IRB SYNOPSIS OF PROPOSAL

“Improving the emotional, behavioral and physical function of long-term care residents through ballroom dance”

1. This study will involve residents of two central Texas long-term care facilities. The initiative is a pilot study designed to involve 10 – 15 participants. Participation in the study is voluntary with study membership representing the residential population of the respective facilities. The investigation is designed to promote health and improve quality of life among the long-term care population as a majority of residents have a diagnosis of cognitive impairment and/or Alzheimer’s disease (AD). The health of residents will vary by individual but it is anticipated that participants will have numerous physical and/or psychological impairments. Male and female residents with a diagnosis of mild cognitive impairment and mild-moderate dementia/Alzheimer’s will be targeted. A majority of the residents will be elders with an age range of 60 to 80+ years. No particular ethnic group is targeted. The rationale for the intervention is an attempt to improve quality of life among this special class of individuals.

The health promotion intervention is hypothesized to improve balance and physical functioning, enhance mood and behavioral patterns and potentially reduce a resident’s drug medication regimen. The intervention is consistent with recommendations by professionals including the American Academy of Neurology for non-pharmaceutical treatment of dementia. This study recognizes the dearth of health promotion activities for institutionalized individuals with a diagnosis of dementia and recognizes a growing problem of polypharmacy and overmedication.

Ensuring that each resident only receives medications clinically required for cognitive impairment, depression and sleep disorders is identified by The Department of Health and Human Services/CMS as a key quality indicator for care of nursing home residents. Additionally, the absence of health promotion activities among institutionalized long-term care residents have been recognized as a limitation in quality of care. The pilot study introduces a novel nonpharmacological method to potentially improve functional status, reduce medications and enhance overall quality of life.

Data will primarily be collected by the nursing staff from recorded information in a resident’s medical chart. Extensive quality indicators are embedded in the federally required document called the Minimum Data Set (MDS). We will pull certain components from the residents chart for a review of intervention effectiveness. If a resident does not have a recent mini-mental exam, then the nursing staff will be asked to perform this test. Additionally, the nursing staff will be asked to administer the Cornell Scale for Depression in Dementia – this form is selected because it is delivered by clinical interview and does not rely on self-rating which could be problematic for this population.

2. Flyers, bulletin board postings and interviews with the staff of the long-term care facilities are methods to be used for identification and recruitment of participants for the pilot research study. Residents may volunteer to participate in the study, and/or residents may be asked if they wish to participate based upon a recommendation by facility professionals pursuant to their knowledge and experience with the elder. The researcher or an appointed member of the facility (R.N. Social Worker) will discuss the format of study – ballroom dance instruction -- with participants and their family (if desired) identifying objectives and potential risks. Upon agreement to participate in the study, consent will be solicited and obtained from the individual and/or his/her legal representative. The researcher or appointed representative will administer the consent form. A short fact sheet as well as the two consent forms will be given to each participating resident or their legal guardian. One copy of the consent form and the fact sheet will be retained by the participant (or participant’s legal guardian). The other signed consent will be collected, and stored by the researcher.

3. Study methodology includes:

Nursing facility staff will perform medical chart reviews the week before the intervention, during week 4 (mid-point), and during week 9 (after the study). Targeted residents will present with a diagnosis of mild cognitive impairment, predementia, mild dementia, or moderate dementia/Alzheimer’s disease. A form will be provided to the staff to allow documentation of categories listed in the mandatory data collection instrument found in the nursing home clinical chart -- the minimum data set (MDS - Version 2.0). Documentation of weight, diagnosis’, health conditions, medication usage (psychotropic and benzodiazepine use in particular), behavior and sleep patterns, physical functioning and structural problems, prevalence of falls, etc. will be transferred from the MDS to the intake form. A Mini-Mental State Examination and the Cornell Scale for Depression in Dementia will be administered by a trained nurse at the three collection times. (Forms are included as attachments).

The intervention of ballroom dance sessions will be provided by a certified ballroom dance instructor who has provided this instruction to long-term care residents for five years. A strict protocol will be followed that emphasizes consistency and appropriate stimulation of cognitive and physical domains. The 45 – 60 minute sessions will be held in the morning in view of prior research suggesting Alzheimer’s clients have better performance and appear to be more receptive to morning activity. The duration of the intervention will be 8 weeks with the sessions administered twice a week.

All sessions will be performed at a secure site within the facility where ancillary furniture has been removed and the surface is concrete, vinyl or tiled. All rugs will be removed. Participants and observers will be asked to wear unrestrictive garments. They will sit in supportive chairs situated in close proximity encircling the “dance floor” allowing observation of peers receiving dance instruction. This configuration allows participants to rest between their training visualize movements and absorb sensory stimulation from the robust music -- an essential component of the intervention. The circular setting seeks to create a “togetherness” atmosphere where participants feel ‘equal’ within a safe environment. The bonding or unity between participants facilitates socialization and engagement. The music used during the session is important with every effort made to match time pieces or standards of the era in which the participants have lived during younger and middle age. Creating memory recall and reminiscing is a core foundation of the dance intervention. The sensory stimulation afforded by tonal vibration, musical notes and phrasing of an arrangement is an important component of the intervention. Major notes are hypothesized to create an up-beat of ‘happier-fun inspired emotion’ while minor notes may inspire a deeper more intimate emotion. Most musical pieces will be between two to four minutes length with very little pause between the selections. The music will begin with upbeat tempos – “major” notes to create a warm, happy environment followed by a few ballads or “minor notes” to soften the setting and invoke emotionality. The balance of music is critical as care must be taken not to over-stimulate. The sessions will always end with some “major” note music leaving participants with a warm or happy-feeling. Dance steps to be used include American Foxtrot Basics and American Tango Basics with addition to an advanced step in Tango that demonstrating motor memory and fine motor coordination. The Dances are similar in movement category but different in culture and character.

The method by which participants are approached is an important factor – a technique that must always be handled with extreme care and a conscious effort. The connection between the participant and the instructor should not be underestimated. The instructor will always ask for permission to dance, and if the answer is “no” for whatever the reason, the instructor will accommodate and thank the resident for attending the session. The instructor will always tell the resident that they are very happy the resident is at the session as rejection of the physical component of the dance training does not necessarily preclude benefits garnered by sensory music and visual stimulation of peer dance.

A key element of the intervention is consistency. The program hinges on repetitiveness including a prescribed schedule for the sessions then structured repetitive instruction during the session.

4. Potential Risks (as assessed by a Registered Nurse and Physical Therapist with extensive experience working in long term care facilities). The potential risk of injury, illness or agitation from the intervention is gauged as a 3/10. Risks include: muscular and joint soreness during the first few weeks of the program; potential falls during the dance session leading to contusion and/or fractures (although the participant will be coupled with the dance instructor during the session thereby potentially lessening fall risk as compared to ‘normal’ unassisted gait during everyday activities within the facility); and a risk of cardiovascular complications from the increased activity and demands on the cardiovascular system during the 2 – 4 minute dance sessions over the course of 45 minutes. The potential benefit is deemed an 8/10 with improvement in any of the following measures viewed as significant: physical abilities – ADL’s scores (activity of daily living), reduction of medications, improved sleep, and a lower depression score. The reward/risk ratio is 8/3 or 2.67. This estimate is viewed as a valid measure of the program and is consistent with anecdotal reports from the dance instructor and nursing facility staff members in nursing homes where the program has been performed on an informal basis for greater than 24 months.

5. Procedures to protect or guard against risk include environmental preparation – that is securing a location in the nursing home that has a firm surface, without furniture or rugs and ensuring that residents wear loose fitting clothing, Furthermore, a safety plan will be in place to ensure that the dance instructor immediately contacts a nurse if the resident shows any signs of distress, is injured by slipping/falling, or exhibits exhaustion, chest pains, or any other medical symptoms. It is not anticipated that any medical treatment would be necessary as a result of the participation in this study but all participating residents will have continual access to medical and emergency attention. The dance session will begin at a low level of intensity and duration and will strengthen as participant conditioning and abilities allow. A resident may discontinue their participation in the study at anytime and can refuse the session on any scheduled day.

6. Potential benefits of the intervention include improvements in behavioral, physical and cognitive functions among residents of long-term care facilities. The proposed intervention is informed by earlier studies that have assessed benefits of dance and movement therapy in management of dementia, dance therapy and Alzheimer’s, ballroom dance for geriatric depression, efficacy of dance/movement therapy for ROM and activities of daily living, emotional response to social dancing in patients with dementia, social dancing to help in care of nursing home patients with dementia, social dance as a way to support intellectual, emotional and motor functions in persons with dementia, music as an intervention for long-term care residents with Alzheimer’s and government efforts to relieve unnecessary medications and pharmaceutical use among residents of long-term care facilities.

7. Compensation will be provided to the nursing facilities (project $1,000/facility) to partly offset personnel costs incurred by nursing staff documentation and for allowing dance instructor to use space within the facility for the dance sessions.

8. As discussed, the potential risks associated with the intervention are greatly outweighed by the potential benefits. Risks pertain to initial physical discomfort, mental agitation, and medical complications pursuant to involvement in a physical activity. The participant will be removed from the study if the intervention increases agitation or results in medical issues. The benefits of discovering a non-pharmacological means to improve, maintain, or prolong physical, cognitive and behavior functions among long-term care residents could greatly improve quality of life for this long neglected population. Placement in a long-term care facility should not be based on a premise of finding a place *to go die*, rather, an individual is simply moving to a location to *live out* the remainder of their life.

9. The following long-term care facilities will participate in the study: Ridgecrest Retirement and Health Care, Waco, Texas and Temple Living Center, Temple, Texas.

10. Non-applicable

11. Non-applicable

12. This proposed study has not been reviewed or approved by another IRB.

13. Individuals who will have access during, or after completion, to the unpublished results of this study will be:

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