

# Skilled Nursing Facility Uses Aromatherapy to Improve Quality of Life

## The Pines at Bristol Improves Sleep, Reduces Medication Usage and Falls

Maria Shonyo, President  
Vela Technologies, LLC

### Key Benefits Achieved

- 91.6% fall reduction
- 74.9% sleep improvement
- 50% medication reduction

### Customer Profile



#### The Pines at Bristol

The Pines at Bristol – Center for Health & Rehabilitation located in Bristol, CT, provides short-term and long-term care to residents.

Offering a comprehensive array of specialized services such as skilled nursing, physical therapy, therapeutic recreation, and restorative care, The Pines at Bristol is recognized by U.S. News & World Report as one of the 2017-2018 Best Nursing Homes in the United States and has attained a CMS 5-Star quality rating.

The Pines at Bristol is also a recipient of the Pinnacle Quality Insights' Customer Experience Award – 2016 and is an affiliate of National Health Care Associates, a leader in short-term rehabilitation and skilled nursing care services throughout the Northeast.

#### Elequil aromatabs® and resident care plans

All residents experienced improved quality of life during the study as demonstrated by improved sleep, decrease in medication usage, and reduction of falls.

Based on these positive study outcomes and the improved overall experience of the staff and residents, attending physicians at The Pines of Bristol have since incorporated Elequil aromatabs into their daily resident care plans accordingly.

## Introduction

### Challenges

The challenges faced by skilled nursing facilities are many. Administrators and staff members are tasked with delivering superior care while managing residents' behavioral expressions, anxiousness, and sleep deprivation.

These factors increase the risk of a potential fall<sup>1</sup> while heightening the stress on staff. When a fall occurs, staff must immediately contact the family, request transport to the hospital if necessary, document the incident, increase monitoring of the resident, and devise interventions. As a result, there is an enormous focus on fall prevention since it can significantly impact the resident's quality of life.

### Falls

According to the Centers for Disease Control and Prevention (CDC), there are millions of falls every year.

Falls are a leading cause of fatal and non-fatal injuries among adults age 65 and older.

One out of five falls cause a serious injury such as broken bones or a head injury.<sup>2</sup> More than 95% of hip fractures are caused by falling.<sup>3</sup>

Fall injuries are among the 20 most expensive medical conditions; in 2015, the total medical costs for falls totaled more than \$50 billion.<sup>4</sup>

### Quest for new and innovative solutions

Many facilities are looking for ways to improve the quality of life for their residents while supporting emerging initiatives to reduce psychotropic drug use.

One non-pharmacological approach is the use of aromatherapy, which has been shown to have profound results across many healthcare settings.

## The Pines at Bristol Internal Pilot Study

### Objective

The Pines at Bristol was interested in aromatherapy as an overall low-cost solution to help reduce resident falls.

The Director of Nursing Services chose an aromatherapy product designed for the clinical setting called Elequil aromatabs<sup>®</sup> (Beekley Medical<sup>®</sup>, Bristol, CT) thinking that if she could improve sleep and decrease medications, it may help reduce resident falls.

She selected Elequil aromatabs for the study because of its unique delivery system and that it adhered directly to the resident's clothing.

### Criteria

All residents participating in the study met the following three criteria prior to the start of the study:

- Experienced a fall within 30 days
- Noted as restless during the night hours (11 pm – 7 am)
- Received daily medications for anxiety, insomnia, and/or mood
  - 8 residents were on  $\geq 3$  medications
  - 4 residents were on  $< 3$  medications

### Methodology

A 30-day study with 12 residents was conducted October 1 – 31, 2017.

The Lavender-Sandalwood blend was selected and used daily for the one-month study period.

An Elequil aromatabs was applied to each study participant every day between 6 pm and 11 pm and was removed during morning care.

Sleep patterns were monitored hourly overnight and documented as:

- Slept well all night
- Up to bathroom (#) times
- Wake up time

### Study results

- Falls reduced by 91.6%\*
- Sleep quality improved by 74.9%
- Medication reduced by 50%

\* Only one study participant experienced a fall. This individual was undergoing physical rehabilitation therapy and the fall was related to improvement in therapy.

## Conclusion

Elequil aromatabs demonstrated effectiveness for the residents at The Pines at Bristol — impacting their quality of life by improving sleep, decreasing medication usage, and ultimately reducing falls.

Although the study was conducted on a small group of residents, the results were so positive it was enough to move forward as a non-pharmacological, person-centered care initiative for individual residents at high risk.

This also aligns with current CMS initiatives and a focus on overall senior healthcare improvement in the United States.

## Elequil aromatabs – Key to Compliance

### CMS guidelines for long term care facilities (LTCF)

The use of Elequil aromatabs supports the CMS 2017 guidelines for LTCF relative to reducing the use of psychotropic drugs (defined to include anti-psychotics, anti-depressants, anti-anxiety agents, hypnotic drugs, and any drug that affects brain activities associated with mental process and behavior).<sup>5</sup>

In particular, F-Tag 679 (Resident Activities) and F-Tag 741 (Behavioral Health) both reference aromatherapy as non-pharmacological interventions.<sup>6</sup>

- **F-Tag 679** outlines that for the resident who exhibits unusual amounts of energy or walking without purpose, they may require an intervention such as aromatherapy.<sup>7</sup>
- **F-Tag 741** outlines the risks and psychosocial impacts related to the use of chemical restraints, explaining that a medication used for discipline or convenience that is not required to treat medical symptoms may cause the resident to be:<sup>8</sup>
  - Subdued, sedated, or withdrawn
  - Asleep during hours that he/she would not ordinarily be asleep
  - Limited in functional capacity

### Polypharmacy

Elequil aromatabs can also help alleviate associated polypharmacy-related challenges such as increased risk of falls.

A large, prospective cohort study conducted with adults aged 50+ showed polypharmacy (defined as regular use of five or more medicines) that included antidepressants and benzodiazepines, was associated with a greater risk of falls.<sup>9</sup>

The use of benzodiazepines is commonly associated with increased falls risk due to dizziness, sedation, impaired motor coordination, and postural disturbances.<sup>10</sup>

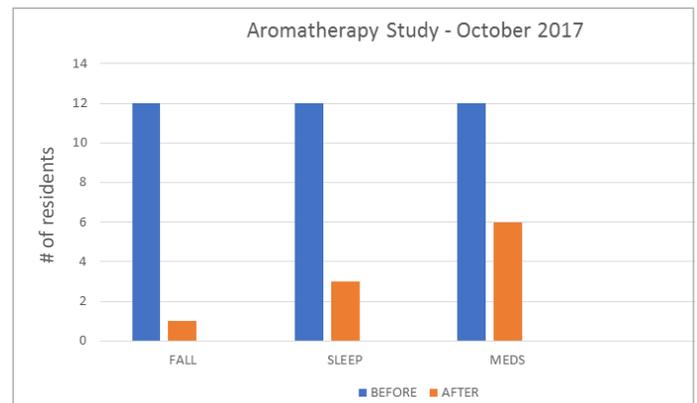
### Guidance on Commonly Used Medications for Older Adults

Older adults often have long-term health conditions that require treatment with multiple medications, resulting in a greater risk of side effects.

This same population can also be more sensitive to certain medications.

The American Geriatrics Society's Health in Aging Foundation recommends that older people avoid using the following types of medications, as they can increase risk of falls and/or cause confusion:<sup>11</sup>

- Benzodiazepines, such as diazepam (Valium®), alprazolam (Xanax®), and chlordiazepoxide (Librium®)
- Sleeping pills such as zaleplon (Sonata®), zolpidem (Ambien®), and eszopiclone (Lunesta®)
- Antipsychotics (commonly used to treat behavioral problems in older adults with dementia) such as haloperidol (Haldol®), risperidone (Risperdal®), or quetiapine (Seroquel®)



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## Endnotes

- 1 Stone, Katie L, Sleep and Falls, U13 Conference Series “Sleep, Circadian Rhythms and Aging: New Avenues for Improving Brain Health, Physical Health and Functioning” October 4-6, 2015, accessed from [https://www.americangeriatrics.org/sites/default/files/inline-files/Katie\\_Stone\\_PhD.pdf](https://www.americangeriatrics.org/sites/default/files/inline-files/Katie_Stone_PhD.pdf) on April 4, 2018.
- 2 Centers for Disease Control and Prevention (CDC), accessed from <https://www.cdc.gov/homeandrecreationalafety/falls/adultfalls.html> on March 13, 2018.
- 3 Ibid.
- 4 Ibid.
- 5 State Operations Manual, Appendix PP – Guidance to Surveyors for Long Term Care Facilities (Rev. 11-22-17), accessed from <https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/GuidanceforLawsAndRegulations/Downloads/Appendix-PP-State-Operations-Manual.pdf> on March 13, 2018.
- 6 Ibid.
- 7 Ibid.
- 8 Ibid.
- 9 Kathryn Richardson, Kathleen Bennett, Rose Anne Kenny; Polypharmacy including falls risk-increasing medications and subsequent falls in community-dwelling middle-aged and older adults, *Age and Ageing*, Volume 44, Issue 1, 1 January 2015, Pages 90–96, accessed from <https://academic.oup.com/ageing/article/44/1/90/2812346> on March 19, 2018.
- 10 Ibid.
- 11 Health in Aging Foundation, Ten Medications Older Adults Should Avoid or Use with Caution, accessed from [http://www.healthinaging.org/files/documents/tipsheets/meds\\_to\\_avoid.pdf](http://www.healthinaging.org/files/documents/tipsheets/meds_to_avoid.pdf) on March 23, 2018.