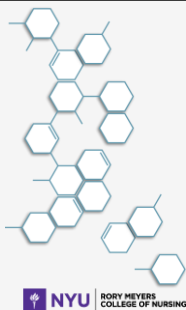**Preventing Adverse Events in Nursing Homes: Working Together to Keep Residents Safe**

Jennifer Pettis, MS, RN, CNE, WCC, Associate Director, Long-Term Care
NICHE | Nurses Improving Care for Healthsystem Elders
NYU Rory Meyers College of Nursing

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NURSES IMPROVING CARE FOR HEALTHSYSTEM ELDERS

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## Objectives

- Describe the impact of adverse events in nursing homes
- Give examples of the three types of adverse events identified by the Office of Inspector General (OIG)
- Discuss how to use root cause analysis to investigate an adverse event
- Critique a facility protocol for a high-risk medication using the Centers for Medicare & Medicaid Services (CMS) Trigger Tool
- Explain how evidence-based practice can prevent adverse events

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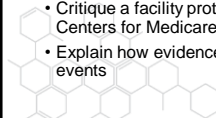
## In the Headlines…

**Popular Blood Thinner Causing Deaths, Injuries in Nursing Homes**

**Study Suggests Medical Errors Now Third Leading Cause of Death in the U.S.**

**Nurse Charged with Homicide for Medication Error**

**Nurse's Suicide Highlights Twin Tragedies of Medical Errors**

**Jury Awards $2.6M in Fall From Hospital Wheelchair**

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## Adverse Events Defined

"*An untoward, undesirable, and usually unanticipated event that causes death, serious injury, harm, or the risk thereof*" (CMS)

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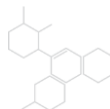
## Let's Chat: Adverse Events

When you think about *adverse events*, what comes to mind?

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## OIG Report: *Adverse Events in Skilled Nursing Facilities: National Incidence among Medicare Beneficiaries*

- An estimated 22 percent of Medicare beneficiaries experienced adverse events during their SNF stays
- An additional 11 percent of Medicare beneficiaries experienced temporary harm events during their SNF stays
- Physician reviewers determined that 59 percent of these were clearly or likely preventable
- Preventable harm was most often a result of substandard treatment, inadequate resident monitoring, failure or delay in treatment, and inadequate resident assessment and care planning
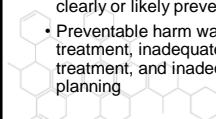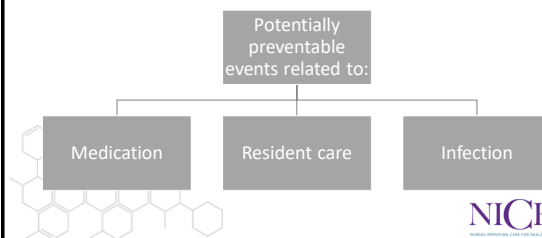
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## OIG Report: *Adverse Events in Skilled Nursing Facilities: National Incidence among Medicare Beneficiaries*

- Over half of the residents who experienced harm returned to a hospital for treatment costing Medicare $208 million in August 2011
- This equates to $2.8 billion spent on hospital treatment for harm caused in SNFs in FY 2011
- As a result of the findings, the OIG made several recommendations to CMS aimed at reducing adverse events

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## Three Types of Adverse Events in Nursing Homes

Potentially preventable events related to:

| Medication | Resident care | Infection |

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## Potentially Preventable Adverse Events Related to Medication

- Change in mental status/delirium related to use of opiates and psychotropic medication
- Hypoglycemia related to use of antidiabetic medication
- Ketoacidosis related to use of antidiabetic medication
- Bleeding related to use of antithrombotic medication
- Thromboembolism related to use of antithrombotic medication
- Prolonged constipation/ileus/impaction related to use of opiates
- Electrolyte imbalance related to use of diuretic medication
- Drug toxicities
- Altered cardiac output related to use of cardiac/blood pressure medication
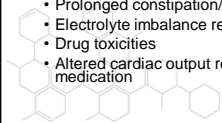
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## Potentially Preventable Adverse Events Related to Resident Care

- Falls, abrasions/skin tears, or other trauma related to care
- Electrolyte imbalance associated with inadequate fluid maintenance
- Thromboembolic events related to inadequate resident monitoring and provision of care
- Respiratory distress related to inadequate monitoring and provision of tracheostomy/ventilator care
- Exacerbations of preexisting conditions related to inadequate or omitted care
- Feeding tube complications related to inadequate monitoring and provision of care
- In-house acquired/worsened stage pressure ulcers/injuries
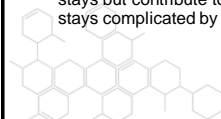- Elopement
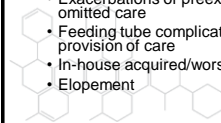
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## Potentially Preventable Adverse Events Related to Infections

- Respiratory infections
- Skin and wound infections
- Urinary tract infections (UTIs)
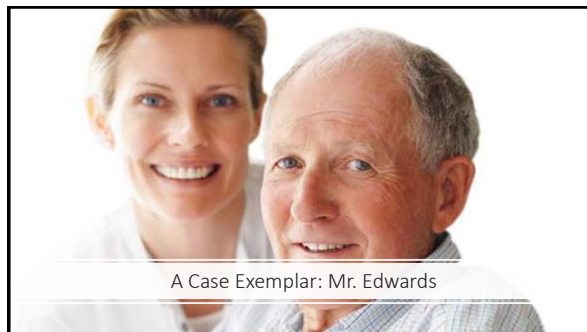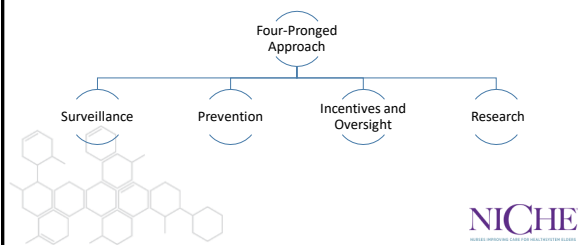- Infectious diarrhea

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## Office of Disease Prevention and Health Promotion (ODPHP) National Action Plan for Adverse Drug Event (ADE) Prevention

- Three of the most commonly implicated drug classes in ADEs:
  - Anticoagulants
  - Opioids
  - Diabetic agents
- Older adults comprise approximately 35 percent of all inpatient stays but contribute to approximately 53 percent of inpatient stays complicated by ADEs

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## ODPHP National Action Plan for ADE Prevention (cont.)

Four-Pronged Approach

- Surveillance
- Prevention
- Incentives and Oversight
- Research

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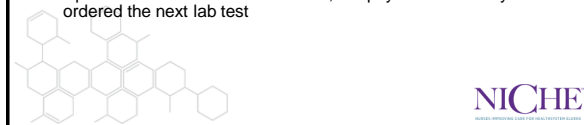A Case Exemplar: Mr. Edwards

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## A Case Exemplar: Mr. Edwards (cont.)

- On the first day of the survey, Mr. Edwards:
  - Had several bruises on his hands and forearms
  - Was alert and oriented
  - Wanted to rest
- The next day, the nurse reported that Mr. Edwards had been transferred to the hospital due to profuse rectal bleeding in the middle of the night
- He was fearful and experienced a panic attack
- He was admitted to the hospital due to gastrointestinal bleeding secondary to warfarin use
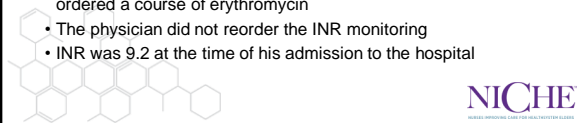
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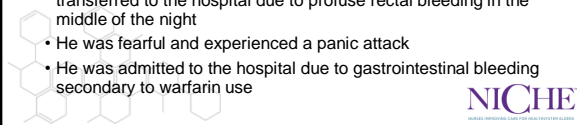
## A Case Exemplar: Mr. Edwards (cont.)

- Warfarin was prescribed for newly-diagnosed atrial fibrillation
- The target international normalized ratio (INR) is 2.0 - 3.0
- Warfarin doses were consistently reviewed in response to his INR results and changes often resulted
- Upon notification of the INR results, the physician routinely ordered the next lab test

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## A Case Exemplar: Mr. Edwards (cont.)

- Ann identified issues related to warfarin management around the time Mr. Edwards had a dental procedure
- The physician stopped the warfarin for five days before surgery and discontinued the INR monitoring during that time
- Following the procedure, the physician resumed warfarin and ordered a course of erythromycin
- The physician did not reorder the INR monitoring
- INR was 9.2 at the time of his admission to the hospital

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Let's Chat: Mr. Edwards

What in your policy and procedures would have prevented this situation?

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## Centers for Medicare & Medicaid Services (ADE) Trigger Tool



Please refer to the ADE Trigger Tool

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## Using the ADE Trigger Tool to Protect Mr. Edwards

- Lab monitoring
- Education
- Alerts

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Using Quality Assurance and Performance Improvement (QAPI) to Prevent Adverse Events

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## F865, QAPI Program

- Each LTC facility must develop, implement, and maintain an effective, comprehensive, data-driven QAPI program that focuses on indicators of the outcomes of care and quality of life.
- The facility must maintain documentation and demonstrate evidence of its ongoing QAPI program. This may include but is not limited to:
  - Documentation demonstrating the development, implementation, and evaluation of corrective actions or performance improvement activities
  - Systems and reports demonstrating *systematic identification, reporting, investigation, analysis, and prevention of adverse events*

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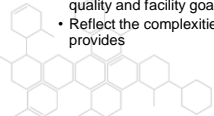## F865, QAPI Program (continued)

- The facility must (continued):
  - Present its QAPI plan to a State Survey Agency or Federal surveyor at each annual recertification survey and upon request during any other survey and to CMS upon request
  - Present documentation and evidence of its ongoing QAPI program implementation and the facility's compliance with requirements to a State Survey Agency, Federal surveyor or CMS upon request

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## F865, QAPI Program (continued)

- **Program design and scope**. A facility must design its QAPI program to be ongoing, comprehensive, and to address a full range of care and services provided by the facility. It must:
  - Address all systems of care and management practices
  - Include clinical care, quality of life, and resident choice
  - Utilize the best available evidence to define and measure indicators of quality and facility goals
  - Reflect the complexities, unique care, and services that the facility provides

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## F865, QAPI Program (continued)

- **Governance and leadership**. The governing body and/or executive leadership is responsible and accountable for ensuring that:
  - An ongoing QAPI program is defined, implemented, and maintained and addresses identified priorities
  - The QAPI program is sustained during transitions in leadership and staffing
  - The QAPI program is adequately resourced
  - The QAPI program identifies and prioritizes problems and opportunities
  - Corrective actions address gaps in systems, and are evaluated for effectiveness
  - Clear expectations are set around safety, quality, rights, choice, and respect
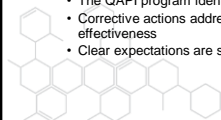
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## F866, Program Feedback, Data Systems and Monitoring

- A facility must establish and implement written policies and procedures for feedback, data collection systems, and monitoring, *including adverse event monitoring*. The policies and procedures must include, at a minimum:
  - Maintenance of effective systems to obtain and use feedback and input from direct care staff, other staff, residents, and resident representatives
  - Facility maintenance of effective systems to identify, collect and use data and information from all departments
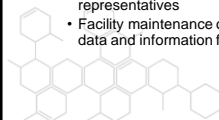
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## F866, Program Feedback, Data Systems and Monitoring (continued)

- The policies and procedures must include, at a minimum (continued):
  - Facility development, monitoring, and evaluation of performance indicators
  - Facility *adverse event monitoring*, including the methods by which the facility will systematically identify, report, track, investigate, analyze and use data and information related to adverse events

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## F867, Program Systematic Analysis and Systemic Action

- The facility must take actions aimed at performance improvement and track performance to ensure that improvements are realized and sustained
- The facility will develop and implement policies addressing how they:
  - Use a systematic approach to determine underlying causes of problems impacting larger systems
  - Develop corrective actions that will be designed to effect change at the systems level to prevent quality of care, quality of life, or safety problems
  - Monitor the effectiveness of its performance improvement activities to ensure that improvements are sustained
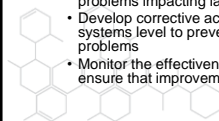
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## F867, Program Activities

- The facility must set priorities for its performance improvement activities that focus on *high-risk, high-volume, or problem-prone areas*; consider the incidence, prevalence, and severity of problems in those areas; and affect health outcomes, resident safety, resident autonomy, resident choice, and quality of care
- Performance improvement activities must *track medical errors and adverse resident events*, analyze their causes, and implement preventive actions and mechanisms that include feedback and learning throughout the facility
- The facility must conduct distinct performance improvement projects
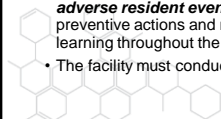
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## Root Cause Analysis (RCA)

"*RCA will help you **look at the systems** in place in your facility and **examine what made it possible** for an adverse event to happen*" (Oregon Patient Safety Commission, n.d.)

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## Traditional Methods...

| |
|---|
| Expected staff to perform flawlessly 24/7 and blamed individuals when they didn't |
| Expected staff to adapt their practice to available equipment and regular procedures |
| Relied on a chain of command in a facility to investigate errors and impose corrections |
| Punished errors |

(Oregon Patient Safety Commission, n.d.)
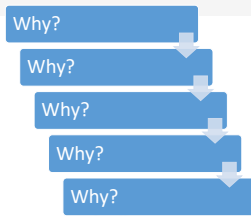
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## RCA...

| |
|---|
| Encourages the development of systems that are designed to compensate for human limitations and looks to system fixes when an error occurs |
| Stresses the development of equipment and procedures that are designed for safety |
| Relies on teamwork among all staff to analyze problems and to propose and implement solutions |
| Stresses learning from errors |

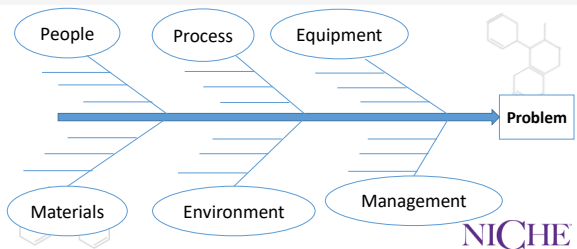(Oregon Patient Safety Commission, n.d.)

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## The Five Whys

- A question-asking method used to get to the root cause(s) of the problem
- Continue asking "why" until you've identified the true source of the problem—this must be understood before you can take action
- Remember, there can be more than one root cause

Why?
Why?
Why?
Why?
Why?

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## Fishbone Diagram



People, Process, Equipment, Materials, Environment, Management → Problem

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## Research: Most Common Factors Contributing to Serious Adverse Events in Nursing Homes

Lack of competence

Incomplete or lack of documentation
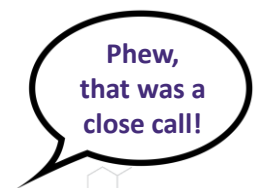
Teamwork failure

Inadequate communication

(Andersson et al., 2017.)

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## Let's Chat: Near Misses

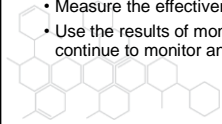- How does your team identify and investigate near misses?
- What is the last near miss that the team investigated?

**Phew, that was a close call!**

## Integrating the ADE Trigger Tool in QAPI

- Investigate any trigger to determine if an ADE has occurred
- If an ADE occurred, determine the underlying causes of problems impacting larger systems
- Following systematic analysis of the ADE, develop a corrective action plan to prevent recurrence
- Measure the effectiveness of those changes
- Use the results of monitoring to identify new approaches and continue to monitor and revise as needed
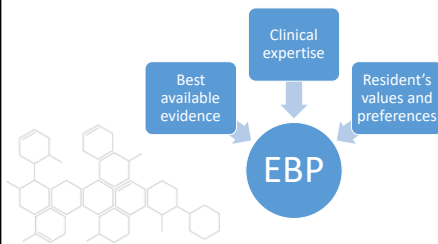
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An Example in Using the Evidence: Pain Management

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## Evidence-Based Practice

Clinical expertise

Best available evidence

Resident's values and preferences

EBP

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## The Population-Based Case for EBP in LTC

- By 2060 the US population will include:
  - 98 million people ages 65 and older
  - 20 million people age 85 and older
  - More than 600,000 centenarians
- Older adults are more diverse
- The number of older adults with chronic conditions continues to increase
- Long-term care utilization will likely double by 2050

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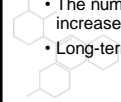
## The Regulatory Case for EBP in LTC

- F658 §483.21(b)(3) Comprehensive Care Plans
- The services provided or arranged by the facility, as outlined by the comprehensive care plan, must—
  - (i)Meet professional standards of quality

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## The Quality Case for EBP in LTC

- Higher acuity resident population
- Increased admissions and discharges
- Consumer, regulator, and payer expectations around quality and safety
- Blurred scope of practice lines between LPNs and RNs

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## Pain Management

- Goal: Maximize function and quality of life
- A multimodal approach:
  - Pharmacological
  - Nonpharmacological
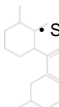  - Interdisciplinary

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## Let's Chat

- What evidence informed your facility's care protocol development?
- What nonpharmacological options to promote comfort are readily available to residents in your facility?
- How are your interdisciplinary colleagues involved in pain management?

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## Pharmacological Treatment Considerations

- Selection and dosage
  - Low dose with gradual upward titration
  - Short half-life and fewest side effects
  - Least invasive route
- Complexity
  - Multidimensional
  - Tailored to patient
  - Combination of therapies
- Prevention
  - Around the clock (ATC) dosing
  - Dosing prior to painful treatment or event
  - Giving the next dose before last dose wears off
- Side effects
  - Proactive treatment

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## Clinical Practice Guidelines and Resources

- American Geriatrics Society
  - https://doi.org/10.1111/j.1532-5415.2009.02376.x
- The University of Iowa College of Nursing
  - https://geriatricpain.org/pain-management
- World Health Organization's Three Step Ladder for Cancer Pain
  - https://www.who.int/cancer/palliative/painladder/en/
- International Association for the Study of Pain
  - https://www.iasp-pain.org
- The City of Hope Pain and Palliative Care Resource Center
  - https://prc.coh.org
- AMDA – the Society for Post-Acute and Long-Term Care Medicine
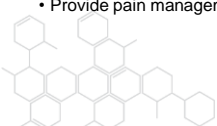  - https://paltc.org

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## Nonpharmacological Treatment Options

- Alternative medical systems
- Manipulative and body-based methods
- Mind-body interventions
- Energy therapies
- Physical pain relief modalities

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## Communicate and Educate

- Promote proactive use of medications
- Educate regarding medications and side effects
- Explain and offer nonpharmacological options
- Tap into interdisciplinary colleagues
- Provide pain management education to staff

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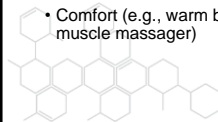## Lessons Learned from atom Alliance: Five Steps to Success

1. Review all current opioid orders
2. Identify source(s) of pain
3. Check for accuracy during care transitions
4. Reduce unnecessary opioid prescriptions
5. Replace opioids with appropriate alternatives

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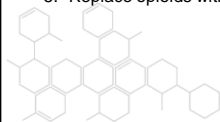
## Lessons Learned from atom Alliance: Comfort Menu

- Sleep (e.g., warm bath, music, sound machine)
- Relaxation (e.g., stress ball, Snoezelen room)
- Entertainment (e.g., reading or talking visit, magazines, books)
- Feeling better (e.g., chocolate, grooming options, deep breathing, pastor visit)
- Comfort (e.g., warm blanket, lip balm, ice pack, hand-held muscle massager)

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## CMS Adverse Events in Nursing Homes Resources



https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/QAPI/Adverse-Events-NHs.html
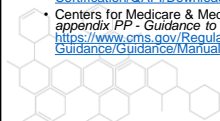
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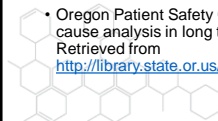
Questions and Discussion

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- Centers for Medicare & Medicaid Services. (2016). *QAPI news brief, volume 2.* Retrieved from https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/QAPI/Downloads/QAPI-Newsbrief-Volume-2.pdf
- Centers for Medicare & Medicaid Services. (2017). *State operations manual appendix PP - Guidance to surveyors for long term care facilities.* Retrieved from https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/som107ap_pp_guidelines_ltcf.pdf

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- Oregon Patient Safety Commission. (n.d.). Oregon's guide to root cause analysis in long term care: Investigating with a different lens. Retrieved from http://library.state.or.us/repository/2010/201009130912581/index.pdf

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