



Nursing Facility Quality Review 2015

Health and Human Services

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1. Executive Summary

The General Appropriations Act (House Bill 1, Article II, Department of Aging and Disability Services, 84th Texas Legislature, Regular Session, 2015) allocated funds to the Texas Department of Aging and Disability Services (DADS) to conduct a statewide survey of people residing in Medicaid-certified nursing facilities to assess their satisfaction with quality of life and care.

The Nursing Facility Quality Review (NFQR) has been conducted since 2002. Since 2010, the NFQR report has been published on a biennial basis. The previous NFQR report provided findings for 2013 and was published in January 2015. It is available on the Quality Monitoring Program's (QMP) [Reports, Manuals & Brochures](#) page at hhs.texas.gov.

DADS contracted with The University of Texas at Austin (UT Austin) for data collection for the 2015 NFQR. Nurses hired by the university visited over 800 nursing facilities across the state, using a structured survey instrument to evaluate the quality of care provided to a random sample of residents. While on-site, the nurses also interviewed residents to determine satisfaction with services received and their overall quality of life in the facility.

In addition to information collected on-site, data from residents' medication administration records (MARs) and the Centers for Medicare and Medicaid Services (CMS) are included in this report.

A number of changes were made to the survey instrument for the 2015 NFQR, including:

- expanding the Quality of Life/Consumer Satisfaction section;
- and

- adding new questions about the use of psychotropic medications, and whether informed consent was obtained prior to their use.

In February 2015, the contract with UT Austin was amended to include the collection of facility level data regarding the Texas Reducing Antipsychotics in Nursing Homes (TRAIN) initiative. Launched in 2014, TRAIN was a collaborative effort between DADS and the Texas Medical Foundation Quality Innovation Network Quality Improvement Organization (TMF QIN-QIO) to help nursing facilities reduce inappropriate use of antipsychotic medications.

Findings

DADS staff analyzed the data, evaluating for linear trends across time; either from the first year of data collection for a specific measure, or when the wording of questions were revised. Any trends identified were then tested for statistical significance.

Use of Antipsychotic Medications

The overuse of antipsychotic medications in nursing facility residents has been a major quality concern, not only across the state of Texas, but also nationally. In many cases, antipsychotics were found to be used inappropriately to treat the behavioral and psychological symptoms of dementia, despite warnings from the Food and Drug Administration against their use in older adults with dementia. (CMS, *National Partnership to Improve Dementia Care*, 2016).

CMS data confirmed a decrease in the use of antipsychotics in Texas nursing facilities from 25.19 percent in July 2014 (the beginning of the TRAIN Initiative) to 20.06 percent in December 2015, and then to 19.07 percent in April 2016. NFQR 2015 findings were consistent with the data from CMS, indicating 21 percent of Texas residents in the sample were receiving an

antipsychotic medication. While this represents a marked decrease in the use of these medications, efforts continue across the state to further reduce the use of antipsychotics in Texas nursing facilities.

Many of the facilities surveyed responded to the TRAIN survey. In general, most had some knowledge of the TRAIN initiative, and were familiar with the various resources available to them in their efforts to reduce antipsychotic medication use in their facilities. Staff from over 38 percent of the responding facilities had attended at least one of the TRAIN conferences. Nearly all of the facilities were focusing on antipsychotic reduction, and had identified residents appropriate for gradual dose reductions. Some of the facilities (42 percent) stated they would like to be contacted by QMP for additional assistance with antipsychotic reduction. If the facility requested additional assistance, their contact information was provided to QMP staff for follow-up.

The following measures demonstrated statistically significant improvements or declines over time. A statistically significant change (improvement or decline) is one that is likely to be due to a real effect, rather than random chance.

Measures demonstrating statistically significant improvements over time

- Residents diagnosed with depression were more likely to show improvement in depressive symptoms with treatment.
- Residents were more likely to be assessed for weight loss and dehydration risk factors.
- Residents diagnosed with an anxiety disorder were more likely to have on-going assessments to evaluate the goals of therapy.
- Residents were less likely to be restrained than in previous years.

Measures that demonstrated statistically significant declines over time

- Residents were less likely to have an advance directive in place.
- Residents were more likely to be diagnosed with diabetes, and less likely to have had all the recommended assessments and lab tests conducted.
- Residents were less likely to have received the influenza or pneumonia vaccine.
- Residents were more likely to have been diagnosed with a urinary tract infection (UTI) or a skin/wound infection in the previous 30 days.
- The percent of residents with a comprehensive nutritional assessment conducted decreased.
- Residents were more likely to have had an unintentional 10 percent weight change (loss or gain) in the previous six months.
- Residents were less likely to be satisfied with their level of pain control in the previous 24 hours.
- Residents were more likely to state they had concerns the facility did not address and concerns they did not express due to a fear of retaliation.

Other measures of interest were either new in 2015 or demonstrated changes that were not statistically significant.

- More than three-quarters of the residents in the sample had an active prescription for a psychotropic medication (e.g., antipsychotics, antidepressants, anti-anxiety medications, and sedatives/hypnotics).¹
- Of those residents diagnosed with diabetes, nearly one-half had physician's orders for sliding scale insulin.
- More than three-quarters of the residents who had an active prescription for a psychotropic medication also had care plans including behavior modification interventions addressing the

¹ New measure for 2015.

specific behaviors for which psychoactive medications were prescribed.²

- Most of the residents in the sample stated they felt safe and secure in their nursing facility.
- Residents generally felt their possessions were safe in their nursing facility.
- Residents were usually satisfied with the food served at the nursing facility, and most stated their favorite foods were available.

In general, residents interviewed during the on-site visits expressed satisfaction with their overall experience in their nursing facility (89 percent) and the healthcare they received there (88 percent).

Next Steps

The HHSC QMP used the information gathered during the NFQR to identify topics for focus area development. By fiscal year 2018, the QMP will be implementing two new focus areas:

- Diabetes Management
- Infection Prevention and Control (including updated recommendations for vaccination)

In addition, QMP will continue developing training opportunities for nursing facility staff, particularly front-line, direct care staff to address learning deficits in specific areas including:

- care of residents with Alzheimer's Disease or other forms of dementia;
- recognizing and preventing abuse, neglect and exploitation; and
- implementing person-centered care practices.

² New measure for 2015.

Current Initiatives and Those in Development

The QMP obtained approval from CMS to use Civil Monetary Penalty funds to implement a number of initiatives to help nursing facilities improve the quality of care and quality of life for residents. Among those initiatives are programs such as Music & MemorySM, Reminiscence Activity, the Director of Nursing Academy, and Texas OASIS: Dementia Care Academy.

HHSC, in partnership with UT Austin School of Nursing, also launched The Center for Excellence in Long-Term Care. The Center for Excellence in Long-Term Care is a web-based educational platform for disseminating evidence-based best practices to professionals and other caregivers who work with older adults and individuals with intellectual and developmental disabilities.

Additional initiatives are in development and will be released throughout 2017 and 2018.

2. Introduction

During the 84th Legislature, Regular Session, 2015, funds were allocated by the Texas Legislature for a statewide survey of Texas nursing facility residents to evaluate the quality of care residents received and how satisfied they were with quality of life in the nursing facility. NFQR has been conducted since 2002; annually between 2002 and 2010, and biennially since 2010. For each NFQR conducted, a written report of the findings has been completed and submitted to the Legislature, Governor, and HHSC Executive Commissioner. In 2015, funding for the NFQR was no longer included as a Rider to the General Appropriations Act, and was instead included in funding for base long-term care strategies. As a result, submission of the report to the Legislature, Governor, and HHSC Executive Commissioner is no longer a requirement.

HHSC uses NFQR data to identify opportunities for statewide improvement and measure statewide changes in the quality of services provided across time. The NFQR examines care provided to a sample of nursing facility residents to determine whether that care was clinically appropriate. The standards for appropriateness of care are evidence-based, determined from systematic reviews of the clinical research literature.

3. Background

Data Collection and Analysis

Data collection for NFQR 2015 began in March 2015 and continued through April 2016. Structured survey tools were used to evaluate the quality of life and quality of care for 1,556 residents in 815 Medicaid-certified nursing facilities across the state. Information was obtained from residents' medical records and interviews. If a resident was unable to participate in the interview, attempts were made to contact the resident's responsible party to obtain their input on selected interview questions.

Census information from a facility's most recent survey visit by DADS Regulatory Services was used to establish that facility's sample size; usually one to three residents in each facility. A list of randomly generated numbers was then prepared for each facility. This list, and a roster provided by the nursing facility, was used by the nurse reviewers to select residents for the sample. For example, if the random number was five, then the fifth resident on the facility's roster was selected for the sample.

DADS staff analyzed the data using statistical software to test for linear trends across time, either from the first year data was collected on a particular measure, or from when there was a change in the wording of a question that prevented comparison to the data from previous years.³

³ Statistically significant differences that are unlikely to be due to chance are indicated by a footnote and corresponding p-value throughout this report. A p-value of <.01 means that there is a 99% chance that the observed difference is due to a real effect.

The findings documented in the report came directly from the resident assessments and interviews completed by the nurse reviewers. Additional information was obtained from:

- evaluations of residents' MARs and supporting documentation; and
- data provided by the Centers for Medicare and Medicaid Services (CMS).

Data were gathered in several areas of care including, but not limited to, advance care planning, depression, diabetes, medication management, restraints, falls, and pressure injuries. The resident interview portion of the survey addressed quality of life, including dietary preferences, activities, privacy and dignity, and resident autonomy.

Beginning in February 2015, the nurse reviewers also collected facility level data regarding the TRAIN Initiative. Each facility's administrator (or his/her designee) was provided with a paper survey to complete. The survey included questions regarding his/her familiarity with the TRAIN initiative and any changes the facility had implemented as a result of TRAIN activities. Responses were received from 758 facilities; in some cases, the facilities refused to return the questionnaire. Other facilities answered some, but not all questions.

Demographics

The residents in the sample ranged in age from 18 to 108 years, with an average age of 78 years. The majority of residents in the sample were female (66 percent), and many had been diagnosed with dementia or another form of cognitive impairment (60 percent). The median length of stay was nearly two and one-half years.

The racial and ethnic breakdown of the residents in the sample was:

- 67 percent White

- 14 percent Hispanic/Latino
- 16 percent Black/African American
- Less than 1 percent Asian
- Less than 1 percent American Indian/Alaska Native
- Less than 1 percent Native Hawaiian/Other Pacific Islander
- 2 percent Other

4. Key Findings

This section includes selected measures demonstrating statistically significant changes over time, or which are important indicators of residents' quality of care and life. A detailed report of the survey findings is in Appendix A.

Improvements or declines in a particular measure may be represented by an increase or decrease in the percent of residents affected. For example, the percent of residents assessed for weight loss risk factors increased, while the percent of residents restrained decreased. In both situations, this would represent an improvement from previous survey findings.

Use of Antipsychotic Medications

One key measure of quality is the use of antipsychotic medications in nursing facilities. These medications have often been prescribed to manage the behavioral and psychological symptoms of dementia, despite warnings from the Food and Drug Administration (FDA) against the use of antipsychotics in older adults with dementia.

Data gathered during the 2015 NFQR and data published by CMS confirm the continued drop in the use of antipsychotic medications in Texas nursing facilities.

- In July 2014, the prevalence of antipsychotic medication usage in Texas nursing facilities was 25.19 percent, according to CMS data. By December 2015, CMS data confirmed antipsychotic use had decreased to 20.06 percent, and then to 19.07 percent in April 2016.
- NFQR 2015 data indicated 21 percent of residents in the sample received at least one antipsychotic medication.

DADS/HHSC and the TMF QIN-QIO launched The TRAIN Initiative in July 2014. This initiative was developed to help nursing facilities reduce the inappropriate use of antipsychotic medications. TRAIN also addressed a lack of training for facility staff, particularly in the care of residents with dementia and in managing resident behaviors more effectively through non-pharmacological interventions.

In addition to the initial conferences, other activities conducted in support of the TRAIN initiative include:

- intense evaluation of antipsychotic use in facilities with each Quality Monitoring visit;
- dementia-related training for nursing facility staff conducted on-site by DADS/HHSC employees, including Alzheimer's Disease and Dementia Care Seminars and Virtual Dementia Tours;
- a series of webinars focusing on decreasing antipsychotic use and improving quality of care for residents with dementia, including one developed specifically for prescribers; and
- the Geriatric Symposium, Texas Taking the Next Step: Dementia in Long-Term Care and Community Settings.

The final TRAIN conferences were presented in December 2015, and the educational content transitioned to the DADS Educational Services Division. DADS/HHSC continues to collaborate with the TMF QIN-QIO, the Texas Health Care Association (THCA), providers, and other stakeholders on additional projects to help nursing facilities reduce the use of antipsychotic medications. The marked decrease in the use of antipsychotics since 2014 reflects on-going efforts of all partners involved in this initiative.

Of facilities responding to the TRAIN survey:

- 97 percent stated they received information regarding the TRAIN initiative;
- 38 percent stated they attended at least one of the TRAIN workshops held in July 2014 and October 2014;

- 89 percent stated they were familiar with the resources available to assist with antipsychotic medication reduction, including the QMP Rapid Response Team process, DADS YouTube channel and the QMP Website;
- nearly 98 percent were focusing on antipsychotic medication reduction;
- 98 percent stated they had identified residents who were appropriate for gradual dose reductions; and
- nearly 97 percent stated they started gradual dose reductions for those residents identified as appropriate.

Facilities were also asked about the percent of residents receiving antipsychotic medications at two different points in time: in July 2014 (the launch of the TRAIN initiative) and then on the date the facility was visited by the nurse reviewer. The percent of residents receiving antipsychotic medications in July 2014 ranged from 0 to 98 percent. When asked about prevalence of antipsychotic medication use at the time of the NFQR visit, the responses ranged from less than 1 percent to 98 percent.

Finally, the facilities were asked if they would like additional assistance from QMP as they worked to reduce the prevalence of antipsychotic medication use. About 42 percent of the facilities responding to the survey stated they would like to be contacted by a QMP staff member for additional assistance with antipsychotic reduction. If a facility requested additional assistance, contact information for a facility representative was provided to QMP staff for follow-up.

Statistically Significant Linear Trends, Improving Over Time

Measures demonstrating statistically significant improvements over time included:

- Residents diagnosed with depression were more likely to demonstrate improvement with treatment than in previous years.
 - ▶ Over one-half of the residents in the sample were diagnosed with depression, and nearly all were receiving medication to treat their depressive symptoms.
 - ▶ Improvement in the symptoms of depression positively impacts health status, as well as overall quality of life.
- Residents were more likely to be assessed for risk factors that could lead to unintended weight loss and/or dehydration.
 - ▶ Unplanned weight loss can lead to loss of muscle tissue, poor wound healing, and cognitive declines.
 - ▶ Dehydration can result in low blood pressure, increased pulse rate, confusion and even death.
 - ▶ If the risk factors are identified, a care plan can be developed and implemented to address those risks.
- Residents who had a diagnosis of an anxiety disorder were more likely to have on-going assessments to determine if they are meeting their treatment goals.
 - ▶ On-going assessments can guide changes in treatment when the resident's treatment goals are not being met.
- Residents were less likely to be restrained than in previous years.
 - ▶ Restraints (chemical and physical) have been used for many years to manage behaviors, prevent falls, and prevent wandering and possible elopements.
 - ▶ Recent research has demonstrated restraints are not effective interventions in most situations, and residents who are restrained are at risk for serious adverse effects.
 - ▶ Adverse psychological effects include depression, agitation, and withdrawal from social activities.
 - ▶ In addition, residents who are restrained are at risk for pressure injuries, incontinence, fractures, and even death.

Statistically Significant Linear Trends, Declining Over Time

Findings demonstrating statistically significant declines over time, included:

- Residents were less likely to have an advance directive in place.
 - ▶ Advance directives are legal documents outlining a resident's decisions about current and future healthcare, including end-of-life care such as cardio-pulmonary resuscitation, use of a ventilator to assist with breathing, or whether to begin artificial nutrition and hydration.
- The percent of residents diagnosed with diabetes mellitus continues to increase over time, and residents do not always have the recommended assessments and lab test completed.
 - ▶ Diabetes is a chronic metabolic disease that can have devastating complications if not adequately treated, including vision loss, kidney failure, and limb amputations.
 - ▶ The recommended lab tests and assessments provide information about how well the resident's diabetes is controlled and guide decisions on treatment.
- Residents were less likely to have received the influenza or pneumonia vaccine.
 - ▶ Individuals over the age of 65 and those with chronic medical conditions are at higher risk for developing significant complications if they contract influenza or pneumonia.
 - ▶ Vaccination is recommended for all residents, and has been shown to decrease the risk of hospitalization and death in this population.
- Residents were more likely to have been diagnosed with a UTI or a skin/wound infection in the previous 30 days.
 - ▶ Healthcare-associated infections (HAIs) can lead to significant illness and even death in nursing facility residents.

- ▶ A number of factors impact residents' risk of developing an infection, including close-quarter living, changes in immune response with aging, and the use of invasive medical devices such as intravenous lines and indwelling bladder catheters.
- Residents were less likely to have had a comprehensive nutritional assessment conducted.
 - ▶ A comprehensive nutritional assessment should be completed by a licensed dietitian at least annually, and include a calculation of the resident's nutritional needs, such as caloric intake and hydration needs.
- Residents were more likely to have had an unintentional 10 percent weight change (loss or gain) in the previous six months.
 - ▶ An unintentional change in weight may be related to a number of factors, such as chronic medical conditions or medications.
 - ▶ In addition, cognitive impairments can impact a resident's nutritional status.
- Residents were less likely to be satisfied with their level of pain control in the previous 24 hours.
 - ▶ Pain is subjective; there is no objective method for measuring a resident's level of pain.
 - ▶ The primary goal for each resident is to achieve a level of pain control that is acceptable to him or her.
 - ▶ If a resident is not satisfied with level of pain control, the facility staff need to reassess the resident and revise the pain management plan.
- Residents were more likely to state they had concerns the facility did not address, and concerns they did not express due to a fear of retaliation.
 - ▶ Residents must be able to freely express their concerns without fear of retaliation.
 - ▶ Residents need to be confident their concerns will be addressed, even if the facility cannot resolve a specific concern fully (such as a regulatory requirement).

Measures of Interest, but not Statistically Significant Linear Trends

Measures demonstrating potentially negative outcomes for residents included:

- More than three-quarters of residents in the sample were receiving a psychotropic medication (e.g. antipsychotics, antidepressants, anxiolytics, sedatives, or hypnotics).⁴
 - ▶ This may reflect the increase in diagnoses of depression and/or anxiety, and the treatment of those disorders.
 - ▶ In addition, residents with sleep disturbances were more likely to have an active prescription for a sedative/hypnotic than in previous years.
- Nearly one-half of the residents diagnosed with diabetes had orders for sliding scale insulin.
 - ▶ Sliding scale is not recommended for blood glucose control in this population, and may lead to episodes of severe hypoglycemia.

Potentially positive measures of interest included:

- When residents were prescribed a psychotropic medication, their care plans usually included non-pharmacological interventions to address the specific behaviors for which those medications were prescribed.⁵
 - ▶ Non-pharmacological interventions can be very effective and, when used consistently, can lead to a reduction in antipsychotic use.
- Residents were usually satisfied with the food served at the nursing facility, and most stated their favorite foods were available.

In general, residents interviewed during the on-site visits expressed satisfaction with their overall experience in the nursing facility and the care received there. In addition, most of

⁴ New measure for 2015.

⁵ New measure for 2015.

the residents stated they felt safe and secure in their facility, and that their possessions were safe as well.

5. Conclusion

The NFQR 2015 assessed the quality of care and quality of life of a sample of more than 1,500 individuals residing in nursing facilities in Texas. Survey results indicate residents were generally satisfied with their overall experience and the health care services they received in their nursing facility. Residents were also likely to feel safe and secure in their facilities, and that their possessions were safe in the facility.

The overuse of antipsychotic medications in nursing facility residents has been a significant quality concern. CMS data and NFQR 2015 findings showed a large decrease in the numbers of residents receiving an antipsychotic medication. The decrease reflects the continued efforts of all stakeholders to ensure antipsychotics are only prescribed when needed and clinically appropriate.

Additional improvements were identified in the care of residents diagnosed with anxiety disorders and depression. In addition, residents were less likely to be restrained than in previous years. While residents were more likely to have been assessed for weight loss and dehydration risk factors, fewer residents had a comprehensive nutritional assessment conducted.

Declines in measures were demonstrated through the increased number of residents found to have exhibited an unintended weight change (loss or gain) of 10 percent in the previous six months than in prior years, and the decrease in the proportion of residents who received the influenza and pneumococcal vaccines. Residents were also less likely to have executed an advance directive, a legal document outlining decisions about health care, including end-of-life care. Finally, residents were

less likely to be satisfied with the level of pain control they achieved in the 24 hours prior to being interviewed.

The information gathered through the NFQR process is shared with a variety of programs throughout the Texas Health and Human Services, as well as providers, industry groups, and other stakeholders.

Next Steps

The data gathered through the NFQR is used by QMP to identify focus areas for future development or other initiatives to help nursing facilities improve the quality of care they provide. Based on an analysis of the data, QMP has identified two new focus areas for development:

- Diabetes Management
- Infection Prevention and Control

These focus areas will be beta-tested by QMP field staff, and will be fully implemented by the beginning of fiscal year 2018.

The QMP works with nursing facilities in a collaborative manner, conducting on-site visits to evaluate facility practices in specific clinical areas and the residents' overall quality of life. The QMP is not a regulatory program and does not cite deficient practices; rather, QMP staff use an educational approach to quality improvement. The QMP uses the Early Warning System (EWS), a statistical risk model, to identify facilities that will receive visits:

- Facilities identified as medium to high risk through the EWS, or who have a history of resident care deficiencies, receive Quality Monitoring Visits.
- Facilities identified as high risk, or having three deficiency citations in a 24-month period constituting an immediate threat to the health and safety related to the abuse or neglect of a resident, receive Rapid Response Team (RRT) visits. RRTs are an intensive form of a Quality Monitoring Visit, and the process usually continues for a six-month period of time. The team includes multiple disciplines, including a QMP

pharmacist, nurse, and dietitian; the Long-Term Care Ombudsman assigned to the facility and the regional regulatory services facility liaison may also participate as necessary.

- Quality Monitoring and RRT visits can also be provider-solicited.

The QMP will continue to work with TMF QIN-QIO, THCA, UT Austin and other partners to develop training opportunities for nursing facility staff. In particular, the QMP is targeting front-line, direct care staff as new training programs are developed to address their learning needs in areas such as:

- care of residents with Alzheimer’s Disease or other forms of dementia;
- recognizing and preventing abuse, neglect, and exploitation; and
- implementing person-centered care practices.

Current Initiatives and Those in Development

The QMP, in collaboration with a variety of partners, has implemented innovative programs designed to help nursing facilities improve the quality of care provided (with a particular focus on residents with dementia) while reducing the use of antipsychotic medications. Some of those initiatives include:

Music and Memory

Music and Memory is a non-profit organization dedicated to providing personalized music playlists to individuals struggling with dementia or other cognitive and physical impairments.

Research confirms the positive effects of familiar music on brain activity and the program is an effective intervention for reducing the use of antipsychotic medications.

QMP received permission from CMS to use Civil Monetary Penalty funds to implement Music and Memory in 400 nursing facilities across the state. By the end of 2018, nearly 10,000 nursing facility residents will have participated in the Music and Memory program.

Reminiscence Activity

Using Civil Monetary Penalty funds, QMP provided participating facilities with Memorable Moments bags containing tangible prompts relating to a specific theme, such as the beach or baseball. Objects and familiar items from the past, as well as pictures and archive sound recordings, are used to stimulate discussion of past activities and experiences. Discussions that prompt memories of residents' lives and past experiences can improve well-being and reduce reliance on antipsychotic medications to manage behavioral symptoms often associated with Alzheimer's disease and dementia.

Director of Nursing Academy

The Director of Nursing (DON) Academy was presented in seven locations across the state in 2016. These three-day conferences provided participants with resources necessary to succeed as a DON in a nursing facility. The Academy emphasized a team approach to quality improvement and creating a person-centered care culture, ultimately improving quality of care and quality of life for residents.

Participants also received information on state and federal regulations for long-term care, staff engagement and retention, leadership, culture change, and dementia care. Once the initial conferences were completed, the Academy transitioned to the DADS Educational Services Division. Division staff will continue to offer the training periodically.

The Center for Excellence in Long-Term Care

The Center for Excellence in Long-Term Care is a partnership between HHSC and UT Austin School of Nursing. This web-based educational platform is designed to deliver best practices to nurses and other professionals who work with older adults and individuals with disabilities.

The first series of modules focuses on improving dementia care in Texas nursing homes and reducing inappropriate use of antipsychotic medications. Content is available for nurses at all levels of licensure, as well as administrators, nurse aides, and physicians. Additional content will be added in the future, including:

- Phase II: Geriatric Nursing Specialty Education
 - ▶ The Geriatric Nursing Specialty Education training program will provide education, best practices, and clinical guidelines, in an effort to transition nurses into geriatric care, specifically to long-term care settings.
- Phase III: Geriatric Transition to Practice
 - ▶ The modules in this phase of the project will focus on the learning needs of nurses (Licensed Vocational Nurses and Registered Nurses) entering the long-term care setting for the first time.

Texas OASIS: Dementia Care Academy

This two-day educational offering focuses on dementia basics, including person-centered care, managing dementia-related behaviors, and alternatives to the use of antipsychotic medications. The first conferences were held in November 2016 and were then offered in locations across the state through February 2017.

Abuse, Neglect, and Exploitation Academy

The Abuse, Neglect, and Exploitation (ANE) Academy focuses on screening for and preventing ANE, as well as changing

environments in which ANE develops. These two-day conferences are open to all nursing facility staff; however, the curriculum was designed and intended for front-line staff providing care to residents. The conferences began in May 2017 and will continue through July 2017.

Certified Nurse Aide Advanced Academy

The QMP was awarded Civil Monetary Penalty funds for the creation of the Certified Nurse Aide (CNA) Academy. The academy's purpose is to provide a comprehensive training program for CNAs in Texas nursing facilities, beyond the basic Nurse Aide Training & Competency Program required for certification. Through this academy, CNAs gain additional information on their role in the nursing facility, with a focus on caring for the geriatric population. This training will be presented around the state beginning in 2018.

Life Enrichment in a Person-Directed Environment

In October 2016, QMP was awarded funds to create this training program for nursing facility staff. This training will assist direct care staff in providing the residents with individualized activities, particularly activities that are important to the residents based on their preferences, customary habits, and lifestyle. This training will be presented beginning in 2018.

Advanced Person-Centered Behavior Training for NF Residents with Dementia

The QMP is developing this course using Civil Monetary Penalty Funds. The purpose of this training is to help nursing facility staff understand how to most effectively work with residents who have dementia and display out of character behaviors. The training emphasizes the importance of individualized care that includes identifying the resident's specific behaviors and effectively working with the resident to prevent the behaviors from becoming an issue. This training will initially be presented

in 20 nursing facilities around the state in 2018, and then will be provided by QMP staff for other nursing facilities on request.

List of Acronyms

Acronym	Full Name
ADA	American Diabetes Association
ANE	Abuse, Neglect and Exploitation
CMS	Centers for Medicare & Medicaid Services
CNA	Certified Nursing Academy
DADS	Department of Aging and Disability Services
DON	Director of Nursing
EWS	Early Warning System
FDA	Food and Drug Administration
HHSC	Health and Human Services Commission
MARs	Medication Administration Records
NFQR	Nursing Facility Quality Review
NPUAP	National Pressure Ulcer Advisory Panel
OTC	Over-the-counter
QMP	Quality Monitoring Program
RRT	Rapid Response Team
TMF QIN-QIO	Texas Medical Foundation Quality Innovation Network-Quality Improvement Organization
THCA	Texas Health Care Association
TRAIN	Texas Reducing Antipsychotics in Nursing Homes
UT Austin	The University of Texas at Austin
UTI	Urinary tract infection

Appendix A. Nursing Facility Quality Review 2015 Findings

Advance Care Planning

Advance care planning encourages residents and/or their family members to make decisions about current and future healthcare. Ideally, advance care planning should begin while the resident still has the ability to participate; this is particularly important when a resident has been diagnosed with dementia or another form of cognitive impairment. Advance care planning helps ensure the care received is in accord with the resident's values and wishes.

Advance directives are legal documents reflecting the healthcare decisions made, including whether to initiate cardio-pulmonary resuscitation, the use of a machine to assist with breathing, or the resident's wishes regarding artificial nutrition and hydration.

Findings

- Fewer residents had an advance directive than in previous years.⁶
- Residents were less likely to receive care consistent with their advance directive.⁷

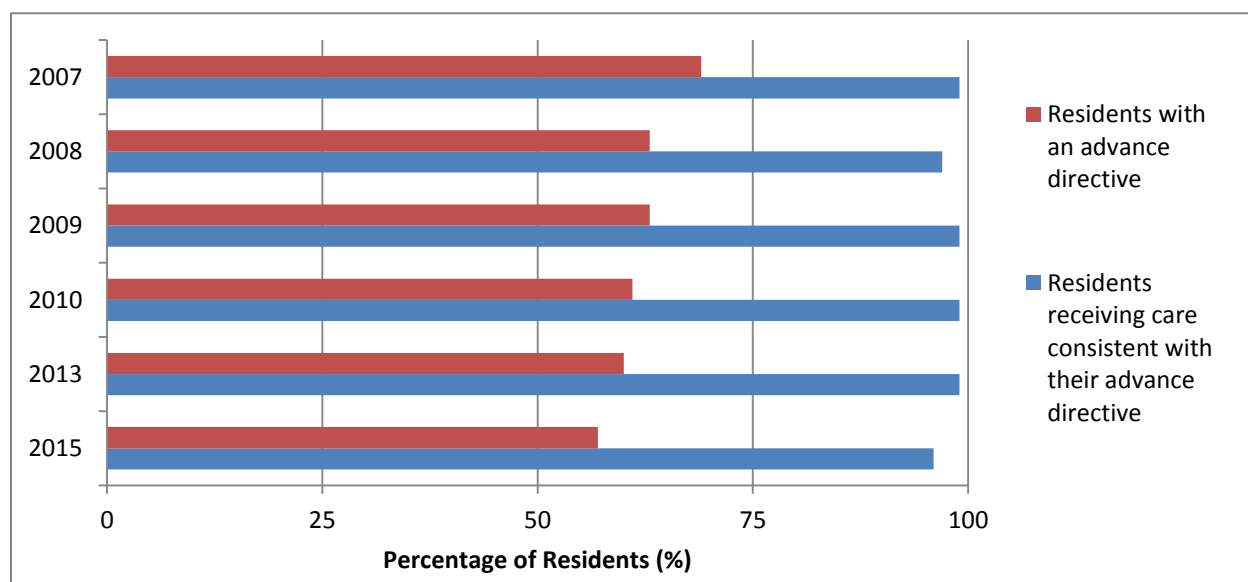
Table 1. Percent of Residents with an Advance Directive and Consistent Care

	2007	2008	2009	2010	2013	2015
Residents who had an advance directive in place	69%	63%	63%	61%	60%	57%
Residents receiving care consistent with their advance directive	99%	97%	99%	99%	99%	96%

⁶ Statistically significant linear trend at $p < 0.1$.

⁷ Statistically significant linear trend at $p < 0.1$.

Figure 1. Percent of Residents with an Advance Directive and Consistent Care



Depression

Depression is estimated to affect nearly half of all nursing facility residents. (Harris-Kojetin, et al, 2013). Because depression often occurs concurrently with other physical and cognitive disorders symptoms may go unrecognized, delaying diagnosis and treatment. Appropriate diagnosis and treatment can significantly improve residents' quality of life.

Antidepressant medications are often the first-line treatment, and while generally effective, antidepressants can have undesirable side effects. Other treatment options include group and/or individual psychotherapy, cognitive-behavioral therapy, and exercise.

Findings

- Residents were more likely to be diagnosed with depression than in previous years.⁸
- Residents were more likely to have on-going assessment of their depressive symptoms.⁹
- Most residents received medication to treat their depressive symptoms.
- Residents were more likely to have improvement in depressive symptoms with treatment.¹⁰

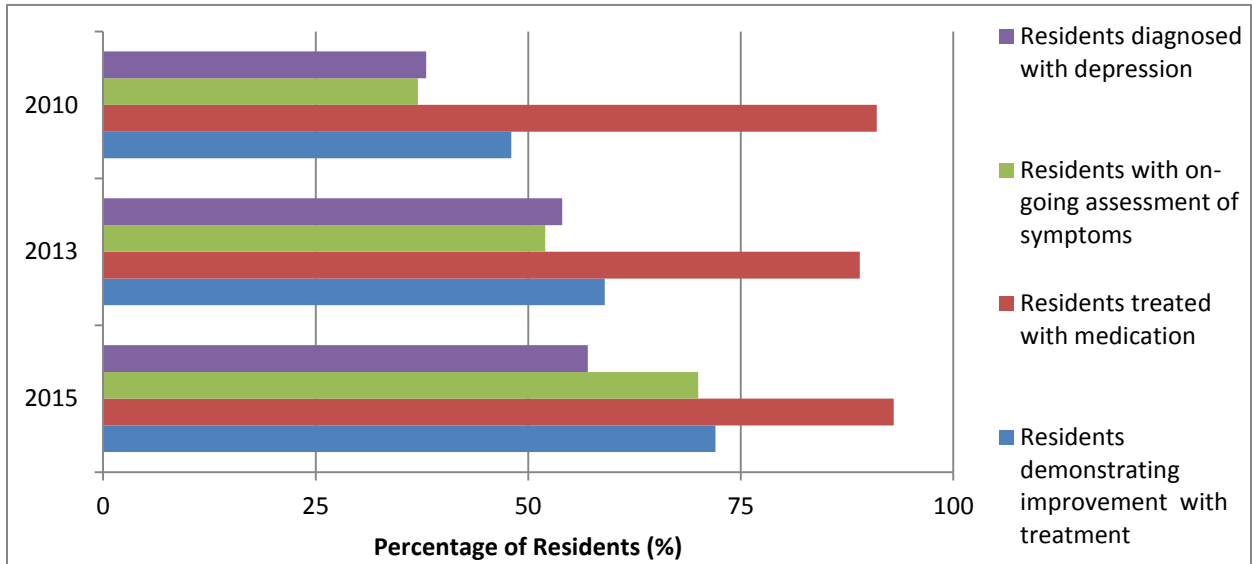
⁸ Statistically significant linear trend at $p < 0.1$.

⁹ Statistically significant linear trend at $p < 0.1$.

Table 2. Percent of Residents with Depression Diagnosis, and Assessment and Treatment

	2010	2013	2015
Residents with a diagnosis of depression	38%	54%	57%
Residents who had on-going assessment of depressive symptoms	37%	52%	70%
Residents with depression, treated with medication	91%	89%	93%
Residents with improvement in depressive symptoms with treatment	48%	59%	72%

Figure 2. Percent of Residents with Depression Diagnosis, and Assessment and Treatment



Diabetes Mellitus

Diabetes is a chronic disease that can lead to serious complications, including vision loss, kidney failure, and amputations. Individuals with diabetes are twice as likely to develop heart disease or have a stroke as those who do not. In 2013, diabetes was the seventh leading cause of death in the U.S. (CDC, *Diabetes at a Glance*, 2016). The financial impact is significant as well; one out of every three Medicare dollars is spent caring for

¹⁰ Statistically significant linear trend at $p < 0.1$.

people with diabetes (American Diabetes Association [ADA], *The Staggering Costs of Diabetes in America*, 2012).

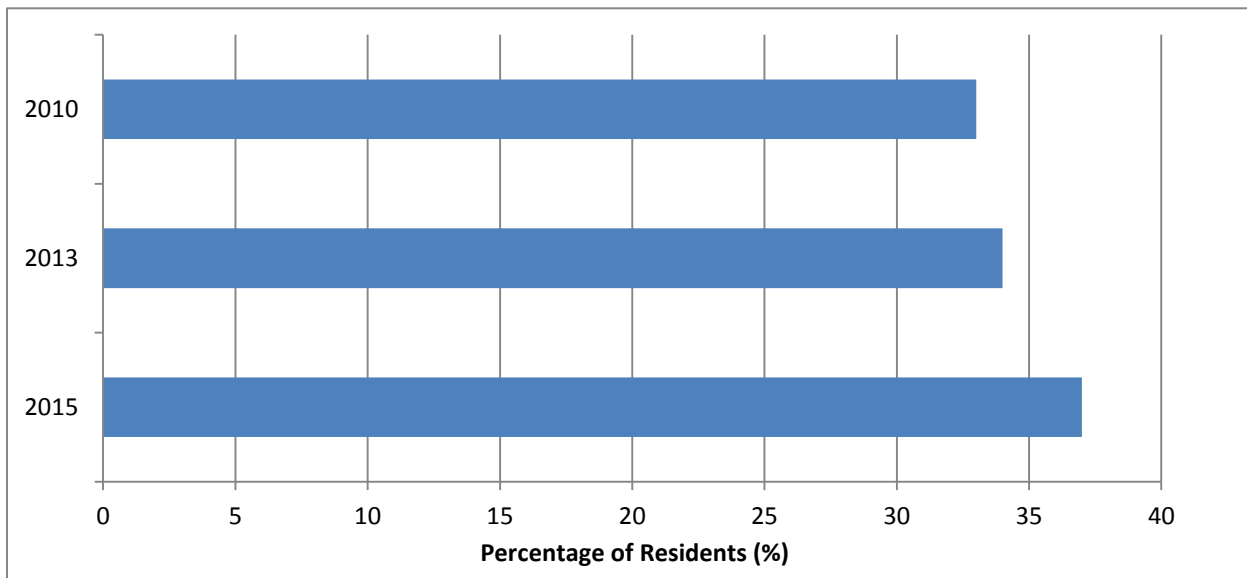
Findings

- The proportion of residents diagnosed with diabetes increased in 2015.¹¹

Table 3. Percent of Residents with Diabetes Diagnosis

	2010	2013	2015
Residents with a diagnosis of diabetes	33%	34%	37%

Figure 3. Percent of Residents with Diabetes Diagnosis



Certain assessments and laboratory tests are recommended to determine how well an individual’s diabetes is controlled, and to identify any evidence of microvascular complications, including a dilated eye exam, a complete foot assessment, blood lipid (cholesterol and triglyceride) levels, and urine protein. The resident’s Hemoglobin A1C should be checked as well (ADA, *Standards of Medical Care*, 2016).

Findings

- Over half of residents diagnosed with diabetes received a foot assessment.
- Less than a third of residents had a comprehensive eye exam conducted.

¹¹ Statistically significant linear trend at $p < 0.1$.

- Fewer residents had received all of the recommended assessments, exams, and lab tests.
- Less than one-half of residents with diabetes had their lipid profile¹² or urine protein¹³ checked.
- Most of the residents had their hemoglobin A1C tested within the previous 12 months.

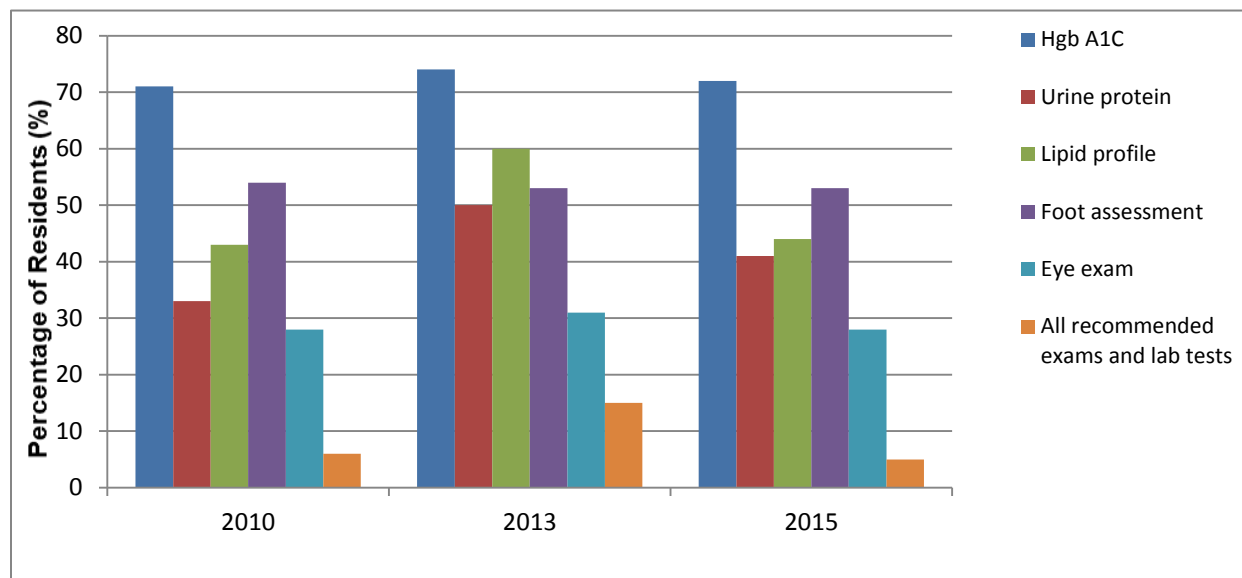
Table 4. Percent of Residents Who Received Recommended Exams, Tests, and Assessments

	2010	2013	2015
Residents with diabetes who had received an eye exam, a foot assessment and all recommended lab tests	6%	15%	5%
Residents with diabetes who had received an eye exam	28%	31%	28%
Residents with diabetes who had received a foot assessment	54%	53%	53%
Residents with diabetes who had a lipid profile completed	43%	60%	44%
Residents with diabetes who had a urine protein completed	33%	50%	41%
Residents with diabetes who had a HgB A1C completed	71%	74%	72%

¹² Statistically significant linear trend at $p < 0.1$.

¹³ Statistically significant linear trend at $p < 0.1$.

Figure 4. Percent of Residents Who Received Recommended Exams, Tests, and Assessments



Treatment for diabetes varies according to the needs of the resident. Available treatments include dietary management, oral medications, and insulin therapy. Sliding scale is a form of insulin therapy; giving a prescribed dose of insulin based on the capillary blood sugar level at a specific time, usually with no consideration to meal intake. Sliding scale dosing is an ineffective way to manage diabetes, but is still frequently used (AMDA-The Society for Post-Acute and Long-term Care Medicine, *Choosing Wisely: Don't Use Sliding Scale Insulin for Long-Term Diabetes Management for Individuals Residing in Nursing Homes*, 2013).

Findings

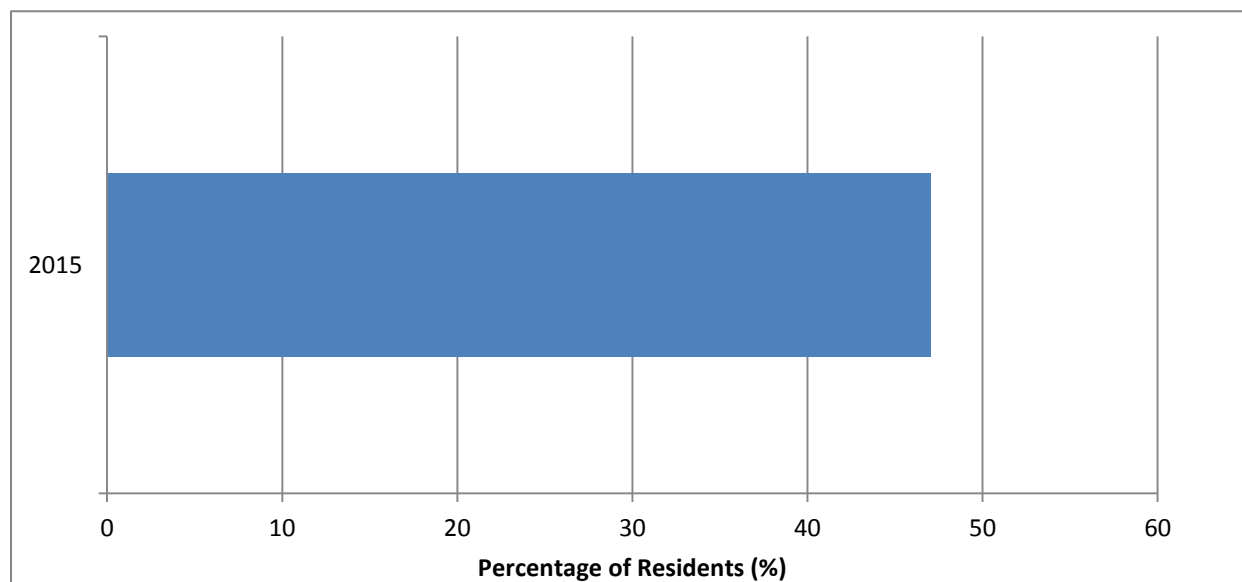
- Nearly one-half, 47 percent, of the residents diagnosed with diabetes had orders for sliding scale insulin.¹⁴

Table 5. Percent of Residents with Physician Orders for Sliding Scale Insulin

	2015
Residents with a diagnosis of diabetes and an order for sliding scale insulin	47%

¹⁴ The wording of the question and answer options were revised for 2015, preventing comparison to previous year's data.

Figure 5. Percent of Residents with Physician Orders for Sliding Scale Insulin



Fall Risk Management Practices

Falls are a leading cause of fatal and non-fatal injuries in older adults. In 2014, around 2.8 million people over the age of 65 were treated in hospital emergency rooms for fall-related injuries, and approximately 800,000 were hospitalized for further treatment. About 27,000 older adults died as a result of fall-related injuries (Bergen G, Stevens M, Burns E, *Falls and Fall Injuries Among Adults Aged ≥65 Years - United States, 2014*).

Residents often have multiple risk factors for falls, including medications, mobility or functional deficits (such as lower extremity weakness and impaired balance), and changes in cognition. A comprehensive fall risk assessment will identify a resident’s specific risk factors and guide staff as they develop a care plan to address those risk factors.

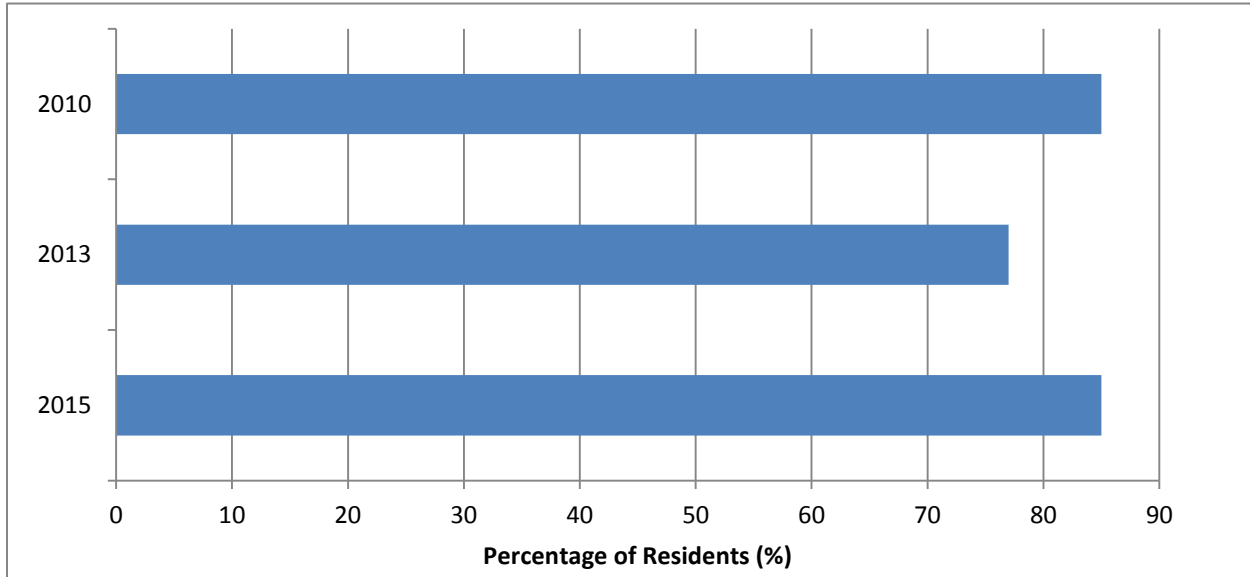
Findings

- Residents were usually assessed for fall risk within 24 hours of admission to the facility.

Table 6. Percent of Residents Assessed for Fall Risk within 24 Hours of Admission

	2010	2013	2015
Residents assessed for fall risk within 24 hours of admission	85%	77%	85%

Figure 6. Percent of Residents Assessed for Fall Risk within 24 Hours of Admission



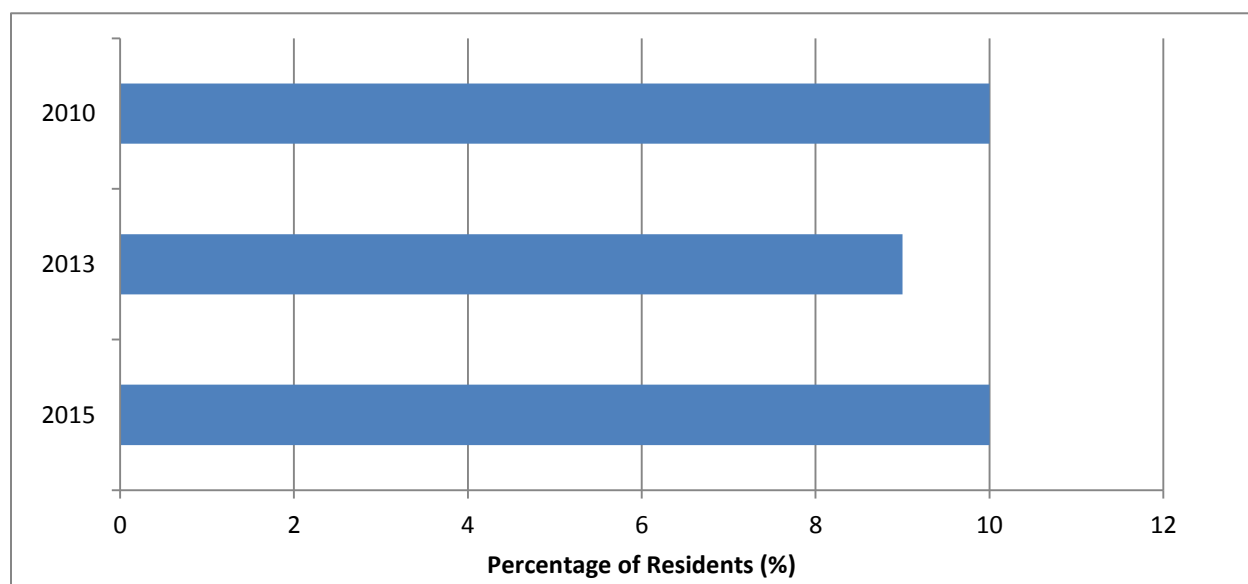
Findings:

- The percent of residents who experienced at least one fall remained relatively stable relative to previous measurement years.

Table 7. Percent of Residents Experiencing at Least One Fall

	2010	2013	2015
Residents who experienced at least one fall in the previous 30 days	10%	9%	10%

Figure 7 Percent of Residents Experiencing at Least One Fall



While a fall does not always result in an injury, older adults are at higher risk for fall-related injuries, including fractures and head trauma. Certain fractures, including hip and spinal fractures, can significantly increase the risk of long-term impairment and death. Older adults in general have an increased risk of death in the first year after a hip fracture, and the mortality risk increases about four percent each year thereafter (Schnell S., Friedman SM., et al, *The 1-Year Mortality of Patients Treated in a Hip Fracture Program for Elders*, 2010).

Findings

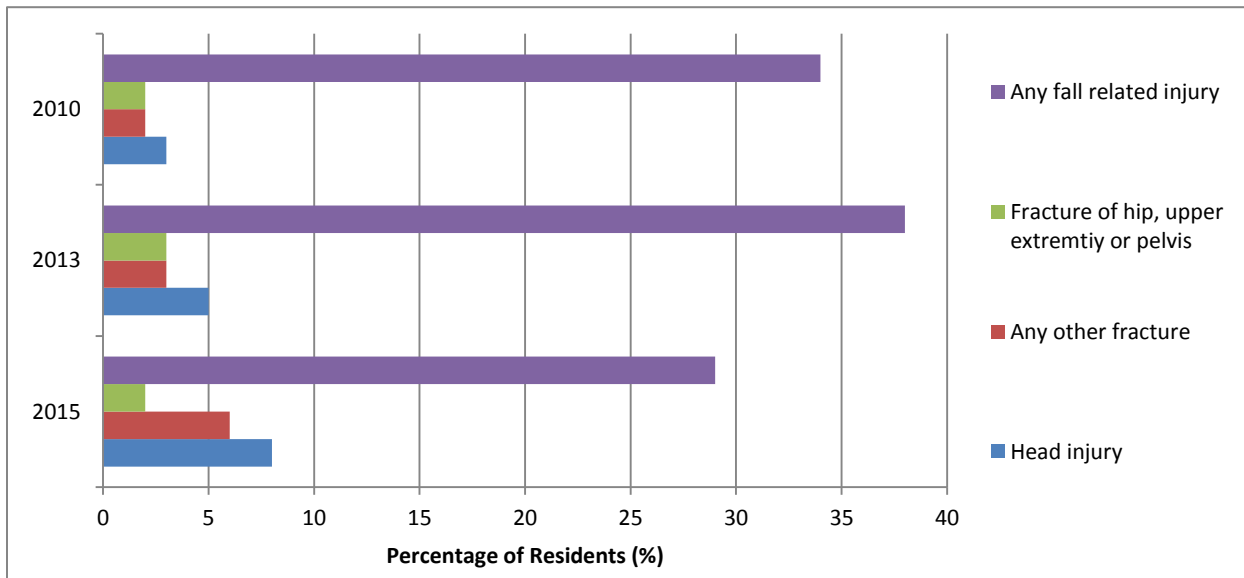
- Residents were less likely to be injured as a result of a fall, and the percent of residents who experienced a fracture of the hip, upper extremity, or pelvis decreased.
- The percent of residents who had a fall-related fracture (other than hip, upper extremity, or pelvic fracture) or head injury increased.

Table 8. Percent of Residents with Fall-related Injury

	2010	2013	2015
Of residents who had fallen, those with any injury	34%	38%	29%
Of residents who had fallen, those with a fractured hip, upper extremity, or pelvis	2%	3%	2%

	2010	2013	2015
Of residents who had fallen, those with any other fracture	2%	3%	6%
Of residents who had fallen, those with a head injury	3%	5%	8%

Figure 8. Percent of Residents with Fall-related Injury



Immunizations

Influenza (flu) is a viral infection that is easily spread from person to person. The flu leads to nearly 200,000 hospitalizations and an average of 23,607 deaths annually in the United States. In a typical flu season, up to 90 percent of flu-related deaths are in people over the age of 65 (CDC, *Epidemiology and Prevention of Vaccine-Preventable Diseases 13th Edition*, 2015).

Pneumococcal pneumonia is a common bacterial infection, leading to nearly 175,000 hospitalizations each year in the U.S. The overall death rate for pneumococcal pneumonia is an estimated 5 to 7 percent; however, in older adults the fatality rate can reach over 50 percent (CDC, 2015).

Nursing facility residents should receive the flu vaccine on an annual basis. Residents who have never received a pneumococcal vaccine should receive the 13-valent pneumococcal conjugate vaccine (PCV 13 or Prevnar 13),

followed by a dose of the 23-valent pneumococcal polysaccharide vaccine (PPSV 23). If the resident has already received the PPSV 23, he or she should then be given a dose of the PCV 13 at least one year later (CDC, *Recommended Immunizations for Adults by Age, 2016*).

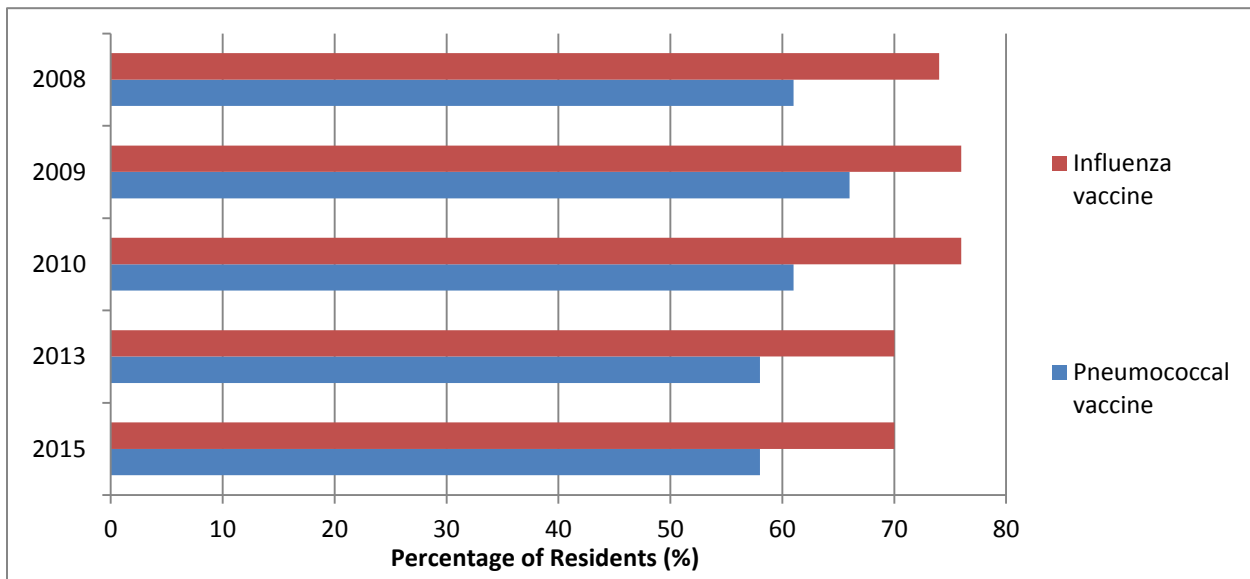
Findings

- Residents were less likely to receive the influenza vaccine than in previous years.¹⁵
- Residents were less likely to receive the pneumococcal vaccine than in previous years.¹⁶

Table 9. Percent of Residents Receiving Influenza and Pneumococcal Vaccines

	2008	2009	2010	2013	2015
Residents who received the influenza vaccine	74%	76%	76%	70%	70%
Residents who received the pneumococcal vaccine	61%	66%	61%	58%	58%

Figure 9. Percent of Residents Receiving Influenza and Pneumococcal Vaccines



¹⁵ Statistically significant linear trend at $p < 0.1$.

¹⁶ Statistically significant linear trend at $p < 0.1$.

Infectious Illnesses

As individuals age, changes in immune response occur; in addition, nursing facility residents often have multiple chronic medical conditions that can affect their immune systems, increasing the risk of developing an infection. Between one and three million serious infections occur each year in long-term care facilities, with as many as 380,000 deaths annually related to infection (CDC, *Nursing Homes and Assisted Living (Long-term Care Facilities [LTCFs])*, 2016).

Findings

- Residents were more likely to have a UTI than in previous years.¹⁷
- Residents were more likely to have a skin or wound infection than in previous years.¹⁸
- A larger proportion of residents had been diagnosed with pneumonia.
- Residents were rarely diagnosed with bacterial diarrhea.

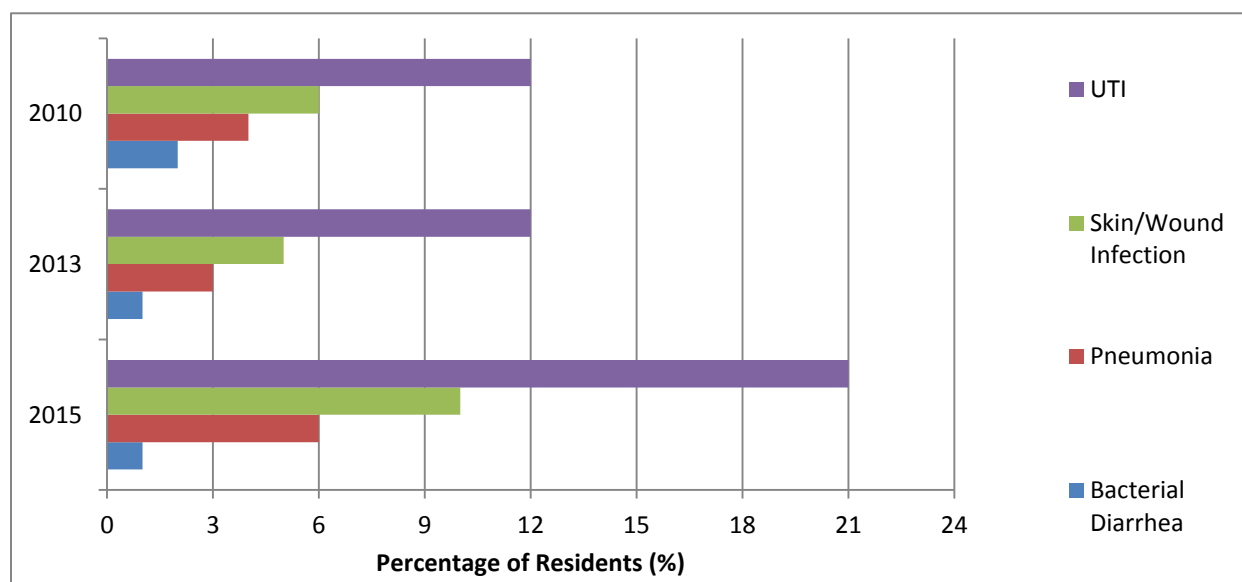
Table 10. Percent of Residents with UTI, Skin Wound, Infection, or Bacterial Diarrhea

	2010	2013	2015
Residents diagnosed with a UTI in the previous 30 days	12%	12%	21%
Residents diagnosed with a skin or wound infection in the previous 30 days	6%	5%	10%
Residents diagnosed with pneumonia in the previous 30 days	4%	3%	6%
Residents diagnosed with bacterial diarrhea in the previous 30 days	2%	1%	1%

¹⁷ Statistically significant linear trend at $p < 0.1$.

¹⁸ Statistically significant linear trend at $p < 0.1$.

Figure 10. Percent of Residents with UTI, Infection, or Bacterial Diarrhea



Antibiotic resistance is an emerging public health threat, related to the widespread use of antibiotics. Antibiotics are among the most commonly used medications, but are often prescribed inappropriately, including for the treatment of non-bacterial illnesses, incorrect dosages, or when used for longer than necessary. When antibiotics are used inappropriately, organisms can become resistant to treatment and can be transmitted by the person or environment to others (CDC, *Antibiotic/Antimicrobial Resistance*, 2016).

Findings

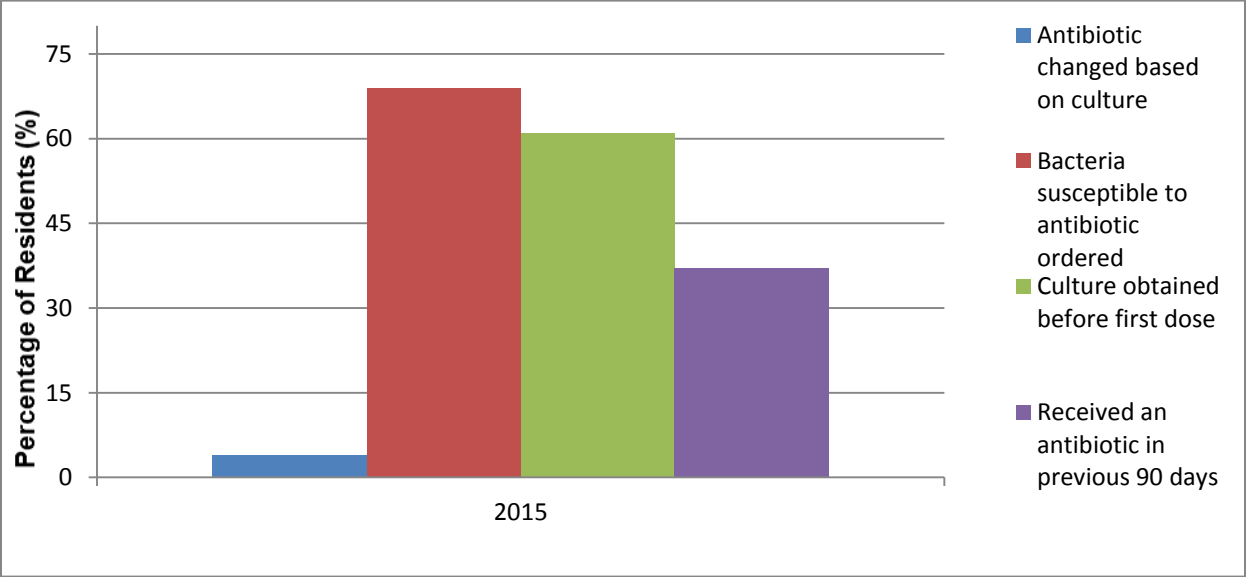
- Over one-third of residents received an antibiotic medication in the previous 90 days.
- A culture was often, but not always, obtained before initiating antibiotics.
- When cultures were obtained, the organism identified was often susceptible to the antibiotic ordered.
- Antibiotic orders were not usually revised when the cultures identified bacteria resistant to the original antibiotic prescribed.

Table 11. Percent of Residents Receiving Antibiotics and Related Services

	2015
Residents who received an antibiotic within the previous 90 days	37%
Residents who had a culture obtained prior to the first dose of an antibiotic	61%

2015	
Residents whose cultures identified an organism susceptible to the antibiotic ordered	69%
Residents whose antibiotic orders were changed when the culture identified bacteria resistant to the initial antibiotic prescribed	4%

Figure 11. Percent of Residents Receiving Antibiotics and Related Services



Medication Practices and Safety

In the United States, people aged 65 and older make up approximately 20 percent of the population, but account for around 33 percent of medication use (CMS, *National Health Expenditure Data: Health Expenditures by Age and Gender*, 2012).

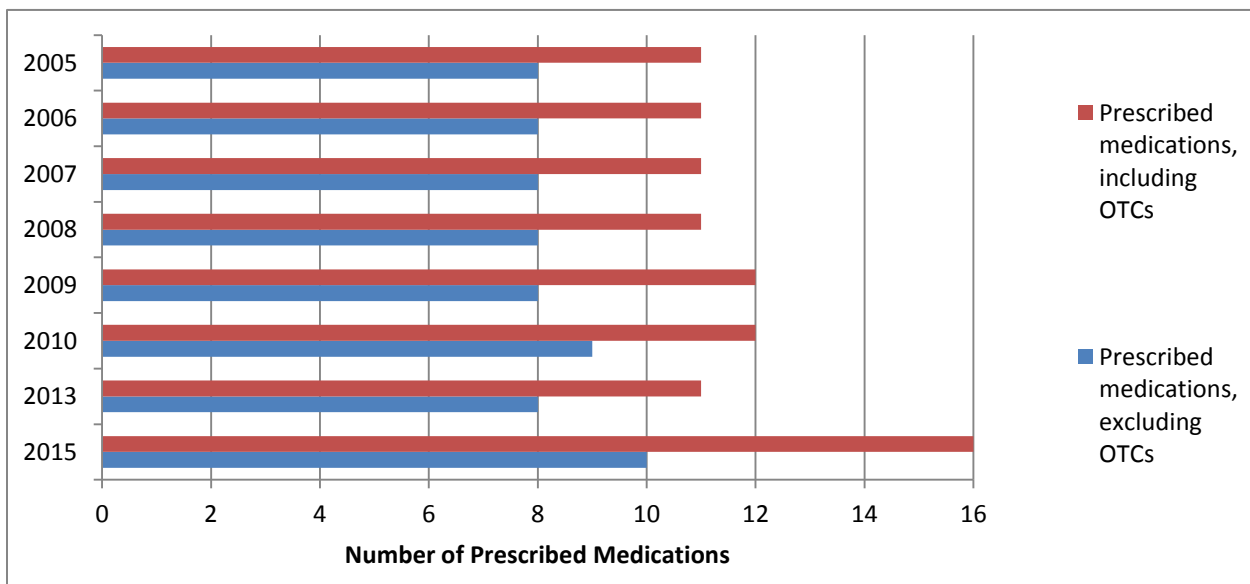
Findings

- Residents were prescribed an average of 16 medications, including over-the-counter (OTC) drugs.
- Residents were prescribed an average of 10 medications, when OTC medications were excluded.

Table 12. Average Number of Medications Prescribed Per Resident

	Average number of prescribed medications per resident, including OTCs	Average number of prescribed medications per resident, excluding OTCs
2005	11	8
2006	11	8
2007	11	8
2008	11	8
2009	12	8
2010	12	9
2013	11	8
2015	16	10

Figure 12. Average Number of Prescribed Medications Per Resident



As people age, changes in muscle mass, a decrease in the percentage of body fat, and impairments in liver and kidney function can affect the way medications are metabolized and excreted from the body. When older adults take multiple medications (polypharmacy), they are at higher risk for drug interactions. AMDA maintains a list of potential drug interactions that could be especially harmful for nursing home residents (AMDA, *Top10 Particularly Dangerous Drug Interactions in PA/LTC*, 2016).

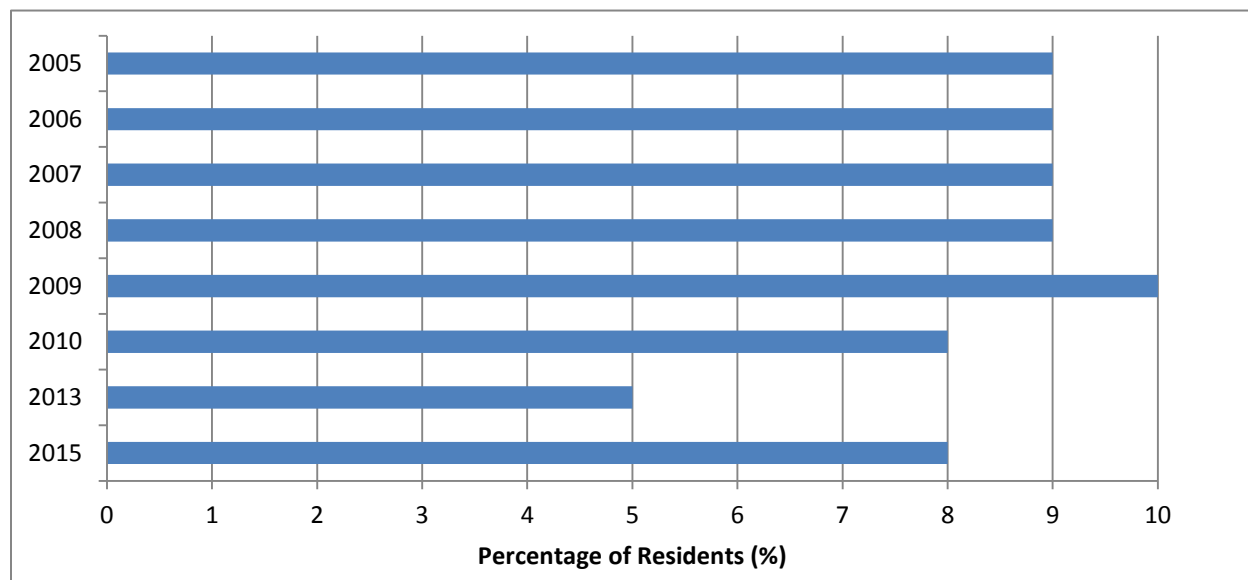
Findings

- The most commonly identified medication combination on the Top 10 list were ACE inhibitors (a type of blood pressure medication) with a potassium supplement.
- Eight percent of residents in the sample had prescriptions for an ACE inhibitor and a potassium supplement.

Table 13. Percent of Residents Prescribed an ACE Inhibitor and Potassium Supplement

Residents prescribed an ACE inhibitor and a potassium supplement	
2005	9%
2006	9%
2007	9%
2008	9%
2009	10%
2010	8%
2013	5%
2015	8%

Figure 13 Percent of Residents Prescribed an ACE Inhibitor and Potassium Supplement



Nutrition, Unintended Weight Changes, and Hydration

In an older adult, unplanned changes in weight may reflect an underlying medical condition. Healthy body weight is defined as a body mass index (BMI) of 18.5 to 24.9 kg/m². A BMI of 25-29.9 kg/m² is considered overweight and a BMI of 30 or greater is considered obese. Weight loss is considered significant when there is more than a 5 percent loss of body weight in a 30 day period, or more than 10 percent loss in 180 days. Significant weight gain occurs when a resident's BMI increases from overweight to obese (QMP, *Healthy Weight Management*, 2016).

Risk factors for unintended weight changes include, but are not limited to:

- chronic medical conditions, such as diabetes, cardiovascular disease or cancer;
- medications;
- oral factors, such as dental disease or tooth loss; and
- physical inactivity and functional impairments.

Risk factors for dehydration are similar, as well as acute illnesses with fever, vomiting, and diarrhea. Residents who need assistance with eating and drinking are also at risk for dehydration. Severe dehydration can lead to low

blood pressure, rapid heartbeat, confusion, loss of consciousness, and even death (QMP, *Healthy Hydration*, 2016).

Findings

- Residents were less likely to have had a comprehensive nutritional assessment completed.¹⁹
- Residents were more likely to be assessed for weight loss risk factors.
- Most of the residents in the sample had been assessed for weight gain risk factors.²⁰
- Residents were more likely to be assessed for dehydration risk factors.²¹

Table 14. Percent of Residents Who Received Nutritional Assessments

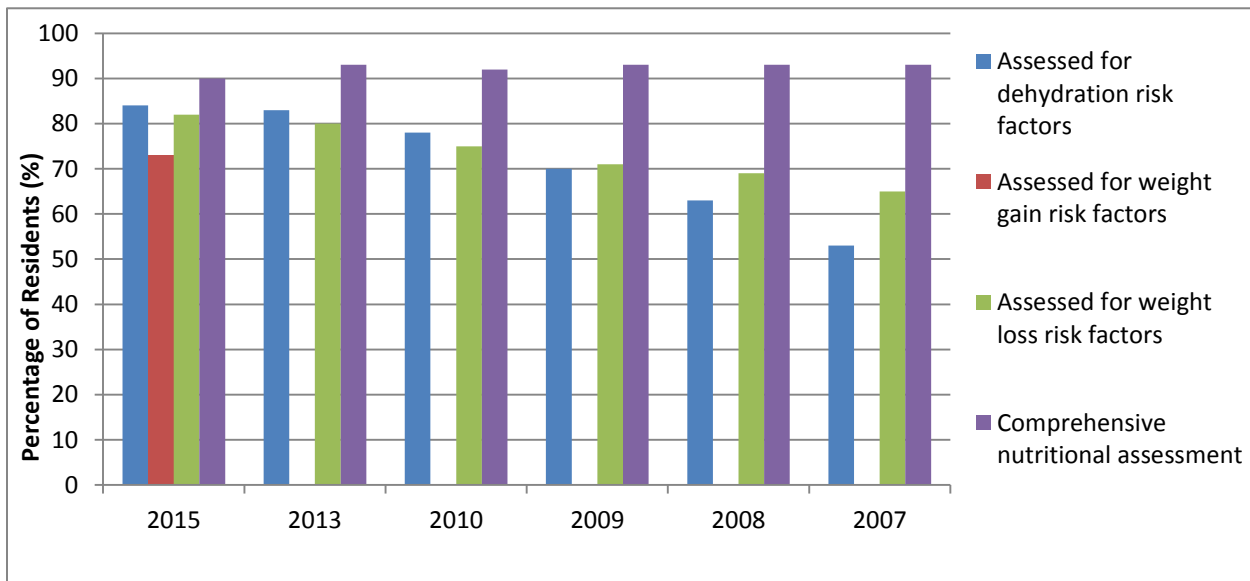
	2007	2008	2009	2010	2013	2015
Residents who had a comprehensive nutritional assessment	93%	93%	93%	92%	93%	90%
Residents who were assessed for weight loss risk factors	65%	69%	71%	75%	80%	82%
Residents who were assessed for weight gain risk factors	-	-	-	-	-	73%
Residents who were assessed for dehydration risk factors	53%	63%	70%	78%	83%	84%

¹⁹ Statistically significant linear trend at $p < 0.1$.

²⁰ New measure for 2015.

²¹ Statistically significant linear trend at $p < 0.1$

Figure 14. Percent of Residents Who Received Nutritional Assessments



Findings

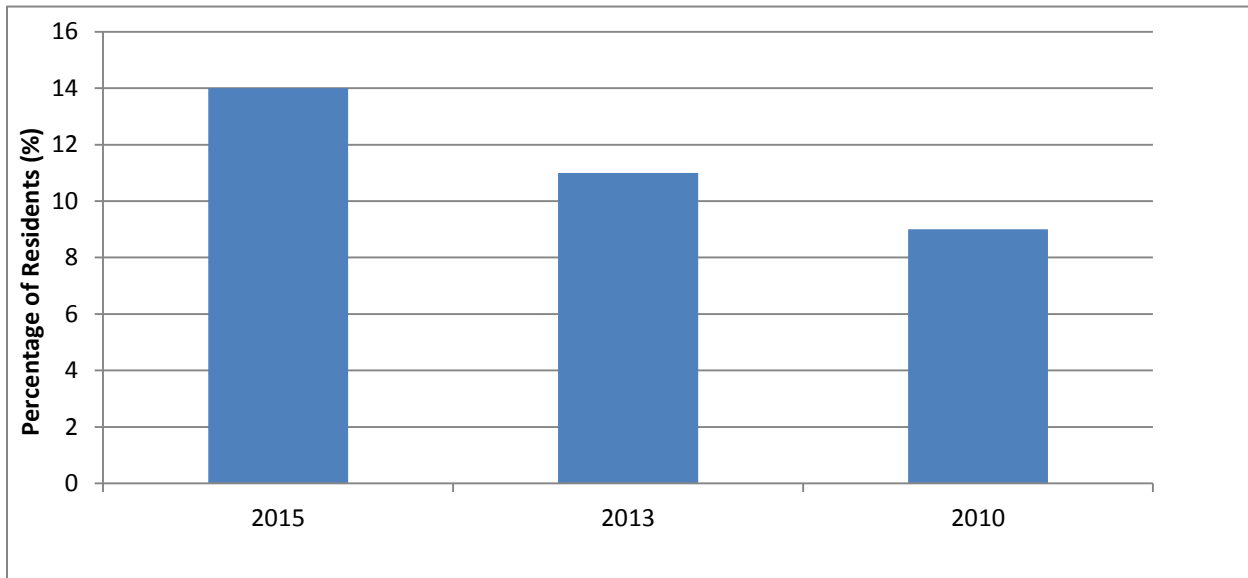
- The percent of residents who had an unintentional 10 percent change in weight over the prior 6 months increased.²²

Table 15. Percent of Residents with Unintentional 10 Percent Change in Weight over the Prior 6 Months

	2010	2013	2015
Residents with an unintentional weight change of 10 percent in the previous 6 months	9%	11%	14%

²² Statistically significant linear trend at $p < 0.1$

Figure 15. Percent of Residents with Unintentional 10 Percent Change in Weight over the Prior 6 Months



Pain Assessment and Control

Older adults often experience pain; however, pain is not a normal part of aging. It is estimated that more than 50 percent of those aged 65 or older experience “bothersome” pain (Patel KV., Guralnik JM., et al., *Prevalence and Impact of Pain Among Older Adults in the United States: Findings from the 2011 National Health and Aging Trends Study*, 2013). Inadequately treated pain can lead to sleep disturbances, changes in cognition, impaired physical function, and social isolation. Residents with dementia may have trouble reporting pain, increasing the risk for under-treatment of pain and inappropriate use of antipsychotic medications.

Pain is subjective; there is no objective measure that can be used to determine the level of pain an individual is experiencing. Therefore, pain is present when the resident says it is and is as severe as stated by the resident. A pain management plan must be based on a thorough assessment and then individualized to meet the resident’s goals for treatment.

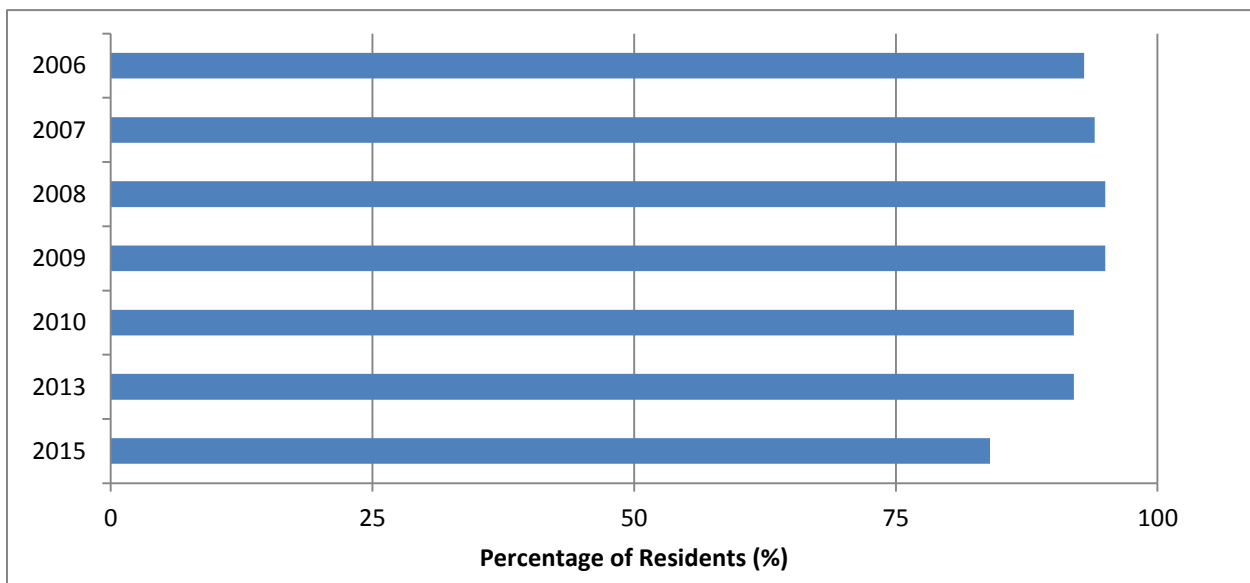
Findings

- Residents were less likely to be satisfied with their level of pain control in the 24 hours prior to being interviewed.²³

Table 16. Percent of Residents Satisfied with Level of Pain Control

	2006	2007	2008	2009	2010	2013	2015
Residents expressing satisfaction with level of pain control in previous 24 hours	93%	94%	95%	95%	92%	92%	84%

Figure 16. Percent of Residents Satisfied with Level of Pain Control



Pain medication is often the first line of treatment; however, non-pharmacological interventions can be an important part of a resident's pain management program. Non-pharmacological therapies can include, but are not limited to, biofeedback, massage therapy, physical therapy, and cognitive behavioral therapy.

²³ Statistically significant linear trend at $p < 0.1$.

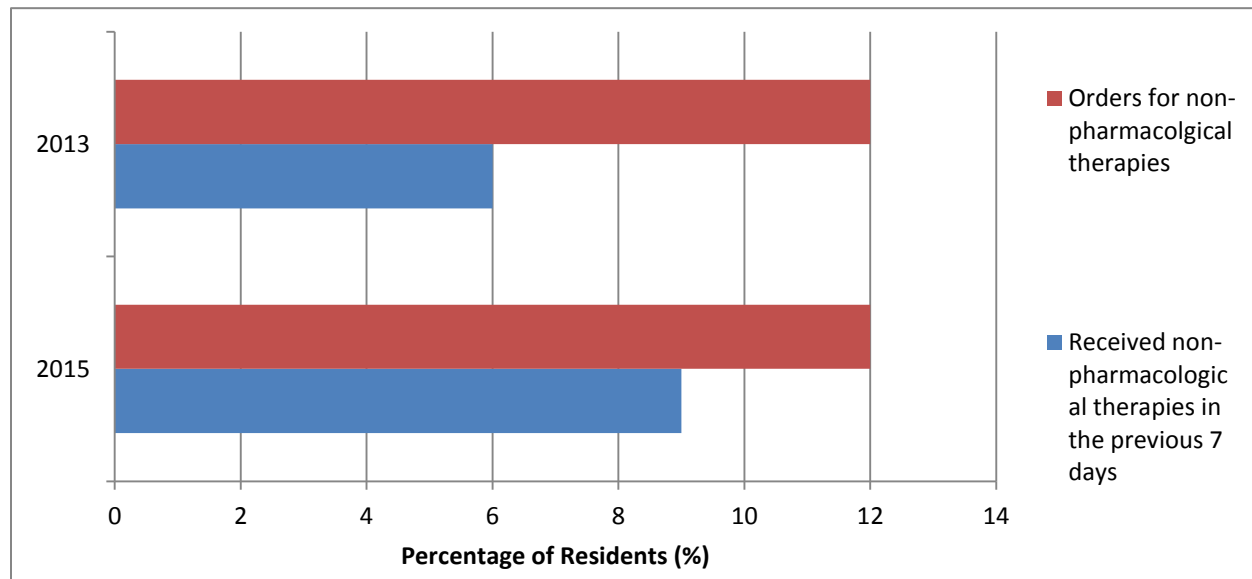
Findings

- Non-pharmacological therapies were rarely a part of residents' pain management plans.
- When residents had orders for non-pharmacological therapies, they were used more frequently than in 2013.²⁴

Table 17. Percent of Residents with Orders for Non-pharmacological Pain Therapies

	2013	2015
Residents with orders for non-pharmacological therapies for pain management	12%	12%
Residents with orders for non-pharmacological therapies, who received those interventions	6%	9%

Figure 17. Percent of Residents with Orders for Non-pharmacological Pain Therapies



Pressure Injuries

A pressure injury (previously called a pressure ulcer) is localized damage to the skin and underlying soft tissue. Pressure injuries usually occur over a bony prominence, such as the tailbone, hips, or shoulders, and may also be related to a medical or other device. The pressure injury can present as

²⁴ Statistically significant linear trend at $p < 0.1$.

intact skin or an open ulcer, and the individual may experience pain related to the injury. Pressure injuries occur as a result of intense and/or prolonged pressure or pressure in combination with shear. Many different factors can impact how the soft tissue is affected by pressure and shear, including a resident’s nutritional status and other medical conditions.

In 2016, the National Pressure Ulcer Advisory Panel (NPUAP) released an update to the staging system. With that update, NPUAP included a change in terminology from “pressure ulcer” to “pressure injury.” This change more accurately reflects the current research into the how pressure injuries develop, and recognizes that tissue injury may be present even when the skin is intact (NPUAP, Pressure Injury Stages, 2016).

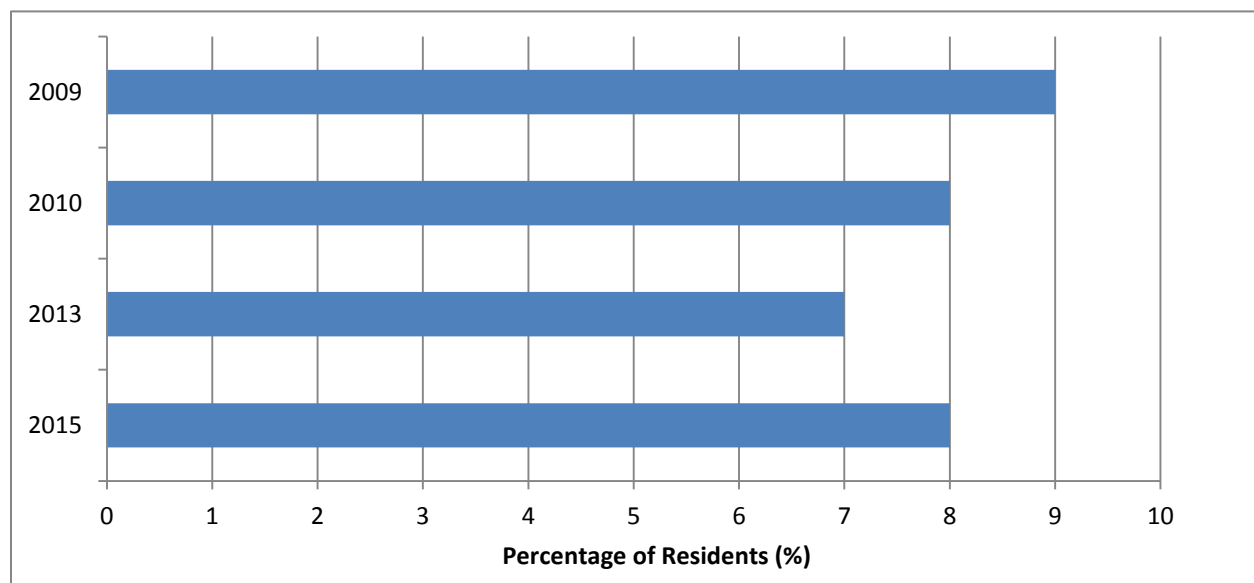
Findings

- The percent of residents with a pressure injury has remained relatively stable over time.

Table 18. Percent of Residents with a Pressure Injury, Regardless of Stage

	2009	2010	2013	2015
Residents with a pressure injury	9%	8%	7%	8%

Figure 18. Percent of Residents with a Pressure Injury, Regardless of Stage



Pressure injuries are staged or categorized by the degree of injury to the skin and underlying tissues, ranging from reddened, but intact skin (Stage 1) to an open wound that exposes bone and/or cartilage (Stage 4). In some situations, the degree of injury may be difficult to assess; those wounds are categorized as Unstageable or as a Deep Tissue Injury.

Findings

Residents may have had more than one pressure ulcer; this represents the highest stage present at the time of data collection. The distribution of pressure injuries by stage was:

- 11 percent Stage 1
- 40 percent Stage 2²⁵
- 14 percent Stage 3
- 12 percent Stage 4
- 17 percent Unstageable pressure injuries
- 7 percent Deep tissue injuries²⁶

Table 19. Percent of Residents with Pressure Injury, by Highest Stage

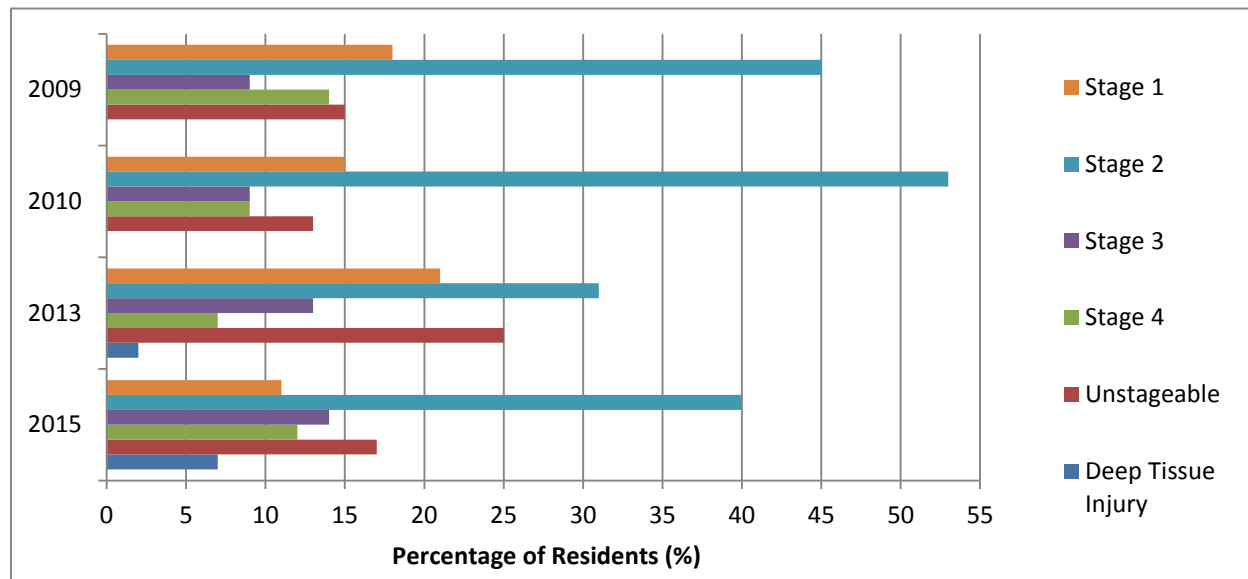
	2009	2010	2013	2015
Residents with a pressure injury, percentage with a Stage 1 pressure injury	18%	15%	21%	11%
Residents with a pressure injury, percentage with a Stage 2 pressure injury	45%	53%	31%	40%
Residents with a pressure injury, percentage with a Stage 3 pressure injury	9%	9%	13%	14%
Residents with a pressure injury, percentage with a Stage 4 pressure injury	14%	9%	7%	12%
Residents with a pressure injury, percentage with an Unstageable pressure injury	15%	13%	25%	17%

²⁵ Statistically significant linear trend at $p < 0.1$.

²⁶ Statistically significant linear trend at $p < 0.1$.

	2009	2010	2013	2015
Of residents with a pressure injury, percentage with a Deep Tissue Injury	n/a	n/a	2%	7%

Figure 19. Percent of Residents with Pressure Injury, by Highest Stage



Psychotropic Medications

Psychotropic medications act on the central nervous system, causing changes in mood, cognition, or consciousness. Antipsychotics, antidepressants, anti-anxiety medications (anxiolytics), sedatives, and hypnotics are all examples of psychotropic medications.

Findings²⁷

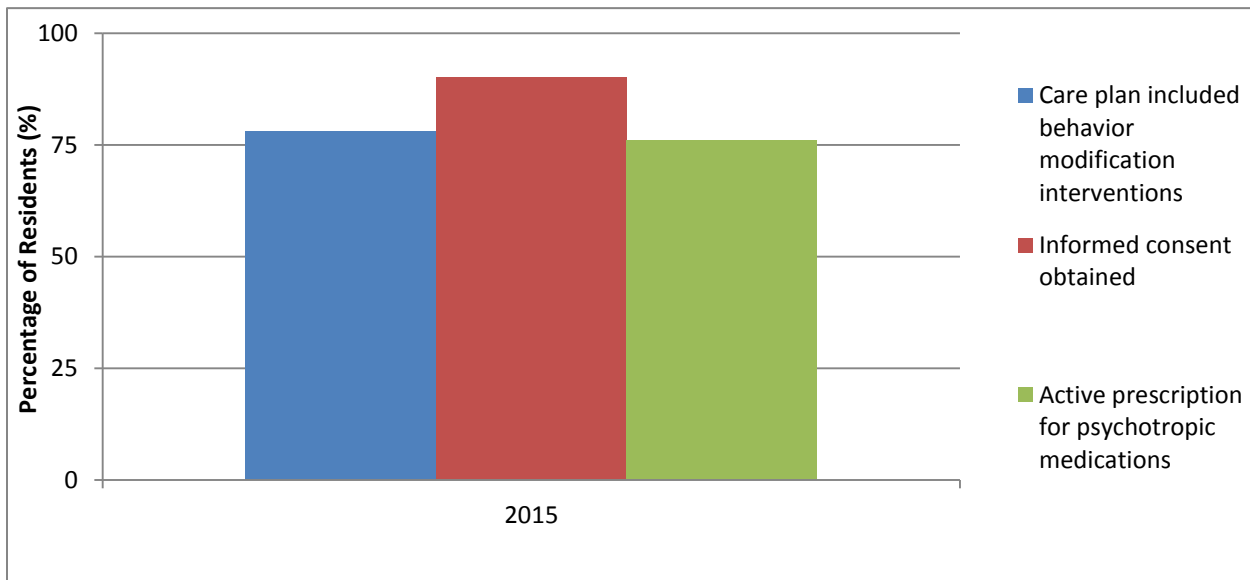
- The majority of residents in the sample had an active psychotropic medication prescription.
- Informed consent was usually obtained prior to administration of the first dose of a psychotropic medication.
- Care plans for residents receiving psychotropic medications often included behavior modification interventions addressing the specific behaviors for which the medications were prescribed.

²⁷ New measures for 2015.

Table 20. Percent of Residents with Active Psychotropic Medication Prescriptions

	2015
Residents who had an active prescription for a psychotropic medication	76%
Residents with an active prescription for a psychotropic medication, and who gave informed consent prior to administering the first dose (resident or responsible party)	90%
Residents with an active prescription for a psychotropic medication, and whose care plan included behavior modification interventions to address specific behaviors for which the medications were prescribed	78%

Figure 20. Percent of Residents with Active Psychotropic Medication Prescriptions



Antipsychotic Medications

Antipsychotic medications are those used for the treatment of specific psychiatric disorders such as schizophrenia or bipolar disorder.

In 2005, the FDA issued a “black box warning” (the strongest FDA warning) noting an increased risk of death in older adults with dementia when taking atypical (or second generation) antipsychotics such as risperidone, olanzapine, or quetiapine. In 2008, the warning was expanded to include

typical (or first generation) antipsychotics including haloperidol, chlorpromazine, and loxapine.

In 2012, CMS launched the *National Partnership to Improve Dementia Care in Nursing Homes*. A goal of the partnership was reducing inappropriate use of antipsychotic medications. Antipsychotic medications have often been prescribed to manage dementia-related behaviors and are not an appropriate of FDA-approved therapy or intervention for treating behavioral or psychological symptoms of dementia.

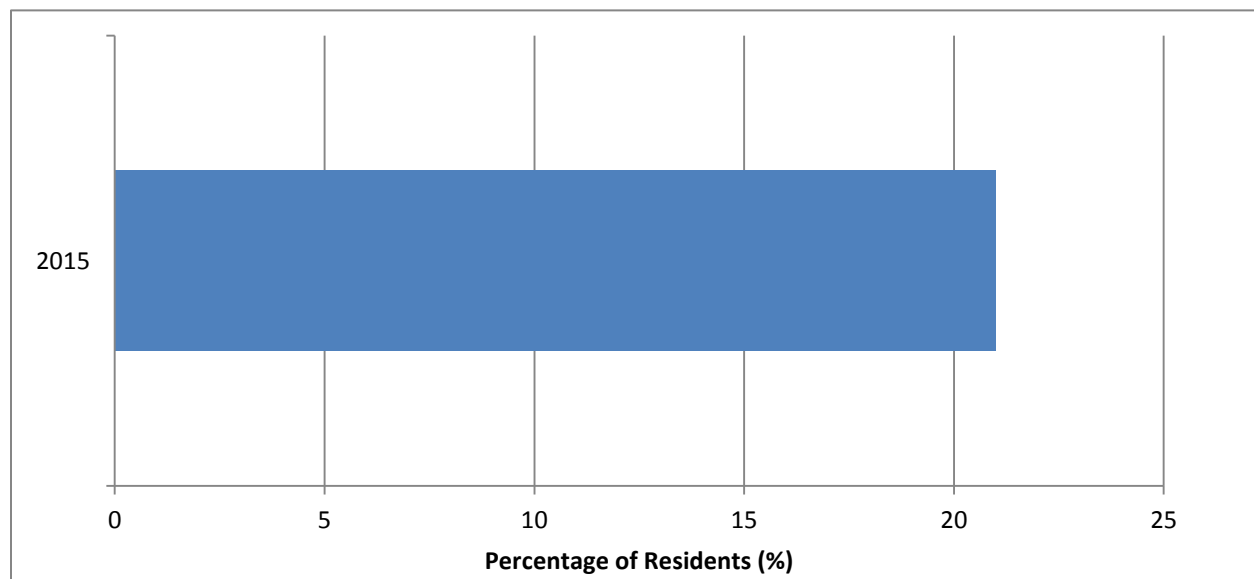
Findings

- 21 percent of residents were receiving at least one antipsychotic medication.

Table 21. Percent of Residents Receiving at Least One Antipsychotic Medication

	2015
Residents who received at least one antipsychotic medication	21%

Figure 21. Percent of Residents Receiving at Least One Antipsychotic Medication



Anti-anxiety Medications

Anxiety is a general term that covers a number of psychiatric disorders, including generalized anxiety disorder, panic disorder, obsessive-compulsive disorder, and post-traumatic stress disorder. An estimated 15.3 percent of adults over 60 have been diagnosed with an anxiety disorder, with women more likely to be affected than men (Tampi R., et al., *Anxiety Disorders in Late Life: A Comprehensive Review*. 2014).

Findings

- Residents were more likely to be diagnosed with an anxiety disorder than in previous years.²⁸
- Residents diagnosed with an anxiety disorder were more likely to have on-going assessments (at least every two weeks) to evaluate the goals of therapy.²⁹

Table 22. Percent of Residents with an Anxiety Disorder and On-going Assessment

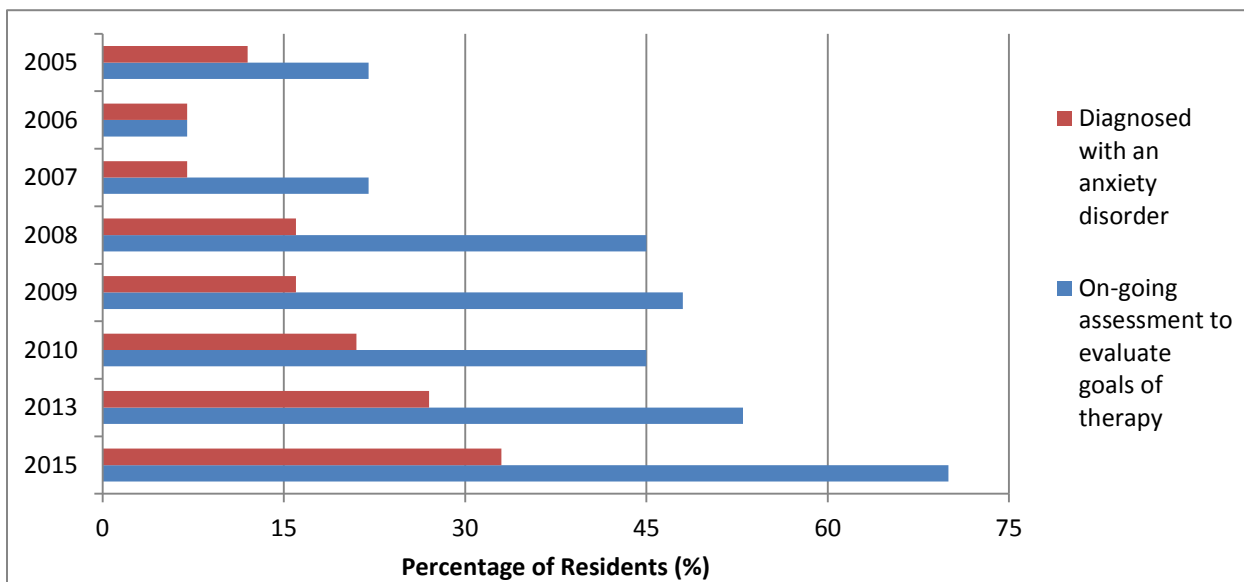
	Residents diagnosed with an anxiety disorder	Residents with an anxiety disorder and on-going assessment to evaluate the goals of therapy
2005	12%	22%
2006	7%	7%
2007	7%	22%
2008	16%	45%
2009	16%	48%
2010	21%	45%
2013	27%	53%

²⁸ Statistically significant linear trend at $p < 0.1$.

²⁹ Statistically significant linear trend at $p < 0.1$.

	Residents diagnosed with an anxiety disorder	Residents with an anxiety disorder and on-going assessment to evaluate the goals of therapy
2015	33%	70%

Figure 22. Percent of Residents with an Anxiety Disorder and On-going Assessment



Medications are often prescribed in the treatment of an anxiety disorder, but may not always be the best choice as the primary treatment for nursing facility residents. These individuals tend to have multiple medical conditions and receive a number of medications, increasing the potential for adverse drug reactions. Non-pharmaceutical treatments, including psychotherapy, have been found to be useful in treating anxiety disorders (National Institute of Mental Health, *Anxiety Disorders*, 2016).

The percent of residents diagnosed with an anxiety disorder was based on NFQR 2015 data, while the data on anti-anxiety medication usage was based on information nursing facilities reported to CMS. The data, methodology, and sample population were different for the percent diagnosed with an anxiety disorder and those receiving anti-anxiety medications. Given the different methodology and sampling techniques used by each, no inferences should be drawn between Figures 22 and 23.

Findings

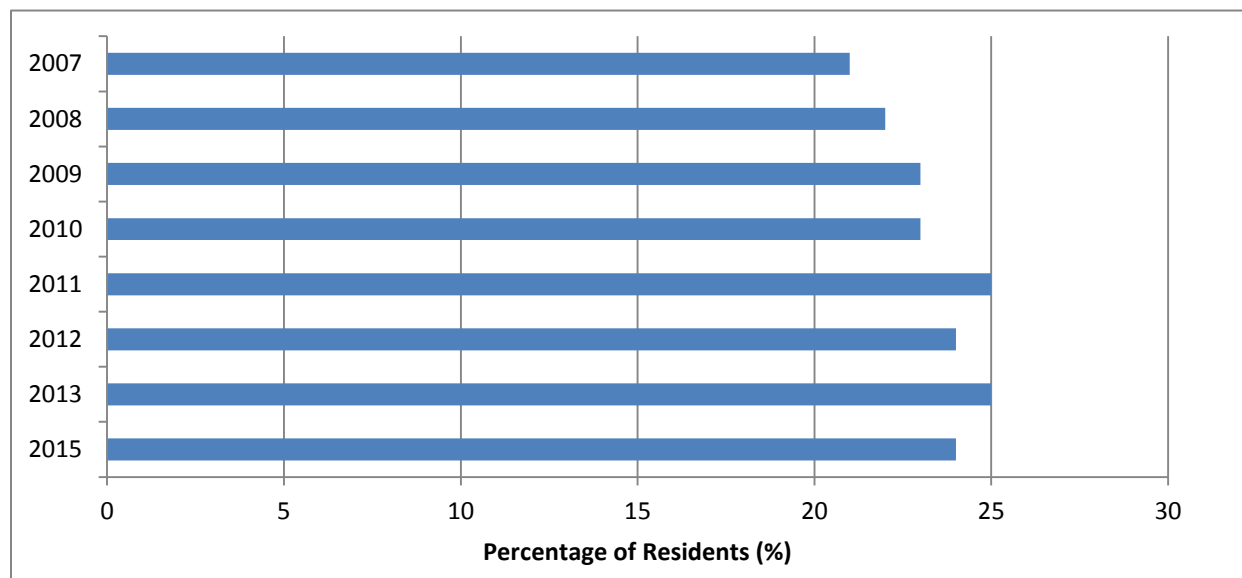
- The percent of residents with a diagnosed anxiety disorder and who received anti-anxiety medications has increased over time.³⁰

Table 23. Percent of Residents with Anxiety Disorders Receiving Anti-Anxiety Medications

Residents with anxiety disorders receiving anti-anxiety medications	
2007	21%
2008	22%
2009	23%
2010	23%
2011	25%
2012	24%
2013	25%
2015	24%

³⁰ Statistically significant linear trend at $p < 0.1$.

Figure 23. Percent of Residents with Anxiety Disorders Receiving Anti-Anxiety Medications



Sedative and Hypnotic Medications

While sleep needs remain constant in older adults, sleep patterns often change with age. Those changes can result in trouble falling asleep, difficulty remaining asleep, and frequent awakening during the night. A number of factors can contribute to sleep disturbances, including pain, depression, dementia, certain medications, and stimulants such as caffeine (CDC, *How Much Sleep Do I Need?* 2015).

Medications, particularly benzodiazepines, are often prescribed to treat insomnia and other sleep disorders, but can have undesirable side effects and increase the risk of falls and fractures in older adults. Sedatives and hypnotics should be used only for short periods of time, and at lower doses than those given to younger adults. Non-drug interventions should be attempted first, including managing environmental and other factors that could interfere with sleep (e.g., sleep hygiene).

Findings

- The percent of residents who reported trouble sleeping increased.³¹
- Residents were more likely to be evaluated for sleep hygiene.³²

³¹ Statistically significant linear trend at $p < 0.1$.

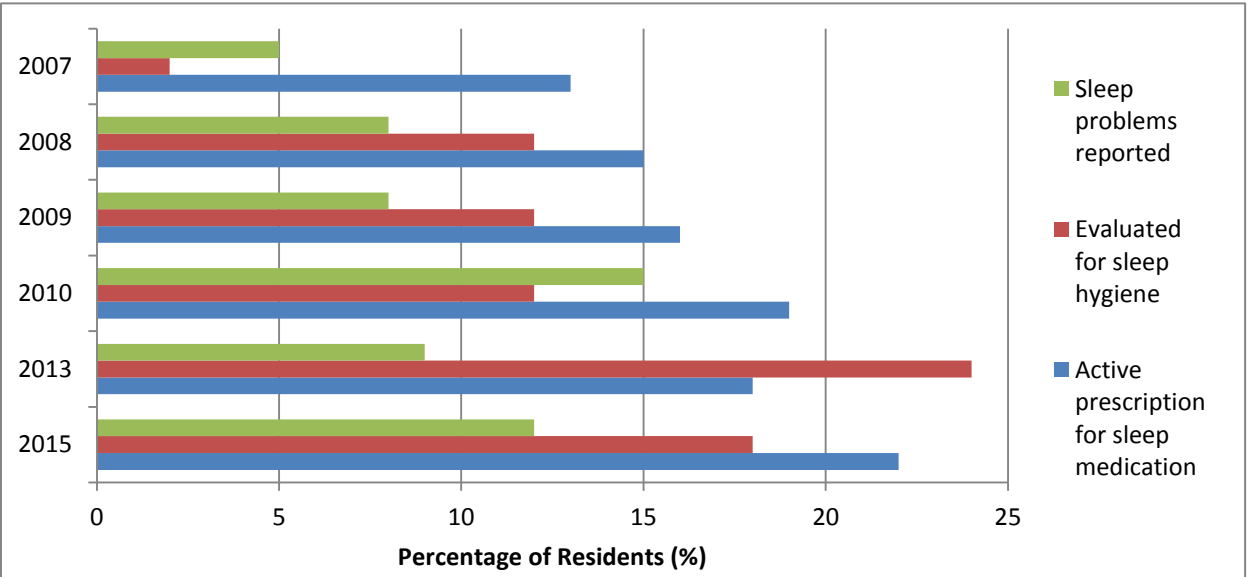
³² Statistically significant linear trend at $p < 0.1$.

- Residents were more likely to have an active prescription for sleep medication.³³

Table 24. Percent of Residents with Sleep Problems, Assessments, and Medications

	2007	2008	2009	2010	2013	2015
Residents who reported sleeping problems	5%	8%	8%	15%	9%	12%
Residents who were evaluated for sleep hygiene	2%	12%	12%	12%	24%	18%
Residents who had an active prescription for sleep medication	13%	15%	16%	19%	18%	22%

Figure 24. Percent of Residents with Sleep Problems, Assessments, and Medications



Restraints

Physical restraints are any device or practice that restricts a resident’s freedom of movement or prevents the resident from accessing any part of his or her body, which the resident cannot easily remove without assistance.

³³ Statistically significant linear trend at $p < 0.1$.

This includes devices such as a seat belt or other waist restraints, a tray table attached to a wheelchair, wrist restraints or hand mitts, and bed rails. Chemical restraints are psychoactive medications used to manage behavioral symptoms distressing to the resident, other residents, or facility staff without addressing the underlying cause of the behavior (CMS, *State Operations Manual*, 2016).

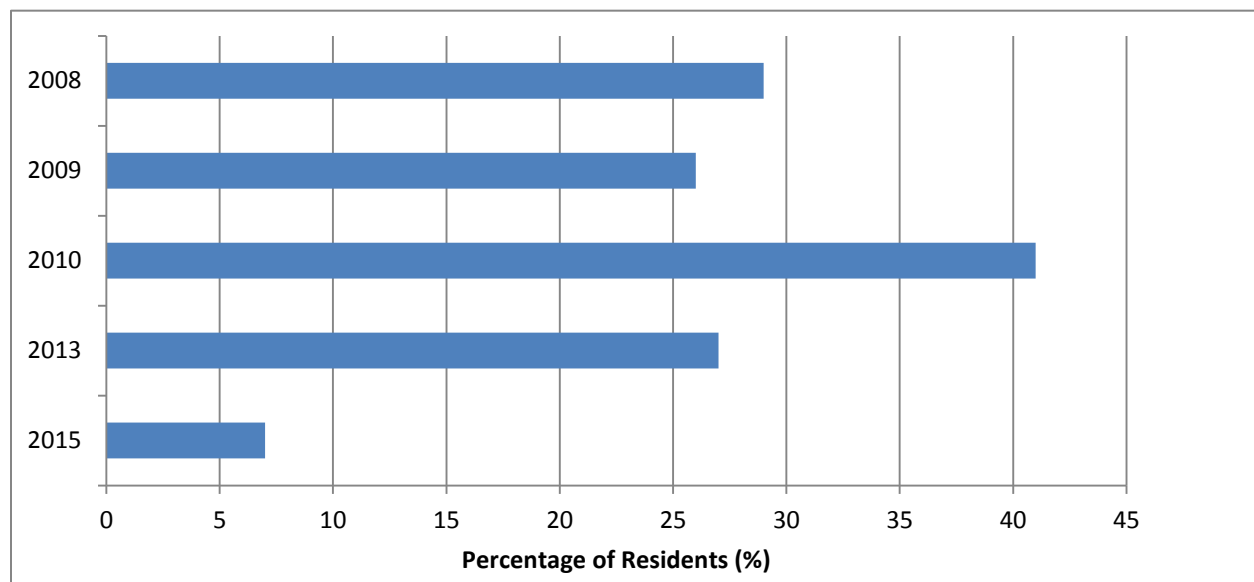
Findings

- Residents were less likely to be restrained than in previous years.³⁴

Table 25. Percent of Residents Restrained in Any Manner

	2008	2009	2010	2013	2015
Residents who were restrained in any manner	29%	26%	41%	27%	7%

Figure 25. Percent of Residents Restrained in Any Manner



Physical restraints were the most common form of restraint identified in 2015, and bed rails were the most frequently used physical restraint. The reasons documented most often for use of physical restraints included fall prevention, positioning issues, and to prevent self-transfers from a bed or chair.

³⁴ Statistically significant linear trend at $p < 0.1$

Research shows restraints do not prevent falls and residents are more likely to be seriously injured if they fall while restrained. Other, more appropriate interventions are available to manage these issues. A number of poor outcomes have been linked to the use of physical restraints, including depression, agitation, incontinence, pressure ulcers, and even death.

Findings

- The percent of residents with full bedrails decreased when compared to previous years.³⁵
- Other types of bedrails (i.e., partial bedrails) were used more frequently than in previous years.³⁶
- Trunk restraints were used more frequently than in previous years.
- Residents were less likely to be placed in a chair that prevented rising.³⁷

Table 26. Percent of Physical Restraint Use by Device Type

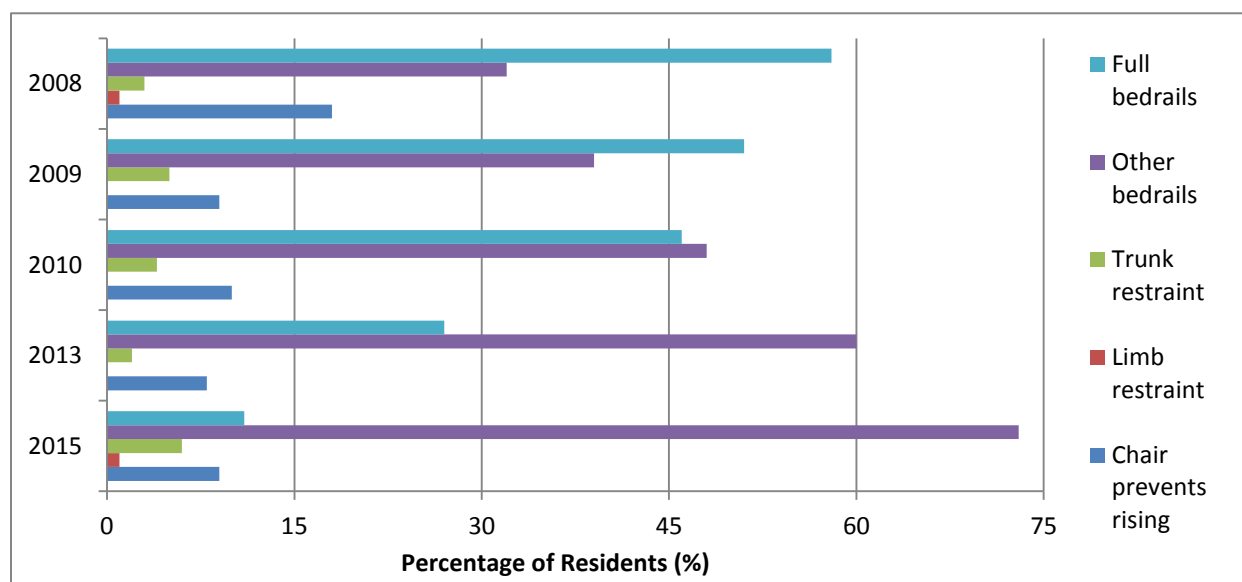
	2008	2009	2010	2013	2015
Of residents with a physical restraint, those with full bed rails	58%	51%	46%	27%	11%
Of residents with a physical restraint, those with other types of bedrails	32%	39%	48%	60%	73%
Of residents with a physical restraint, those with trunk restraints	3%	5%	4%	2%	6%
Of residents with a physical restraint, those with limb restraints	1%	<1%	<1%	<1%	1%
Of residents with a physical restraint, those placed in a chair that prevents rising	18%	9%	10%	8%	9%

³⁵ Statistically significant linear trend at $p < 0.1$.

³⁶ Statistically significant linear trend at $p < 0.1$.

³⁷ Statistically significant linear trend at $p < 0.1$.

Figure 26. Percent of Physical Restraint Use by Device Type



Findings

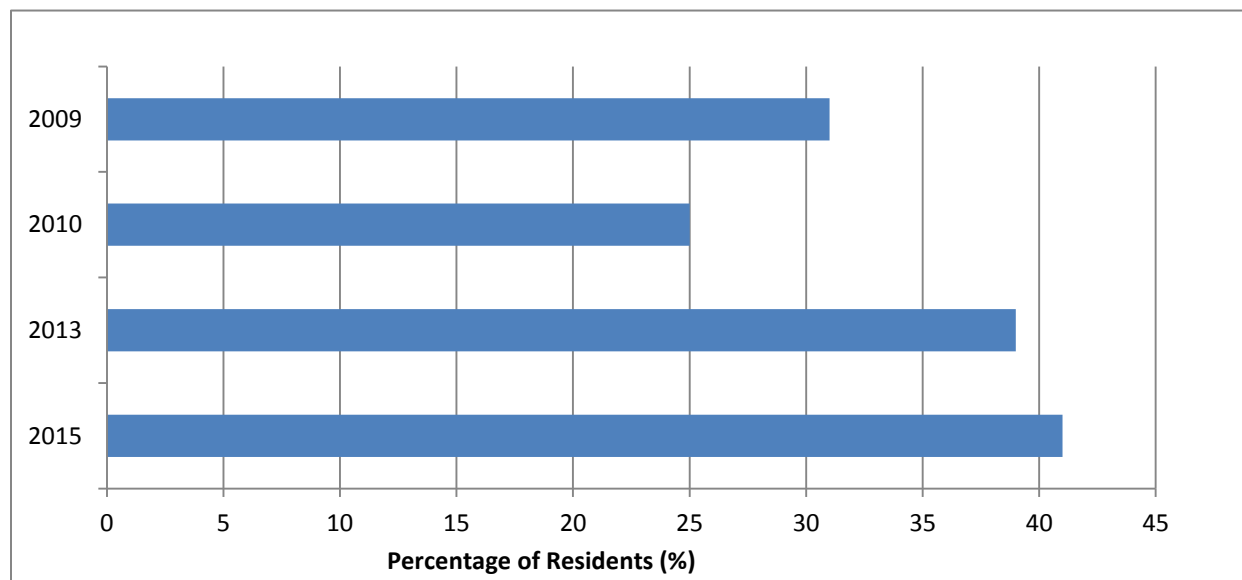
- Residents were more likely to be restrained at the request of a family member or guardian than in previous years.³⁸

Table 27. Percent of Time Restraints were Initiated at the Request of a Family Member or Guardian

	2009	2010	2013	2015
Of residents who were restrained, those who were restrained at the request of a family member or responsible party	31%	25%	39%	41%

³⁸ Statistically significant linear trend at $p < 0.1$.

Figure 27. Percent of Time Restraints were Initiated at the Request of a Family Member or Guardian



Urinary Continence

Urinary incontinence, or loss of bladder control, is estimated to affect between 43 percent and 81 percent of all nursing facility residents.

Incontinence is not a normal part of the aging process, but is often related to underlying issues including chronic medical conditions, dementia, and functional or mobility impairments. Incontinence often plays a part in the decision to pursue nursing facility placement and can increase the risk of falls, fractures, and skin breakdown. Residents with incontinence are often reluctant to participate in activities, leading to social isolation. Residents in several studies have self-reported decreases in their quality of life due to urinary incontinence, particularly in the areas of dignity, autonomy, and mood (Kane R., Dongjuan X., *Effect of Urinary Incontinence on Older Nursing Home Residents' Self-Reported Quality of Life*, 2013).

Findings

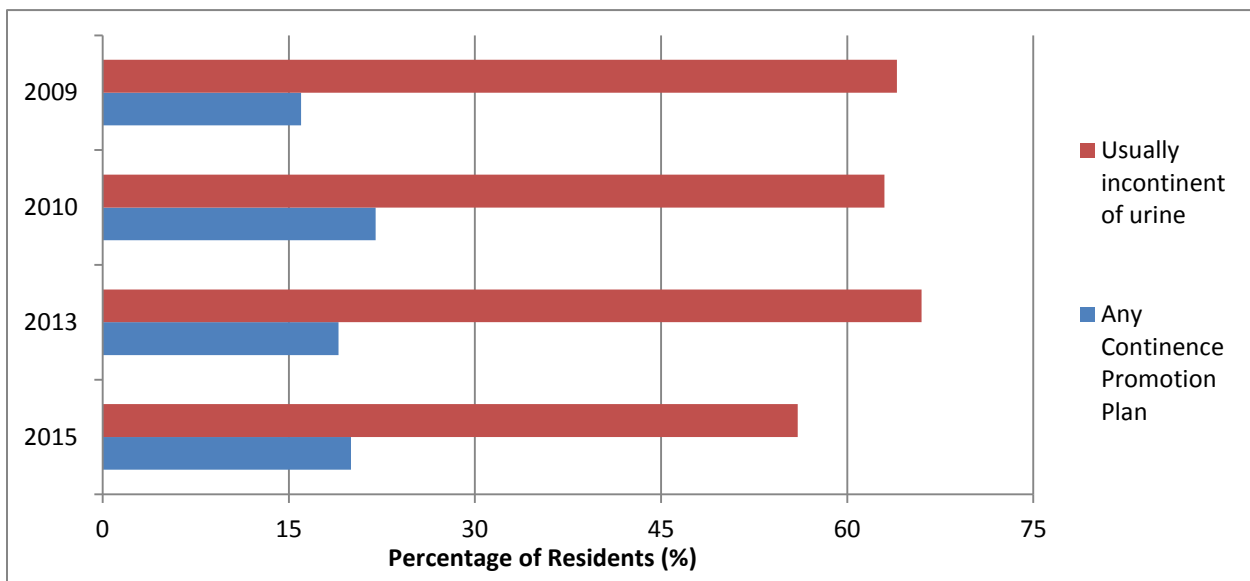
- The percent of residents who were usually incontinent decreased in 2015.³⁹
- Residents who were incontinent were more likely to have a continence promotion plan in place, when compared to previous years.⁴⁰

³⁹ Statistically significant linear trend at $p < 0.1$.

Table 28. Percent of Residents with Urinary Incontinence and Continence Promotion Plans

	2009	2010	2013	2015
Residents who were usually incontinent of urine	64%	63%	66%	56%
Residents who were incontinent of urine and had a continence promotion plan	16%	22%	19%	20%

Figure 28. Percent of Residents with Urinary Incontinence and Continence Promotion Plans



A continence promotion plan should be based on a thorough assessment of the resident’s needs, identifying any reversible conditions and determining the most appropriate type of plan and schedule for that individual.

Findings

- Continence promotion plans were more likely to be based on residents’ specific voiding patterns and needs than in previous years.⁴¹

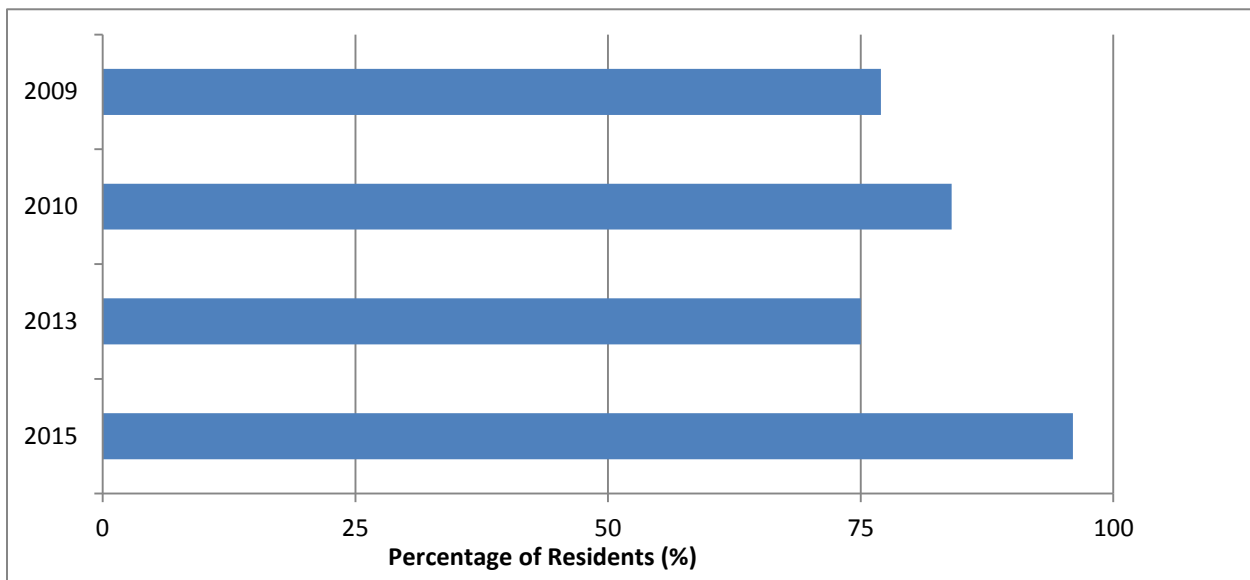
⁴⁰ Statistically significant linear trend at $p < 0.1$.

⁴¹ Statistically significant linear trend at $p < 0.1$.

Table 29. Percent of Continence Promotion Plans Based on Resident’s Voiding Patterns and Needs

	2009	2010	2013	2015
Residents with a continence promotion plan based on their voiding patterns and needs	77%	84%	75%	96%

Figure 29. Percent of Continence Promotion Plans Based on Resident's Voiding Patterns and Needs



Quality of Life/Consumer Satisfaction

Quality of life is a subjective measurement of a resident’s experiences in the nursing facility and his or her ability to enjoy the normal activities of life. This includes the resident’s satisfaction with relationships, activities, autonomy, privacy, and feelings of safety/security at the facility.

Information for this section was gathered through face-to-face interviews. If the resident was unable to participate, a family member or guardian was contacted to complete the questions regarding overall satisfaction with their experience in the facility and the health care services received. If the resident was unable to participate and the family member or guardian was unavailable, the quality of life section of the survey was not completed.

Most of the residents (or family members/guardians) stated they were either very satisfied, satisfied, or somewhat satisfied with their experience in the facility, as well as the healthcare services they received.

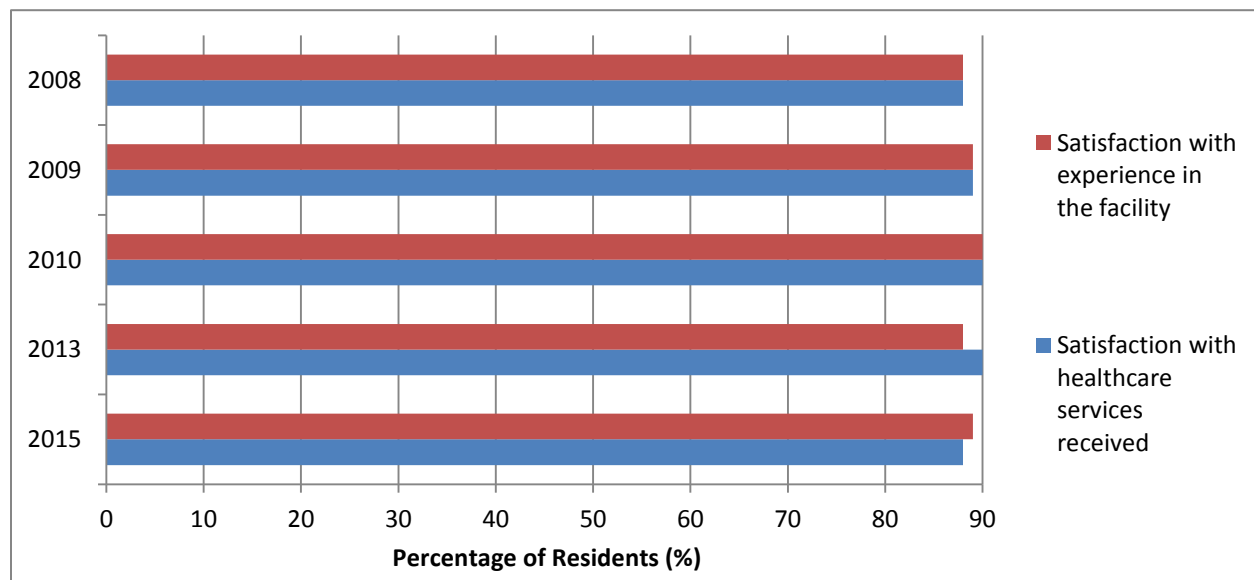
Findings – Overall Satisfaction

- The percent of residents (or family members/guardians) who expressed satisfaction with their experience in the nursing facility and the health care services they received has remained relatively stable over time.

Table 30. Percent of Residents Satisfied with Experience in the Facility and Healthcare Services Received

	2008	2009	2010	2013	2015
Residents who expressed satisfaction with their experience in the facility	88%	88%	90%	88%	89%
Residents who expressed satisfaction with the healthcare services they received in the facility	88%	89%	90%	90%	88%

Figure 30. Percent of Residents Satisfied with Experience in the Facility and Healthcare Services Received



Findings – Addressing Concerns

Residents were asked about their ability to express concerns or grievances to facility staff, and whether they had fears of retaliation if their concerns were expressed. The answer options for these questions were simply “yes” or “no.” While most of the residents stated they felt comfortable expressing their concerns, there were some residents who stated they did not express their concerns due to a fear of retaliation.

- The percent of residents who stated they had concerns the facility did not address increased when compared to previous years.⁴²
- The percent of residents who stated they had concerns they did not express due to a fear of retaliation also increased.⁴³

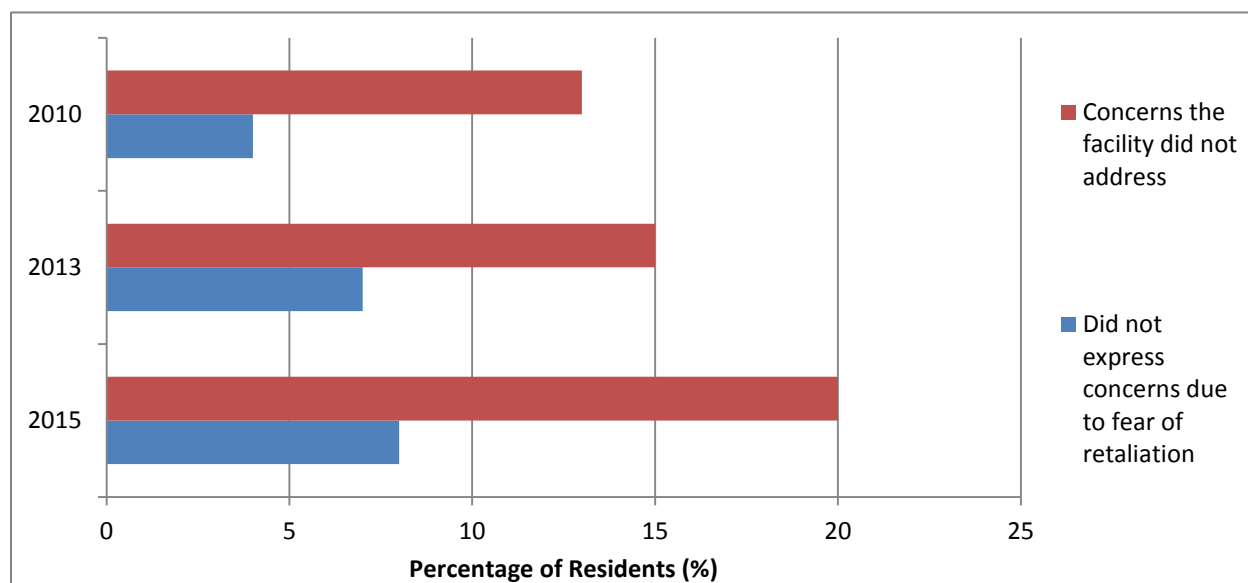
Table 31. Percent of Residents with Concerns Not Addressed, or Not Expressed Due to Fear of Retaliation

	2010	2013	2015
Residents who had concerns the facility did not address	13%	15%	20%
Residents who had concerns they did not express due to the fear of retaliation	4%	7%	8%

⁴² Statistically significant linear trend at $p < 0.1$.

⁴³ Statistically significant linear trend at $p < 0.1$.

Figure 31. Percent of Residents with Concerns Not Addressed, or Not Expressed Due to Fear of Retaliation



For the other questions in the Quality of Life section, the residents had the following answer options:

- Always
- Most of the time
- Sometimes
- Rarely
- Never
- No answer

For this report, “always,” “most of the time,” and “sometimes,” were combined into a single response indicating satisfaction. The answer option “most of the time” was new in 2015, therefore testing changes across time for statistical significance was not conducted for those questions.

Findings – Food and Dining Services

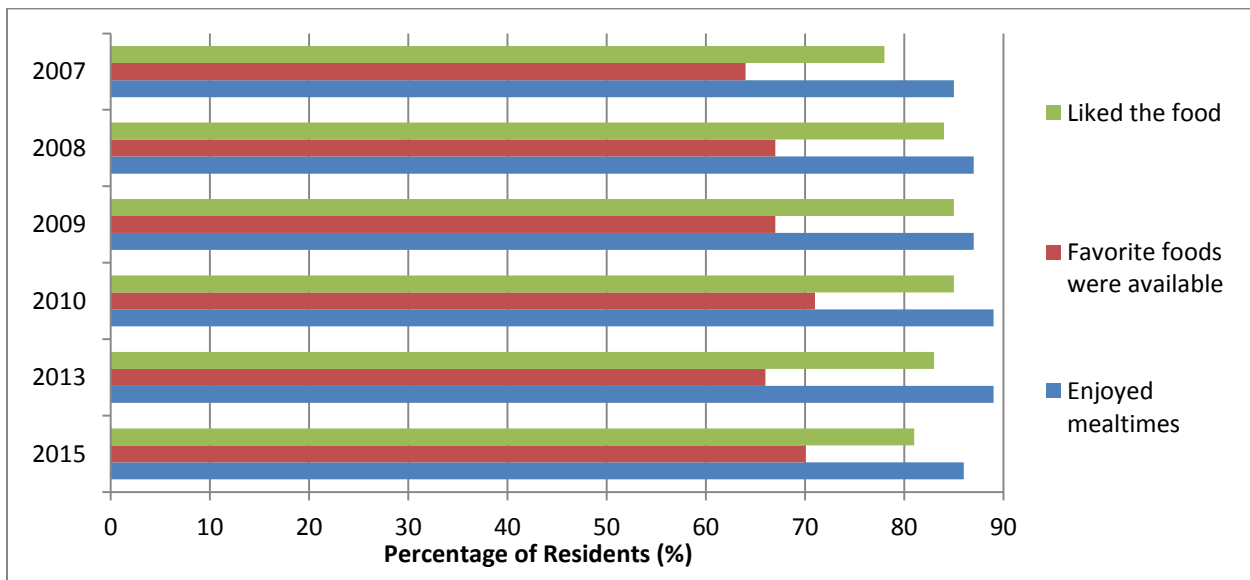
The majority of the residents in the sample expressed satisfaction with the food and dining services at the facility.

- Most of the residents stated they liked the food served at the facility.
- Residents were often able to get their favorite foods at the facility.
- Most of the residents stated they enjoyed mealtimes at the facility.

Table 32. Percent of Residents Satisfied with Food and Dining Services

	2007	2008	2009	2010	2013	2015
Residents who liked the food at the facility	78%	84%	85%	85%	83%	81%
Residents who stated their favorite foods were available	64%	67%	67%	71%	66%	70%
Residents who stated they enjoyed mealtimes	85%	87%	87%	89%	89%	86%

Figure 32. Percent of Residents Satisfied with Food and Dining Services



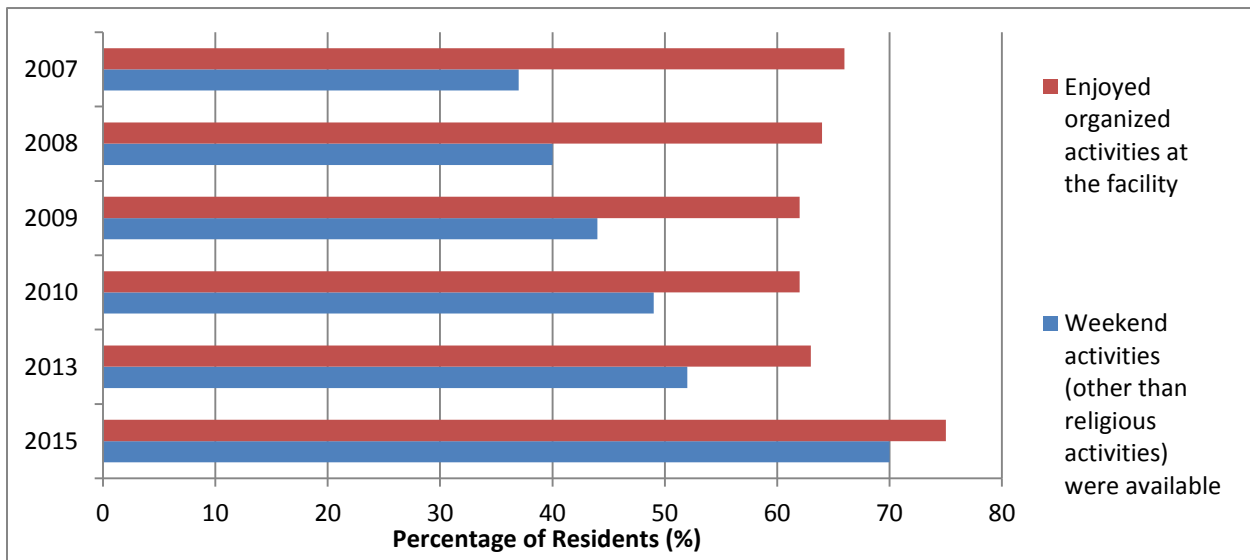
Findings – Activities

- The majority of residents interviewed stated they enjoyed the organized activities offered at the facility.
- Most residents interviewed stated weekend activities (other than religious activities) were available.

Table 33. Percent of Residents Satisfied with Organized Activities

	2007	2008	2009	2010	2013	2015
Residents who enjoyed the organized activities offered	66%	64%	62%	62%	63%	75%
Residents who stated weekend activities (other than religious activities) were available	37%	40%	44%	49%	52%	70%

Figure 33. Percent of Residents Satisfied with Organized Activities



Findings – Access to Outdoor Spaces

Residents were asked whether they had access to outdoor spaces, and if outdoor spaces were available, if they could go outside when they wished to.

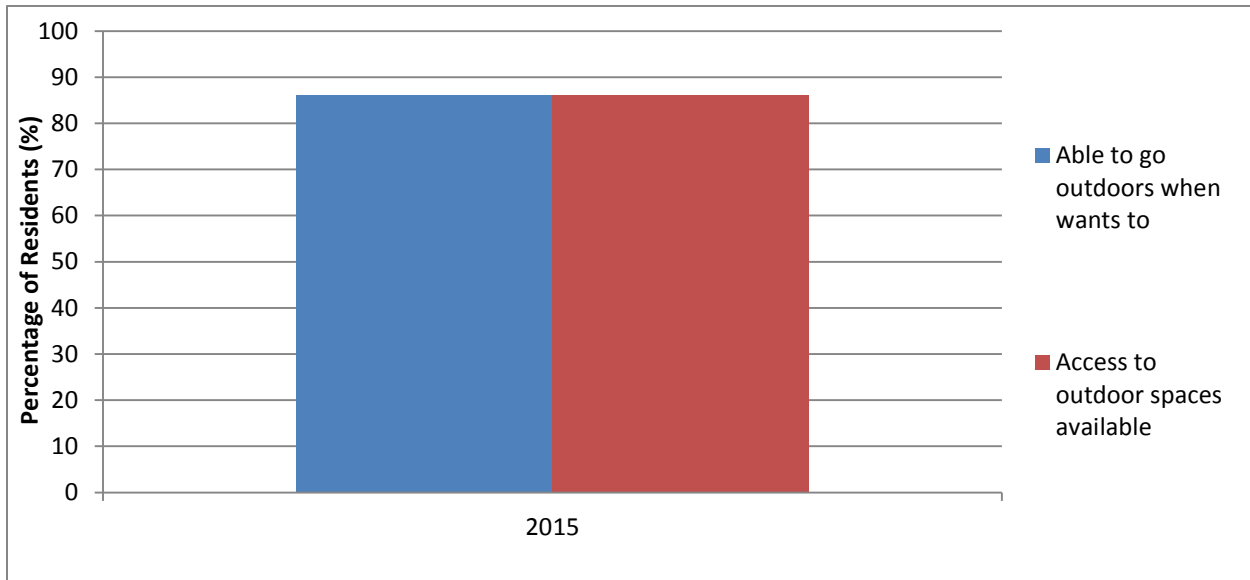
- Most of the residents stated they had access to outdoor spaces.
- Residents were usually able to go outdoors when they wished to.

Table 34. Percent of Residents Satisfied with Access to and Ability to Use Outdoor Spaces

	2015
Residents who stated they had access to outdoor spaces at the facility	86%

	2015
Residents who stated they could go outdoors when they wished to	86%

Figure 34. Percent of Residents Satisfied with Access to and Ability to Use Outdoor Spaces



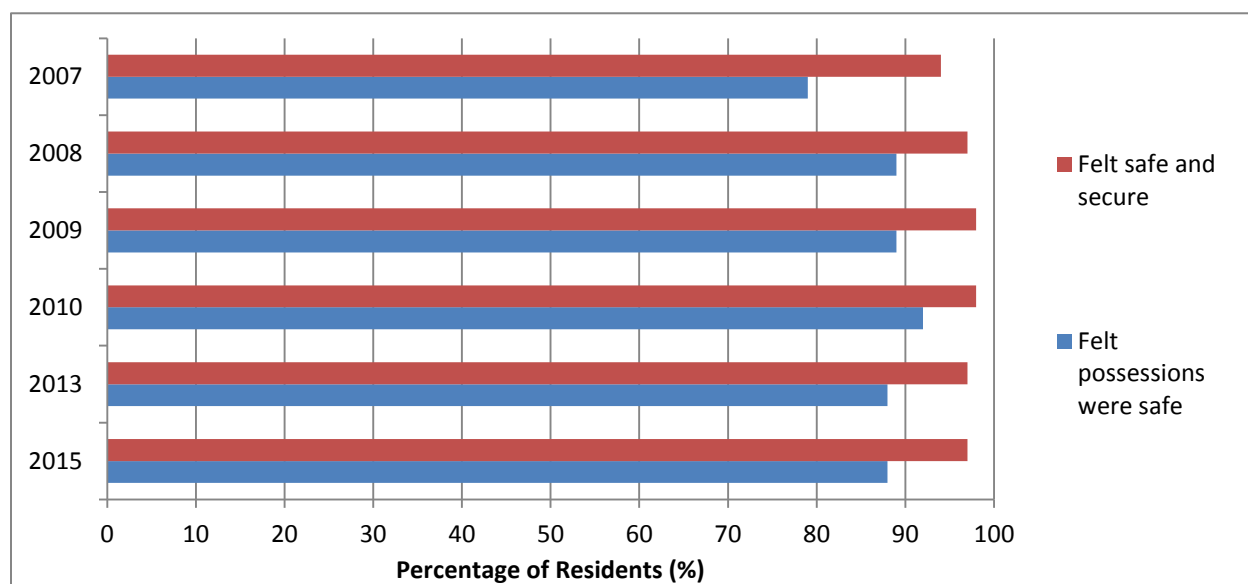
Findings – Safety and Security

- Residents generally felt safe and secure at the facility, and also felt their possessions were safe.

Table 35. Percent of Residents Satisfied with Safety of Self and Possessions

	2007	2008	2009	2010	2013	2015
Residents who stated they felt safe and secure	94%	97%	98%	98%	97%	97%
Residents who stated they felt their possessions were safe	79%	89%	89%	92%	88%	88%

Figure 35. Percent of Residents Satisfied with Safety of Self and Possessions



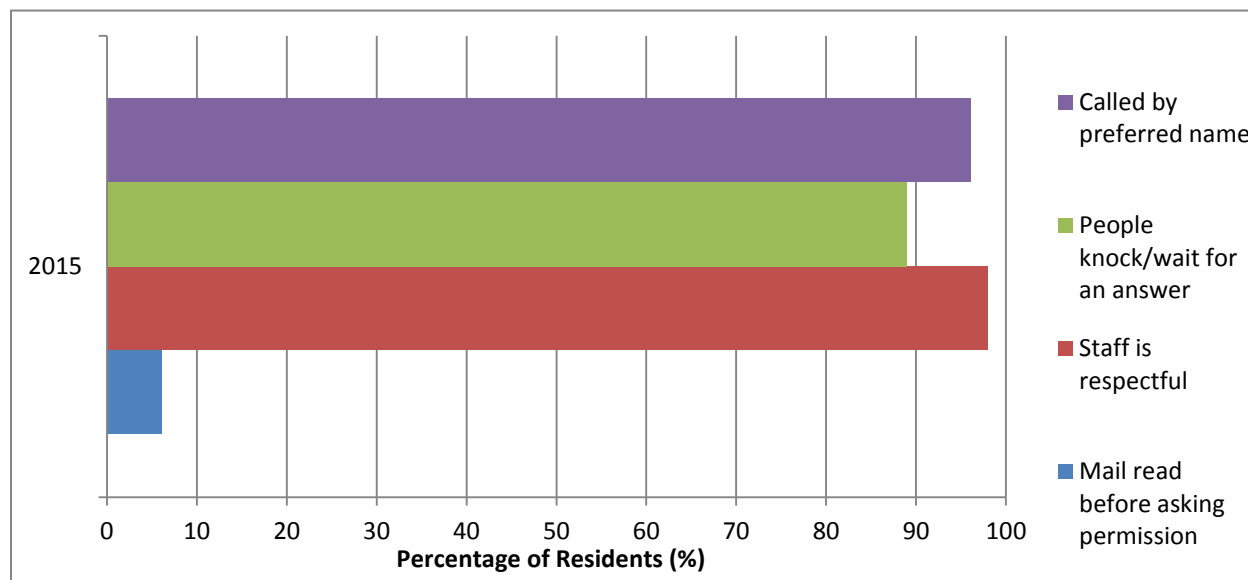
Findings – Privacy, Dignity, and Respect

- Residents generally stated they were called by their preferred name.
- People usually knocked and waited for an answer before entering their room.
- Nearly all of the residents stated the staff members treated them with respect.
- A few residents stated their mail was read by others without first asking their permission.

Table 36. Percent of Residents Satisfied with Level of Privacy, Dignity, and Respect

	2015
Residents who stated they were called by their preferred name	96%
Residents who stated people knocked first and waited for an answer before entering their room	89%
Residents who stated staff members treated them with respect	98%
Residents who stated their mail was read before asking their permission	6%

Figure 36. Percent of Residents Satisfied with Level of Privacy, Dignity, and Respect



Findings - Autonomy

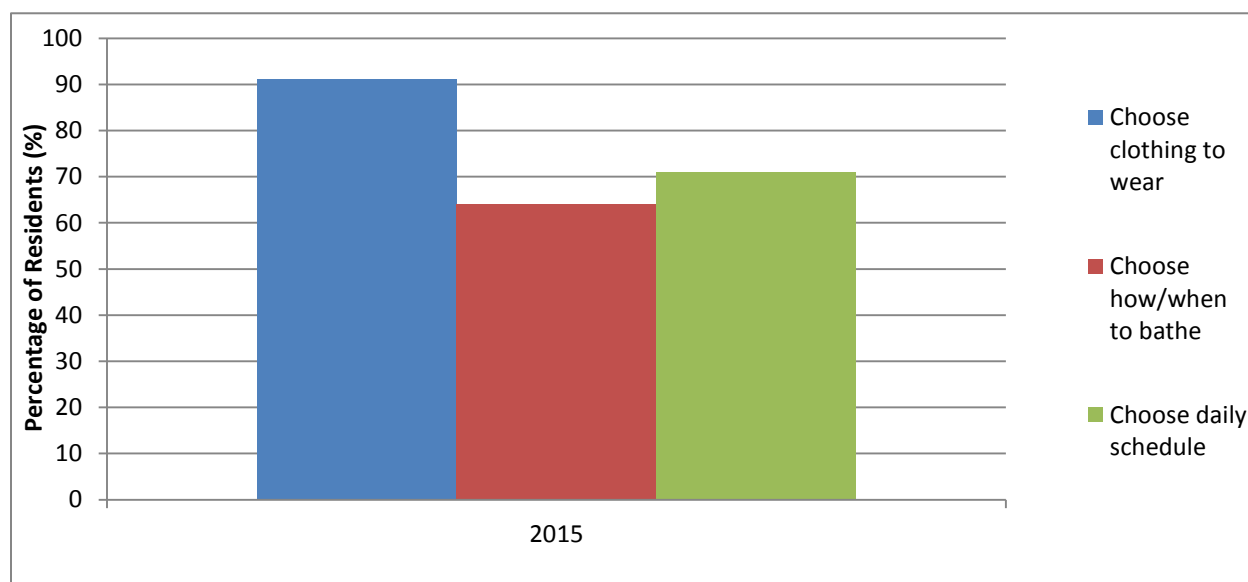
Autonomy is an important dimension of person-centered care, with staff respecting and supporting the residents’ choices about their daily schedules and their care.

- Most residents could choose their daily schedule.
- Most residents could choose how and when to bathe.
- Most residents could choose the clothing they wanted to wear each day.

Table 37. Percent of Residents Satisfied with Autonomy

	2015
Residents who stated they could choose their daily schedule	71%
Residents who stated they could choose how and when to bathe	64%
Residents who stated they could choose the clothing they wanted to wear each day	91%

Figure 37. Percent of Residents Satisfied with Autonomy



Findings – Consistent Assignment

Residents were asked whether they had a favorite caregiver and, if so, were they able to choose to have that caregiver take care of them. Residents were also asked about consistent assignment of caregivers; in other words, did the same caregiver take care of them most of the time?

Consistent assignment has been shown to improve the quality of care and the quality of life for residents. When a caregiver is consistently assigned to the same residents, he or she becomes familiar with each resident’s preferences and routines, strengthening the relationship between the resident and the caregiver (National Nursing Home Quality Improvement Campaign, *Consistent Assignment*, 2016).

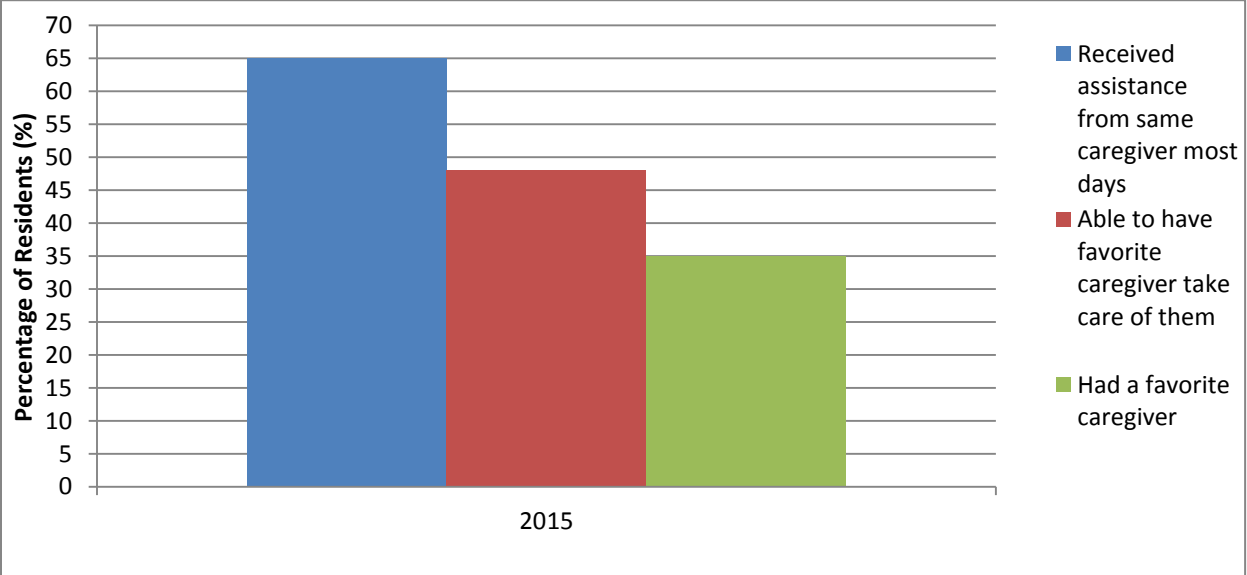
- Just over one-third of residents stated they had a favorite caregiver.
- Of those who had a favorite caregiver, less than half of residents were able to choose to have that caregiver take care of them.
- A majority of residents stated they usually received assistance from the same caregiver.

Table 38. Percent of Residents with Favorite Caregiver, Able to Choose a Caregiver, and with Consistent Caregiver Assignment

	2015
Residents who stated they had a favorite caregiver	35%

	2015
Residents who stated they were able to have their favorite caregiver take care of them	48%
Residents who stated they received assistance from the same caregiver most days	65%

Figure 38. Percent of Residents with Favorite Caregiver, Able to Choose a Caregiver, and with Consistent Caregiver Assignment



Findings – Care Planning

A resident’s comprehensive care plan is developed by the interdisciplinary team, and addresses his or her health care needs, as well as retained abilities, preferences, and routines. The interdisciplinary team includes the resident, and he or she has the right to be involved in care plan meetings. If the resident is unable to participate, a family member (with the resident’s permission) or legal representative may take part in planning the resident’s care.

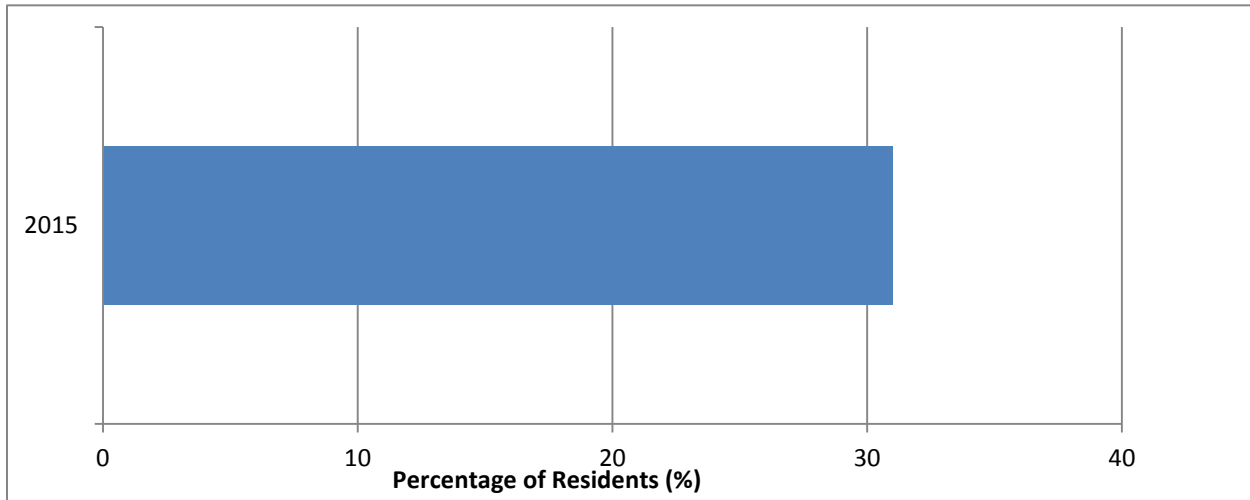
For the first time in 2015, residents in the sample were asked if they had participated in their care plan meetings.

- Less than one-third of residents stated they had participated in care plan meetings.

Table 39. Percent of Residents Who Participated in Care Plan Meetings

	2015
Residents who stated they participated in care plan meetings	31%

Figure 39. Percent of Residents Who Participated in Care Plan Meetings



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