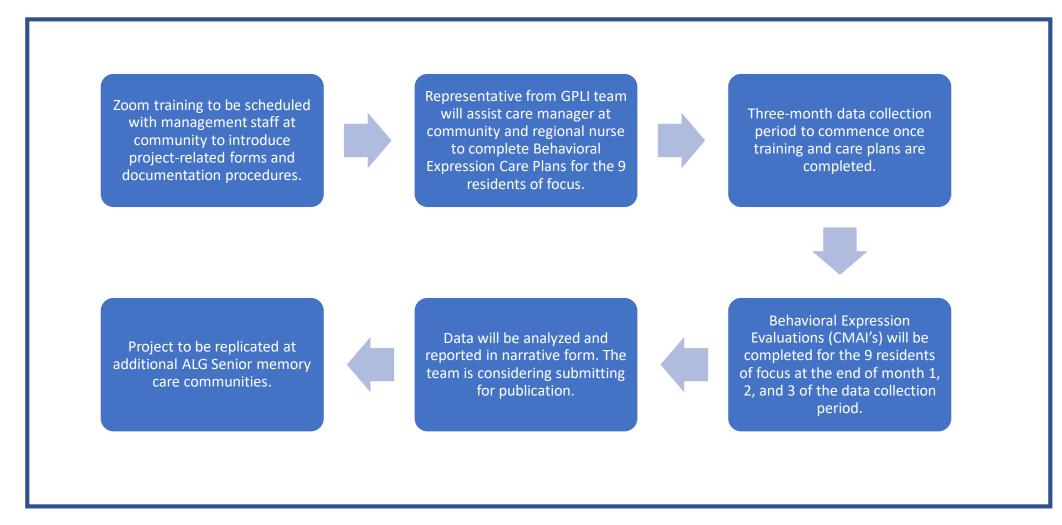


# Preliminary Results

- √ 8% reduction in antipsychotics.
  - Primary focus has been PRN antipsychotics.
  - Medication reviews for scheduled antipsychotics.
- √ 60% decrease in fall rate since initiation of project.
- ☐ Need to review data for benzodiazepines and anticonvulsants.
- ☐ Will review incidence of behavioral expressions and effectiveness of non pharmacologic care practices once Care Log is deployed as part of the documentation process.



## Next Steps



## References

- Cohen-Mansfield, J., Marx, M. S., & Rosenthal, A. S. (1989). A description of agitation in a nursing home. *Journal of Gerontology: Medical Sciences*, 44(3), M77-M84.
- Zimmerman, S., Miller, H., Ward, K., Miller, S., Sloane, P.D. (2018) Care Practices for Individuals Living with Dementia: An Evidence-Based How-to Quality Improvement Guide. The University of North Carolina, Chapel Hill.