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# Use of Antipsychotic Medications in Individuals With Alzheimer's Disease in Nursing Facilities

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Of the Requirements for the Degree of

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## Abstract

Patients with Alzheimer's disease or other types of dementia often require long-term care in nursing facilities (NF) where they may display out-of-character behaviors complicating their care. While antipsychotic medications are sometimes prescribed for NF residents, their use is considered inappropriate for the control of dementia behaviors. The Centers for Medicare and Medicaid Services have rated Texas the worst state in the country for the inappropriate use of antipsychotic medications for NF residents with dementia. This project was guided by the star model of knowledge transformation with the goal to reduce inappropriate use of antipsychotic medications through NF staff education. The purpose of this project was to develop an educational program for nurses, direct care staff, pharmacists, and prescribers regarding appropriate use of antipsychotic medications, reduction efforts, alternative non pharmacological interventions, and an associated toolkit of educational resources. The program development was accomplished in conjunction with a team of local experts who provided process evaluation regarding their satisfaction with the planning process through the completion of an anonymous, 10-question, Likert-type survey. All participants scored their results with a (5) strongly agree or (4) agree. A descriptive analysis of the survey data provided information that positively supported the development of the project. At the end of the project, the education program and resources were delivered to the Texas Health and Human Services Commission, with a plan for later implementation and outcome evaluation. This project has the potential to achieve positive social change through reducing the numbers of Texan NF residents with dementia who are inappropriately prescribed antipsychotic medications, which will result in an increase in their quality of life.

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## Dedication

This project is dedicated to all individuals who receive care in Texas Nursing Facilities. Each person who receives care in an institutional setting deserves the highest quality of life. Care and services must meet each person's individual needs. As an agent of the state, it is an honor to be able to serve those we are responsible for and make a difference in their lives.

**Acknowledgments**

I would like to thank all of my family for allowing me to accomplish this. Their patience and tolerance has been much appreciated. Without their understanding, love and devotion to me, I would not have been able to do this. Most of all I would like to thank my loving husband, Johnny R. Vahalik. He has been an instrumental force in my life for almost two decades, always supportive and cheering me on. Many weekends he played single dad, allowing me the time to complete this program.

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SECTION 1: Nature of the Project

## Introduction

As of 2016, an estimated 5.4 million individuals of all ages had Alzheimer's disease (Alzheimer's Association, 2016), with a 2015 estimated economic burden of $226 billion annually (Alzheimer's Association, 2015) across the United States. Of the more than 5 million Americans affected by Alzheimer's disease, 350,000 of them are Texans, ranking Texas fourth, nationally, in the total number of cases. Additionally, Texas is ranked second in the nation in the number of deaths related to Alzheimer's disease (Alzheimer's Association, 2016). In fiscal year 2015, over 90,000 individuals were living in Texas nursing facilities (NFs); of those, over 49,000 had a diagnosis of Alzheimer's disease or another dementia-related condition (Texas Health and Human Services Commission, 2016). Many individuals living in NFs experience out-of-character behaviors as a symptom of their disease process. These symptoms include agitation (which may be exhibited by calling out with raised voice, hitting, pinching, and cursing), decreased appetite (refusal to eat), and the refusal of activities of daily living (personal care, grooming, bathing, and dressing). These behaviors often lead to a resident's isolation and poor quality of care and quality of life. A common treatment modality to combat these behaviors is a prescription for antipsychotic medications.

A staff educational training program and toolkit, which includes clinical guidelines and evidence-based best practices for the care of NF residents who have Alzheimer's disease or other dementia-related conditions, may assist staff members of all disciplines in the use of alternative interventions before adding an antipsychotic to the

treatment regimen. With the training program and toolkit that I have developed, staff members will become more educated in caring for individuals with these disease processes. This staff education training program and toolkit will provide continuing education and enhance their current knowledge, skills, and abilities in order to reduce inappropriate administration of antipsychotics. This project could result in a decrease in the use of antipsychotic medications and the subsequent increase in the quality of care and quality of life for Texas NF residents. Section 1 includes the problem, the purpose, the nature of the doctoral project, and a summary of the section.

## Problem Statement

In Texas NFs, there was and still is a significant issue with the inappropriate use of antipsychotic medications in those with Alzheimer's disease or other dementia-related conditions (Center for Medicare and Medicaid Services (CMS), 2014). In this project, I addressed the problem of inappropriate use of antipsychotics with those who have a diagnosis of Alzheimer's or a dementia-related condition and reside in a Texas NF. Residents who have a diagnosis of Alzheimer’s or a dementia-related condition have behaviors that are often challenging and out of character for the individual. These behaviors are often a result of an unmet need such as pain, hunger, boredom, urinary tract infection, or being wet or soiled. These behaviors have to be managed so that residents can continue their activities of daily living and have some quality of life. If members of the frontline staff, such as nurses and certified nurse aides, do not recognize the unmet need, a prescriber may order an antipsychotic to alleviate or manage the behavior. One of the reasons for the over prescription of antipsychotic medications in Texas NFs relates

directly to the out-of-character behaviors that these individuals may exhibit. These out-of-character behaviors are a common symptom in this population of residents, and medication intervention is used to control the behavior(s). According to the Centers for Medicare and Medicaid Services, in 2014 Texas was worst (51st) in the nation for inappropriate use of antipsychotics for those residing in a NF who had a diagnosis of Alzheimer's or a dementia-related condition (Centers for Medicare and Medicaid Services, 2014).

Researchers have linked the inappropriate use of antipsychotic medications in this population to increasing falls, decreased appetite, increased psychotic behaviors, and even death. In 2005, the Federal Drug Administration (FDA) warned that clinical trial data strongly indicated that newer "atypical" antipsychotics increase the risk of death in dementia patients. In 2008, the FDA placed its strongest black box warning on all conventional and atypical antipsychotics because the agency determined that the drugs are associated with an increased risk of mortality in elderly residents who are prescribed these medications. Atypical antipsychotics are contraindicated for "off-label" use in individuals who have challenging behaviors as a result of Alzheimer's disease or another dementia-related condition. Given the increase in the use of antipsychotic medications and the FDA black box warning, CMS initiated the National Partnership to Improve Dementia Care in 2012. The Survey and Certification division of CMS for NF Regulation spearheaded this initiative. Alternative interventions to reduce the inappropriate use of antipsychotic medications have become necessary. In a conversation with Dr. Wehry during an Oasis: Dementia Care Training Seminar, she stated "in addition to alternative

interventions to decrease behaviors, improved knowledge of the care for these individuals can minimize behaviors from inception" (S. Wehry, personal communication, December 15, 2015).

As I noted on the previous page, Texas NFs use of antipsychotic medication ranks 51st in the nation (CMS, 2014), which prompted the Texas Department of Aging and Disabilities Services (DADS) to conduct an iceberg analysis in an attempt to gain a deeper understanding of this problem (see Appendix A). An iceberg analysis is the method that a systems thinker would use to examine the patterns and root causes of a problem, identifying the issues that lie below the problem and may not necessarily have been immediately seen (Northwest Earth Institute, 2017). Each piece of infrastructure touching the consumer was reviewed in its entirety during a root cause analysis, conducted by DADS Quality Monitoring Program (QMP) staff. The common theme throughout the analysis for all disciplines was a lack of knowledge related to the care of individuals with Alzheimer's or dementia-related conditions. This knowledge was not included in any discipline's basic education or training in enough depth to allow the discipline's practitioners to be experts in this type of care. Consequently, inappropriate use of antipsychotics is a symptom of practitioners' lack of knowledge, skills, and abilities to care for this population in ways alternative to the introduction of an antipsychotic.

To address the underlying cause, all pieces of infrastructure must be addressed. Using the systems thinking approach, pieces of infrastructure were identified and analyzed. Using this same approach, an infrastructure wheel was created identifying all

disciplines that had to be addressed to eliminate the symptom permanently (see Appendix B). The most significant deficit determined in the analysis done by TDADS was a lack of education across four disciplines. In this staff education training program and toolkit, the lack of education was addressed at the level of the prescriber, nurse, pharmacist, and the certified nurse aide.

Nurses are trained to intervene, but often lack necessary education regarding available non-pharmacological interventions that can be used to assist individuals before or during an out-of-character behavior. New nurses often staff the bedside in a NF and do not receive the level of training in nursing school needed to be a geriatric expert or an expert on the care of someone with Alzheimer's or another dementia-related condition. Due to this lack of knowledge and education, the staff members at the bedside often have difficulty providing a high level of care, thus causing the staff members to reach out to the prescriber who may prescribe an inappropriate antipsychotic. According to the Texas Board of Nursing (TBON) and the Texas Administrative Code (TAC) (n.d.) Section 215.9, nursing students must receive nursing courses that include didactic and clinical instruction in four content areas of study. Of those four areas, there is no specific mention of students receiving any geriatric-specific content. For licensed vocational nurses in Texas, the Texas Board of Nursing, per TAC Rule §214.9, requires that students receive instruction in nursing care of the aged, which is one of five areas of study. The Nursing Care of the Aged care area is extremely limited and only has to include:

- Physical, psychological, and cognitive changes associated with the aging process.

- Implications of aging in planning nursing care.
- Nursing care of individuals experiencing common health problems associated with aging.
- Palliative and end-of-life care.
- Examples of clinical experiences that may include, but are not limited to: long-term care and rehabilitation settings, acute care units serving adult clients of all ages, clinics, elderly respite or day care settings, NFs, and assisted living settings.

The primary nurse at the bedside in NFs is an LVN/LPN (TDSHS, 2016).

This issue is significant for all professions now providing care to this population of individuals, and will only become more significant as the number of individuals with Alzheimer's disease or other dementia-related conditions continues to increase. More and more, all disciplines in healthcare are faced with caring for individuals who have out-of-character behaviors that develop due to an unmet need or as a result of their disease process. Due to care providers' lack of knowledge and education on how to care for this population and alternative interventions to antipsychotic use, antipsychotic medications are prescribed and a further deterioration of the individual's condition takes place. The rise in use of antipsychotics for the treatment of behaviors not associated with actual mental health disease processes is a cause for concern for society as a whole, so much so that in 2012, CMS created the National Partnership to focus on NF care across the nation. The mission of the partnership is to improve the quality of care for NF residents with dementia, with an initial focus on reducing the use of antipsychotic medications.

## Purpose Statement

In order to combat the current and increasingly prevalent inappropriate use of antipsychotic medications to treat the out-of-character behaviors that are symptomatic of Alzheimer's disease and other dementia-related conditions, nurses (along with those working in other disciplines) must be provided with necessary educational resources on the alternative non-pharmacological activities and therapies that they can implement to work through these displayed behaviors. It is also important to train all level of staff members, including the certified nurse aide, pharmacist, and the prescriber.

## Response to the Gap in Practice

The gap in practice is a lack of knowledge by staff members (prescriber, nurse, pharmacist, certified nurse aide) related to the inappropriate use of antipsychotics with this population. The staff members' lack of knowledge related to the care of those with Alzheimer's disease or a dementia-related condition results in the inappropriate use of this classification of medications. The purpose of this project was to develop needed educational resources for Texas NFs on the appropriate use of antipsychotics, reduction efforts, and alternative non-pharmacological interventions. Using the PICO (Problem, Intervention, Comparison, and Outcome) model, I addressed the inappropriate use of antipsychotics (which leads to overutilization) in this population. This educational intervention to provide nurses, prescribers, pharmacists, and direct care workers with information and training on antipsychotic use in this population is imperative for implementing strategies that will minimize behaviors and increase the use of alternative interventions. The efficacy of the educational intervention could be determined by

comparing the inappropriate medication use of those who have not received training to that of those who have. My goal is that outcomes show a decrease in the inappropriate use of antipsychotics in this population.

For this project, I adapted and reorganized materials from the Iowa Geriatric Education Center's (2017) staff educational training program and toolkit. The Iowa Geriatric Education Center's toolkit includes clinical guidelines regarding the care of individuals with Alzheimer's disease or dementia-related conditions, out-of-character behaviors, use of antipsychotic medications, and alternative interventions (Iowa Geriatric Education Center, 2017). In this project, I did not develop new approaches, but instead combined all resources and materials available and bundled them in a way that they can be provided to the staff of NFs as a comprehensive training program and toolkit to assist the NFs in making changes in their facilities. These resources will provide the tools and framework that an NF will use to educate its staff on the available alternative non-pharmacological interventions and how best they can integrate the resources into the care that they provide for their residents. In this project, I developed a program that includes educational material for nurses, pharmacists, prescribers, and direct care workers. At the completion of this project, I will make this material available to all Texas NFs. My goal for this staff educational training program and toolkit is to decrease the use of antipsychotics in this population.

## Nature of the Doctoral Project

The nature of the project was to develop a staff educational program combined with the currently published literature on clinical guidelines, dementia care, and

intervention alternatives to antipsychotics for the control of out-of-character behaviors. Program planning followed the principles of staff education and included a well-developed framework.

### Sources of Evidence

I conducted a literature review and presented the results to a group of key stakeholders who functioned as a team of experts. This team of experts included nurses, pharmacists, prescribers, nurse aides, NF providers, and resident advocates. Stakeholders provided feedback and input on the educational resource information, as well as on practical ways for NFs to implement the resources for their staff and residents. I incorporated stakeholder's feedback into the educational toolkit final product and the plan for implementation. The team also developed a plan for program implementation and evaluation. At the completion of the planning, I handed the project deliverables over to the Texas Health and Human Services Commission. The deliverables included the staff educational training program, the educational toolkit, the implementation plan, and plan for evaluation of the program. Implementation and evaluation of the educational program will occur after completion of this project.

## Significance to Practice

### Stakeholder Analysis

Stakeholders of this project included residents of Texas NFs, nurses who care for this population, nurse prescribers, pharmacists, certified nurse aides, and family members of this population. The staff education I developed through this project will have a positive impact on all who live in Texas by educating those who care for them about

better prescribing patterns and the increased use of non-pharmacological interventions. The overall impact to the residents may be improved quality of life. In addition, staff members who care for these individuals will be impacted by gaining additional knowledge, skills, and abilities in caring for those they serve.

**Contributions to Nursing Practice**

This project and its future implementation may also provide future contributions to the overall practice of nursing in Texas. Raising awareness of this practice problem may generate future change to educational programs at both the LVN and RN levels, or at a minimum allow for dissemination of educational information more widely than is currently available. An example of the dissemination of this information is the October 2017 publication of the Texas Board of Nursing's quarterly newsletter related to transition to practice for new nurses in long term care. In this article, the author states that new nurses may not be trained in the care of specialty populations such as those who have Alzheimer's or a dementia-related condition and may require more training to be effective (Texas Board of Nursing, 2017).

This project may also have impact on other professions such as the medical profession, pharmacy profession, and the nurse aide profession. The project educates on the care of those with dementia, inappropriate prescribing patterns, non-pharmacological interventions to assist with or minimize behaviors, and how to provide better care overall. The education is relevant to individuals in these other professions and takes into consideration that the nurse has to effectively communicate with all members of the healthcare team.

## Implications for Positive Social Change

This project also has the potential for positive social change. As NF staff members become more knowledgeable, they tend to do better and implement what they know, which may ultimately carry further than the NF. If, overall, the medical profession acknowledges that antipsychotics for this population to treat behaviors should not be a first line intervention, then this will extend through the entire continuum of care and impact the other settings where these individuals are cared for.

## Summary

There is a significant problem with the inappropriate use of antipsychotic medications in NF residents that has garnered national attention, but is particularly severe in Texas. The purpose of this project was to develop educational resources for Texas NFs on the appropriate use of antipsychotics, reduction efforts, and alternative non-pharmacological interventions for residents with Alzheimer's and dementia-related conditions. I assembled a team of experts to review the results of a literature review and contribute to the development of an educational program. The project deliverables consisted of the staff educational training program, resource toolkit, implementation plan, and plan for program evaluation.

# SECTION 2: Background and Context

## Introduction

Inappropriate use of antipsychotics with those who have a diagnosis of Alzheimer's disease or a dementia-related condition is a problem in NFs, especially in Texas. The purpose of this project was to develop educational resources for Texas NFs on the appropriate use of antipsychotics, reduction efforts, and alternative non-pharmacological interventions. I developed this project on the premise that staff education can reduce inappropriate use of antipsychotics in NF residents who have a diagnosis of Alzheimer's or other dementia-related condition. The project resulted in a staff educational training program and toolkit, and included evidence-based best practices related to the use of antipsychotics and alternative non-pharmacological interventions for the care of NF residents who have Alzheimer's disease or another dementia-related condition.

## Concepts, Models, and Theories

The Institute of Medicine proposed a framework for systematic reviews of evidence in 2011. This framework includes (a) defining the problem that you are trying to address; (b) developing the interdisciplinary team (IDT) who will participate (stakeholders); (c) identifying and assessing the literature and evidence based on what you are trying to answer; (d) producing findings from the review of literature and evidence; (e) incorporating expert opinion and consumer choices and preferences (what do they think and how did they respond); (f) assembling a clinical guideline group (if this

is different from the IDT); (g) producing clinical guidelines/best practices; and (h) using guidance to make better decisions or outcomes related to care.

In addition, to the systematic evidence review, I used the Star Model of Knowledge Transformation to assist in the creation of the staff educational training program and toolkit with clinical guidelines and evidence-based best practice. The Star Model is a model for understanding the cycles, nature, and characteristics of knowledge that researchers used in various aspects of evidence-based practice (Stevens, 2012). The Model "organizes both old and new concepts of improving care as a whole, and provides a framework with which to organize EBP processes and approaches" (Stevens, 2012).

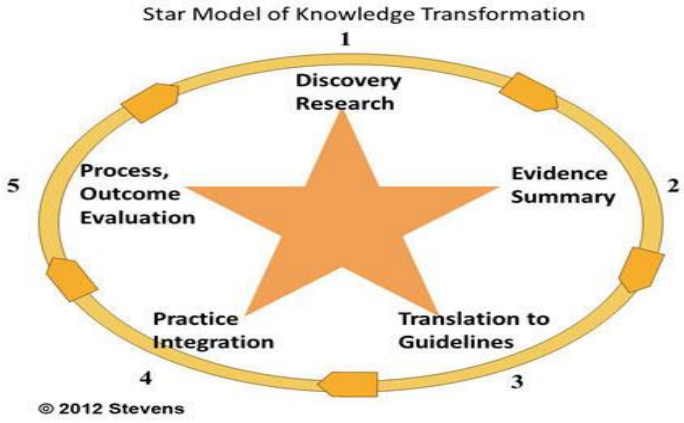


Figure 1. Star Model of Knowledge Transformation (Stevens, 2012)
Used for academic purpose with permission.

The Star Model demonstrates the sequence of knowledge, as it develops from research to practice, and can be used to guide the process of constructing evidence-based practice. "Configured as a simple 5-point star, the model illustrates five major stages of

knowledge transformation: 1) discovery research, 2) evidence summary, 3) translation of guidelines, 4) Practice integration and 5) process, outcome evaluation. Evidence-based processes and methods vary from one point on the Star Model to the next" (Stevens, 2012).

## Relevance to Nursing Practice

In 2011, the FDA, the CMS, and the Governmental Accountability Agency (GAO) stated that atypical antipsychotic medications were overprescribed and should not be used with those who have dementia and are living in an NF (FDA, 2011; CMS, 2012; U.S. GAO, n.d.). The GAO used data from the CMS's Minimum Data Set (MDS), along with prescription usage data to make this conclusion. The MDS is a CMS comprehensive assessment that is required for every NF resident. As part of the assessment, it captures the individual resident's diagnosis and any use of antipsychotics in the last 7 days. The MDS is transmitted electronically to CMS by each NF. CMS can identify how many individuals in the nation's NFs have a diagnosis of Alzheimer's disease or a dementia-related condition and are currently being treated with antipsychotic medications. Due to an increase in the inappropriate use of antipsychotic medications, CMS started the National Partnership to Improve Dementia Care in Nursing Homes in 2011, and provided each state with their percentage for antipsychotic usage for this population. In 2011, Texas's percentage was 28.40%. According to CMS, as of 2014, Texas ranked 51st in the nation for overutilization of these medications for treatment of individuals living in NFs who have Alzheimer's disease or a dementia-related condition. As of July 2016, Texas was ranked 42nd in the nation, but still has a long way to go (CMS, 2016).

Between 2008 and 2011, CMS and the FDA asked states to ensure reduction in the inappropriate use of atypical antipsychotic medications in this population. In 2011, the CMS established the National Partnership to Improve Dementia Care in Nursing Homes. The partnership resulted in nationwide guidance to NFs and the state agencies who regulate them on what the CMS considered to be the benchmark percentage for usage, and began measuring states and ranking their usage each quarter. The CMS (2012) described the partnership as follows:

> The CMS is partnering with federal and state agencies, NFs, other providers, advocacy groups, and caregivers to improve comprehensive dementia care. CMS and its partners are committed to finding new ways to implement practices that enhance the quality of life for people with dementia, protect them from substandard care and promote goal-directed, person-centered care for every NF resident. The Partnership promotes a multidimensional approach that includes public reporting, state-based coalitions, research, training, and revised surveyor guidance" (p. 1).

In 2011, Texas had a percentage of use of almost 29%, with the national benchmark being set at an overall reduction of 30% for each state. By 2014 Texas had reduced antipsychotic use to 25%, but had not met the 30% benchmark reduction goal and was listed as 51$^{st}$ in the nation. CMS concluded that Texas had the highest inappropriate use of antipsychotics in the nation.

Educational programs can decrease the inappropriate use of atypical antipsychotic medications (Smith & Guest, 2014). Smith and Guest (2014) found that prescribing

patterns and care of those who have Alzheimer's or a dementia related condition can change by educating those involved. In their article, they identified the results that education had on the use of antipsychotics in several studies of long-term care facilities. Smith and Guest (2015) stated,

> Education on geriatric prescribing provided to the nursing staff who serve as the "eyes and ears" of the physician in long-term care and who function in many ways as case managers can be an effective tool to incentivize physicians to better prescription practice. When this is done with the best features of adult learning, crafted to the subject matter and the specific audience, then a better outcome can be expected. (p. 10-11)

One example of an educational program is the IA-ADAPT developed by the Iowa Geriatric Education Center. The trainings available through the IA-include multiple educational modules on antipsychotic use in those with Alzheimer's or a dementia-related condition. The center's trainings contain information on non-drug management of challenging behaviors versus the use of an antipsychotics (IA-ADAPT, 2016). There are multiple resources and clinical guidelines available for nurses, pharmacists, and prescribers that include:

1. Overview of evidence-based approach evaluation of problem behaviors;
2. Delirium assessment and management;
3. Non-drug management;
4. Drugs that may cause delirium or problem behaviors;
5. Antipsychotics for dementia prescribing guide;

6. Antipsychotic guide for direct care providers;
7. Algorithm for behavioral and psychological symptoms of dementia;
8. Managing a crisis; and
9. Shared Decision Making Guide: Antipsychotic Medicines for People with Dementia (IA-ADAPT, 2016).

I found similar material produced by the University of Texas at Austin School of Nursing Center for Excellence in Long Term Care (UT School of Nursing, the Center for Excellence in LTC, 2017). The additional materials supported the directives from CMS and the FDA detailing that antipsychotics used with this population may result in further harm and should not be used unless it is the intervention of last resort after all other non-pharmacological interventions had been attempted. There is also information indicating that nurses and others who care for this population need to be trained in the overall care techniques and how to minimize behaviors without the use of antipsychotics (UT School of Nursing, the Center for Excellence in LTC, 2017). I included all of these resources in the staff educational training program and toolkit.

## Local Background and Context

Even though this is a national problem, it is having a significant impact at the state level. Texas was ranked 51$^{st}$ in the nation in 2014 for inappropriate use of antipsychotics (CMS, 2014). Texas is one of the largest states in the nation and has one of the highest numbers of NFs (The Henry J. Kaiser Foundation, 2014). Texas also has the third largest population of NF residents in the nation (The Henry J. Kaiser Foundation, 2014). Data for 2016 show that Texas has 1232 NFs, and approximately 98,000 people

live in these NFs (Texas Health and Human Services Commission [HHSC], 2016). Of this population, almost half have a diagnosis of Alzheimer's disease or a dementia-related condition.

Texas is also experiencing a high staff turnover rate in NFs. According to the Texas Department of State Health Services' (DSHS) 2014 Long Term Care Nurse Staffing Study, it is noted that in 2013 approximately only 26% of the LVNs and 3% of RNs in the state work in NFs, or extended care settings (TDSHS, 2015). In their 2016 report, DSHS noted an increase of LVNs from 26% to 27% working in NFs or extended care settings (Texas Department of State Health Services, 2016). However, their data show that the percentage of RNs in NFs or extended care settings remained at 3%. Lack of education and support is also cited as a reason for turnover among Certified Nurse Aides. This turnover was even higher in the 2016 report indicating a constant influx of new nurses entering the NF as front line staff.

NFs are subject to rules and regulations by CMS, referred to as the Conditions of Participation (COP). The COP include regulations for the use of antipsychotic medications, including a requirement that administration must be accompanied by justifying documentation, especially if someone has a diagnosis of Alzheimer's disease or a dementia-related condition. Chapter 19 of the TAC mandates that NFs are subject to citation if they fail to plan the care necessary to meet the individual resident's needs, and to provide the best care possible to ensure the highest quality of life. The Texas Department of Aging and Disability Services (DADS, 2016) reported that quality of life

was the fifth most common complaint received by the Consumer Rights and Services Division (Quality of Life — Failure to care for residents in a manner and in an environment that promote maintenance or enhancement of each resident's dignity and self-determination about aspects of his or her life in the facility that are significant to the resident). Complaints related to medications were ranked seventh (Medications — Failure to ensure that residents' medications are administered in the correct dosage as prescribed by the physician; or failure to ensure a resident's drug regimen is free from drugs used in excessive dose or duration without adequate monitoring, without adequate indications for their use, or in the presence of adverse consequences that indicate the dose should be reduced or discontinued). Complaints about sufficient staff were ranked eighth (Sufficient Staff — Failure to provide sufficient qualified and trained staff to care for residents to enable them to reach their highest practicable physical, mental and psychosocial well-being). Overall Texas NF care has been scrutinized and criticized in the media and at the federal level in the last 2-3 years, with one of the main issues being the inappropriate use of antipsychotics.

In the last 2 years, Texas has made significant progress in addressing the inappropriate use of antipsychotics on NF settings. However, Texas still has not met the National Partnership benchmark. CMS set the benchmark in November 2016 at 16%, when Texas had a high rank of 17.46% at the time. (Texas HHSC, 2016). The inappropriate usage of antipsychotics will have impacted Texas NFs even more, due to quality incentive payments. On September 1, 2017, Texas implemented the first reimbursement system that pays nursing facilities for direct outcomes tied to quality

measures. This program is known as the Quality Incentive Payment Program (QIPP; Texas HHSC, 2017). One of the measures is the antipsychotic long stay measure (the measure that CMS has been monitoring). If the NF participates in the QIPP program and does not show improvement with this measure each month, the NF will not receive its quality-enhanced payment. This practice problem can now impact the NF at the reimbursement level and not just at the compliance level.

## Role of the DNP Student

I am currently employed with the Texas HHSC as the Director of the Quality Monitoring and Innovation Program. This role allows me to impact and influence NF care in all Texas nursing facilities. My program works with NFs that are at risk for delivering poor care and having poor survey outcomes. These NFs are identified through an early warning system that uses survey data, complaint history, and quality measures for which the data are pulled from the MDS. One of these measures is the percentage of antipsychotics used by the NF in this population. We work with the NFs identified by the early warning system, providing technical assistance, policy guidance, system improvement, and evidence-based best practice. As project leader, I interact with NFs, consumers who reside in NFs, regulators of NFs, and multiple stakeholders such as advocates, provider associations, legislative officials, and families and friends of those whose loved ones are receiving NF care. As a nurse, I chose this practice problem and project because I want to see permanent social change. In Texas, it is a challenge to implement a clinical guideline or best practice and ensure its sustainability inside NFs. To truly make a change, it must be done on multiple levels and must infuse through the

entire infrastructure that touches the practice problem. This practice problem is not isolated at the NF level, or within the nursing structure. It touches prescribers, pharmacists, families, consumers, nurse aides, regulators, reimbursement, educators, and more. Through leading this project, I have the ability to touch each of these pieces of infrastructure. I believe that with this project the goal is to re-think the way that care is provided to our older adult population, including those that live in NFs. It is everything I believe in as a nurse, and because of my position within HHSC and the opportunity to work on this project, I think I can make change occur. There is no need to overmedicate or use pharmaceutical interventions, since in many cases, interventions as simple as music that means something to the resident can be enough to calm them, minimize behaviors, and restore memories that lead to that individual's higher quality of life. Thomas, Baier, Kosar, Ogarek, & Mor (2017) noted that there was an increase in the percentage of residents who experienced a reduction in behaviors, both symptoms and frequency, as well as an increase in the percentage of residents whose antipsychotic medication intake was decreased after music was introduced to the resident.

## Role of the Project Team

The team of experts I assembled for this project consisted of professional nurses, representatives from provider organizations, resident advocates, and NF professionals. In the remainder of this study, I refer to the team as the steering committee. The steering committee reviewed the literature and search results, and the staff educational training program and toolkit draft. The steering committee provided feedback that I incorporated into the final product, including the implementation plan and the plan for program

evaluation. The team met several times, first to review the initial framework and objectives, second to review the draft, and third to review the revised work products. During the final meeting of the steering committee, I obtained project evaluation data regarding my effectiveness in planning and project leadership. Each steering committee member completed an evaluation questionnaire that can be found in Appendix C.

## Summary

In summary, this project is needed and supports positive social change impacting the nursing profession and ultimately the consumer of NF services. The gap in practice is an educational deficit related to the use of antipsychotics with NF residents who have a diagnosis of Alzheimer's disease or other dementia-related conditions. In Section 3, I discuss the literature review, systems thinking, and my use of the iceberg model to show that education is needed to address the practice problem. A staff educational training program and toolkit will be an effective way to reduce the inappropriate use of antipsychotics in this population. In Section 4, I discuss the planning of the Staff Educational Training Program and Toolkit, addressing what it will include and the plan for implementation.

# SECTION 3: Collection and Analysis of Evidence

## Introduction

In Texas NFs, there is a significant issue with the inappropriate use of antipsychotic medications in those with Alzheimer's disease or other dementia-related conditions. The purpose of this project was to develop educational resources for Texas NFs on the appropriate use of antipsychotics, reduction efforts, and alternative non-pharmacological interventions. In this project, I identified an educational deficit and addressed the infrastructure using an educational approach. The four levels of care providers include the prescriber, nurse, pharmacist, and certified nurse aide. In the following section, I describe the sources of evidence I used for this project along with the analysis and synthesis of those data.

## Practice Focused Question

The practice focused question guiding this project was: Will staff education reduce inappropriate use of antipsychotics in those who have a diagnosis of Alzheimer's or other dementia-related condition who reside in a nursing facility? The purpose of this project was to develop a toolkit of educational resources regarding alternative interventions to reduce the inappropriate use of antipsychotics in this target population. The resource toolkit and staff educational training program were delivered to the Texas Health and Human Services Commission for use in staff development and continuing education. The implementation and evaluation of the educational program will occur after completion of this project.

## Sources of Evidence

The literature review was completed with each source having at least three references or credible sources that support its use. These were evaluated for use in the staff educational training program and toolkit. The development of the education program was guided by the Star model, and written for four levels of staff members (the prescriber, pharmacist, nurse, and certified nurse aide). The resources were assembled into the staff educational training program and toolkit with instructions on its use. A team of experts was assembled through an invitation to prescribers, pharmacists, nurses, certified nurse aides, NF representatives, and project subject matter experts.

Team members attended meetings facilitated by the project leader. Team meetings began with the first step of restating the problem and the purpose of the project along with the goals. The second step solidified the project timeline. The third step was a review of the initial draft of the staff educational training program and toolkit. Step four in the project was an incorporation of feedback from the team of experts into a revised program. Step five was a discussion of the implementation plan, which was done after completion of the project.

Initial ideas for implementation included a pilot program in 10 facilities. The ten NFs were to participate in a webinar, and an overview of the staff educational training program and toolkit was to be provided. The toolkit was to be released via a flash drive that would be mailed to them prior to the webinar. Once the webinar had been completed, each NF was to be responsible for implementation, sharing, and using the training

program and toolkit. Instead, NF nurse representatives were included on the Steering committee. The steering committee recommended a different implementation plan.

Step six of the project was used to discuss plans for project program evaluation. The staff educational training program and toolkit identifies two suggestions to measure knowledge. The Psychotropic Education and Knowledge Test for Nurses in Nursing Homes (PEAK) and the Older Age Psychotropic Quiz (OAPQ). Both of these allow for knowledge to be assessed by the participant who is the user of the project program.

In addition to the project program having an evaluation system for the overall effects of the project itself, there is also an evaluation of the project by the steering committee members. The conceptual evaluation form provided for a summative evaluation of the work done by myself as the student and developer of the project. A second evaluation by the steering committee was used to collect feedback on the educational program content (See Appendices C, D, E and F)

## Analysis and Synthesis

For tracking and recording evidence related to the project, a project management approach was taken. Detailed meeting minutes from the expert team have been taken. At the completion of the project, team members provided project evaluation data through the completion of a questionnaire evaluating the effectiveness of the student as a leader and project manager (see Appendix D). Questionnaire results were compiled and presented in the final project report.

## Summary

In summary, the project compiled credible pieces of information, educational resources, clinical guidelines, and best practices for the care of individuals with Alzheimer’s disease or other dementia-related conditions in a nursing facility. The material focused on the use of antipsychotics, the prevention of overutilization, and alternative interventions instead of antipsychotic usage, and care for those who have Alzheimer's disease or other dementia-related conditions.

Section 4: Findings and Recommendations

## Introduction

In Texas NFs, there is a significant issue with the inappropriate use of antipsychotic medications in those with Alzheimer's disease or other dementia-related conditions. The gap in practice is a lack of staff member knowledge related to the inappropriate use of antipsychotics with this population**.** The practice focused question was: Will staff member education reduce the inappropriate use of antipsychotics in those who have a diagnosis of Alzheimer's or other dementia-related condition who reside in a nursing facility? The purpose of this project was to develop educational resources for Texas NFs on the appropriate use of antipsychotics, reduction efforts, and alternative non-pharmacological interventions. For the staff educational program, I combined published literature on clinical guidelines, dementia care, and intervention alternatives to antipsychotics for the control of out-of-character behaviors with feedback from a team of experts. In this project, I addressed infrastructure of the NF, looking at four levels of care providers, using an educational approach to address the identified gap in practice. The four levels of care providers are the prescriber, nurse, pharmacist, and certified nurse aide. In the following section, I describe the project development phase, the results of the project, findings and implications along with recommendations.

## Findings and Implications

I received IRB conditional approval for this project on August 25, 2017, and final approval with site agreement on October 17, 2017. The approval number is 08-25-17-

0104735. Due to the nature of the project, no other conditions applied as a result of the IRB and the project was initiated as intended.

I developed the educational program over a six-week period. The project steering committee met five times. I conducted an initial review of available literature, resources, and educational material and found an abundance of resources. At subsequent meetings, the project steering committee provided feedback on each module as it was developed. The committee reviewed the content, researched the material, and even took some of the training modules identified in the project program to determine their usefulness. Each time the steering committee met, most members provided editorial comments and remarks. Each meeting lasted approximately 1 hour. The committee did receive versions of the project program 2-3 days in advance so that members could complete a review prior to the actual meeting. I used GoToMeeting software and conference call technology to allow for greater effectiveness during the meetings. At the final planning meeting, I asked the steering committee members to complete a summative evaluation for each of the sections of the staff educational training program and toolkit (Appendix C). The rater form was developed by the Center for Educator Compensation Reform (Graham, Milanowski, Miller & Westat, 2012). The steering committee members received the instruction manual, the form, and rater IDs. Each committee member returned a total of 5 rater forms. The data were tallied in an aggregate format. The rater sheet used a rating scale of 1-5, with 1 being *not at all* and 5 being *yes, very much so*. In some cases, 1 was the benchmark and in others 5 was the benchmark. The scores reflected positive satisfaction with the educational program final product. One area that raters rated

constantly as only somewhat successful was, "Does the chapter provide learning activities to enhance the content?" As a result of this feedback, I revised the project program to include activities to enhance learning where applicable. This was done with examples of additional activities, videos/multimedia to watch, and other suggested material to review.

In addition, I provided each participant the evaluation tool titled Stakeholder/Team Member Evaluation of DNP Project (see Appendix C). The steering committee members submitted their feedback using this evaluation as well. Results were tallied with most questions receiving a rating between *agree* (4) and *strongly agree* (5). Several anecdotal comments were provided that indicated the need for the program.

The steering committee's participation provided instrumental feedback on the framework for the project, adding to the development of a thorough, comprehensive educational program. Members identified several topics that I had not initially taken into consideration such as advocacy and enhancing nurse communication. Given that the focus was on advancing skills related to dementia care and the use of antipsychotics with someone who has Alzheimer's disease or a dementia-related condition, the steering committee believed that these added topics were critical to meeting the goals of the educational program.

There are several implications from the development of this project. The most important implication of the educational program is the precedence that it may set for future state-wide projects in Texas. The resulting educational program serves to enhance the knowledge of prescribers, nurses, pharmacists, and nurses' aides in Texas NFs. In

turn, the quality of life for the NF residents under their care will improve. As a result, not only is there the potential for NFs to run more smoothly, but the residents' families may also feel an increased satisfaction with the care their loved ones are receiving. An important implication for the entire Texas health care system is the desired result on improved federal reimbursement, as Texas strives to make evidence-based change in order to meet federally mandated benchmarks in the reduction of inappropriate antipsychotic medication use in NFs.

Positive social change is possible as a result of this project, because it may improve individuals' awareness of how to care appropriately for those who have Alzheimer's disease or a dementia-related condition. The educational program can also be used in any setting and will provide education even to those who are caring for family members in the community.

## Recommendations

The final work product of this project was the staff educational training program and toolkit, which was delivered to the THHS to be reviewed and disseminated at a further date to all Texas NFs. The program contains an appendix, which includes resources for the program and a reference list. The staff educational program and toolkit contains the following sections: an introduction; orientation to the training program/toolkit; overview of the population; roles and responsibilities of members of the care team; interventions that can be used by the care team; and resources, tools, and trainings for the participant to take on-line. In Section 1, which is the introduction and

orientation to the training program and toolkit, there is an overview of what will be found in the coming sections. An excerpt from this section is as follows:

This training program/toolkit will provide NFs with information related to antipsychotic medication usage in nursing facility residents with dementia. This information includes:

- What it is:
    - What are antipsychotic medications?
- Assessment of the Resident:
    - Assessing admission orders for AP medications that are not appropriate for the resident.
- Prevention:
    - Alternate interventions in the place of AP medications.
- Staff Roles:
    - Nursing.
    - Direct Care Staff (CNA, CMA).
    - Physician.
    - Administrative Staff.
- Handling the Issue:
    - What to do if a resident is admitted on AP medications.
- Resources:
    - Evidence-based practice from nationally known sources including
        - Pioneer Network.

- Centers for Medicare and Medicaid Services (CMS).
- American Geriatrics Society (AGS).
- Centers for Disease Control and Prevention (CDC).
- American Medical Directors Association (AMDA).
- TMF Quality Innovation Network-Quality Improvement Organization (TMF QIN-QIO).
- Nursing Home Quality Campaign.
- Alzheimer's Association
- Texas Medical Foundation.

A major component of the staff education training program and toolkit is the use of non-pharmacological interventions in the population of residents most commonly affected by the inappropriate use of antipsychotic medications, those with a diagnosis of Alzheimer's disease or other dementia-related conditions. The interventions discussed include music therapy, reminiscence therapy, art therapy, laughter therapy, doll therapy, and many others that have been shown to have a positive effect in the reduction of antipsychotic medication usage. The final work product of deliverables included a plan for implementation of the educational program. The steering committee recommendations included that the staff educational training program and toolkit (use of antipsychotics for those who have a diagnosis of Alzheimer's or a dementia-related condition and live in a nursing facility) be disseminated to all Texas NFs and posted electronically on a web-based platform as a resource. The project program, once reviewed and accepted by the THHS, will be made public.

The educational program includes the Older Age Psychotropic Quiz (Brown & Westbury, 2016; Appendix F) for use as a pre- and post-evaluation of participants' learning. Section 6 of the project describes and provides them with resources on evaluation of the training program and toolkit. It includes ways to use data to which they have access to see if changes in prescribing patterns and overall care has achieved the overall objectives of the program. The committee also developed an outcome evaluation plan for this educational program. The outcome evaluation plan will consist of a reporting mechanism for each NF that chooses to use the program, with a baseline metric for antipsychotic use in this population. Once the NF uses the program and has implemented it, the NF will collect the same data to determine if reduction in antipsychotic use has occurred. This can be done through monitoring of the MDS assessments. The goal of this educational program is to decrease the use of antipsychotic medications in Texas NF. These data can also be compared to those NFs that have not used the program. Through the monitoring and evaluation of these data, a determination can be made about the overall effectiveness of the project program.

## Contribution of the Doctorial Project Team

The steering committee for the project was composed of a university tenured nursing faculty member (APRN, PhD) from another university; a community college nursing faculty member (APRN, DNP) who is also a member of the Texas Board of Nursing; a registered nurse from The Quality Improvement Organization contracted with the CMS for Texas; the president of the Texas Association of Vocational Nurse Educators (MSN, RN); a representative from the Texas Nurses Association (APRN,

PHD); a Texas NF director of nursing (RN); and 2 additional registered nurses (MSN) who work for the Texas Health and Human Services Commission in the quality performance and improvement area. The steering committee's role in the project was to review and provide input and comments related to the overall framework and objectives for the project, to review drafts of the actual staff educations training program and toolkit, and to review the final program (project deliverables). In addition, the steering committee provided an evaluation of each section/module to make changes and to strengthen final program. Committee members also reviewed the dissemination plan for the project and provided feedback and recommendations for dissemination and future use of the project material.

Each team member brought a unique perspective to the team. The members who have an academic background were able to view the material from an educator's perspective, providing feedback related to the content and the ability for the content to be used by the potential learner. The member from the Texas Board of Nursing brought a perspective on the relevance of the information to the nursing profession and assisted with ensuring the content remained within scope of nursing practice. The other members who had varying quality improvement backgrounds were able to ensure that the end product was one that could be utilized by all Texas NFs and that the implementation plan could be executed and followed through. The director of nursing from a Texas NF brought the perspective of the end user. All members provided input and feedback to ensure that the overall project product met the needs of the participant who would benefit from using the program. The project steering committee also completed the evaluation of

my work as a DNP student (Appendix D). The results were tallied and overall feedback showed that the project program met the objectives, the process was well organized, and that I demonstrated leadership in the project program development, accepted feedback in a positive manner, and incorporated the feedback to strengthen the overall project program.

## Strengths and Limitations of the Project

The project had both strengths and limitations. Some of the strengths were having the amount of literature available on the subject matter and a very knowledgeable steering committee. In addition, the timing was right for the project, as there was and still is a lot of attention on this topic in Texas and nationwide. This allowed for interest and buy-in from the steering committee.

One significant limitation to this project is the ease of accessibility of the materials. It is not possible to mandate the use of the materials, however, if not fully understood, it is possible that an individual may misuse the materials. Because of this, Section 1 of the project program had to be carefully drafted to establish the need for its use and why its use is necessary. A second limitation is that once this is disseminated, there must be a commitment to keep the material up to date. This places the burden for this onto the entity who disseminates it as well as whomever places it on-line. The entity identified to do this will be the Texas Health and Human Services Commission. As guidance continues to evolve and change, the staff educational training program and toolkit will have to be updated. The project program becomes a living, breathing document requiring revisions on an on-going basis to remain effective.

## Section 5: Dissemination Plan

Based on the recommendation of the steering committee, I plan to disseminate the staff educational training program and toolkit to all Texas NFs. The practice problem is widespread and impacts all Texas NFs. The plan includes electronic dissemination of the program to individual NFs as well as posting on the Texas Health and Human Services Commission website for future use and easy access. The focus audience is Texas NFs, primarily the nursing staff, although the program does include information for prescribers, pharmacists, and direct care staff. In addition, this information regarding this educational program will be shared over the next 12 months at conferences and other venues where NF providers may be in attendance. This includes day 1 the Texas Geriatric Symposium which is focused on nurses who work in long term care settings.

## Analysis of Self

The journey as a Doctorate in Nursing Practice student and the project experience has been one of enlightenment and self-growth. As a registered nurse of twenty-seven years with a diverse background in nursing, the development of this project and articulating oneself in a scholarly "written voice" was challenging.

My past experiences and current work commitments prepared me for project management, the project experience, and gaining the knowledge/expertise needed to develop my project. However, what I found most difficult was transferring this knowledge into a scholarly product that was reflective of my "scholarly" voice. Conveying myself in this manner was a challenging journey, one I did not realize from

the project inception. However, the outcome has been, in my opinion, significant growth and learning on my part throughout the project.

Overall this has been a positive experience and it enhanced my current knowledge, which has become beneficial in my professional role. Because I am a state government employee, I do not have long term goals of future scholarly publications. The work that I participate in may have future publications, but it will be done via the role of my current employment or by a third party where I am a second or third author. However, I will use the knowledge, skills, and abilities I have gained to enhance communication in my current role along. As a result of this project, I have been recognized as a leading expert in the area of long term care, with a focus on NF care and aging. In addition, the knowledge, skills, and abilities that I have gained earned me a recent appointment to the Advisory Council on Alzheimer's Research Care and Services by the Department of Health and Human Services.

## Summary

This doctoral project will provide education and resources to thousands of nurses and will benefit tens of thousands of residents who reside in NFs across Texas. Since 2015, Texas has moved from 51$^{st}$ in the nation for use of antipsychotics in NF residents who have a diagnosis of Alzheimer's or a dementia related condition, to 31$^{st}$ in the nation as of the 3$^{rd}$ quarter in 2017 according to the CMS (2014, 2016). Continuing education on this topic is still needed. The staff educational training program and toolkit will allow for nurses and staff who care for these individuals to further their own knowledge, skills, and abilities, and may allow for sustainment of these efforts to continue in Texas.

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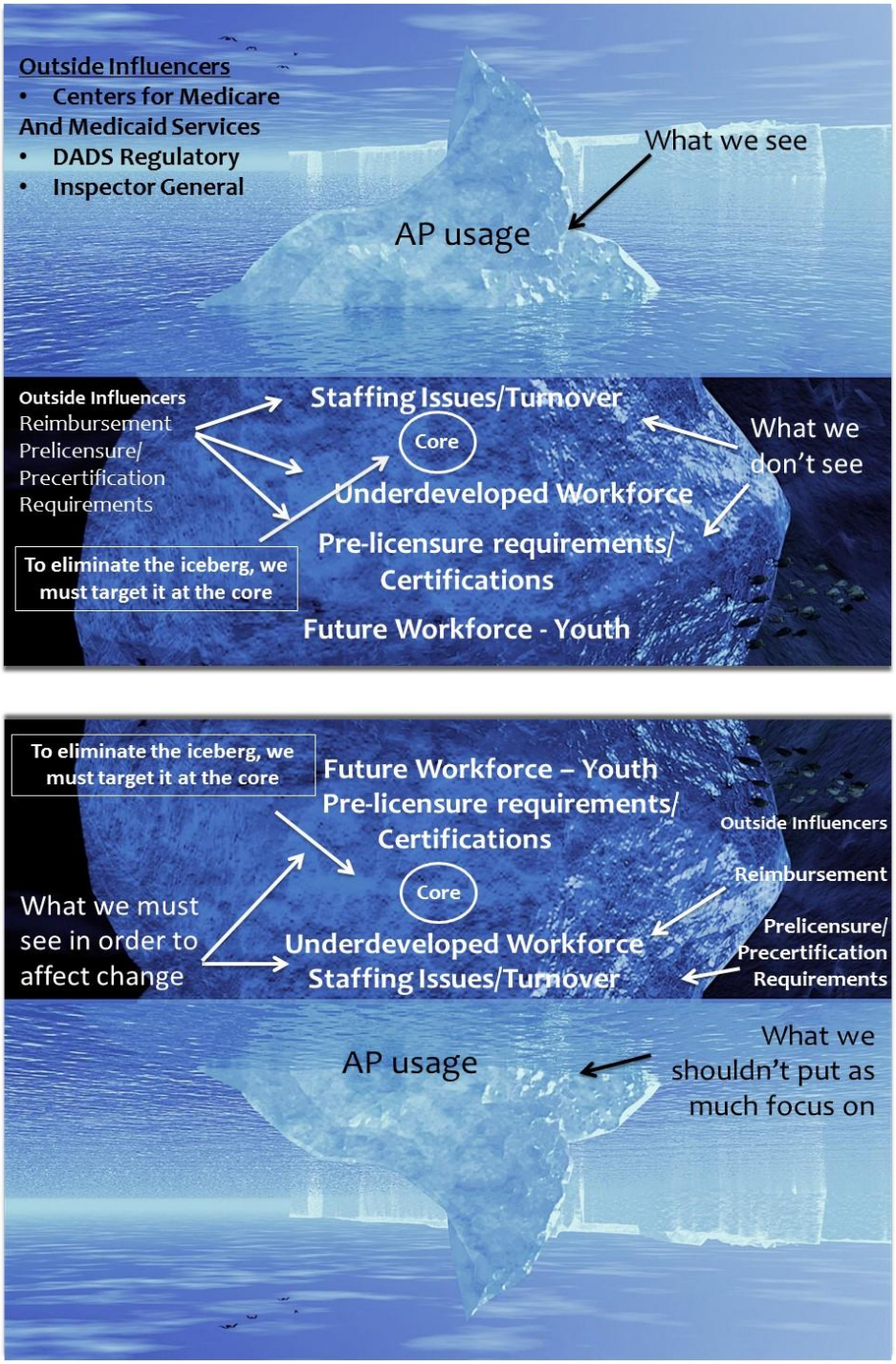
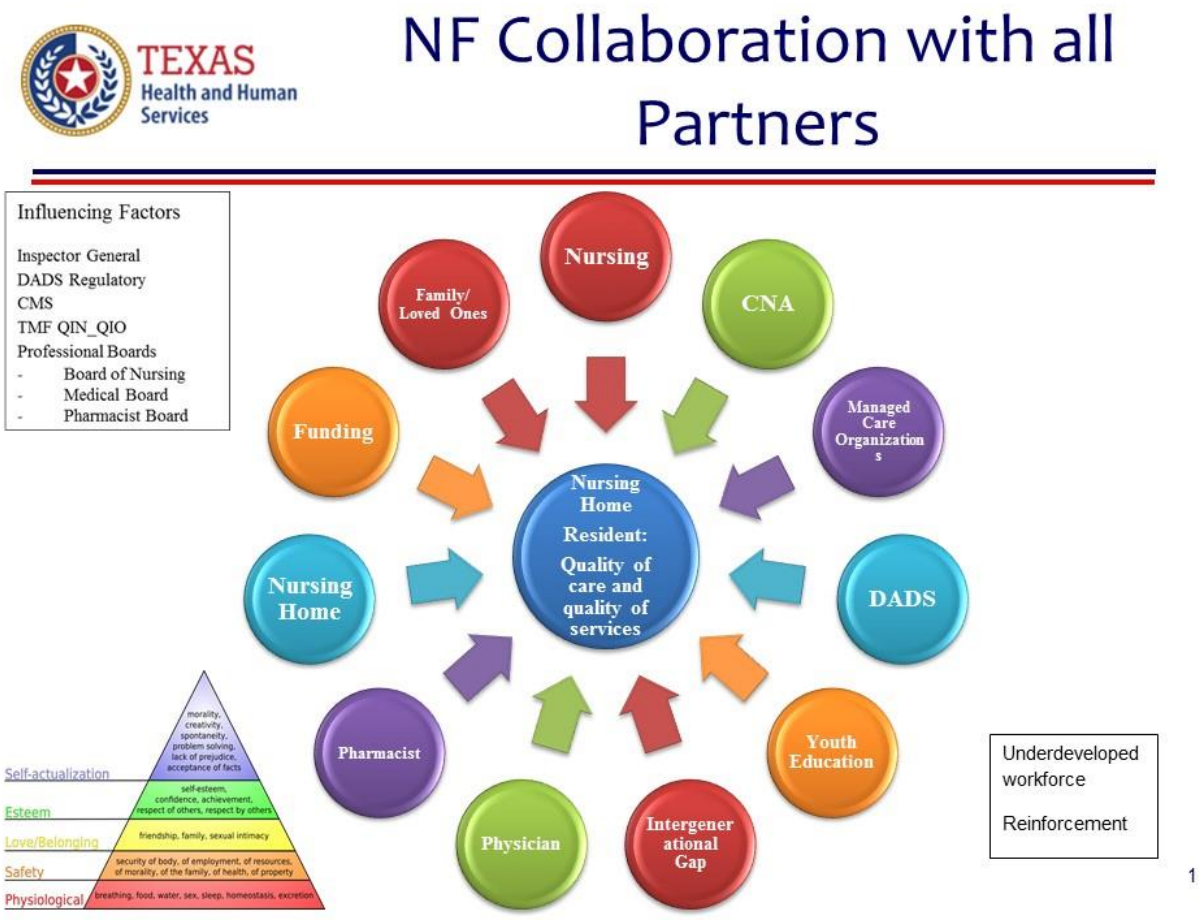
Appendix A: Iceberg Model



Appendix B: NF Collaboration Wheel



Appendix C: Conceptual Evaluation

## Rater ID:

## Conceptual evaluation and rater agreement form.

Please answer the following questions after reading the assigned chapter content. Please rate each chapter separately. If you would like to specific notes on what needs to be changed make these suggestions in the chapter. You do not have to rationalize your responses; however, if you would like to provide a reason for your ranking write it in the chapter.

**Module: _____**

**1. Does the chapter cover the specified content thoroughly?**

1. Not at all
2. Mostly not
3. Neutral
4. Mostly yes
5. Yes, very much so

**2. Does the chapter provide learning activities to enhance the content?**

1. Not at all
2. Mostly not
3. Neutral
4. Mostly yes
5. Yes, very much so

**3. Is the chapter formatted in a clear, neat, manner without typos or grammatical error?**

1. Not at all
2. Mostly not
3. Neutral
4. Mostly yes
5. Yes, very much so

**4. Is there essential content missing from the chapter?**

1. Not at all
2. Mostly not
3. Neutral
4. Mostly yes

5. Yes, very much so

**5. Does the chapter provide illustrations to enhance the content?**

1. Not at all
2. Mostly not
3. Neutral
4. Mostly yes
5. Yes, very much so

**6. Is the chapter written to enhance interest in the topic?**

1. Not at all
2. Mostly not
3. Neutral – (just a few problems but some great stuff, too)
4. Mostly yes
5. Yes, very much so

**7 Are the appropriate citations used in the chapter? (did the authors reference the right people?)**

1. Not at all
2. Mostly not
3. Neutral
4. Mostly yes
5. Yes, very much so

**8 Is the appropriate documentation used in the chapter? (are the facts straight?)**

6. Not at all
7. Mostly not
8. Neutral
9. Mostly yes
10. Yes, very much so

Appendix D: Stakeholder/Team Member Evaluation of DNP Project

Problem:

Purpose:

Goal:

Objective:

Scale: SD=Strongly Disagree D=Disagree U=Uncertain A=Agree SA=Strongly Agree

| Question | 1=SD | 2=D | 3=UC | 4=A | 5=SA |
|---|---|---|---|---|---|
| 1. Was the problem made clear to you in the beginning? | | | | | |
| 2. Did the DNP student analyze and synthesize the evidence-based literature for the team? | | | | | |
| 3. Was the stated program goal appropriate? | | | | | |
| 4. Was the stated project objective met? | | | | | |
| 5. How would you rate the DNP student's leadership throughout the process? | | | | | |
| 6. Were meeting agendas sent out in a timely manner? | | | | | |
| 7. Were meeting minutes submitted in a timely manner | | | | | |
| 8. Were meetings held to the allotted time frame? | | | | | |
| 9. Would you consider the meetings productive | | | | | |
| 10. Do you feel that you had input into the process? | | | | | |
| 11. Please comment on areas where you feel the DNP student excelled or might learn from your advice/suggestions: | **Comments:** | | | | |

# Appendix E: Nursing Facility Evaluation

| Nursing Facility Education/Resource toolkit – The misuse of Antipsychotics with those who have a diagnosis of Alzheimer's or a dementia-related condition | **Strongly Disagree** | **Disagree** | **Neutral** | **Agree** | **Strongly Agree** |
|---|---|---|---|---|---|
| The content is relevant to the stated objectives | 1 | 2 | 3 | 4 | 5 |
| The content is well organized into clearly labeled sections | 1 | 2 | 3 | 4 | 5 |
| The resources and links provided in the sections are evidence based and credible organizations/resources | 1 | 2 | 3 | 4 | 5 |
| The content is appropriate and free from bias, stereotypes or insensitivity | 1 | 2 | 3 | 4 | 5 |
| The links to the CMS and HHSC/DADS provide useful information relevant to the misuse of Antipsychotics with those who have a diagnosis of Alzheimer's disease or a dementia-related condition and reside in a nursing facility | 1 | 2 | 3 | 4 | 5 |
| The content of the Education/Resource toolkit addressed prescribing patterns | 1 | 2 | 3 | 4 | 5 |
| The content of the Education/Resource toolkit addressed alternate interventions that can be used prior to introducing/prescribing an antipsychotic | 1 | 2 | 2 | 4 | 5 |
| I will make/implement change based on what I have learned from this Education/Resource toolkit | 1 | 2 | 3 | 4 | 5 |
| Overall, I am satisfied with the content of this Education/Resource toolkit | 1 | 2 | 3 | 4 | 5 |
| Comments: | | | | | |

Appendix F: Older Age Psychotropic Quiz (OAPQ)

# Older Age Psychotropic Quiz (OAPQ)

Circle one answer for each of the following questions.
When you have finished, check to make sure you have completed all 10 questions.

1. **Risperidone is most effective for the treatment of which behavior?**
   a) calling out
   b) wandering
   c) aggression
   d) repetitive questioning
   e) don't know

2. **The maximum recommended daily dose of risperidone in older people with dementia is:**
   a) 2 mg
   b) 1 mg
   c) 4 mg
   d) 3mg
   e) don't know

3. **Which of the following adverse effects is NOT usually associated with the use of olanzapine?**
   a) stroke
   b) falls
   c) raised blood sugar
   d) reflux
   e) don't know

4. **Regular reviews of antipsychotics in residents with dementia should be performed every:**
   a) 6 weeks
   b) 3 months
   c) 6 months
   d) 12 months
   e) don't know

5. **The drug diazepam is mainly used to treat:**
   a) depression
   b) agitation
   c) infection
   d) anxiety
   e) don't know

6. **Which of the following adverse effects is NOT commonly associated with oxazepam use?**
   a) falls
   b) memory impairment
   c) nausea
   d) confusion
   e) don't know

7. **What is the recommended duration of temazepam treatment for sleep disorder?**
   a) 1-2 weeks
   b) 6 weeks
   c) 1 month
   d) 3 months
   e) don't know

8. **The recommended medication for long-term treatment of anxiety in older people is:**
   a) temazepam
   b) an SSRI (e.g. sertraline)
   c) risperidone
   d) oxazepam
   e) don't know

9. **Amitriptyline (Endep) is recommended as a night time sedative in older people.**
   a) true
   b) false
   c) don't know

10. **Quetiapine (Seroquel) is licensed to treat:**
    a) dementia
    b) schizophrenia
    c) anxiety
    d) insomnia
    e) don't know