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ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

ENHANCING THE ASSESSMENT OF SUICIDAL IDEATION
IN THE LONG-TERM CARE ENVIRONMENT:
A QUALITY IMPROVEMENT PROJECT

Submitted to the Faculty
Yale University School of Nursing

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Nursing Practice

Carissa Ann Tufano

March 31, 2022

ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

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ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

This DNP Project is accepted in partial fulfillment of the requirements for the degree Doctor of Nursing Practice.

Advisor: Andree de Lisser, DNP, APRN, PMHCNS-BC

Date:

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Carissa Ann Tufano

Date:

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Abstract

Despite high rates of depression and risk factors for suicide, there is a knowledge deficit and lack of protocol surrounding the assessment of suicidal ideation in the long-term care setting. Although studies examining suicide in the long-term care setting are lacking, the prevalence of suicidal ideation is high. This DNP quality improvement project addressed this problem by creating a suicide assessment and management inservice for frontline clinical staff at a skilled nursing facility in Connecticut. The inservice integrated use of an adapted suicide assessment algorithm and a suicide screening tool, the P4 Screener. A SAMHSA toolkit was utilized as a guide for inservice creation. After a three-person expert panel unanimously validated the importance and relevance of the inservice PowerPoint content, two rounds of the inservice, including additional application content for staff authorized to complete formal assessments, was presented to twenty-eight (28) frontline staff. Evaluation of knowledge acquisition, confidence and comfortability was conducted via pre and post-test. Results of a paired samples t-test showed a significant difference in participant knowledge of suicidal ideation assessment from pre-inservice to post-inservice. Descriptive statistics were utilized to describe trends in participant comfort and confidence from pre-inservice to post-inservice. The small sample size (n=6) for the additional application content inservice limited confidence in those results showing there was not a significant difference in knowledge acquisition from pre to post-inservice.

These results have implications for clinical practice in the long-term care setting by empowering the frontline assessment of suicidal ideation and collaboration with mental health services to promote accurate identification of those who are at risk and implementation of clinically appropriate interventions.

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Chapter 1: Introduction, Problem Statement and Significance

Introduction

The World Health Organization describes suicide as a global phenomenon, noting that suicide accounts for 1.4% of deaths throughout the world and is the 18th leading cause of death (World Health Organization, 2016). In 2018, the Centers for Disease Control and Prevention (CDC) described suicide as the 10th leading cause of mortality in the United States claiming the lives of over 48,000 individuals (Centers for Disease Control and Prevention, 2018). Most recently, The Joint Commission identified suicide prevention as one of its national patient safety goals for year 2021. Older males aged 75 and older make up the group with the highest rate of suicide at 40.5 per 100,000 individuals (Centers for Disease Control and Prevention, 2018). Additionally, the World Health Organization recognizes that rates of suicide are highest for those aged 70 and older in almost all regions of the world (Barak, 2020).

The U.S. Census Bureau's (2020) estimates show the rapid growth of the country's older adult population. There are 15,600 nursing homes within the United States with 1.7 million licensed beds (Centers for Disease Control, 2016). Of those licensed beds, it is projected that 1.3 million residents live in nursing home communities (Centers for Disease Control and Prevention, 2015). Older adults make up the largest percentage of nursing home residents accounting for 83.5% of the population (Centers for Disease Control and Prevention, 2016). Long-term care (LTC) refers to a range of medical and personal services designed to assist those who cannot function independently (Medicare.org, 2020). Long-term care communities include nursing homes, assisted living and residential care facilities, and house a large portion of the population that is at greater risk of suicide due to age and other unique factors. These residents present with a multitude of factors which can perpetuate suicide risk including declining health, mental

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illness, isolation, and cumulative losses. However, there are few reliable statistics on completed suicide in LTC due to limitations in data (Mezuk et al., 2019) as a result of sample shortcomings (i.e. not inclusive of all U.S. states) and the underreporting of suicides. Also, few studies have explored the specific suicide risk factors in LTC residents (O'Riley et al., 2013). Given the unique population, accurate assessment and intervention for suicide risk is integral to understanding and improving the care needs of the LTC community.

Problem Statement

Given the unique risk factors and the lack of knowledge in assessing and appropriately intervening with suicide risk, suicide detection and management within the LTC setting is best approached from an interdisciplinary perspective. The integration of external mental health consultation services is paramount to support and enhance facility staff interventions. Current federally mandated procedures require use of the Minimum Data Set (MDS) 3.0 for all nursing homes certified for Medicare and Medicaid payments. The MDS 3.0 is a standardized assessment tool which informs treatment planning, provides a mechanism to homes for reimbursement of care and provides indicator data that is used to monitor system-wide quality (Simons et al., 2012). Prior to 2011 and the implementation of the MDS 3.0, assessments of suicidal ideation in nursing homes were seldomly conducted (Temkin-Greener et al., 2020). Proactive screening for depression by way of the PHQ-9, which contains a question to evaluate suicide risk, is incorporated into the MDS 3.0 and administered by a social worker.

“Frontline staff” (for purposes of this paper this includes, registered nurses, licensed practical nurses, certified nursing assistants, recreation therapists and social workers) have the most frequent contact with patients and can identify those who are expressing suicidal ideation. As previously mentioned, there is a protocol in place to assess mood upon admission and at other

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touchpoints throughout the year in nursing homes per the MDS 3.0. However, there remains a knowledge deficit among staff and lack of protocol for assessment and intervention when suicidal ideation is acutely identified or expressed. This Doctor of Nursing Practice project focused on the adaptation of an algorithm to guide frontline assessment of suicide risk and the development of a frontline staff suicide assessment and management inservice, which addressed use of the algorithm. The goal of this project was to improve staff's confidence, comfortability and knowledge regarding the assessment and management of suicidal ideation in the LTC setting.

Significance

Studies on rates of suicidal ideation in LTC show frequency rates ranging from 11% to 43% and few studies have been conducted on the rates of suicide attempts (O'Riley et al., 2013). Older adults make up 83.5% of the nursing home population (Centers for Disease Control and Prevention, 2016) and mental health or counseling services are offered by 86.6% of U.S. nursing homes (Centers for Disease Control and Prevention, 2013). Mental health disorders affect 65%-90% of nursing home residents (Orth et al., 2019). Furthermore, the percentage of users of LTC services with a diagnosis of depression is highest in nursing homes at 48.5% when compared to other types of facilities (Centers for Disease Control and Prevention, 2013). Given the percentage of nursing home residents with depression, in addition to medical comorbidities, increased attention to collaborative efforts with mental health providers is warranted. While the addition of the screening item for suicide contained in the MDS 3.0 dictates that facilities have protocols for managing those at risk of suicide (O'Riley et al., 2013), there is a lack of standard protocol for assessing acute suicidal ideation in LTC. Although a mental health diagnosis does not definitively precipitate higher suicide risk, psychiatric illness consistently emerges as a

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prominent risk factor for suicide attempts in older adults (Conwell et al., 2011). Studies show that 90%-95% of those who die by suicide have a diagnosable mental health condition before their death and that other medical conditions are also correlated with increased risk (Nock et al., 2018). Identifying “points of engagement” where older adults with suicidal ideation can be best detected (Conwell et al., 2011) will further aid in these assessment and prevention efforts.

Chapter 2: Review of Literature

Search Strategy

A literature review was completed to evaluate the evidence on suicide assessment and intervention in the LTC environment. Databases searched included PubMed, Medline, Embase, and PsychInfo. Search terms such as “long-term care”, “long term care”, “nursing homes” and “suicide” were utilized. Six hundred and sixty articles were identified. Scholarly articles published between the years 2011-2021 were included. The search was also limited to articles in the English language. Eighteen other resources were included from other sources and did not match the search inclusion/exclusion criteria (such as date of publication) but were deemed to be relevant. After duplicates were removed, six hundred and fifty-eight articles were screened and excluded if the studies were not related to the population and/or topic of suicide in LTC, not available in the English language or not available in full text. Forty-four full text articles were reviewed, and twenty-two articles were included in the review of literature. This information can be found in the Prisma flow chart (See Appendix A). Inclusion criteria included date of publication within the last 10 years, English language, studies related to suicide in the adult/older adult population and a focus on the long-term care setting (including nursing homes and assisted living communities). Information was extracted from sources into an evidence matrix (see

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Appendix B) such as study purpose, population, setting, evidence type, limitations of the study and study findings.

Results

The evidence reviewed supports the need for enhancement of suicide risk assessment in LTC. Overall, the studies focused on areas such as the prevalence of suicidal ideation and suicide in LTC, facility and individual risk factors, staff perceptions and interventions to enhance staff knowledge, such as training. The following review of literature will be organized by these common themes.

Review of Literature

Prevalence of Suicide in Long-Term Care

Studies examining suicide in nursing homes are limited and show variation in their results. Study types found and reviewed included retrospective cohort, systematic review, cross sectional and qualitative. Menghini and Evans (2000) found an overall nursing home suicide rate of roughly 34.77 deaths per 100,000 person-years in those aged 65 and older over a 17-year period. This rate is similar, although slightly lower than the age adjusted suicide rate within the U.S. population at the time (Menghini and Evans, 2000). Despite staff supervision, data show that the cumulative incidence of suicide among adults 65 years and older in nursing homes is similar to community estimates (Mezuk et al., 2015).

Risk factors identified in the community are also represented in the LTC setting including higher risk with White race, history of suicide attempts, male gender, and mental health diagnosis (Mezuk et al, 2015). The burden of suicide within the U.S. transcends those living in LTC. A study conducted showed approximately 2.2% of suicides among adults 55 years and

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older during years 2003 to 2015 were *associated* with LTC (Mezuk et al., 2019). Results indicate that the most affected group included those who were transitioning into or out of LTC. Results of a systematic review of three studies, (Menghini and Evans 2000, Suominen et al., 2003 and Scocco et al., 2003) indicate that 52% of residents who had died by suicide had resided in the nursing home for less than 12 months (Murphy et al., 2014). Residential transitions are a significant time to prevent suicide within the older adult and LTC population (Mezuk et al., 2019). Anticipation of nursing home placement has been suggested to be a contributing factor (Loebel et al., 1991). This transitional period of LTC placement is a unique transition given the loss or change of location of home and contact with family members and friends. For older adults, this transitional period can be a troubling one and is connected to an increase in depression and possible precipitant of suicide (Temkin-Greener et al., 2020).

While studies specifically examining suicide within the LTC setting are lacking, the prevalence of suicidal ideation is high (Temkin-Greener et al., 2020). Findings of a systematic review (Mezuk et al., 2014) show suicidal thoughts are common among older adults in LTC. The prevalence of suicidal ideation ranged from 5%-33% of residents over a month period. Also suggestive of the importance of transitional periods, suicidal ideation has been found to be higher on admission to LTC than at later assessment periods. During one study examining the prevalence of suicidal ideation in nursing home admissions, a significant decline in suicidal ideation was found to occur around 3 months after admission, with additional decreases by the end of the first year of stay (Temkin-Greener et al., 2020). During their study utilizing assessments provided through the MDS 3.0, the observed rate of suicidal ideation was identified as 1.24% at admission and declined to 0.50% at discharge among short term stay residents. For long term stay residents, the observed suicidal ideation rate was 1.81% at admission with a

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decline to 1.21% at 3 months, 1.19% at 6 months and 0.98% at 12 months (Temkin-Greener et al., 2020).

Although studies are limited, and variables need to be considered, suicidal ideation and suicide may be more prominent and underreported within the LTC setting, especially surrounding the time of transition and adjustment.

Individual and Facility Modifiable Factors

Identifying risk factors specific to LTC facilities and their residents, in addition to points of engagement, provides value to understanding appropriate assessment and prevention strategies. While few studies examine these specific risk factors in long-term care, there are factors pertinent to long-term care (O'Riley et al., 2013) and its population including mental health diagnosis, especially depression, physical health issues, pain, and loss. Prior suicidal behavior is generally considered a large risk factor for death by suicide. Contrary to this, results of a systematic review completed by Murphy et al., (2015) suggest that previous suicidal behavior may be a lesser risk factor for completed suicides in the skilled nursing environment (Murphy et al., 2015). Older people may be less likely to attempt suicide (vs die by suicide) because they are less likely to survive and/or may be more determined to die (Murphy et al., 2015). Also contradictory, a retrospective data linkage cohort study (Murphy et al., 2019) examining nursing home resident deaths in Australia, found that residents with depression did have an increased risk of suicide (95% CI=0.88-6.80) yet this was not statistically significant ($p=.09$) This may relate to the lack of diagnosis of depression in this population due to the difficulties in identifying depression in persons with other physical and cognitive comorbidities (Murphy et al., 2019).

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Choi et al., (2017) examine physical health as a suicide precipitant. Results indicate that 50% of suicide decedents aged 65 and older have physical health problems suspected to contribute to their suicide (Choi et al., 2017). These older adults were also found to be more likely to suffer from depression. Moderate to severe symptoms of depression greatly increase risk during a nursing home residency (Temkin-Greener et al., 2020). As evidenced by the contents of suicide notes and coroner/medical examiner and law enforcement reports, older adults perceived health conditions and uncontrollable pain as unchanging, contributing to hopelessness and the view of suicide as the only viable way out (Choi et al., 2017). In a retrospective review of root cause analysis reports of suicide attempts and completions in Veterans Health Administration LTC and nursing home units (Mills et al., 2015), higher percentages of pain, stressors, substance abuse and mental illness were found in suicide deaths.

Delays in medical treatment, most of which involved lack of timely treatment for pain or symptoms of depression, have also been identified as a root cause (Mills et al., 2015). Uncontrolled pain has been identified as a major contributor to hopelessness among almost 30% of older persons with health problems who died by suicide (Choi et al., 2017). Via semi-structured interviews with 17 older adults residing in nursing homes, assisted and independent living communities, the topic of suicide emerged (Davis-Berman, 2011). One resident spoke about the option of suicide if he found himself in unmanageable pain. Another participant spoke about the impact of seeing others lose their quality of life and the dread surrounding the idea of becoming dependent. While the results are not necessarily generalizable, the interviews supported findings from other quantitative studies that suggest that anxiety of death and fear reduce with increased age (Davis-Berman, 2011).

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Facility specific or environmental risk factors have been examined in a small number of studies. Osgood (1992), collected information on facility characteristics, overt suicide, and intentional life-threatening behavior. Environmental characteristics related to suicidal behavior were discovered. More suicides occurred in larger facilities and facilities with higher staff turnover (Osgood, 1992). Religious or "other" facilities experienced more suicide deaths than public or private facilities (Osgood, 1992). In addition, less costly facilities encountered more deaths. Temkin-Greener et al., (2020) aimed to examine associations with both individual and nursing home level factors. They found no significant associations with facility characteristics such as quality ratings, and rural or urban location. It was found that residents in for profit nursing facilities had significantly lower risk adjusted odds of suicidal ideation possibly due to lower staffing levels and high staff burden contributing to underreporting of suicidal ideation (Temkin-Greener et al., 2020). Bed size, chain membership or occupancy rates were not consistently related to suicidal ideation. Residents in nursing homes with a 1 hour per day increase in certified nursing assistant (CNA) staffing increased the odds of suicidal ideation by 10-20% (Temkin-Greener et al., 2020). This may reflect the role of the CNA as an integral person to detect and report suicidal thoughts and behaviors.

Staff Perceptions

Nursing staff, including certified nursing assistants, frequently provide the most “hands on” and intimate care with residents. Often, it is staff’s awareness of a change in condition or behavior that brings greater attention to a concern and prompts a referral to mental health services.

Couillet et al., (2017) performed a qualitative study in France to identify how caregivers view suicide in older persons and how those perspectives may impact preventative measures.

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Conclusions include that caregivers viewed suicide as an act of autonomy and as a response to the suffering associated with aging and living conditions (Couillet et al., 2017). Piven et al., (2008) interviewed certified nursing assistants in the United States who expressed uncertainty about whether depression was normal with older age. There were also knowledge deficits in certified nursing assistant's understanding of depression (Piven et al., 2008). Both factors can impact how and if observations of altered mood or behavior are reported. While suicide prevention is accepted as being a fundamental part of care, there may be a conflict between professional missions and personal beliefs (Couillet et al., 2017). Nursing home team members may have varying opinions as to their roles, the roles of their peers and the role of patient and family (Simons et al., 2012). Certified nursing assistants may feel as though their role of providing emotional care to residents is not formally acknowledged by the facility (Piven et al., 2008). Gaining a more thorough understanding of staff perceptions surrounding depression, suicide, and their role in prevention, is of value toward the development of staff training and assessment process.

Staff Training and Facility Intervention

Given the integral role of staff within the LTC environment, assuring proper training is critical to a suicide assessment protocol. In addition, the integration of mental health consultation services is a priority in providing comprehensive assessment of risk. Psychiatric consultants can directly increase nursing facility residents' and staff's access to psychiatric services (Muramatsu and Goebert, 2011). Through their cross-sectional study examining the perceptions of need for psychiatric services in LTC, almost three quarters of those surveyed indicated that staff education is a helpful component of onsite psychiatric services (Muramatsu and Goebert, 2011). Behavioral management of dementia was the most requested educational topic followed by the

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topics of depression and suicide (Muramatsu and Goebert, 2011). Nursing home social service providers have expressed discomfort administering the suicide screening question as part of the PHQ-9/MDS 3.0 (Simons et al., 2012). This also supports additional training regarding assessing suicide in older adults.

The World Health Organization (2012) has regarded gatekeeper training as a suicide prevention strategy that should be implemented as a priority in at risk populations such as the elderly (as cited in Chauillac et al., 2016). In a national random sample of nursing homes, almost half of those surveyed reported that lack of staff education was an obstacle in providing behavioral health services within the facility (Orth et al., 2019). Furthermore, adequate education and consistent nurse staffing were associated with higher availability of mental health services (Orth et al., 2019). The concept behind gatekeeper training is to train staff who come into close contact with those who are at high risk of suicide (Chauliac et al., 2016). Findings from a quasi-experimental study, conducted in England, suggest that gatekeeper training helps to improve skills of all staff members working with persons with suicidal ideation and leads the facility to put more routine suicide prevention measures in place (Chauliac et al., 2016). A systematic review conducted by Chauillac et al., (2019) found common key messages of gatekeeper trainings. These themes included:

- Older persons are at risk of suicide.
- Suicide risk is increased by psychiatric conditions, hopelessness, and loss.
- Depression, even in older age, requires care.
- There are warning signs of suicide and depression that should be addressed.
- Suicidal ideation should be taken seriously, and questions should be asked.
- Suicidal persons should be referred to a specialist.

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A toolkit developed by Substance Abuse and Mental Health Services Administration (SAMHSA) provides a guide that is intended for use in LTC and other senior living environments. “A Guide to Promoting Emotional Health and Preventing Suicide in Senior Living Communities” (2011), is written with an intended audience of administrators and directors of long-term care communities. This toolkit reviews background information on suicide and warning signs. Three essential steps are identified to prevent and address suicide starting with a focus on the “whole population approach” to encourage wellness activities for all residents regardless of risk. “At risk” and “crisis response” steps are also outlined and focus on residents deemed to be at risk or those who have attempted suicide (SAMHSA, 2011).

It has also been suggested by O’Riley et al., (2013) that a resident’s level of suicide risk should dictate the type of action at the facility level. They propose a “decision-tree” to assist staff in determining level of risk (i.e. minimal, lower and higher risk). This decision tree or algorithm emphasizes documentation, collaboration with mental health providers, an emergency care plan meeting to discuss residents at risk of suicide and use of a suicide screening tool such as the P4 Screener (See Appendix G). The P4 Screener, developed by Dube et al., is a 4-item tool used to measure and classify level of risk (Raue et al., 2014). The P4 Screener was evaluated in randomized controlled trials and found to be useful in assessing for potential suicide risk in medical patients (Dube et al., 2010). This screener includes questions about the “4 P’s” of suicide including suicide plan, past suicide attempts, probability of completing suicide, and preventive factors (Dube et al., 2010). The instrument is also succinct and can be readily utilized in a medical setting, such as LTC. Authors found that rates of suicidal ideation were comparable to those found in other studies and that the measure was easily utilized by providers (Raue et al., 2014).

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Project Model

Kurt Lewin's Theory of Planned Change is a model which is applicable to this DNP project. Kurt Lewin, a social psychologist, focused on the study of group dynamics and organizational development (Shirey, 2013). The model is comprised of three stages named unfreezing, moving and refreezing. The framework for this model is that of field theory which states that behavior is derived from a totality of coexisting facts and these facts have the character of a dynamic field in that any part of the field depends on every other part. (Lewin, 1997).

The three stages of Lewin's model were pertinent to this project's development (See Appendix C). The first stage involved creating a sense of urgency for change and weakening the forces that can potentially restrain movement. To complete this stage, the need for the change was communicated via collaboration with the Director of Nursing ("champion"). Strong connections with the administrative team were solidified to assist in engaging staff's involvement. This was a critical step to "weaken" time constraints that may have hindered staff from participating in educational inservicing (which was also part of the "move" stage). Barriers and facilitators of change were further identified via external and internal analysis, also called SWOT Analysis (Gürel and Tat, 2017).

During the move stage, staff informally provided their feedback and described their knowledge base and comfort level with assessment of suicidal ideation. The goal here was to encourage communication with those who would be directly impacted by the change. An algorithm was adapted for use and the educational inservice was created and delivered. During the refreeze stage, the focus was on sustaining the project at the site. Those forces that aided in driving the change (i.e. administrative team including the Director of Nursing and frontline

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staff's engagement) were accentuated. Ongoing support and education from behavioral health services was another important factor.

Organizational Description and Assessment

The setting for this project was a skilled nursing facility which accommodates both long-term care and rehabilitation needs. The facility serves both adult and older adult populations in Connecticut. A Director of Nursing oversees the clinical operations and each of the two units is staffed with a nurse and certified nursing assistants.

Onsite psychiatric services are provided by a contracted behavioral health practice. These services are scheduled 2-3 days weekly with two psychiatric nurse practitioners. Crisis or emergency coverage is provided as needed by the psychiatrist. Residents who are service connected to the VA system, receive their mental health treatment primarily from VA providers. Mental health and neuropsychiatric diagnoses within the entire system vary and include Schizophrenia, Schizoaffective Disorder, Post-traumatic Stress Disorder (PTSD), Major Depressive Disorder, Generalized Anxiety Disorder and Dementia.

The dynamics within this setting supported the need for this DNP project. First, the population is diverse with a multitude of comorbidities and risk factors which can precipitate suicidal ideation. Second, and not unlike other nursing home communities, staff receive little training on how to assess and manage suicidal ideation. Third, it is typical for nursing homes to contract with outside behavioral health practices which means there is no in-house behavioral health provider onsite daily. Nurses, CNAs and facility social workers are often first to recognize suicidal ideation yet there is a lack of procedure surrounding subsequent steps to manage the suicidal ideation.

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A SWOT analysis (see Appendix D) revealed the unique characteristics of this facility including those that serve as barriers and/or facilitators to change. A strength reflected on SWOT analysis is the seasoned and open-minded administrative team. The Director of Nursing served as a champion as she oversees the clinical operations and has the authority and ability to influence protocol and staff participation. Her active and ongoing support of this change aided in assuring successful implementation and sustainability. Other strengths included a diverse clientele, dedicated nursing staff, a robust recreation program and onsite social services. This facility works closely with a private behavioral health group and the VA system to provide mental health services to residents. In addition to clinical services, both groups provide psychoeducation and are instrumental in sustaining the new procedure onsite. The small size of the facility, the longevity of the staff and devotion to the clientele are all strengths that contributed to creating change onsite.

Various weaknesses included an antiquated documentation system, which slows the communication across disciplines and make the collection of information more tedious. Also, there is intermingling of residents with various psychiatric conditions which was considered for suicide assessment purposes. Staff schedules and limited time to devote to inservice training was also another weakness. There was also some hesitancy to change among staff.

External threats included potential changes to guidelines set forth by The Centers for Medicare and Medicaid Services and how changes impact the relevancy of the suicide risk assessment procedure. This is addressed by staying up to date with the guidelines and adapting the procedure as needed. There was also a threat of misperception or stigma associated with mental health, aging and suicide which could have impacted motivation. Opportunities include

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the potential for collaboration with the Department of Public Health and expansion of protocol to other sites.

Goal and Aims

This Doctor of Nursing Practice project focused on the integration of an algorithm to guide frontline assessment and management of suicide risk and the development of a suicide assessment and management inservice for frontline staff. The goals of this DNP project were to improve staff's confidence regarding identification of suicidal ideation and to enhance assessment and management of suicidal ideation based on level of risk via use of algorithm. The specific aims of this project were:

Aim I.

To develop an educational inservice for frontline long-term care staff that promotes use of an algorithm and procedure for addressing suicidal ideation in this long-term care setting.

Aim II.

To implement and evaluate the impact of the inservice training and algorithm on staff confidence and management of persons with suicidal ideation in this long-term care setting.

Aim III.

To address scaling and sustainability of the project.

Chapter 3: Methods

Overview

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Despite high rates of depression and risk factors for suicide, there is a knowledge deficit and lack of protocol surrounding assessment of suicidal ideation in the long-term care setting.

This DNP project focused on the development of a suicide assessment educational inservice to promote use of an assessment and management algorithm by frontline staff in the long-term care setting. An inservice on suicide risk assessment and management was designed to educate nurses, certified nursing assistants, social services, rehabilitation therapists, dieticians, and recreation therapists within a skilled nursing facility. Additional application content on the use of the suicide assessment algorithm, including integration of the P4 Screener, was included exclusively for registered nurses, social services and supervisors. The aims of this project were as follows:

Aim I.

To develop an educational inservice for frontline long-term care staff that promotes use of an algorithm and procedure for addressing suicidal ideation in this long-term care setting.

- A meeting with the facility Director of Nursing was conducted to establish goals and strategies to engage clinical staff.
- Informal meetings with clinical frontline staff (i.e. nurses and certified nursing assistants) were conducted on nursing unit with intention of gaining staff's buy-in and encouraging feedback and questions.
- Results of the review of literature were used to support the need for frontline staff training and the development of a procedure for assessing suicidal ideation in the long-term care setting.

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- A toolkit developed by SAMHSA, “A Guide to Promoting Emotional Health and Preventing Suicide in Senior Living Communities” (2011), served as a guide for development of the educational service.
- Development of the inservice curriculum was based on the evidence. Refer to Appendix F for curriculum details.
- A suicide assessment algorithm published by O’Riley et al., (2013) was adapted for use specific to this skilled nursing facility. Refer to Appendix H.
 - The algorithm was adapted to suit the facility’s needs and staffing.
 - The P4 Screener, a four-item measure, was incorporated into the algorithm to help identify level of potential suicide risk. This tool addresses the four P’s of suicide assessment including past attempts, current plans, probability of an attempt and protective factors. The P4 Screener has been studied in medically ill populations with depression and can be a useful tool for non-psychiatric clinicians (Dube et al., 2010).
- Collaborated with colleagues who provide mental health services to the long-term care population regarding content of algorithm and inservice. These colleagues included two clinicians (Advanced Practice Registered Nurse and Licensed Marriage and Family Therapist) and collaborating psychiatrist/MD.
- Collaborated with Director of Nursing to obtain her feedback on algorithm and content of inservice.
- A power-point and complementary handout was created for staff reference.

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- Complementary handouts were provided to Director of Nursing after completion of both inservice rounds to avoid any influence on participant responses.
- Additional content regarding use of assessment procedure, including use of algorithm and P4 Screener, was included for registered nurses/supervisors and Social Services.
- Expert panel comprised of three experts reviewed curriculum content.
 - Expert panel tool developed by Lazenby, Dixon, Coviello and McCorkle (2014) was used as a guide.
 - A three-person expert panel was yielded after contacting three local experts.
- Pre and post-tests were created. Refer to Appendix E. Goals of the pre and post-tests were to evaluate knowledge acquisition, staff confidence and comfortability.

Aim II.

To implement and evaluate the impact of the inservice training and algorithm on staff confidence and management of persons with suicidal ideation in this long-term care setting.

Implementation

- Informal meetings/discussions were held with frontline staff to explain DNP project purpose and objectives.
- Meetings were scheduled with Director of Nursing and Social Services to plan implementation of project and devise inservice schedule.

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- Inservice training(s) were delivered to twenty-eight (28) clinical staff members following the administration of the pre-test.
 - A forty-five minute in-person inservice was delivered twice onsite to include staff across different shifts.
 - Following the forty-five-minute session, additional inservice content addressing the use of algorithm and P4 Screener was presented exclusively to registered nurse supervisors and Social Services.
 - A paper pre-test was handed out to staff onsite and was completed immediately prior to start of inservice session.
- Post-test was completed immediately following inservice training.
 - A paper post-test was administered directly following the inservice session.
- Additional pre and post-tests focused on the algorithm and use of P4 Screener were administered to registered nurse supervisors and Social Services immediately prior and following the additional inservice content.

Evaluation

- a) The outcomes evaluated included staff knowledge acquisition, comfortability with identifying suicidal ideation and confidence in utilizing algorithm and managing suicidal ideation.
- b) Both descriptive and bivariate statistical analyses were utilized to analyze the data. A Paired Samples T-Test ($\alpha=0.05$) was utilized to conclude if the educational inservice lead to improvements in knowledge acquisition on how to use algorithm.

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Descriptive analysis was utilized to identify trends regarding comfortability and confidence.

Aim III.

To address scaling and sustainability of the project.

Scaling

- Findings will be presented to the facility administrative team, including the Director of Nursing and Director of Social Services, to scale up the project to the entire campus and to the residential care housing unit.
- Future plans for scaling up the project include presentations to geriatric and psychiatric associations in addition to presentations to other long-term care communities to promote use of inservice and algorithm.

Sustainability

- To sustain the project on site, findings will be presented to the administrative team at the facility (i.e., Director of Nursing). Both administrative and frontline staff were engaged throughout the project development and implementation process. Other onsite mental health providers were engaged. Communication with these and other stakeholders took place via email, and informal meetings.
- A meeting will be held with the Director of Nursing to discuss the creation of a facility policy to promote ongoing use of algorithm and suicide assessment inservice training for frontline staff.

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Project Plan

The project timeline includes major milestones specific to development, implementation, and evaluation. Please reference Appendix I for a timeline with monthly breakdown of project steps.

Statement Related to Human Subjects

This project has been deemed a quality improved project by the Yale University IRB and is thus exempt from Yale University IRB approval. There is minimal to no risk to participants.

Systems Considerations and Implications

This writer is affiliated as a psychiatric advanced practice nurse consultant for this skilled nursing facility. This writer served as project manager and decision making was completed in collaboration with the Director of Nursing. The Director of Nursing provided the approval for this project. Decisions regarding project planning and implementation were confirmed with her prior to execution. The Director of Nursing maintains the ability to influence staff and was instrumental in organizing the inservice schedule.

Other stakeholders included nurses, certified nursing assistants and social services, all of whom have a direct interest in improving the quality of care and efficiency of their work. Nurse Supervisors are instrumental in implementing the use of this protocol. Onsite psychiatric providers, including this writer's professional partners, were also stakeholders and have an interest in improving the quality of care and facilitating enhanced communication between facility and psychiatry.

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There are financial benefits that will be obtained by implementing this project. Although challenging to quantify with exact numbers, there is a large cost associated with emergency room (ER) transfers and hospital admissions from skilled nursing facilities. The frequency of unnecessary transfers may be reduced by improving the onsite assessment of suicidal ideation and implementing a procedure which stresses the collaboration between facility and mental health provider. As a result, costs of unnecessary ER transfers can be better avoided. In addition to cost avoidance regarding ER transfers, patient outcomes will be positively impacted. Emergency room transfers can be highly disruptive for a long-term care resident, which can bear an emotional cost. In addition, this clientele is especially vulnerable to hospital acquired infections and delirium which are associated with a financial burden.

Quality of care and the reduction of risk may also see improvements. Skilled nursing facilities are highly regulated and subject to routine Department of Public Health surveys. In addition, the Five Star Quality Rating System is intended for the public's reference and considers various quality measures, including ER visits, hospitalizations, and rates of depression (<https://www.medicare.gov>). Improving suicide assessment knowledge and procedure onsite will aid in the improvement of safety, reduction of unnecessary transfers and hospitalizations and proactive identification and treatment of depression. With improved quality of care, comes a higher degree of patient and family satisfaction. A higher star rating, which can be attractive to potential future consumers, may also be a secondary benefit.

Empowering staff by engaging them throughout the project's development leads to team building and improved staff satisfaction. Moreover, embedding and sustaining a streamlined process, such as the one proposed via this project, can improve employee satisfaction. With

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improved staff satisfaction comes improved work performance which brings positive financial benefits.

This DNP project brings benefit to the patient and family experience, employee satisfaction and overall quality of care. These factors all bring value which largely outweighs the costs projected to implement this project. Refer to Appendix J for budget.

Chapter 4: Results

Expert Panel

An expert panel consisting of three mental health clinicians from diverse backgrounds was selected to review and rate the inservice content. The panel member information is as follows:

Marisa Brown, PsyD., APRN, PMHNP-BC

Dr. Brown is Director of Clinical Services for a Connecticut behavioral health provider specializing in consultative services for adults and older adults residing in long-term care facilities.

Michele Kieras, LCSW, CDP, CADDCT

Ms. Kieras is Director of Social Work and Facility Education and Customer Service Regional Manager for a behavioral health provider specializing in services for older adults in long-term care and inpatient geriatric psychiatric settings.

Mary Kay Polacek, RN

Ms. Polacek is Director of Nursing Services for an enhanced assisted living community.

Content Validity and Reliability

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Each expert panelist received a copy of the PowerPoint inservice presentation. Each panelist was asked to complete a questionnaire and rate specific inservice topical items. See Appendix J. All items received 100% affirmative responses indicating that all items were relevant and important. Panelists were asked to provide additional feedback. Based upon this feedback, minor modifications were made to the PowerPoint including information regarding developmentally appropriate acceptance of death vs suicidal ideation and risk associated with suicidal intent vs plan.

Interrater reliability was demonstrated with a Cronbach's alpha score of 1.

Sample Description

A total of twenty-eight (28) frontline staff were included in the data collected for this DNP project. Staff positions and the number of years that they worked in long-term care are presented in Figure 1 and Figure 2, respectively.

Figure 1

Staff positions represented in sample.

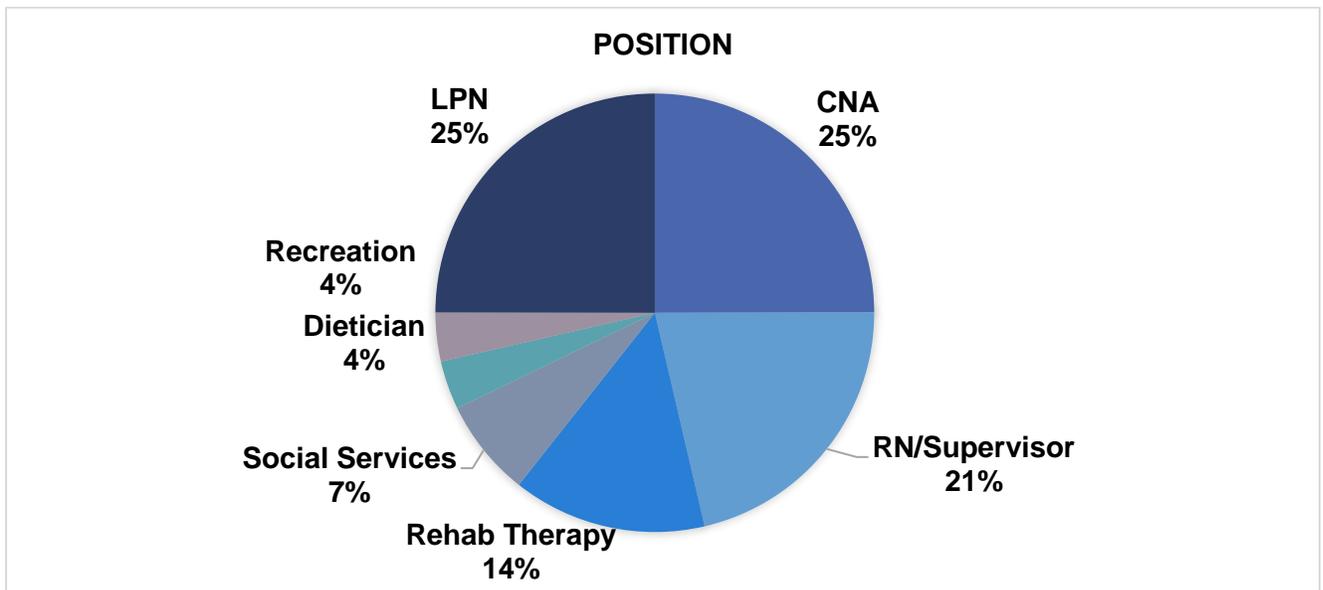
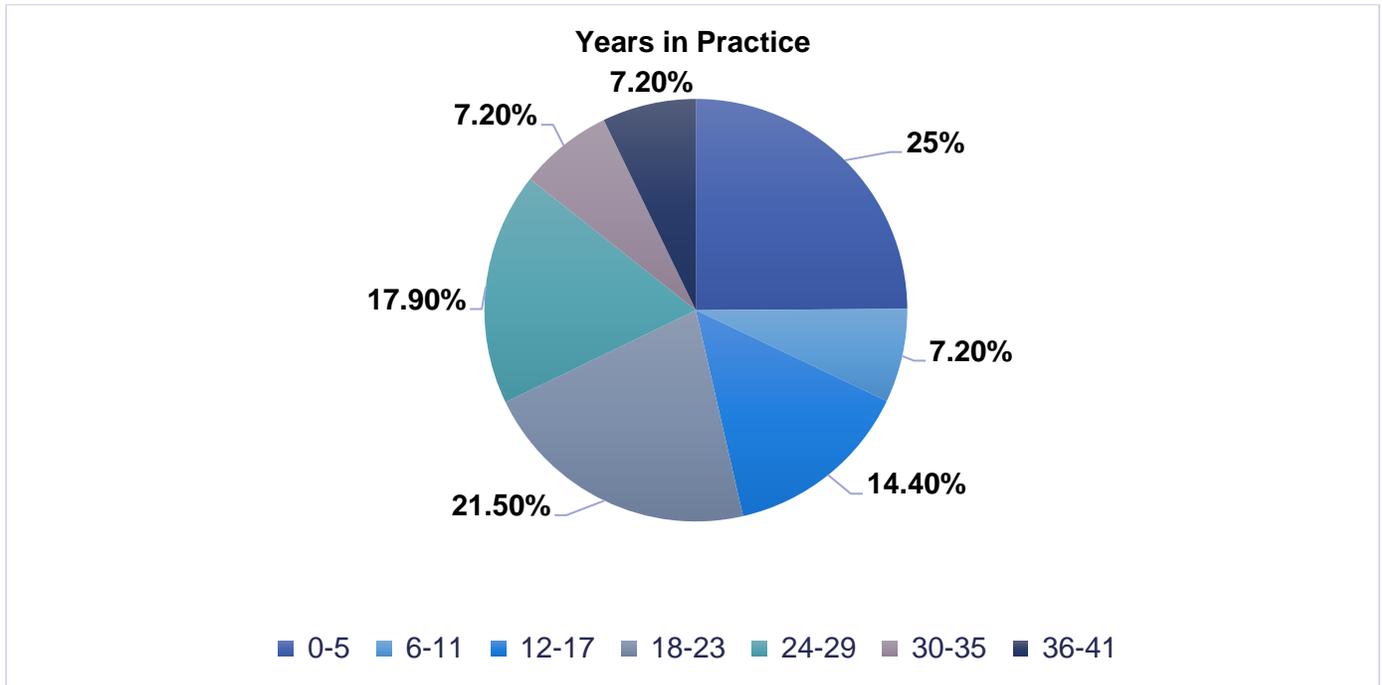


Figure 2

Staff number of years in practice in long-term care



Knowledge Acquisition Results

A paired samples t-test was conducted to examine the change in participant knowledge acquisition regarding suicide assessment in the skilled nursing facility. Results demonstrated a significant difference in knowledge from pre-inservice (M=3.18, SD=1.28) to post-inservice (M=3.93, SD=.98); $t(27) = -3.58, p = .001$.

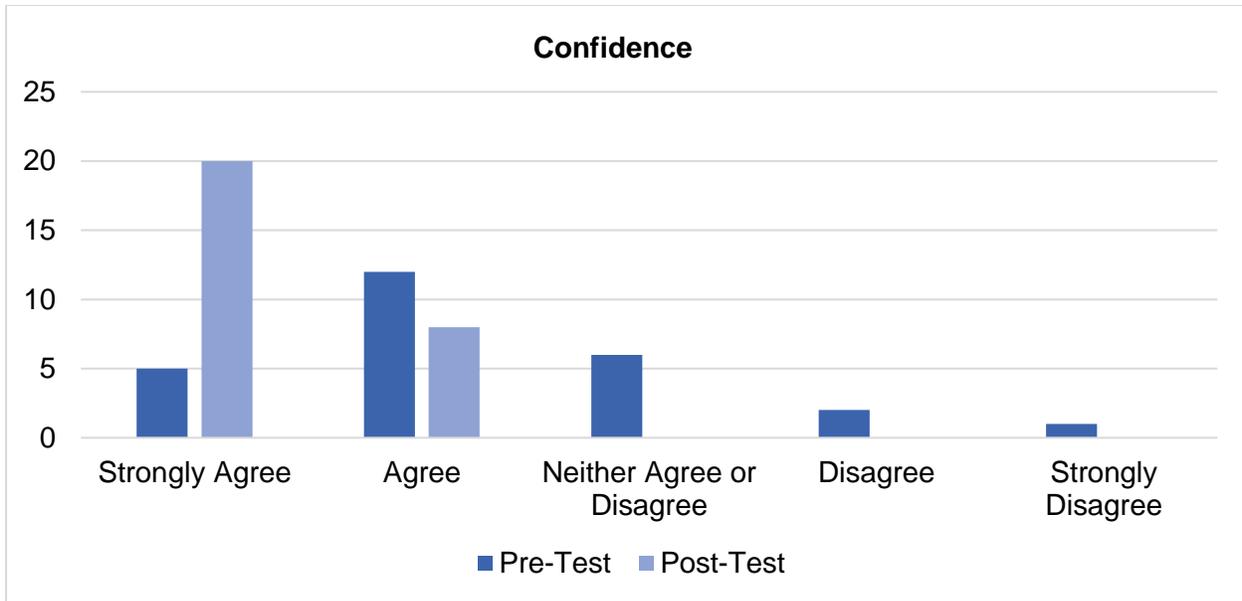
Confidence and Comfortability Results

Descriptive results are presented below (Figure 3 and Figure 4) to demonstrate trends in staff confidence and comfortability from pre to post-inservice.

Figure 3

Participant reported degree of confidence addressing suicidal ideation at pre and post-inservice.

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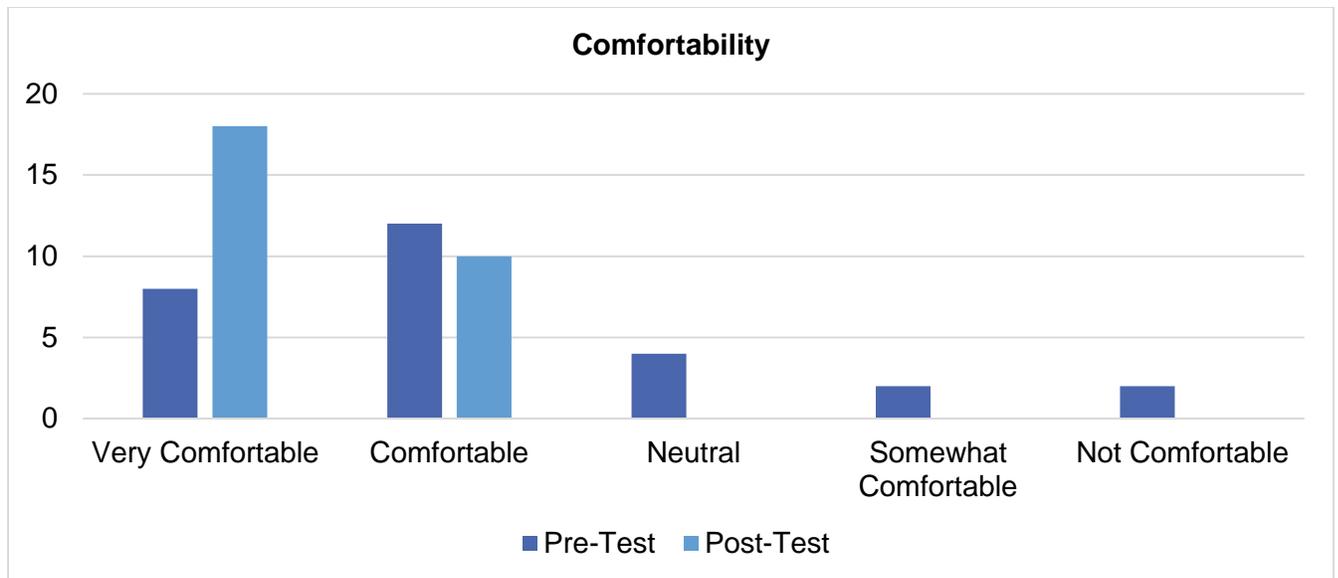
¹ Two responses were not included-One chose multiple options, and one did not provide a response.

Results indicate a trend in increased confidence with all participants (n=28, 100%) indicating that they “strongly agree” or “agree” that they can identify passive suicidal ideation vs. active suicidal ideation and feel confident knowing what to do if someone expresses suicidal ideation post-inservice compared to (n=17, 60.7%) pre-inservice.

Figure 4

Participant degree of comfortability identifying and reporting suicidal ideation at pre and post-inservice.

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Results indicate a trend in increased comfortability with all participants (n=28, 100%) indicating their level of comfort with identifying and reporting suicidal ideation as “very comfortable” or “comfortable” at post-inservice compared to (n=20, 71.4%) at pre-service.

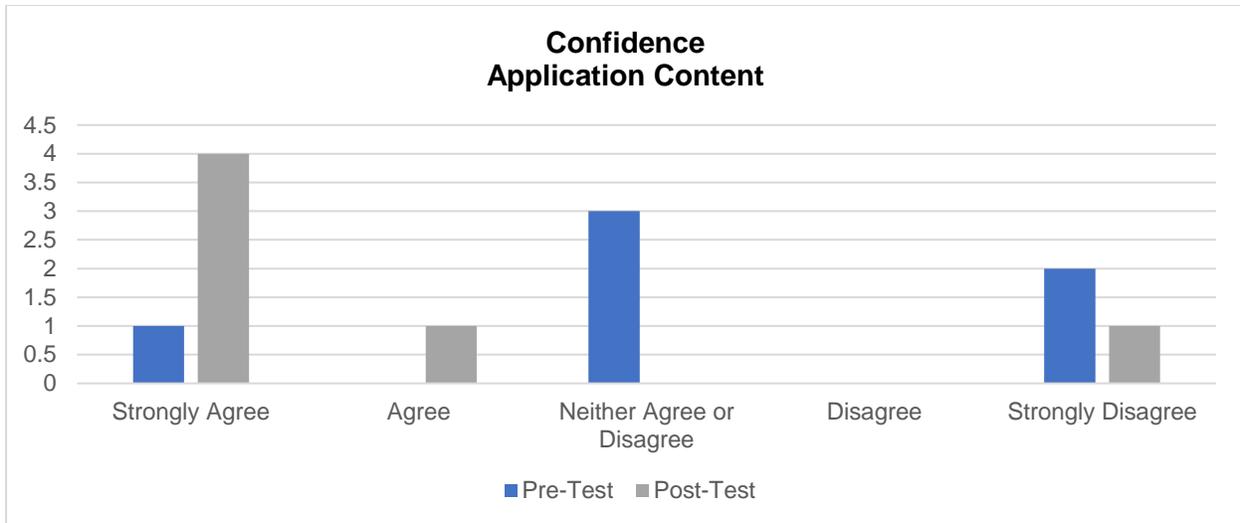
Additional Application Content Results

Given the small sample size, Fisher’s exact test was used to determine if there was a significant difference in the proportion of participants who correctly answered the question regarding the purpose of the P4 Screener from pre to post-inservice. There was not a statistically significant difference between the two variables ($p=1.0$). Of note, more than 4 cells had less than the expected count of 5. Therefore, these results should be interpreted with caution.

Figure 5

Participant degree of confidence in administering the P4 Screener at pre and post-additional application content inservice.

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There appeared to be an increase in confidence levels reported at post-inservice for those who participated in the additional application content (n=6). All but one participant (n=5, 83.3%) indicated that they either strongly agreed or agreed that they felt confident administering the P4 Screener at the post-application content inservice compared to participant (16.6%) at pre-application content inservice.

The final question on the application content post-test was a multi-answer question to ascertain knowledge acquired specific to the adapted algorithm. This question was not asked on the pre-test since this topic was new to staff prior to inservice. Fifty percent of the participants (n=3) answered this question incorrectly. All participants who answered incorrectly included the same incorrect response which was “avoid sending the patient to the ER no matter how serious the situation is”.

Chapter 5: Discussion and Conclusion

Discussion

Findings from this pilot study suggest both a need and potential benefit from suicidal ideation assessment and management education in this long-term care setting. Results

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demonstrate a significant improvement in knowledge acquisition from pre to post-test. Participants reported improved confidence and comfortability in their ability to identify, report and manage suicidal ideation in this setting. These results are consistent with the literature review which acknowledged a knowledge deficit concerning suicide and the benefits of staff education. A larger sample size is needed to be able to accurately assess the value and impact of the additional application content knowledge. The small sample size was a product of the number of staff who can perform clinical assessments onsite. Future iterations of this study will include larger long-term care facilities which will increase sample size for both the main and additional inservice content. While the overall sample demonstrated diversity by including staff from different disciplines and amounts of experience, increasing the sample size will allow for greater generalizability to long-term care. In addition, more extensive demographic data (i.e., gender and race) will be collected to ensure the sample is representative of staffing in long-term care. This will further enhance understanding of generalizability of the sample.

Findings also suggest potential areas of improvement for future presentations. Regarding additional application content post-test question number 3, all incorrect answers were the same. Specifically, they all indicated that emergency service calls should be avoided at all costs. Future trainings will clarify when to send patients to the emergency room. It will be important to emphasize that use of the P4 Screener and adapted algorithm does not invalidate the need for emergency room use for certain circumstances.

The process of administering the inservice revealed a desire among this sample to learn about this topic. Staff were engaged throughout by asking questions. At the start of each round of inservice, this writer acknowledged the emotionally challenging content contained in the presentation. Some of the participants were noted to become emotional during the presentation,

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and one staff member spent time after the inservice speaking to this writer about the emotions this process produced. This demonstrates the personal connection, which fuels a genuine desire to learn and improve the assessment and management process. In the future, more time will be set aside to acknowledge the personal connections participants may have to the topic. Presenting the inservice in-person also allows for a more personal connection and the ability to address staff concerns in an immediate and personal fashion.

The process also revealed hesitancy to engage in the application of suicidal ideation assessment for fear of legal ramifications. For example, a supervisor participant during the additional application content session expressed trepidation about performing an assessment onsite as opposed to sending a “suicidal” patient to the emergency room. This propelled a dialogue about scope of practice, what assessment of suicidal ideation entails and the importance of collaboration with the facility contracted mental health professionals. To highlight similarities in the process, while acknowledging differences in content, a comparison was made between the assessment of a fall (a common assessment for nurses in long-term care) and the assessment of suicidal ideation. It can be hypothesized that this trepidation may be fueled by a lack of experience and/or knowledge and other staff members may share a similar concern. Furthermore, this highlights the importance of education to empower staff with the knowledge needed to confidently perform assessments onsite. To confirm these hypotheses, and to better understand the needs and concerns of long-term care staff, qualitative interviews will be conducted. The results of these interviews will help to tailor future iterations of the inservice.

Limitations

One potential limitation was that the inservice was delivered twice onsite. The purpose of this was to capture as many participants as possible, accommodating different schedules. While

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each inservice followed the same topical outline and PowerPoint presentation, there was the risk of emphasizing different content areas based upon unique dialogue and questions shared during each inservice round. This could in turn impact post-test results. Besides offering one round of the inservice (which would naturally decrease sample size due to staffing schedules), this inservice could be pre-recorded to ensure there is no meaningful difference in content. The purpose of educating staff via this inservice is to impact change and thus it is important to address questions in real-time. Utilizing a pre-recorded method will eliminate the ability to readily answer staff questions or concerns. It may also eliminate the personal connection which is important while addressing such a topic.

Sample size, especially for the additional content application component, was small and limits the ability to perform inferential statistics, identify trends and generalize results. Ideally this study will be repeated with a larger sample size.

Sustainability and Scalability

To ensure sustainability, findings will be shared with the facility administrative team. Periodic follow-up surveys will be conducted to assess the practicality of the algorithm and P4 Screener in addition to staff knowledge, confidence, and comfortability overtime. Ideally a follow-up survey will be conducted at six months post-intervention. A refresher inservice will be conducted yearly to support sustainability, emphasize content, and educate new staff members. A written policy, which formally explains how and when to apply the adapted algorithm and P4 Screener, will be considered, and discussed with the Director of Nursing. Future study plans include expansion to incorporate qualitative interviews with long-term care staff to understand knowledge needs and gains for suicide protocol administration. This will ensure sustainability by incorporating feedback from staff that will enhance and make the process more usable.

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Next steps include scaling up the project to the residential care housing unit onsite and to other long-term care facilities, including both skilled nursing and assisted living communities. Presentations will be conducted at state multidisciplinary long-term care meetings to promote the inservice and use of adapted algorithm and P4 Screener. Presentations will also be conducted at geriatric conferences to promote inservice content.

Broader Healthcare Systems Implications

This project has implications that transcend the walls of long-term care communities. As stated in the introduction, suicide is the 10th leading cause of death in the United States (Centers for Disease Control and Prevention, 2018). This project not only brings attention to this issue but proposes an approach to addressing and managing suicidal ideation in the older adult population and within a medical setting. This project may be utilized and adapted to inform other environments who serve other high-risk groups, such as hospitals and primary care settings. By accurately identifying level of risk, appropriate and individual management strategies can be better implemented. In addition, this project emphasizes the importance of collaboration between medical settings and mental health, which carries significant importance to improve identification and detection of persons at risk of suicide.

Conclusion

Improving the knowledge deficit that exists in long-term care surrounding suicidal ideation assessment and management is an ongoing process. This project sought to provide suicidal ideation assessment and management education to frontline staff within a skilled nursing community and examine the impact on staff knowledge, confidence, and comfortability. Results suggest a significant improvement in knowledge acquisition from pre to post-inservice. Trends in

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improved confidence and comfortability were appreciated. A larger sample size is required to improve confidence in results relative to the additional application content training.

By increasing knowledge, confidence and comfortability surrounding suicidal ideation assessment and management, the quality of patient care within the long-term care setting is improved. Moreover, interventions that are specific to the individual's level of risk are emphasized and intrusive and ineffective interventions are minimized. This project serves as an initial step toward standardizing a suicidal ideation assessment and management protocol within the long-term care setting which has the potential for application to other types of settings in the future.

References

- Barak, Y. (2020). Suicide ideation in US nursing homes: institutional freedom versus institutional paternalism. *The American Journal of Geriatric Psychiatry*, 28(3), 299-301.
- Centers for Disease Control and Prevention. *Disparities in Suicide*. [Disparities in Suicide | CDC](#)
- Centers for Disease Control and Prevention. [Suicide rising across the US | VitalSigns | CDC](#)
- Centers for Disease Control and Prevention. (2020) *Nursing Home Care*.
[FastStats - Nursing Home Care \(cdc.gov\)](#)
- Centers for Disease Control and Prevention. (2016). *Older Person's Health*.
[FastStats - Older Persons Health \(cdc.gov\)](#)
- Centers for Disease Control and Prevention. (2013) Long-Term Care Services in the United States: 2013 Overview. Vital and Health Statistics. Series 3, number 7.
[Long-Term Care Services in the United States: 2013 Overview \(cdc.gov\)](#)
- Chauliac, N., Leaune, E., Gardette, V., Poulet, E., & Duclos, A. (2019). Suicide prevention interventions for older people in nursing homes and long-term care facilities: a systematic review. *Journal of geriatric psychiatry and neurology*, 33(6), 307-315.
- Chauliac, N., Brochard, N., Payet, C., Duclos, A., & Terra, J. L. (2016).
How does gatekeeper training improve suicide prevention for elderly people in nursing homes? A controlled study in 24 centres. *European psychiatry*, 37, 56-62.
- Choi, N. G., DiNitto, D. M., Marti, C. N., & Conwell, Y. (2019). Physical health problems as a late-life suicide precipitant: examination of coroner/medical examiner and law enforcement reports. *The Gerontologist*, 59(2), 356-367.
- Conwell, Y., Van Orden, K., & Caine, E. D. (2011). Suicide in older adults. *Psychiatric Clinics*, 34(2), 451-468.
- Couillet, A., Terra, J. L., Brochard, N., & Chauliac, N. (2017). Barriers to the prevention of

ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

- suicide in nursing homes. *Crisis*, 38(6), 423-432.
- Davis-Berman, J. (2011). Conversations about death: Talking to residents in independent, assisted, and long-term care settings. *Journal of Applied Gerontology*, 30(3), 353-369.
- Dube, P., Kurt, K., Bair, M. J., Theobald, D., & Williams, L. S. (2010). The p4 screener: evaluation of a brief measure for assessing potential suicide risk in 2 randomized effectiveness trials of primary care and oncology patients. *Primary Care Companion Journal of Clinical Psychiatry*, 12(6), 12.
- Gürel, E., & Tat, M. (2017). SWOT analysis: a theoretical review. *Journal of International Social Research*, 10(51).
- Lewin, K. (1997). *Resolving Social Conflicts & Field Theory in Social Science*. Washington DC. American Psychological Association.
- Loebel, J. P., Loebel, J. S., Dager, S. R., Centerwall, B. S., & Reay, D. T. (1991). Anticipation of nursing home placement may be a precipitant of suicide among the elderly. *Journal of the American Geriatrics Society*, 39, 407-408
- Medicare.org. (2020). Different types of long-term care.
[Different Types of Long-Term Care | Medicare & Medicare Advantage Info, Help and Enrollment](#)
- Menghini, V. V., & Evans, J. M. (2000). Suicide among nursing home residents: a population-based study. *Journal of the American Medical Directors Association*, 1(2), 47-50.
- Mezuk, B., Ko, T. M., Kalesnikava, V. A., & Jurgens, D. (2019). Suicide among older adults

ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

- living in or transitioning to residential long-term care, 2003 to 2015. *JAMA network open*, 2(6), e195627-e195627.
- Mezuk, B., Lohman, M., Leslie, M., & Powell, V. (2015). Suicide risk in nursing homes and assisted living facilities: 2003–2011. *American journal of public health*, 105(7), 1495-1502.
- Mezuk, B., Rock, A., Lohman, M. C., & Choi, M. (2014). Suicide risk in long-term care facilities: A systematic review. *International Journal of Geriatric Psychiatry*, 29(12), 1198-1211.
- Mills, P. D., Gallimore, B. I., Watts, B. V., & Hemphill, R. R. (2015). Suicide attempts and completions in Veterans Affairs nursing home care units and long-term care facilities: a review of root-cause analysis reports. *International journal of geriatric psychiatry*, 31(5), 518-525.
- Muramatsu, R. S., & Goebert, D. (2011). Psychiatric services: experience, perceptions, and needs of nursing facility multidisciplinary leaders. *Journal of the American Geriatrics Society*, 59(1), 120-125.
- Murphy, B., Kennedy, B., Martin, C., Bugeja, L., Willoughby, M., & Ibrahim, J. E. (2019). Health and care related risk factors for suicide among nursing home residents: a data linkage study. *Suicide and Life-Threatening Behavior*, 49(3), 695-706.
- Murphy, B. J., Bugeja, L., Pilgrim, J., & Ibrahim, J. E. (2015). Completed suicide among nursing

ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

- home residents: a systematic review. *International journal of geriatric psychiatry*, 30(8), 802-814.
- Nock, M. K., Ramirez, F., & Rankin, O. (2019). Advancing our understanding of the who, when, and why of suicide risk. *JAMA psychiatry*, 76(1), 11-12.
- O'Riley, A., Nadorff, M. R., Conwell, Y., & Edelstein, B. (2013). Challenges associated with managing suicide risk in long-term care facilities. *The annals of long-term care: the official journal of the American Medical Directors Association*, 21(6), 28-34.
- Orth, J., Li, Y., Simning, A., & Temkin-Greener, H. (2019). Providing behavioral health services in nursing homes is difficult: findings from a national survey. *Journal of the American Geriatrics Society*, 67(8), 1713-1717.
- Osgood, N. J. (1992). Environmental Factors in Suicide in Long-Term Care Facilities. *Suicide and Life-Threatening Behavior*, 22(1), 98-106.
- Piven, M. L., Anderson, R. A., Colón-Emeric, C. S., & Sandelowski, M. (2008). Certified nursing assistants' explanatory models of nursing home resident depression. *Western journal of nursing research*, 30(6), 653-672.
- Raue, P. J., Ghesquiere, A. R., & Bruce, M. L. (2014). Suicide risk in primary care: Identification and management in older adults. *Current psychiatry reports*, 16(9), 466.
- Shirey, M. R. (2013). Lewin's theory of planned change as a strategic resource. *JONA: The Journal of Nursing Administration*, 43(2), 69-72.

ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

Simons, K., Connolly, R. P., Bonifas, R., Allen, P. D., Bailey, K., Downes, D., & Galambos, C.

(2012). Psychosocial assessment of nursing home residents via MDS 3.0: Recommendations for social service training, staffing, and roles in interdisciplinary care. *Journal of the American Medical Directors Association*, 13(2), 190-e9-190.e15.

Substance Abuse and Mental Health Services Administration. Promoting Emotional Health and Preventing Suicide: A Toolkit for Senior Living Communities. Center for Mental Health Services; Rockville, MD: 2011. [guide.gettingstarted \(1\).pdf](#)

Temkin-Greener, H., Orth, J., Conwell, Y., & Li, Y. (2020). Suicidal ideation in US nursing homes: association with individual and facility factors. *The American Journal of Geriatric Psychiatry*, 28(3), 288-298.

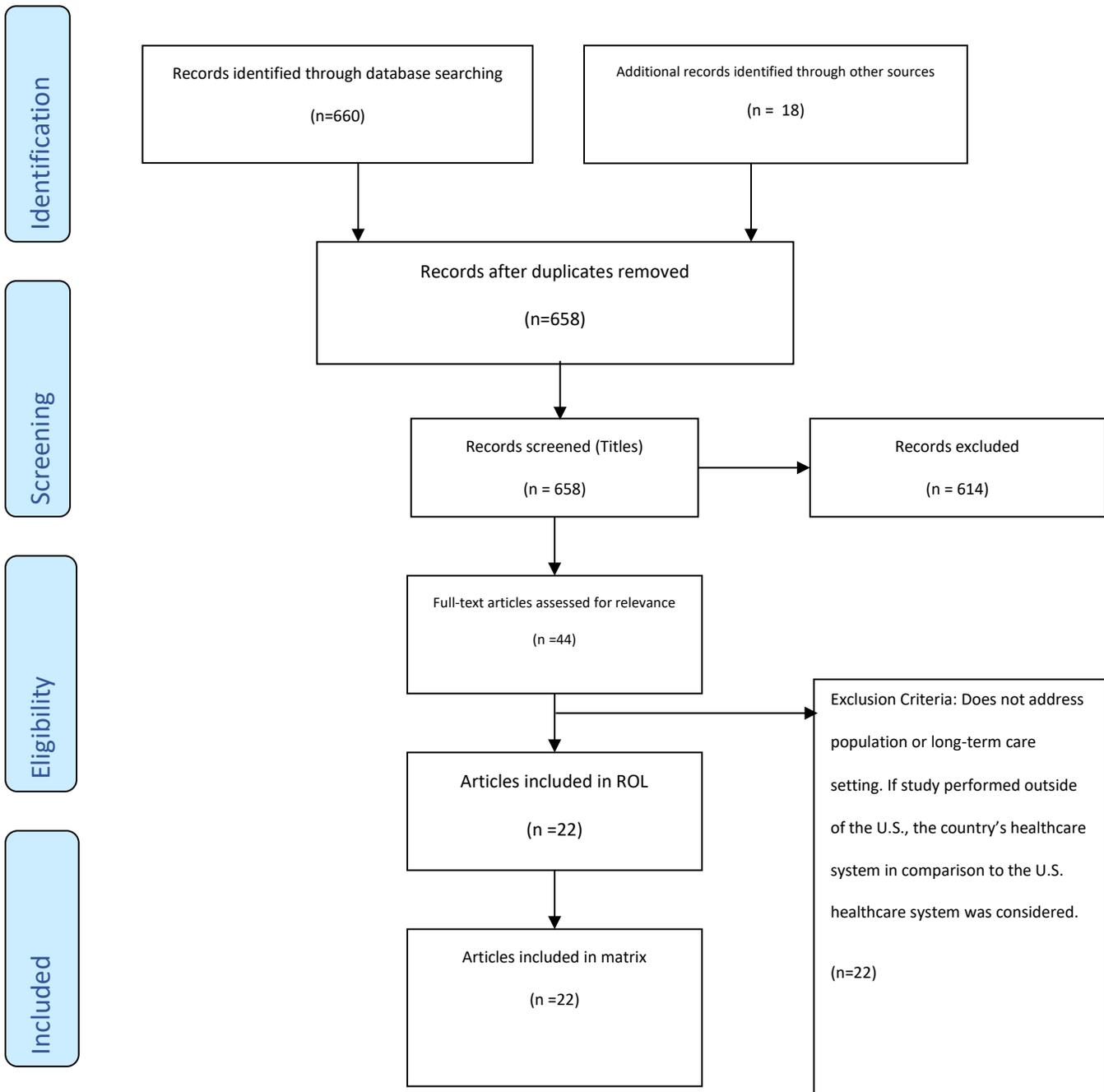
U.S. Census Bureau. (2020) 2020 Census Will Help Policymakers Prepare for the Incoming Wave of Aging Boomers
[By 2030, All Baby Boomers Will Be Age 65 or Older \(census.gov\)](#)

World Health Organization. (2012) *Public health action for the prevention of suicide: a framework*. Geneva, Switzerland. [Suicide Prevention.pdf \(who.int\)](#)

World Health Organization. (2021) *Mental Health and Substance Use*.
[Mental Health and Substance Use \(who.int\)](#)

Appendix A: Flow of Studies

From: Moher, D., Liberati, A., Tetzlaff, J., Altman, DG. The PRISMA Group (2009). *Preferred Reporting Items for Systemic Reviews and Meta-Analyses: The PRISMA Statement*. PLoS Med 6(7)



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**Appendix B:
Evidence Matrix**

| Author, Year | Purpose | Evidence Type | Sample/Setting | Findings that help answer the question | Limitations | Level of Evidence JBI Levels of Evidence | Concepts Addressed |
|-----------------------|--|--------------------------------|---|--|---|---|---|
| Chauliac et al., 2016 | To assess impact of gatekeeper training on suicide prevention for older adults in nursing homes. | Controlled, quasi experimental | 12 nursing homes with 30% of staff who had undergone training (14 hours of training-see section 2.2) compared to 12 nursing homes with staff without training. Data was collected at each nursing home relative to residents deemed to be suicidal. | Detection of SI relied more heavily on the facility staff in those facilities with staff training vs. facilities without training. Facilities with training implemented more measures to manage persons with SI and suicidal residents were more frequently referred to the psychologist. More suicide prevention measures were put into place in facilities with trained staff. | Study performed in France-limiting generalizability. Nursing homes could not be randomly chosen. Not able to establish a baseline for judgment criteria before start. | Level 2.d | Staff Training Suicide in LTC Collaboration |
| Couillet et al., 2017 | To examine how caregivers in nursing homes consider suicide in older persons | Observational/ Qualitative. | Eighteen caregivers from nursing homes who were in contact with patients on a daily basis were interviewed. Doctors, psychologists and | Caregivers saw suicide as an act of autonomy and as a response to the suffering associated with aging. Suicide prevention was viewed as an | Possible bias in selection and recruitment. Interview time was short. Some participants were not willing to discuss suicide. Generalizability | Level 3.e | Staff perceptions/barriers |

ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

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| | and how these perceptions influence suicide prevention. | | management were not included. Three nursing homes in France were included. | integral part of the care however daily practice and personal opinion might interfere. Depictions of suicide in older adults of nursing home caregivers were like those of the general population. Important to take representations into account. In order to consider training for staff it is important to understand potential barriers. | limited (performed in France). | | |
| Mezuk et al., 2019 | To estimate the number of suicides associated with LTC among adults 55 years+ | Cross sectional epidemiologic study | N=47,759 Age 55+ All suicides and undetermined deaths included from restricted access data from NVDRS, years 2003-2015 | Over 13 year period, 2.2% of suicide among adults 55+ were associated with LTC. Transition to residential facility may be an important point to address suicide prevention (p.8) Transition to LTC is correlated with other characteristics such as depression and pain that are known risk factors. Major | Not all states are represented including those with high numbers of seniors. Attempted to account for this. | Level 4.c | Suicide in LTC |

ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

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| | | | | life transitions are associated with suicide (consistent with other findings). | | | |
| Mezuk et al., 2015 | To analyze the epidemiology of suicide among those aged 50+ in LTC. To examine if transitioning into LTC was a suicide risk factor. | Mix of qualitative and quantitative measures. Epidemiological study. | Virginia Violent Death Reporting System (2003-2011) Locations of suicides N=3453 Nursing homes N=285 and ALFs N=548. Long-term care, state of Virginia | Over 9 years, 3% of suicides in those aged 50+ were related to LTC in Virginia. Incidence of suicide was comparable to those in community (14.16 per 100,000 in nursing homes vs 15.66 in community). Bigger facility size was associated with higher suicide risk in ALF. Anticipation of admission to LTC or those with a loved one transitioning to LTC also potential risk factor (p.1500) LTC may be important point of engagement. | Information on facility traits was limited. Information was lacking on quality metrics for ALFs. | Level 4.a | Suicide in LTC Risk factors |
| Temkin-Greener et al., 2020 | To evaluate the incidence of SI among postacute and LT stay nursing home | Cross-sectional, epidemiological. | Sample consisted of Medicare beneficiaries recently accepted to NHs in USA over a 1 year time period | The average rate of SI was below 2% for post-acute and LTC residents (within past 2 weeks). SI was higher on | Findings are associations, not causal (data cross-sectional) | Level 4.a | Suicide in LTC Risk Factors (facility) Staff Training Screening Tools (PHQ-9) |

ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

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| | <p>admissions. Explore associations with individual and facility level factors.</p> | | <p>(2014-2015). The final analytical sample included 1,864,102 postacute and 304,106 LTC admissions over 15,000 NHs over 1 year.</p> | <p>admission, SI declined by almost 60% for post-acute residents. For LT residents, SI declined typically within 3 months with a further decrease by 1 year. Observed rate of suicidal ideation was identified as 1.24% at admission and declined to 0.50% at discharge among short term stay residents. For long term stay residents, the observed suicidal ideation rate was 1.81% at admission with a decline to 1.21% at 3 months, 1.19% at 6 months and 0.98% at 1-year Covariates on an individual level that increased risk-moderate to severe depression, aggressive behavior, psychiatric conditions, pain, use of psychotropics.</p> | <p>Unmeasured variables may influence findings (attempted to adjust)</p> | | <p>MDS 3.0</p> |
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ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

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| | | | | <p>Facility level covariates associated with SI-increase in CNA staffing (thought to be r/t better identification of SI with more cna's), for profit homes-lower risk adjusted odds of SI (p.13, online) Study is the earliest to use MDS 3.0 evaluations</p> | | | |
| <p>Mills, Gallimore, Watts, Hemphill. 2015</p> | <p>Describe the systemic vulnerabilities found after suicidal behavior in LTC. Steps to decrease risk.</p> | <p>Retrospective Review (of RCA reports of suicide and suicide attempts)</p> | <p>17,400 RCA reports in dataset. 1100 pertinent to LTC. 35 RCA reports from nursing home units and LTC centers in the VHA system between 1/1/2000-12/31/2013 were identified. RCA is a way to examine the underlying causes of adverse events with a focus on the systemic and organizational factors that may have contributed (p. 520)</p> | <p>The average age of those in the RCA reports was 65 years. 11 had previous attempts. Primary methods included cutting with sharp object, overdose or strangulation. The primary "root cause" for suicide attempts and completions included need for increased staff education about assessment and treatment. SAMHSA toolkit mentioned. Problems with</p> | <p>Data consisted of only facility reported information via the VA patient safety system. Possible that suicide attempts were not all accounted for. Limited generalizability-mostly male veterans. Information about the specific patient characteristics is lacking.</p> | <p>Level 4.a</p> | <p>Staff Training Suicide in LTC Risk Factors</p> |

ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

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| | | | | communication also identified as another root cause followed by problems with the environment. One root cause identified that is not commonly identified in other studies- delays in medical treatment or diagnosis (p. 522-523). | | | |
| Chauliac et al., 2019 | To review literature evaluating the impact of suicide prevention interventions for older adults in LTC | Systematic Review | Studies describing interventions targeted at decreasing suicidality in NHs were included. Studies focused on depression or younger people were not included (p. 4) Six studies ultimately comprised the review. | First systemic review regarding suicide prevention strategies in LTC settings. Two types of interventions described in the (6) studies. 1. Direct interventions 2. Gatekeeper trainings. Gatekeeper training found to have an impact on the care of patients with SI. Lack of RCT's. Life review intervention did not significantly decrease SI. BE-ACTIV program (from a prison program) was | Low number of studies included. Cannot draw conclusions on efficient suicide preventions strategies. | Level 2.b | Suicide in LTC Staff Training |

ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

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| | | | | adapted to LTC- possibly some positive effects, no real conclusion drawn. | | | |
| Murphy et al., 2019 | Examine associations between health status and care needs of nursing home residents and risk of death from suicide compared to other causes. | Retrospective data linkage cohort study | 146 nursing home residents who died of suicide-130 were matched to their assessment data with comparable information for 95 residents. Nursing homes (deaths) in Australia between 2000-2013 | Male > to die from suicide then females (fivefold). Increase in age yielded a decrease risk of dying from suicide compared to other causes. Those divorced or separated were more likely to die from suicide. Apparent increased risk of suicide with diagnosis of depression was not statistically significant. residents with depression did have an increased risk of suicide (95% CI=0.88-6.80) yet this was not statistically significant (p=.09) Those requiring more care were less likely to die from suicide but higher risk from other causes. Suicide risk | Assessment tools. If staff not trained on tool, the accuracy of data may have been impacted. All health conditions may not have been documented. | Level 3.e | Suicide in LTC Risk Factors |

ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

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| | | | | <p>was also found to be lower Suggests that suicide risk for elders living in LTC should be considered separately from those living in the community. ? under-recognition of depression (their finding was not consistent with other findings). Ability to carry out a plan or the cognitive ability to devise a plan most likely comes into play regarding findings.</p> | | | |
| <p>Menghini, V., & Evans, J., 2000</p> | <p>Identify cases of suicide or suicidal behavior among NH residents and describe clinical features of suicide and suicidal behaviors in LTC.</p> | <p>Population based, retrospective cohort study.</p> | <p>Aged 65+ who were residents of LTC in Omsted County and communities nearby, during years 1981-1997. 12 facilities, 846 beds and nearly 100% occupancy rate. Population of surrounding community ~100,000 and mostly white.</p> | <p>Rate was similar to but slightly lower than the overall age adjusted suicide rate among U.S. population. Nursing home suicide rate of roughly 34.77 deaths per 100,000 person-years in those aged 65 and older over a 17-year period. Higher level of education, less cognitive impairment and</p> | <p>Number of cases identified likely an underestimate. Results not generalizable to inner city or non-white populations. Records may not be complete or many not be accurate.</p> | <p>Level 3.e</p> | <p>Risk Factors Suicide in LTC</p> |

ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

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| | | | | having more recently entered nursing home were characteristic of those who attempted or completed suicide. Male sex. Suicide more frequent among those entering nursing homes within 6 months. | | | |
| O'Riley et al., 2013 | Examine the risk factors associated with suicide in older adults, explain issues that arise when trying to manage suicidal LTC residents. Proposal of framework for assessing and managing suicide risk in the LTC setting. | Not a study | Review of articles pertinent to suicide in elders and LTC. | A framework for addressing SI in LTC, including a decision-tree, is proposed. | Not a study. | Level 5 | Risk Factors Suicide in LTC Barriers Staff Training |

ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

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| Murphy et al., 2015 | Review publish research describing the frequency, nature and contributing factors of completed suicides in NH's. | Systematic Review | All original, peer reviewed literature published in England from January 1949-December 2013 was reviewed. Criteria was inclusion: original research in a peer reviewed journal, English language, population of nursing home residents, study included a description of completed suicides. 8 articles were eligible. | Individual risk factors are identified (p. 809) Duration of one's residence also discussed-52% of residents who completed suicide resided in nursing homes for <12 months. Facility risk factors also identified. Personal loss identified as a major risk factor. | Data sources-may have missing data. Potential recall bias. Generalizability may be an issue-difference between countries. | Level 2.b | Suicide in LTC Risk Factors |
| Orth et al., 2019 | To identify facility level factors associated with the difficulty of providing mental health services in NHs. | Survey | Surveys were completed from 1079 NHs. A national sample was obtained from Nursing Home Compare (maintained by CMS). NH's perceptions of mental health service availability were assessed. | Findings show that almost half reported that lacking appropriate staff education was an obstacle in providing mental health services. | Possible selection bias. Findings may underestimate the inadequate state of mental health services (however sample size is large). | Level 4.a | Staff training Barriers |
| Na et al., 2018 | To validate the PHQ-9 item 9 with a brief version | Cross-sectional analysis | Data was analyzed from 841 adults aged 18+ with primary diagnosis of | Results suggest that PHQ-9 suicide item was an insufficient measure for suicide | Findings are not specific to older adults or LTC population. | Level 4.c | Screening Tools |

ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

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| | of the Columbia Suicide Severity Rating Scale. | | mood disorder. Data were collected by an electronic data capture system or paper based surveys. | risk. Labeling a patient based upon a PHQ-9 positive response without further assessment could introduce unnecessary burdens on system. | | | |
| Piven et al., 2008 | To pinpoint CNA Explanatory Models of depression. Identify aspects that may contribute to the under-recognition of depression in NHs. | Qualitative descriptive design | Two nursing homes randomly selected from a parent study. 19 CNAs for study participation. | CNAs identified 4 primary factors that cause resident depression-losses, medication, environment, physical conditions. CNAs concurred that because they work closely with residents that they were mostly likely to identify changes in mood and behavior. Misperceptions can impact how/if depression is identified. Training may help to correct this. | | Level 3.e | Staff Training Staff perceptions Barriers |
| Loebel et al., 1991 | To further examine the possible influence of marital status on fear of | Cross-sectional self report | A comparison group of 30 elderly persons living in a retirement home were surveyed about concerns re: personal future. Comparison group | Anticipation of nursing home placement may be a precipitating factor of suicide. Married persons were more | Older study | Level 4.d | Risk factors |

ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

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| | nursing home placement | | was matched to a suicide group for age and gender. 21 were male, 9 female with average age of 72.8 years. | likely to fear nursing home placement. | | | |
| Choi et al., 2017 | To compare older adults who passed by suicide with and without physical health problems. Examine physical health problems as a precipitant to suicide. | Cross-sectional | Quantitative data from the NVDRS were analyzed. All records of death from suicide n=111,534 were examined Between 2005-2014. | 50% of suicide decedents aged 65 and older have physical health problems suspected to contribute to their suicide On- More likely to be suffering from depression and to have expressed SI intent. Loss of independence was mentioned in 1%. | The validity of data on health problems may be questionable. | Level 4.c | Risk factors |
| Davis-Berman, 2011 | To understand how older adults perceive death. | Qualitative/semi structured interviews | 17 semi structured interviews were conducted with older adults from ALF, SNF and independent living. The method of participant selection was dictated by administration | Themes such as acceptance of death, impact of current living situation and talk of suicide were identified. Strong religious beliefs were used as coping mechanisms. | Small sample-limit generalizability. | Level 3.e | Risk factors |
| Mezuk et al., 2014 | To review and synthesize the descriptive | Systematic review | 4 databased searched for empirical studies of suicide risk in nursing homes, | Suicidal thoughts are common among older adults in LTC. The prevalence of suicidal ideation | Studies involved small samples. Limited comparisons to adults in the community. | Level 2.c | Risk factors Suicide in LTC |

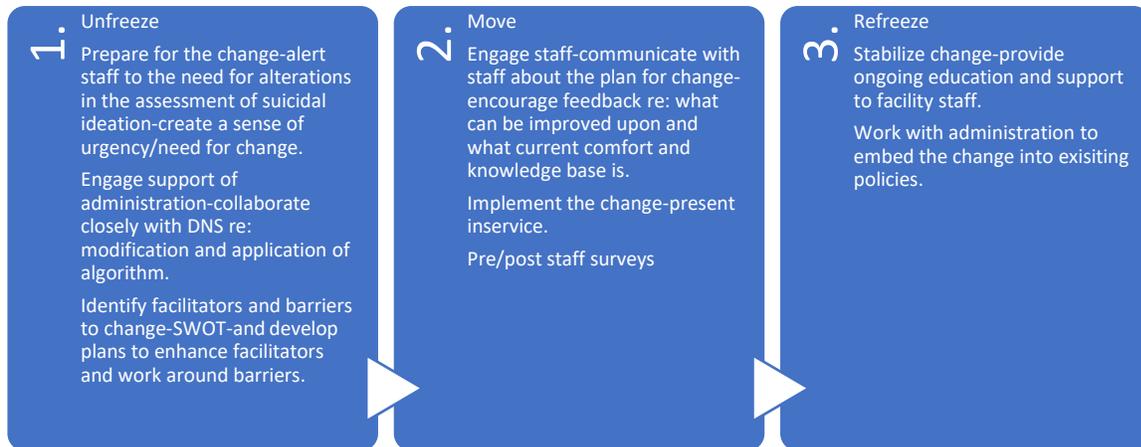
ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

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| | and analytic epidemiology of suicide in LTC over past 25 years. | | assisted living and other residential homes from 1985-2013. | over a month was 5%-33% of residents. Completed suicide is rare. Existing research is limited. | | | |
| Muramatsu and Goebert, 2011 | To identify the experience and perceptions of multidisciplinary nursing facility leaders regarding need for psychiatric services in residents of LTC | Cross-sectional | Surveys were sent to 188 nursing facilities in Hawaii. 52% staff response (individual) rate and 89% facility response rate. | Helpful psychiatric services include staff education. Psychiatric consultants can directly increase nursing facility residents' and staff's access to psychiatric services and also increase the changes of LTC placement for those with mental illness. | Limited generalizability to other systems since Hawaii's system has unique features. | Level 4.c | Staff Training |
| Simons et al., 2012 | Draw attention to the social work role in assessment of nursing home residents via MDS 3.0. | Opinion/Review | No sample | Social services have expressed discomfort administering PHQ-9 (SI question). Additional training is warranted. There is need for increased psychosocial training and clinical training. | Lower level of evidence | Level 5.c | Staff training |

ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

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| Raue et al., 2014 | To review risk factors for late-life suicide, methods to assess for different levels of suicidality and research development. Specific to primary care. | Opinion/Review | No sample | Suicidal ideation exists on a continuum. The use of screen (P4 Screener) and interviews can help primary care providers identify cases. | Lower level of evidence. Primary care population-although represents a “medical” setting. | Level 5.c | Intervention/Staff training |
| Osgood, 1992 | Identify environmental factors related to suicide in LTC | Cross-sectional, surveys | Random sample, 1,080 facilities. | 4 environmental characteristics were revealed related to suicide behavior including turnover, size, supports, and cost. Larger facilities experienced more suicide deaths. Lower cost facilities experienced more deaths. | Older study | Level 4.d | Risk factors |

Appendix C: Project Model
Lewin's Theory of Planned Change



Lewin, K. (1997). *Resolving Social Conflicts & Field Theory in Social Science*. Washington DC. American Psychological Association.

Appendix D: SWOT Analysis

| | |
|---|---|
| <p>Strengths</p> <ul style="list-style-type: none"> -A long-term care community offering a diverse range of services including rehabilitation, long-term care, and residential care housing. -Consulting services are offered onsite including psychiatry. -Multiple services offered including respite, hospice and speech therapy/PT/OT which enhances care and collaboration. -Dedicated group of staff including nurses and certified nursing assistants (many have longevity with the facility). -Small (60 bed) skilled nursing community with diverse clientele including veteran population. -Social services (social worker) onsite to assist with adjustment to environment, discharge planning following a short stay and psychosocial assessment(s). -Director of Nursing is open-minded and enthusiastic about embracing a front-line assessment strategy for suicidal ideation. | <p>Weaknesses</p> <ul style="list-style-type: none"> -Intermingling of residents with multiple diagnoses (i.e. major psychiatric diagnoses, dementia etc). -Antiquated documentation system (no electronic charting) -Potential staff hesitancy to change. -Staff schedule time constraints which limits time available for inservice. |
| <p>Opportunities</p> <ul style="list-style-type: none"> -Potential for growth to other long-term care communities who may be motivated to adopt protocol. -Potential for collaboration with Department of Public Health to establish protocol and reduce ER transfers. | <p>Threats</p> <ul style="list-style-type: none"> -Attitudes/perceptions attached to mental health, suicide and aging adults leading to less motivation to address this change. -Changing guidelines from CMS which can impact relevancy of protocol. |

ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

Appendix E: Pre and Post-Tests

Pre-Inservice Healthcare Staff Survey and Test

Please circle your position: RN LPN RN Supervisor CNA Social Worker Recreation Other: _____

How many years have you worked in long-term care? _____

For each of the statements below, circle the answer that best represents your response.

- 1) I can differentiate between passive suicidal ideation vs. active suicidal ideation and feel confident knowing what to do if someone expresses suicidal ideation
1=Strongly Disagree 2=Disagree 3=Neither Agree or Disagree 4=Agree 5=Strongly Agree
- 2) My level of comfort with identifying and reporting suicidal ideation is:
1=Not Comfortable 2=Somewhat Comfortable 3=Neutral 4=Comfortable 5=Very Comfortable
- 3) **True or False:**
Older adults use more deadly means when attempting suicide as compared to younger people.
- 4) **True or False:**
Suicidal ideation is rare in the nursing home setting.
- 5) **True or False:**
Suicidal ideation is normal for an older adult.
- 6) Which is a protective factor of suicide risk?
 - a. Isolation
 - b. Access to guns
 - c. Strong family connection
 - d. Prior suicide attempts
- 7) Which is an example of a passive suicidal statement?
 - a. "I want to kill myself"
 - b. "I pray that God will take me"
 - c. "I have been thinking about strangling myself with this cord"
 - d. "I've been having thoughts of jumping out of the window" (window is on the 5th floor)

Total Score Range: 2-15

ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

Post-Inservice Healthcare Staff Survey and Test

Please circle your position: RN LPN RN Supervisor CNA Social Worker Recreation Other: _____

How many years have you worked in long-term care? _____

For each of the statements below, circle the answer that best represents your response.

- 1) I can differentiate between passive suicidal ideation vs. active suicidal ideation and feel confident knowing what to do if someone expresses suicidal ideation
1=Strongly Disagree 2=Disagree 3=Neither Agree or Disagree 4=Agree 5=Strongly Agree
- 2) My level of comfort with identifying and reporting suicidal ideation is:
1=Not Comfortable 2=Somewhat Comfortable 3=Neutral 4=Comfortable 5=Very Comfortable
- 3) **True or False:**
Older adults use more deadly means when attempting suicide as compared to younger people.
- 4) **True or False:**
Suicidal ideation is rare in the nursing home setting.
- 5) **True or False:**
Suicidal ideation is normal for an older adult.
- 6) Which is a protective factor of suicide risk?
 - a. Isolation
 - b. Access to guns
 - c. Strong family connection
 - d. Prior suicide attempts
- 7) Which is an example of a passive suicidal statement?
 - a. "I want to kill myself"
 - b. "I pray that God will take me"
 - c. "I have been thinking about strangling myself with this cord"
 - d. "I've been having thoughts of jumping out of the window" (window is on 5th floor)

Total Score Range: 2-15

ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

Additional Pre-Survey and Test For RNs/Nursing Supervisors and Social Services Only:

Indicate your position _____

How many years have you worked in long-term care? _____

1. Which statement regarding the P4 Screener is TRUE:
 - a. It is a tool used to assess for depression
 - b. It is a screening tool used to predict if someone will attempt suicide
 - c. It is a screening tool used to assess for potential suicide risk
 - d. It is a test that can only be administered by a mental health professional
 - e. I am not familiar with the P4 Screener

2. I feel confident in administering the P4 Screener to assist in determining potential suicide risk.
1=Strongly Disagree 2=Disagree 3=Neither Agree or Disagree 4=Agree 5=Strongly Agree

Total Score Range: 1-6

ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

Additional Post-Survey and Test for RNs/Nursing Supervisors and Social Services Only

Indicate your position _____

How many years have you worked in long-term care? _____

1. Which statement regarding the P4 Screener is TRUE:
 - a. It is a tool used to assess for depression
 - b. It is a screening tool used to predict if someone will attempt suicide
 - c. It is a screening tool used to assess for potential suicide risk
 - d. It is a test that can only be administered by a mental health professional
 - e. I am not familiar with the P4 Screener

2. I feel confident in administering the P4 Screener to assist in determining potential suicide risk.
1=Strongly Disagree 2=Disagree 3=Neither Agree or Disagree 4=Agree 5=Strongly Agree

3. The suicide assessment algorithm reviewed during the inservice stresses the importance of
(CIRCLE ALL THAT APPLY)
 - The importance of documentation
 - Taking suicidal thoughts seriously
 - Modifying the environment to eliminate any potential hazards
 - Avoiding sending the patient to the ER no matter the circumstances
 - Collaboration with mental health provider either by phone or in-person

Total Score Range: 1-10

ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

Appendix F

Inservice Curriculum Outline

- I. Introduction to Suicide (15 Minutes)
 - a. Introductions
 - b. Definitions of terms: completed suicide vs suicidal ideation (passive vs active) vs suicide attempt
 - c. The problem and significance in long-term care
 - d. Prevalence of suicide vs. suicidal ideation in LTC
 - e. Discussion of staff attitudes/perceptions regarding suicidal behavior
- II. Suicide Assessment (20 Minutes)
 - a. Review of risk factors for suicide
 - i. Identify those that are most common in LTC
 - b. Review of protective factors for suicide
 - c. Brief review of screening tools-P4 Screener
 - i. Brief review to alert all staff to use of screening tool
 - d. Brief review of assessment algorithm
 - i. Alert all staff to new procedure
 - ii. Discussion of roles relative to algorithm
 - iii. Highlight assessment of environment (providing for safety)
- III. Questions/Answers (10 Minutes)
- IV. Orientation to Algorithm/Procedure For RNs, Social Services and Supervisors Only (15 Minutes)
 - a. Description of each step in algorithm
 - b. Review P4 Screener
 - c. Questions/Answers

Appendix G
P4 Screener

Have you had thoughts of actually hurting yourself?

NO

YES

4 Screening Questions

1. Have you ever attempted to harm yourself in the past?

NO

YES

2. Have you thought about how you might actually hurt yourself?

NO

YES → [How? _____]

3. There's a big difference between having a thought and acting on a thought. How likely do you think it is that you will act on these thoughts about hurting yourself or ending your life some time over the next month?

a. Not at all likely _____

b. Somewhat likely _____

c. Very likely _____

4. Is there anything that would prevent or keep you from harming yourself?

NO

YES → [What? _____]

| Risk Category | Shaded ("Risk") Response | |
|---------------|---------------------------|---------------------------|
| | Items 1 and 2 | Items 3 and 4 |
| Minimal | Neither is shaded | Neither is shaded |
| Lower | At least 1 item is shaded | Neither is shaded |
| Higher | | At least 1 item is shaded |

Dube, P., Kurt, K., Bair, M. J., Theobald, D., & Williams, L. S. (2010). The p4 screener: evaluation of a brief measure for assessing potential suicide risk in 2 randomized effectiveness trials of primary care and oncology patients. *Primary Care Companion Journal of Clinical Psychiatry*, 12(6), 12.

Appendix H

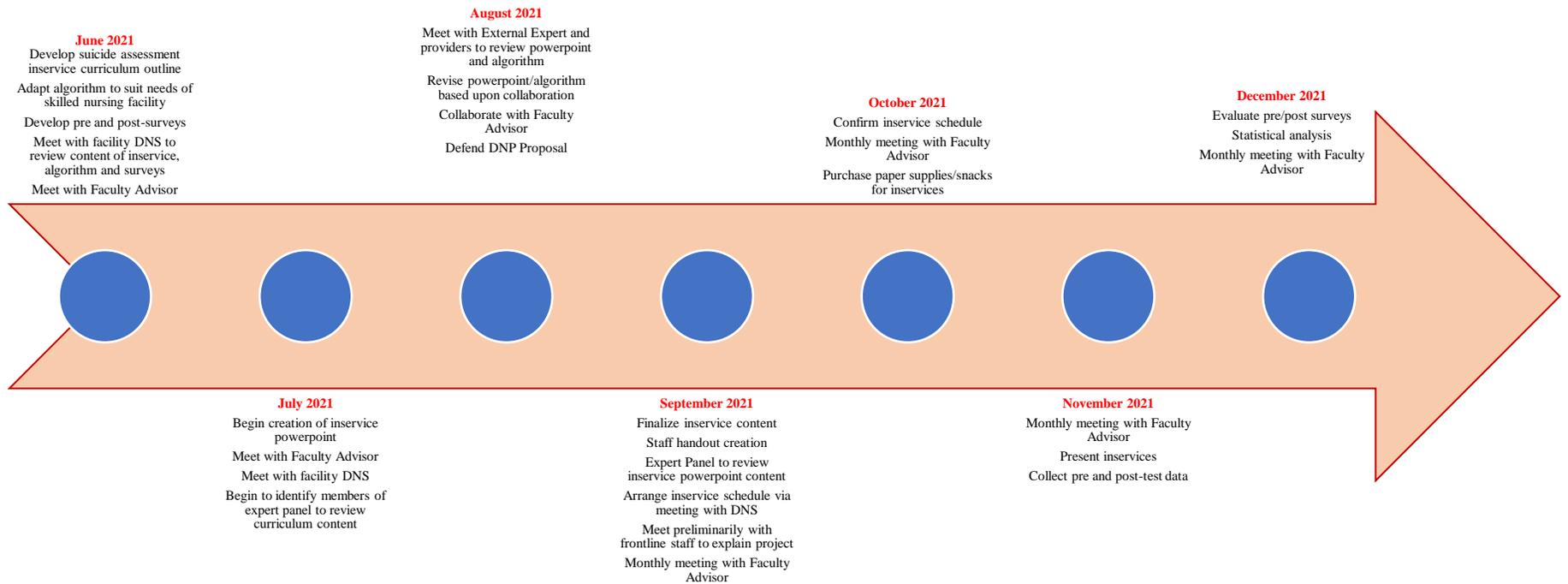
Adapted Suicide Ideation Algorithm

Adapted from O’Riley et al., 2013.



ASSESSMENT OF SUICIDAL IDEATION IN LONG-TERM CARE

Appendix I Project Timeline



Appendix J
Project Budget

| Project Expense | Projected Cost | Actual Cost |
|---|-----------------|-----------------|
| Start Up Costs | | |
| Access to scholarly articles/databases (Including algorithm and P4 Screener) | \$0 | \$0 |
| SAMHSA Senior Living Toolkit | \$0 | \$0 |
| Computer Ink Cartridge | \$138.24 | \$138.24 |
| Multipurpose Computer Paper | \$8.39 | \$8.39 |
| Mental Health First Aid Training | \$50.00 | \$0 |
| Capital Costs | | |
| Mini Portable Projector | \$90.00 | \$59.99 |
| Other | | |
| Deli Catering | \$500.00 | \$425.00 |
| Water Bottles | \$25.00 | \$17.98 |
| Total Project Expenses: | \$811.63 | \$649.60 |

Appendix K

Expert Panel Questionnaire

Domain A: Introduction to Suicide in Long-Term Care

| Item | Is the item important? (Indicate either “Yes” or “No”) | Is the item relevant? (Indicate either “Yes” or “No”) | Please add any suggestions about the category |
|--|--|---|--|
| Definitions of suicide terminology | | | |
| Significance of suicide and suicidal ideation in long-term care | | | |
| The prevalence of suicide and suicidal ideation in long-term care | | | |
| Staff attitudes and perceptions regarding older adults and suicide | | | |

Does Domain A, “Introduction to Suicide in Long-Term Care”, fit the project? Yes No

Is there anything missing from the domain?

Do you have any additional suggestions or comments?

Domain B: Suicidal Ideation Identification and Assessment

| Item | Is the item important? (Indicate either “Yes” or “No”) | Is the item relevant? (Indicate either “Yes” or “No”) | Please add any suggestions about the category |
|----------------------|--|---|--|
| Suicide Risk Factors | | | |
| Protective Factors | | | |

| | | | |
|---|--|--|--|
| | | | |
| Introduction to algorithm and its important steps | | | |
| Introduction to the P4 Screener | | | |

Does Domain B, "Suicidal Ideation Identification and Assessment", fit the project?

Is there anything missing from the domain?

Do you have any additional suggestions or comments?