F689

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§483.25(d) Accidents.

The facility must ensure that –
§483.25(d)(1) The resident environment remains as free of accident hazards as is possible; and

§483.25(d)(2) Each resident receives adequate supervision and assistance devices to prevent accidents.

INTENT: 483.25(d)

The intent of this requirement is to ensure the facility provides an environment that is free from accident hazards over which the facility has control and provides supervision and assistive devices to each resident to prevent avoidable accidents. This includes:

- Identifying hazard(s) and risk(s);
- Evaluating and analyzing hazard(s) and risk(s);
- Implementing interventions to reduce hazard(s) and risk(s); and
- Monitoring for effectiveness and modifying interventions when necessary.

DEFINITIONS 483.25(d)

Definitions are provided to clarify terms related to providing supervision and other interventions to prevent accidents.

"Accident" refers to any unexpected or unintentional incident, which results or may result in injury or illness to a resident. This does not include other types of harm, such as adverse outcomes that are a direct consequence of treatment or care that is provided in accordance with current professional standards of practice (e.g., drug side effects or reaction).

"Avoidable Accident" means that an accident occurred because the facility failed to:

- Identify environmental hazards and/or assess individual resident risk of an accident, including the need for supervision and/or assistive devices; and/or
- Evaluate and analyze the hazards and risks and eliminate them, if possible, or, if not possible, identify and implement measures to reduce the hazards/risks as much as possible; and/or
- Implement interventions, including adequate supervision and assistive devices, consistent with a resident's needs, goals, care plan and current professional standards of practice in order to eliminate the risk, if possible, and, if not, reduce the risk of an accident; and/or

- Monitor the effectiveness of the interventions and modify the care plan as necessary, in accordance with current professional standards of practice.

"Unavoidable Accident" means that an accident occurred despite sufficient and comprehensive facility systems designed and implemented to:

- Identify environmental hazards and individual resident risk of an accident, including the need for supervision; and
- Evaluate and analyze the hazards and risks and eliminate them, if possible and, if not possible, reduce them as much as possible;
- Implement interventions, including adequate supervision, consistent with the resident's needs, goals, plan of care, and current professional standards of practice in order to eliminate the risk, if possible, and, if not, reduce the risk of an accident; and
- Monitor the effectiveness of the interventions and modify the interventions as necessary, in accordance with current professional standards of practice.

"Assistance Device" or **"Assistive Device"** refers to any item (e.g., fixtures such as handrails, grab bars, and mechanical devices/equipment such as stand-alone or overhead transfer lifts, canes, wheelchairs, and walkers, etc.) that is used by, or in the care of a resident to promote, supplement, or enhance the resident's function and/or safety.

NOTE: The currently accepted nomenclature refers to "assistive devices." Although the term "assistance devices" is used in the regulation, the Guidance provided in this document will refer to "assistive devices." These terms mean the same thing, and may be used interchangeably.

"Environment" refers to any environment or area in the facility that is frequented by or accessible to residents, including (but not limited to) the residents' rooms, bathrooms, hallways, dining areas, lobby, outdoor patios, therapy areas and activity areas.

"Fall" refers to unintentionally coming to rest on the ground, floor, or other lower level, but not as a result of an overwhelming external force (e.g., resident pushes another resident). An episode where a resident lost his/her balance and would have fallen, if not for another person or if he or she had not caught him/herself, is considered a fall. A fall without injury is still a fall. Unless there is evidence suggesting otherwise, when a resident is found on the floor, a fall is considered to have occurred (refer to Resident Assessment Instrument User's Manual. Version 3.0, Chapter 3, page J-27).

"Hazards" refer to elements of the resident environment that have the potential to cause injury or illness.

- "Hazards over which the facility has control" are those hazards in the resident environment where reasonable efforts by the facility could influence the risk for resulting injury or illness.

- "Free of accident hazards as is possible" refers to being free of accident hazards over which the facility has control.

"**Position change alarms**" are alerting devices intended to monitor a resident's movement. The devices emit an audible signal when the resident moves in a certain way. Types of position change alarms include chair and bed sensor pads, bedside alarmed mats, alarms clipped to a resident's clothing, seatbelt alarms, and infrared beam motion detectors.[1] Position change alarms do not include alarms intended to monitor for unsafe wandering such as door or elevator alarms.

"Risk" refers to any external factor, facility characteristic (e.g., staffing or physical environment) or characteristic of an individual resident that influences the likelihood of an accident.

"Supervision/Adequate Supervision" refers to an intervention and means of mitigating the risk of an accident. Facilities are obligated to provide adequate supervision to prevent accidents. Adequate supervision is determined by assessing the appropriate level and number of staff required, the competency and training of the staff, and the frequency of supervision needed. This determination is based on the individual resident's assessed needs and identified hazards in the resident environment. Adequate supervision may vary from resident to resident and from time to time for the same resident.

GUIDANCE OVERVIEW §483.25(d)
Numerous and varied accident hazards exist in everyday life. Not all accidents are avoidable. The frailty of some residents increases their vulnerability to hazards in the resident environment and can result in life-threatening injuries. It is important that all facility staff understand the facility's responsibility, as well as their own, to ensure the safest environment possible for residents.

The facility is responsible for providing care to residents in a manner that helps promote quality of life. This includes respecting residents' rights to privacy, dignity and self-determination, and their right to make choices about significant aspects of their life in the facility.

An effective way for the facility to avoid accidents is to develop a culture of safety and commit to implementing systems that address resident risk and environmental hazards to minimize the likelihood of accidents. A facility with a commitment to safety:

- Acknowledges the high-risk nature of its population and setting;
- Develops effective communication, including a reporting system that does not place blame on the staff member for reporting resident risks and environmental hazards;
- Engages all staff, residents and families in training on safety, and promotes ongoing discussions about safety with input from staff at all levels of the organization, as well as residents and families;

- Encourages the use of data to identify potential hazards, risks, and solutions related to specific safety issues that arise;
- Directs resources to address safety concerns; and
- Demonstrates a commitment to safety at all levels of the organization.

A SYSTEMS APPROACH

Processes in a facility's interdisciplinary systematic approach may include:

- Identification of hazards, including inadequate supervision, and a resident's risks of potentially avoidable accidents in the resident environment;
- Evaluation and analysis of hazards and risks;
- Implementation of individualized, resident-centered interventions, including adequate supervision and assistive devices, to reduce individual risks related to hazards in the environment; and
- Monitoring for effectiveness and modification of interventions when necessary.

A key element of a systematic approach is the consistent application of a process to address identified hazards and/or risks. Risks may pertain to individual residents, groups of residents, or the entire facility. Hazards may include, but are not limited to, aspects of the physical plant, equipment, and devices that are defective or are not used properly (per manufacturer's specifications), are disabled/removed, or are not individually adapted or fitted to the resident's needs. An effective system not only proactively identifies environmental hazards and the resident's risk for an avoidable accident, but also evaluates the resident's need for supervision.

Identifying and addressing risks, including the potential for accidents, includes consideration of the environment, the resident's risk factors, and the need for supervision, care, and assistive devices. This will allow the facility to communicate information about observed hazards, identify resident-specific information, develop and implement an individualized care plan based on the Resident Assessment Instrument (RAI) to address each resident's needs and goals, and to monitor the results of the planned interventions. The care plan should strive to balance the resident's wishes with the potential impact on the safety of the resident and other residents.

A systematic approach enables the facility to evaluate safety throughout its environment and among all staff, and make appropriate adjustments in training and competency testing as required. Each resident and their family members or representatives should be aware of the risks and potential hazards related to falls and of various devices used to reduce fall risk. Furthermore, a systematic approach enables leadership and direct care staff to work together to revise policies and procedures, based on feedback from workers who are most familiar with the residents and care processes. Effective facility systems address how to:

- communicate the observations of hazards,
- record resident specific information, and
- monitor data related to care processes that potentially lead to accidents.

Identification of Hazards and Risks

Identification of hazards and risks is the process through which the facility becomes aware of potential hazards in the resident environment and the risk of a resident having an avoidable accident. All staff (e.g., professional, administrative, maintenance, etc.) are to be involved in observing and identifying potential hazards in the environment, while taking into consideration the unique characteristics and abilities of each resident. The facility should make a reasonable effort to identify the hazards and risk factors for each resident. Various sources provide information about hazards and risks in the resident environment. These sources may include, but are not limited to, Quality Assessment and Assurance (QAA) activities, environmental rounds, MDS/CAAs data, medical history and physical exam, facility assessment as required in F838, and individual observation. This information is to be documented and communicated across all disciplines.

Evaluation and Analysis

Evaluation and analysis is the process of examining data to identify specific hazards and risks and to develop targeted interventions to reduce the potential for accidents. Interdisciplinary involvement is a critical component of this process. Analysis may include, for example, considering the severity of hazards, the immediacy of risk, and trends such as time of day, location, etc.

Both the facility-centered and resident-directed approaches include evaluating hazards and accident risk data which includes prior accidents/incidents, analysis to identify the root causes of each hazard and accident risk, and identifying or developing interventions based on the severity of the hazards and immediacy of risk. Evaluations also look at trends such as time of day, location, etc.

Implementation of Interventions

Implementation refers to using specific interventions to try to reduce a resident's risks from hazards in the environment. The process includes: Communicating the interventions to all relevant staff, assigning responsibility, providing training as needed, documenting interventions (e.g., plans of action developed through the QAA committee or care plans for the individual resident), and ensuring that the interventions are put into action.

Interventions are based on the results of the evaluation and analysis of information about hazards and risks and are consistent with professional standards, including evidence-based practice. Development of interim safety measures may be necessary if interventions cannot immediately be implemented fully.

Facility-based interventions may include, but are not limited to, educating staff, repairing the device/equipment, and developing or revising policies and procedures. Resident-directed approaches may include implementing specific interventions as part of the plan

of care, supervising staff and residents, etc. Facility records document the implementation of these interventions.

Monitoring and Modification

Monitoring is the process of evaluating the effectiveness of care plan interventions. Modification is the process of adjusting interventions as needed to make them more effective in addressing hazards and risks.

Monitoring and modification processes include:

- Ensuring that interventions are implemented correctly and consistently;
- Evaluating the effectiveness of interventions;
- Modifying or replacing interventions as needed and
- Evaluating the effectiveness of new interventions.

An example of facility-specific modification is additional training of staff when equipment has been upgraded, while a resident-specific modification is revising the care plan to reflect the resident's current condition and risk factors that may have changed since the previous assessment.

For example, a facility implements a position change alarm for a newly admitted resident with a history of falls. After completing a comprehensive assessment of the resident, facility staff identify the resident's routines and patterns, remove the alarm, and implement more individualized interventions that address the actual cause of why a resident may be changing position (e.g. has been in one position too long or is trying to reach for a personal item) which could lead to a fall.

Supervision

Supervision is an intervention and a means of mitigating accident risk. Facilities are obligated to provide adequate supervision to prevent accidents. Adequacy of supervision is defined by type and frequency, based on the individual resident's assessed needs, and identified hazards in the resident environment. Adequate supervision may vary from resident to resident and from time to time for the same resident. Devices such as position change alarms may help to monitor a resident's movement temporarily, but do not eliminate the need for adequate supervision.

The resident environment may contain temporary hazards (e.g., construction, painting, housekeeping activities, etc.) that warrant additional supervision or alternative measures such as barriers to prevent access to affected areas of the resident environment.

Adequate supervision to prevent accidents is enhanced when the facility:

- Accurately assesses a resident and/or the resident environment to determine whether supervision to avoid an accident is necessary; and/or

- Determines that supervision of the resident was necessary and provides supervision based on the individual resident's assessed needs and the risks identified in the environment.

Resident Smoking

Some facilities permit residents to smoke tobacco products. In these facilities, assessment of the resident's capabilities and deficits determines whether or not supervision is required. If the facility identifies that the resident needs assistance and supervision for smoking, the facility includes this information in the resident's care plan, and reviews and revises the plan periodically as needed.

The facility may designate certain areas for resident smoking. The facility must ensure precautions are taken for the resident's individual safety, as well as the safety of others in the facility. Such precautions may include smoking only in designated areas, supervising residents whose assessment and care plans indicate a need for assisted and supervised smoking, and limiting the accessibility of matches and lighters by residents who need supervision when smoking for safety reasons. Smoking by residents when oxygen is in use is prohibited, and any smoking by others near flammable substances is also problematic. Additional measures may include informing all visitors of smoking policies and hazards.

Guidance concerning resident smoking regulations can be found in NFPA 101, 2012 edition, the Life Safety Code at 19.7.4, Smoking, including requirements for signage, prohibiting smoking by residents classified as not responsible, and disposal of smoking materials.

Electronic cigarettes – While electronic cigarettes (e-cigs), or vapor pens, are not considered smoking devices, and their heating element does not pose the same dangers of ignition as regular cigarettes, they are not without risk. A review of literature by the Centers for Disease Control and Prevention (CDC), Food and Drug Administration (FDA), and Federal Emergency Management Agency (FEMA) shows that as electronic cigarette use has increased, risks associated with their use have also increased. Risks and concerns include:

- Potential health effects for the smoker, such as respiratory illness or lung injury which may present with symptoms of breathing difficulty, shortness of breath, chest pain, mild to moderate gastrointestinal illness, fever or fatigue;
- Second-hand aerosol exposure;
- Nicotine overdose by ingestion or contact with the skin; and
- Explosion or fire caused by the battery.

Because these devices are not without risk and have accidents associated with them, facilities have a responsibility to oversee their use and provide supervision to maintain an accident-free environment.

In August 2016, the World Health Organization recommended that electronic cigarettes be banned indoors or where smoking is prohibited because of the second-hand exposure to potentially toxic chemicals, and many local and state jurisdictions have begun enacting laws that prohibit electronic cigarette use everywhere that smoking is banned. Facilities that decide, in accordance with State and local laws, to allow e-cigarette use, should develop and implement policies for safe use of e-cigarettes, along with policies for traditional cigarettes. Policies should include where e-cigarettes can be used and how to handle the devices, batteries and refill cartridges. The FDA has published recommendations for safe handling at the following link: https://www.fda.gov/tobaccoproducts/labeling/productsingredientscomponents/ucm539362.htm#blue.

Residents who wish to use e-cigarettes should be assessed for their ability to safely handle the device. Concerns related to resident safety with use of e-cigarettes should be investigated using the guidance at 42 CFR 483.25(d), F689, Accidents and Supervision. Surveyors should also consider how facilities balance resident safety with a resident's right to use these devices while also considering the rights of residents who do not want to be exposed to second-hand aerosol. For concerns related to resident choice to use e-cigarettes in facilities where the devices are permitted and for residents who do not wish to be exposed to second-hand aerosol, surveyors should use guidance at 42 CFR 483.10(c)(3) Right to Participate in Planning Care, F553 and 483.10(f), F561, Self-Determination. For concerns about a facility's policies for e-cigarettes, use F926, 483.90(i)(5), Smoking Policies.

Resident-to-Resident Altercations

NOTE: A resident to resident altercation should be reviewed as a potential situation of abuse which should be investigated under the guidance for 42 CFR §483.12, (F600). The surveyor should not automatically assume that abuse did not occur for a resident identified as having a cognitive impairment or mental disorder, as it does not preclude the resident from deliberate (willful) or non-accidental actions. "Willful" as defined at §483.5 and as used in the definition of "abuse," "means the individual must have acted deliberately, not that the individual must have intended to inflict injury or harm." Even though a resident may have a cognitive impairment, he/she could still commit a willful act. If during the investigation of an allegation of abuse, it is determined that the action was not willful, the surveyor must investigate whether the facility is in compliance with the requirement to maintain an environment as free of accident hazards as possible, and that each resident receives adequate supervision using guidance at this tag, F689, Accidents.

It is important that a facility take reasonable precautions, including providing adequate supervision, when the risk of resident-to-resident altercation is identified, or should have been identified. Certain situations or conditions may increase the potential for such altercations, including, but not limited to:

- A history of aggressive behaviors including striking out, verbal outbursts, or negative interactions with other resident(s); and/or
- Behavior that may disrupt or annoy others such as constant verbalization (e.g., crying, yelling, calling out for help), making negative remarks, restlessness, repetitive behaviors, taking items that do not belong to them, going into other residents' rooms, drawers, or closets, and undressing in inappropriate areas. Although these behaviors may not be aggressive in nature, they may precipitate a negative response from others, resulting in verbal, physical, and/or emotional harm.

The facility is responsible for identifying residents who have a history of disruptive or intrusive interactions, or who exhibit other behaviors that make them more likely to be involved in an altercation. The facility should identify the factors (e.g., pain, specific triggers in the environment, etc.) that increase the risks associated with individual residents, including those that could trigger an altercation. The interdisciplinary team reviews the assessment along with the resident and/or his/her representative, in order to address the underlying reasons for the behavioral manifestations and to identify interventions to try to prevent altercations.

The interventions listed below include supervision and other actions that could address potential or actual negative interactions:

- Evaluating staffing levels to ensure adequate supervision (if it is adequate, it is meeting the resident's needs) (refer to F725, §483.35(a)(1)(2), to evaluate staffing levels for any nursing services not related to behavioral health care or dementia care and F741, §483.40, for any staff caring for residents with dementia, mental and psychosocial disorder, substance use disorder, or a history of trauma and/or post-traumatic stress disorder);
- Evaluating staffing assignments to ensure consistent staff who are more familiar with the resident and who thus may be able to identify changes in a resident's condition and behavior;
- Providing safe supervised areas for unrestricted movement;
- Eliminating or reducing underlying causes of distressed behavior such as boredom and pain;
- Monitoring environmental influences such as temperatures, lighting, and noise levels; and
- Ongoing staff training, competencies and supervision, including how to approach a resident who may be agitated, combative, verbally or physically aggressive, or anxious, and how and when to obtain assistance in managing a resident with behavior symptoms (refer to F726, §483.35(a)(3)(4)(c), to evaluate staff competency for any nursing services not related to behavioral health care or dementia care and F741, §483.40, for any staff caring for residents with dementia, mental and psychosocial disorder, substance use disorder, or a history of trauma and/or post-traumatic stress disorder).

RISKS AND ENVIRONMENTAL HAZARDS

This section discusses common, but not all, potential risks and hazards found in the resident environment.

NOTE: The information included in the following sections is based on current professional standards of practice or "best practice" models as described in the literature.

The physical plant, devices, and equipment described in this section may not be hazards by themselves but can become hazardous when a vulnerable resident interacts with them. Some temporary hazards in the resident environment can affect most residents who have access to them (e.g., construction, painting, and housekeeping activities). Other situations may be hazardous only for certain individuals (e.g., accessible smoking materials).

In order to be considered hazardous, an element of the resident environment must be accessible to a vulnerable resident. Resident vulnerability is based on risk factors including the individual resident's functional status, medical condition, cognitive abilities, mood, and health treatments (e.g., medications). Resident vulnerability to hazards may change over time. Ongoing assessment helps identify when elements in the environment pose hazards to a particular resident.

Certain sharp items, such as scissors, kitchen utensils, knitting needles, or other items, may be appropriate for many residents but hazardous for others with cognitive impairments. Handrails, assistive devices, and any surface that a resident may come in contact with may cause injury, if the surface is not in good condition, free from sharp edges or other hazards or not installed properly.

Improper actions or omissions by staff can create hazards in the physical plant (e.g., building and grounds), environment, and/or with devices and equipment. Examples of such hazards might include fire doors that have been propped open, disabled locks or latches, nonfunctioning alarms, buckled or badly torn carpets, cords on floors, irregular walking surfaces, improper storage and access to toxic chemicals, exposure to unsafe heating unit surfaces, and unsafe water temperatures. Other potential hazards may include furniture that is not appropriate for a resident (e.g., chairs or beds that are not the proper height or width for the resident to transfer to and from safely or unstable as to present a fall hazard) and lighting that is either inadequate or so intense as to create glare. Devices for resident care, such as pumps, ventilators, and assistive devices, may be hazardous when they are defective, disabled, or improperly used (i.e., used in a manner that is not per manufacturer's recommendations or current professional standards of practice).

Resident Vulnerabilities

The responsibility to respect a resident's choices is balanced by considering the resident's right to direct the care they receive with the potential impact of these choices on their well-being, other residents, and on the facility's obligation to protect residents from harm. The facility has a responsibility to educate a resident, family, and staff regarding significant risks related to a resident's choices. When a resident's choice poses some risk, staff should work with the resident to understand reasons for the choice, and discuss options for the facility to honor the choice. For example, a resident may express a desire to use a cane instead of a walker or wheelchair in order to maintain dignity and self-esteem. This preference should be discussed to review potential positive and negative consequences of possible courses of action (including potential negative consequences that may result from preventing the choice) and to find ways to develop a care plan in which staff honor the choice while mitigating risks. For resources on care planning to mitigate risk, see A Process for Care Planning Resident Choice at https://www.pioneernetwork.net/wp-content/uploads/2016/10/Process-for-Care-Planning-for-Resident-Choice-.pdf .

Verbal consent or signed consent/waiver forms do not eliminate a facility's responsibility to protect a resident from an avoidable accident, nor does it relieve the provider of its responsibility to assure the health, safety, and welfare of its residents. While Federal regulations affirm the resident's right to participate in care planning and to refuse treatment, the regulations do not create the right for a resident or representative to demand the facility use specific medical interventions or treatments that the facility deems inappropriate. The regulations hold the facility ultimately accountable for the resident's care and safety.

Falls and unsafe wandering/elopement are of particular concern. The following section reviews these issues along with some common potential hazards.

Falls - The MDS defines a fall as unintentionally coming to rest on the ground, floor, or other lower level but not as a result of an overwhelming external force (e.g., resident pushes another resident). An episode where a resident lost his/her balance and would have fallen, if not for another person or if he or she had not caught him/herself, is considered a fall. A fall without injury is still a fall. Unless there is evidence suggesting otherwise, when a resident is found on the floor, a fall is considered to have occurred.

NOTE: Challenging a resident's balance and training him/her to recover from loss of balance is an intentional therapeutic intervention. The losses of balance that occur during supervised therapeutic interventions are not considered a fall.

Some factors that may result in resident falls include, but are not limited to:

- Environmental hazards, such as wet floors, poor lighting, incorrect bed height and/or width, or improperly fitted or maintained wheelchairs;
- Unsafe or absent footwear and loose or improperly worn clothing;
- Underlying chronic medical conditions, such as arthritis, heart failure, anemia and neurological disorders;

- Acute change in condition such as fever, infection, delirium;
- Medication side effects;
- Orthostatic hypotension;
- Lower extremity weakness;
- Balance disorders;
- Poor grip strength;
- Functional impairments (difficulty rising from a chair, getting on or off toilet, etc.);
- Gait disorders;
- Cognitive impairment;
- Visual deficits;
- Pain; and
- Incontinence.

Older persons have both a high incidence of falls and a high susceptibility to injury.[2] Serious potential consequences of falls include physical injuries, pain, increased risk of death, impaired function, fear of falling, and self-imposed limitations on activities leading to social isolation.[3] Evaluation of all of the causal factors leading to a resident fall assists the facility in developing and implementing relevant, consistent, and individualized interventions to prevent future occurrences. Proper actions following a fall include:

- Ascertaining if there were injuries, and providing treatment as necessary;
- Determining what may have caused or contributed to the fall, including ascertaining what the resident was trying to do before he or she fell;
- Addressing the risk factors for the fall such as the resident's medical conditions(s), facility environment issues, or staffing issues; and
- Revising the resident's plan of care and/or facility practices, as needed, to reduce the likelihood of another fall.

NOTE: A fall by a resident does not necessarily indicate a deficient practice because not every fall can be avoided.

Position Change Alarms:

Facilities often implement position change alarms as a fall prevention strategy or in response to a resident fall. The alarms are designed to alert staff that the resident has changed position, increasing the risk for falling. However, the efficacy of alarms to prevent falls has not been proven and a study of hospitalized patients concluded these devices may only alert staff that a fall has already occurred. The same study also noted false alarms are a common problem leading to "alarm fatigue," where staff no longer respond to the sound of an alarm.[4] A study on bed-exit alarms concluded the alarms are not a substitute for staff assisting residents and bed-exit alarms may not always function reliably for residents who weigh less than 100 pounds or who are restless.[5] Individual facility efforts to reduce use of alarms have shown falls actually decrease when alarms are eliminated, and replaced with other interventions such as purposeful checks to

proactively address resident needs, adjusting staff to cover times of day when most falls occur, assessing resident routines, and making individualized environmental or care changes that suit each resident. [6] For example, brighter lighting might help a resident with macular degeneration ambulate more easily in his or her room but would cause glare and make walking more difficult for a resident with cataracts.[7]

Facilities must implement comprehensive, resident-centered fall prevention plans for each resident at risk for falls or with a history of falls. While position change alarms are not prohibited from being included as part of a plan, they should not be the primary or sole intervention to prevent falls. If facility staff choose to implement alarms, they should document their use aimed at assisting the staff to assess patterns and routines of the resident. Use of these devices, like any care planning intervention, must be based on assessment of the resident and monitored for efficacy on an on-going basis. Position change alarms have been used to monitor a resident's movement in chairs or beds, etc. However, there must be sufficient staff and supervision to meet the resident's needs and staff must be vigilant in order to respond to alarms in a timely manner. Alarms do not replace necessary supervision. Facilities must take steps to identify issues that place the resident at risk for falls and implement approaches to address those risks in a manner that enables the resident to achieve or maintain his or her highest practicable physical, mental, and psychosocial well-being.

Wandering and Elopement - Wandering is random or repetitive locomotion. This movement may be goal-directed (e.g., the person appears to be searching for something such as an exit) or may be non-goal-directed or aimless. Non-goal-directed wandering requires a response in a manner that addresses both safety issues and an evaluation to identify root causes to the degree possible. Moving about the facility aimlessly may indicate that the resident is frustrated, anxious, bored, hungry, or depressed. Goal-directed wandering may fulfill a resident's need for exercise or provide sensory stimulation. This goal directed wandering should also require staff supervision and a facility response to address safety issues.

Wandering may become unsafe when a resident becomes overly tired or enters an area that is physically hazardous or that contains potential safety hazards (e.g., chemicals, tools, and equipment, etc.). Entering into another resident's room may lead to an altercation or contact with hazardous items. Unsafe wandering can be associated with an increased risk for falls and injuries.

While wander, door, or building alarms can help to monitor a resident's activities, staff must be vigilant in order to respond to them in a timely manner. Alarms do not replace necessary supervision, and require scheduled maintenance and testing to ensure proper functioning.

A situation in which a resident leaves the premises or a safe area without the facility's knowledge and supervision, if necessary, would be considered an elopement. This situation represents a risk to the resident's health and safety and places the resident at risk

of heat or cold exposure, dehydration and/or other medical complications, drowning, or being struck by a motor vehicle.

Facility policies that clearly define the mechanisms and procedures for assessing or identifying, monitoring and managing residents at risk for elopement can help to minimize the risk of a resident leaving a safe area without the facility's awareness and/or appropriate supervision. In addition, the resident at risk should have interventions in their comprehensive plan of care to address the potential for elopement. Furthermore, a facility's disaster and emergency preparedness plan should include a plan to locate a missing resident.

Safety for Residents with Substance Use Disorder (SUD)

Residents with a history of substance use disorder may be at increased risk for leaving the facility without notification and/or for illegal or prescription drug overdose if the resident continues using substances while residing in the nursing home. Residents with a history of substance use disorder should be assessed for these risks and care plan interventions should be implemented to ensure the safety of all residents.

For example, residents with substance use disorder may leave the facility to satisfy an addiction to alcohol, prescription drugs, or illegal substances. Care planning interventions should address this risk by providing appropriate diversions for residents and encouraging residents to seek out facility staff to discuss their plan of care, including discharge planning, rather than leaving to seek out substances which could endanger the resident's health and/or safety. The facility should advise residents of the risks of leaving the facility to seek out substances and/or early, unplanned discharge, and provide appropriate referrals and discharge instructions whenever possible.

Facilities are responsible for identifying and assessing a resident's risk for leaving the facility without notification to staff and developing interventions to address this risk. A situation in which a resident with decision-making capacity leaves the facility intentionally would generally not be considered an elopement **unless the facility is unaware of the resident's departure and/or whereabouts**. A resident who leaves the facility prior to his or her planned discharge, but with facility knowledge of the departure and despite facility efforts to explain the risks of leaving, would be leaving against medical advice (AMA). Documentation in the medical record should show that facility staff attempted to provide other options to the resident and informed the resident of potential risks of leaving AMA. Documentation should also identify the time the facility became aware of the resident leaving the facility.

NOTE: This guidance is not intended to restrict a resident's ability to leave and return to the facility in accordance with the resident's medical orders, care plan, facility policy and §§483.10(c)(6), (f)(3), and (f)(8).

Additionally, residents with SUD may try to continue using substances during their stay in the nursing home. Facility staff should assess the resident for the risk for substance

use in the facility and have knowledge of signs and symptoms of possible substance use such as: frequent leaves of absence with or without facility knowledge, odors, new needle marks, and changes in resident behavior such as unexplained drowsiness, slurred speech, lack of coordination, and mood changes, particularly after interaction with visitors or absences from the facility. Efforts to prevent substance use may include providing substance use treatment services, such as behavioral health services, medication-assisted treatment (MAT), alcoholic/narcotics anonymous meetings, working with the resident and the family, if appropriate, to address goals related to their stay in the nursing home, and increased monitoring and supervision.

When investigating overdose occurrences, surveyors should evaluate whether the facility assessed and identified that the resident who experienced an overdose had a history of substance use and was at risk for using substances which could lead to an overdose while in the facility. If there is a history of SUD, the resident's comprehensive care plan should contain interventions, if appropriate, to prevent substance use in the facility as well as interventions for when substance use is suspected or identified. Facility staff should implement care plan interventions which should include increased monitoring and supervision of the resident, increased supervision of visitors, and notification of the resident's physician or non-physician practitioner. For example, a resident displays changes in behavior or unexplained lethargy after his or her visitors leave or other residents report observing the use of substances. When substance use is suspected, (in the facility or upon return from an absence from the facility) which could lead to overdose, facility staff should implement the care plan interventions.

Facilities and surveyors should be aware that relapses of substance use can be common in individuals with SUD, and may result in a drug overdose. Facilities that accept residents with SUD are typically doing so to treat a medical-related issue, and are not expected to fully cure individuals with SUD of their underlying addictive behaviors while in the facility. However, facility staff should be prepared to address emergencies related to substance use by providing increased monitoring, maintaining and having knowledge of administering opioid reversal agents like naloxone, initiating CPR as appropriate, and contacting emergency medical services as soon as possible. The United States Surgeon General has recommended that naloxone be kept on hand where there is a risk for an opioid overdose. Information on safe naloxone administration may be found on this document developed by the Substance Abuse and Mental Health Administration (SAMHSA), https://store.samhsa.gov/system/files/sma18-4742.pdf.

NOTE: Surveyors should be aware that the occurrence of an overdose does not automatically mean that noncompliance exists. As noted above, drug overdoses can be expected with individuals with SUD and facilities are not expected to fully cure these residents of their underlying disease or SUD. For example, a resident with a known history of SUD and drug seeking behaviors when offsite, returns from an absence from the facility. Evidence shows the facility took steps to increase its monitoring of the resident, and despite this effort, the resident overdosed between checks or immediately upon return before increased monitoring had begun. Additionally, the facility attempted CPR and administered naloxone. This example demonstrates a negative outcome,

however, noncompliance with this requirement does not exist. Conversely, if the same resident returns from an absence but the facility did not take steps to increase monitoring, noncompliance with the requirements at §483.25(d) may exist due to failure to identify the resident's risk for overdose and implement interventions.

Physical Plant Hazards

NOTE: Refer to guidance at 483.7*1* (F838) for facility responsibilities regarding the facility's physical environment.

Supervision and/or containment of hazards are needed to protect residents from harm caused by environmental hazards. Examples of such hazards can range from common chemical cleaning materials to those caused by adverse water temperatures or improper use of electrical devices.

Chemicals and Toxins - Various materials in the resident environment can pose a potential hazard to residents. Hazardous materials can be found in the form of solids, liquids, gases, mists, dusts, fumes, and vapors. The routes of exposure for toxic materials may include inhalation, absorption, or ingestion.

For a material to pose a safety hazard to a resident, it must be toxic, caustic, or allergenic; accessible and available in a sufficient amount to cause harm. Toxic materials that may be present in the resident environment are unlikely to pose a hazard unless residents have access or are exposed to them. Some materials that would be considered harmless when used as designed could pose a hazard to a resident who accidentally ingests or makes contact with them.

Examples of materials that may pose a hazard to a resident include (but are not limited to):

- Chemicals used by the facility staff in the course of their duties (e.g., housekeeping chemicals, cleaning and sanitizing agents) and chemicals or other materials brought into the resident environment by staff, other residents, or visitors;
- Drugs and therapeutic agents;
- Plants and other "natural" materials found in the resident environment or in the outdoor environment (e.g., poison ivy).

One source of information concerning the hazards of a material that a facility may obtain is the Safety Data Sheet (SDS).[8] The Occupational Safety and Health Administration (OSHA) requires employers to have a SDS available for all hazardous materials that staff use while performing their duties.[9] SDSs are available on-line for numerous chemicals and non-toxic materials, and should be reviewed carefully to determine if the material is toxic and poses a hazard. Poison control centers are another source of information for potential hazards, including non-chemical hazards such as plants.

NOTE: Toxicological profiles for a limited number of hazardous materials are accessible on the Agency for Toxic Substances & Disease Registry Web site at http://www.atsdr.cdc.gov/.

Water Temperature - Water may reach hazardous temperatures in hand sinks, showers, tubs, and any other source or location where hot water is accessible to a resident. Burns related to hot water/liquids may also be due to spills and/or immersion. Many residents in long-term care facilities have conditions that may put them at increased risk for burns caused by scalding. These conditions include: decreased skin thickness, decreased skin sensitivity, peripheral neuropathy, decreased agility (reduced reaction time), decreased cognition or dementia, decreased mobility, and decreased ability to communicate.[10]

The degree of injury depends on factors including the water temperature, the amount of skin exposed, and the duration of exposure. Some States have regulations regarding allowable maximum water temperature. Table 1 illustrates damage to skin in relation to the temperature of the water and the length of time of exposure.[11]

Table 1. Time and Temperature Relationship to Serious Burns

Water Temperature		Time Required for a 3rd Degree Burn to Occur
155°F	68°C	1 sec
148°F	64°C	2 sec
140°F	60°C	5 sec
133°F	56°C	15 sec
127°F	52°C	1 min
124°F	51°C	3 min
120°F	48°C	5 min
100°F	37°C	Safe Temperatures for Bathing (see Note)

NOTE: Burns can occur even at water temperatures below those identified in the table, depending on an individual's condition and the length of exposure.

Based upon the time of the exposure and the temperature of the water, the severity of the harm to the skin is identified by the degree of burn, as follows.[12]

- First-degree burns involve the top layer of skin (e.g., minor sunburn). These may present as red and painful to touch, and the skin will show mild swelling.

- Second-degree burns involve the first two layers of skin. These may present as deep reddening of the skin, pain, blisters, glossy appearance from leaking fluid, and possible loss of some skin.

- Third-degree burns penetrate the entire thickness of the skin and permanently destroy tissue. These present as loss of skin layers, often painless (pain may be caused by patches of first- and second-degree burns surrounding third-degree burns), and dry, leathery skin. Skin may appear charred or have patches that appear white, brown, or black.

Electrical Safety - Any electrical device, whether or not it needs to be plugged into an electric outlet, can become hazardous to the residents through improper use or improper maintenance. Electrical equipment such as electrical cords can become tripping hazards. Halogen lamps or heat lamps can cause burns or fires if not properly installed away from combustibles in the resident environment. The Life Safety Code prohibits the use of portable electrical space heaters in resident areas.

Extension cords should not be used to take the place of adequate wiring in a facility. If extension cords are used, the cords should be properly secured and not be placed overhead, under carpets or rugs, or anywhere that the cord can cause trips, falls, or overheat. Extension cords should be connected to only one device to prevent overloading of the circuit. The cord itself should be of a size and type for the expected electrical load and made of material that will not fray or cut easily. Electrical cords including extension cords should have proper grounding if required and should not have any grounding devices removed, or should not be used without the grounding devices.

Power strips may not be used as a substitute for adequate electrical outlets in a facility. Power strips may be used for a computer, monitor, and printer. Power strips are not designed to be used with medical devices in patient care areas. Precautions needed if power strips are used include: installing internal ground fault and over-current protection devices; preventing cords from becoming tripping hazards; and using power strips that are adequate for the number and types of devices used. Overload on any circuit can potentially cause overheating and fire. The use of ground fault circuit interruption (GFCIs) may be required in locations near water sources to prevent electrocution of staff or residents.[13]

The proper use of electric blankets and heating pads is essential to avoid thermal injuries. These items should not be tucked in or squeezed. Constriction can cause the internal wires to break. A resident should not go to sleep with an electric blanket or heating pad turned on. Manufacturer's instructions for use should be followed closely. Injuries and deaths have been related to burns and fires related to the use of heating pads. Most deaths are attributable to heating pads that generated fires, but most injuries are burns from prolonged use or inappropriate temperature setting. Prolonged use on one area of the body can cause a severe burn, even when the heating pad is at a low temperature setting.

Lighting - The risk of an accident increases when there is insufficient light or too much light, which often results in glare. Vision among older persons varies widely; therefore, no single level of illumination can ensure safety for all residents. The proper amount of light depends on the resident's visual needs and the task he/she is performing. An older

person typically needs more light to see. However, a resident with cataracts or glaucoma may be overly sensitive to bright light, and excessive lighting could make it more difficult to see clearly and thereby increase his/her fall risk.[14] Creating transitional zones between light and dark spaces helps to improve sight recovery and enable safer mobility. Providing extra visual cues that clearly define needed items or spaces in areas with limited or variable light can help to enable safe performance of tasks (e.g., turning on a light). Providing supplemental light near beds for residents who are mobile may assist in safe mobility at night.[15]

NOTE: Refer to guidance under 42 CFR 483.10(i)(5), F584, Safe Environment regarding adequate and comfortable lighting.

Assistive Devices/Equipment Hazards

Assistive devices also can help to prevent accidents. Assistive devices and equipment can help residents move with increased independence, transfer with greater comfort, and feel physically more secure. However, there are risks associated with the use of such devices and equipment, particularly if or when they are not properly maintained and these risks need to be balanced with the benefits gained from their use. Training of staff, residents, family members and volunteers on the proper use of assistive devices/equipment is crucial to prevent accidents. It is also important to communicate clearly the approaches identified in the care plan to all staff, including temporary staff. It is important to train staff regarding resident assessment, safe transfer techniques, and the proper use of mechanical lifts including device weight limitations.

NOTE: The Safe Medical Devices Act of 1990 (SMDA) requires hospitals, nursing homes, and other user facilities to report deaths, serious illnesses, and injuries associated with the use of medical devices to manufacturers and the Food and Drug Administration.

Assistive Devices for Mobility - Mobility devices include all types of assistive devices, such as, but not limited to, canes, standard and rolling walkers, manual or non-powered wheelchairs, and powered wheelchairs. Three primary factors that may be associated with an increased accident risk related to the use of assistive devices include:

1. Resident Condition. Lower extremity weakness, gait disturbances, decreased range of motion, and poor balance may affect some residents. These conditions combined with cognitive impairment can increase the accident risks of using mobility devices. Unsafe behavior, such as failure to lock wheelchair brakes and trying to stand or transfer from a wheelchair unsafely, can result in falls and related injuries;

2. Personal Fit and Device Condition. Devices can pose a hazard if not fitted and/or maintained properly.[16] Personal fit, or how well the assistive device meets the individual needs of the resident, may influence the likelihood of an avoidable accident; and

3. Staff Practices. Mobility devices that a resident cannot readily reach may create a hazardous situation. Unsafe transfer technique used by staff may result in an accident. Inadequate supervision by staff of a resident during the initial trial period of assistive device use or after a change in the resident's functional status can increase the risk of falls and/or injury. Additionally, staff needs to ensure assistive devises properly fit the resident and the resident has received proper training in the use of the assistive device.

Assistive Devices for Transfer - Mechanical assistive devices for transfer include, but are not limited to, portable and stationary total body lifts, sit-to-stand devices, and transfer or gait belts. The resident assessment helps to determine the resident's degree of mobility and physical impairment and the proper transfer method; for example, whether one or more caregivers or a mechanical device is needed for a safe transfer. Residents who become frightened during transfer in a mechanical lift may exhibit resistance movements that can result in avoidable accidents. Communicating with the resident and addressing the resident's fear may reduce the risk.

Factors that may influence a resident's risk of accident during transfer include staff availability, resident abilities, staff training and competency. The resident's ability to communicate and identify physical limitations or to aid in the transfer will help determine the need for an assistive device, such as a mechanical lift. The Occupational Safety and Health Administration (OSHA) provides information and guidelines on identifying problems and implementing solutions relating to handling residents during transfers.[17]

Devices Associated with Entrapment Risks - Devices can be therapeutic and beneficial; however, devices are not necessarily risk free so it is important to weigh the relative risks and benefits of using certain devices. For example, while physical restraints may be used to treat a resident's medical symptom, the devices may create a risk for entrapment. Physical restraints are defined as any manual method, physical or mechanical device/equipment or material that meets all of the following criteria:

- Is attached or adjacent to a resident's body;
- Cannot be removed easily by the resident; and
- Restricts the resident's freedom of movement or normal access to his/her body.

Serious injuries, as well as death, have been reported as a result of using physical restraints. Some physical restraints carry a risk of severe injury, strangulation, and asphyxiation. Restrained residents may be injured or die when they try to remove restraints, to ambulate while restrained, or due to an improperly fitted or used device. Evidence shows that physical restraints cause more harm than good and seriously infringe upon a person's autonomy as explained in this article in the Journal of Medical Ethics, "Use of physical restraint in nursing homes: clinical-ethical considerations."[18] The Food and Drug Administration (FDA) also provides guidance on bed rail safety and reducing entrapment:

- https://www.fda.gov/medical-devices/hospital-beds/guide-bed-safety-bed-rails-hospitals-nursing-homes-and-home-health-care-facts, A Guide to Bed Safety Bed Rails in Hospitals, Nursing Homes and Home Health Care: The Facts

- https://www.fda.gov/medical-devices/bed-rail-safety/recommendations-health-care-providers-about-bed-rails, Recommendations for Health Care Providers About Bed Rails

- https://www.fda.gov/regulatory-information/search-fda-guidance-documents/hospital-bed-system-dimensional-and-assessment-guidance-reduce-entrapment, Guidance for Industry and FDA Staff: Hospital Bed System Dimensional and Assessment Guidance to Reduce Entrapment.

Regardless of the purpose for use, bed rails (also referred to as "side rails," "bed side rails," and "safety rails") and other bed accessories (e.g. transfer bar, bed enclosures), while assisting with transfer and positioning, can increase resident safety risk. Bed rails include rails of various sizes (e.g., full length rails, half rails, quarter rails) that may be positioned in various locations on the bed. Residents most at risk for entrapment are those who are frail or elderly or those who have conditions such as agitation, delirium, confusion, pain, uncontrolled body movement, hypoxia, fecal impaction, acute urinary retention, etc. that may cause them to move about the bed or try to exit from the bed. The failure to provide timely assistance with using the bathroom, inappropriate bed positioning, and other care-related activities can contribute to the risk of entrapment. The FDA provides detailed information about bed rails, including recommendations for health care providers.[19]

Entrapment may occur when a resident is caught between the mattress and bed rail or in the bed rail itself. Technical issues, such as the proper sizing of mattresses, fit and integrity of bed rails or other design elements (e.g., wide spaces between bars in the bed rails) can also affect the risk of resident entrapment.[20]

NOTE: §483.25(n) (F700) requires that facilities attempt appropriate alternatives before installing/ using bed rails, and if a bed or side rail is used, the facility must ensure correct installation, use, and maintenance of bed rails.

The use of a specialty air-filled mattress or a therapeutic air-filled bed may also present an entrapment risk that is different from rail entrapment with a regular mattress. The high compressibility of an air-filled mattress compared to a regular conventional mattress requires appropriate precautions when used for a resident at risk for entrapment. An air-filled mattress compresses on the side to which a person moves, thus raising the center of the mattress and lowering the side. This may make it easier for a resident to slide off the mattress or against the rail. Mattress compression widens the space between the mattress and rail. When a resident is between the mattress and rail, the mattress can re-expand and press the chest, neck, or head against the rail. While using air therapy to prevent and treat pressure ulcer/injuries, facilities should also take precautions to reduce the risk of

entrapment. Precautions may include following manufacturer equipment alerts and increasing supervision.[21]

NOTE: §483.12 (F604), applies to the use of physical restraints. This guidance at §483.25(d), (F689) applies to assistive devices that create hazards (e.g., devices that are defective; not used properly or according to manufacturer's specifications; disabled or removed; not provided or do not meet the resident's needs (poor fit or not adapted); and/or used without adequate supervision when required). §483.25(n) (F700) applies to the installation of bed rails.

KEY ELEMENTS OF NONCOMPLIANCE

To cite deficient practice at F689, the surveyor's investigation will generally show that the facility failed to do one or more of the following:

- Identify and eliminate all known and foreseeable accident hazards in the resident's environment, to the extent possible; or
- To the extent possible, reduce the risk of all known or foreseeable accident hazards that cannot be eliminated; or
- Provide appropriate and sufficient supervision to each resident to prevent an avoidable accident; or
- Provide assistance devices necessary to prevent an avoidable accident from occurring.

INVESTIGATIVE SUMMARY

Use

Use the Accidents Critical Element (CE) Pathway along with the above interpretive guidelines when determining if the facility meets the requirements to ensure that the resident's environment remains as free from accident hazards as possible and that each resident receives adequate supervision and assistance devices to prevent accidents.

Summary of Accident and Supervision Investigative Procedure

Observe the general environment of the facility to determine if the facility provides an environment that is free from accident hazards over which the facility has control and provides supervision and assistive devices to each resident to prevent avoidable accidents. During observation of the facility, the survey team should observe the environment for the presence of potential/actual hazards. For a resident with an identified concern, briefly review the assessment and plan of care to determine whether the facility identified resident risks and implemented interventions as necessary.

If the resident has been in the facility for less than 14 days (before completion of all the Resident Assessment Instrument (RAI) is required), review the baseline care plan which

must be completed within 48 hours to determine if the facility is providing appropriate care and services based on information available at the time of admission.

DEFICIENCY CATEGORIZATION

In addition to actual or potential physical harm, always consider whether psychosocial harm has occurred when determining severity level (See Psychosocial Outcome Severity Guide).

Examples of Severity Level 4 Noncompliance Immediate Jeopardy to Resident Health or Safety include, but are not limited to:

- The facility failed to keep corrosive cleaning supplies out of the reach of ambulatory residents with dementia, resulting in one resident ingesting drain opener and sustaining esophageal damage.

- The facility failed to provide supervision to a unit which had ambulatory cognitively impaired residents. The facility failed to keep these residents from gaining access to the employee locker room. When the surveyor conducted her tour of the facility, she found a confused resident who was trapped in the employee locker room.

- The facility failed to keep a resident free from hazards and provide the necessary monitoring and supervision for a resident with known substance use disorder and history of using illicit substances when outside of the facility. Through an interview with a certified nurse aide (CNA), the surveyor discovered the resident left the facility for approximately five hours with facility knowledge of the absence. Upon return to the facility, the resident went to his room. Facility staff did not assess the resident's condition for several hours and then found the resident unresponsive. Medical records showed that the resident had sustained an overdose.

Examples of Severity Level 3 Noncompliance Actual Harm that is Not Immediate Jeopardy include, but are not limited to:

- The facility failed to apply a smoking apron to a resident while smoking, which was necessary and documented on the care plan. The resident sustained a 2nd degree burn after the cigarette fell onto his/her lap.

- The facility failed to use a two-person transfer, as determined necessary by the comprehensive care plan, during a transfer from the resident's bed to wheelchair, resulting in the resident falling to the floor, sustaining a laceration requiring sutures.

Examples of Severity Level 2 Noncompliance No Actual Harm with Potential for More Than Minimal Harm that is Not Immediate Jeopardy include, but are not limited to:

- The facility failed to remove clutter and building materials from a construction area, immediately adjacent to a walkway used by residents and their families, creating a hazard which poses a risk for more than minimal harm.

- A cognitively intact resident with known SUD but no other safety concerns was observed lingering by doors that were not monitored. After interviewing staff, the survey team identified that the facility did not have a consistent process for how residents notify the facility when they leave the facility, or have a process to identify when residents leave the facility if the resident does not notify facility staff.

Severity Level 1 Noncompliance No Actual Harm with Potential for Minimal Harm

The failure of the facility to provide a safe environment and adequate supervision places residents at risk for more than minimal harm. Therefore, Severity Level 1 does not apply for this regulatory requirement.

NOTE: References to non-CMS/HHS sources or sites on the Internet included above or later in this document are provided as a service and do not constitute or imply endorsement of these organizations or their programs by CMS or the U.S. Department of Health and Human Services. CMS is not responsible for the content of pages found at these sites. URL addresses were current as of the date of this publication.
Other resources which may be useful:

Falls
National Council on Aging National Falls Prevention Resource Center at
https://www.ncoa.org/professionals/health/center-for-healthy-aging/national-falls-prevention-resource-center
Centers for Disease Control and Prevention at
http://www.cdc.gov/homeandrecreationalsafety/falls/
World Health Organization Fall Prevention in Older Age at
https://www.who.int/publications/i/item/9789241563536
National Institute on Aging, Falls and Fall Prevention,
https://www.nia.nih.gov/health/topics/falls-and-falls-prevention
Wandering and Elopement Resources
National Council of Certified Dementia Practitioners at http://www.nccdp.or

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[3] Panel on Prevention of Falls in Older Persons, American Geriatrics Society and British Geriatrics. (2010). Summary of the updated American Geriatrics Society/British Geriatrics Society clinical practice guideline for prevention of falls in older persons. J Am Geriatr Soc, 2011, 59(1), 148-57.
[4] Taylor, J.A., Parmelee, P., Brown, H., and Ouslander, J. The Falls Management Program: A Quality

Improvement Initiative for Nursing Facilities. Agency for Healthcare Research and Quality, 2005, *https://www.ahrq.gov/patient-safety/settings/long-term-care/resource/injuries/fallspx.html*

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[7] MASSPRO (n.d.). Nursing home alarm elimination program: It's possible to reduce falls by eliminating resident alarms.

[8] Becker, C., Rapp, K. (2010) Fall Prevention in Nursing Homes. Clinics in Geriatric Medicine 26(4)693-704.

[9] *US Dept. of Health and Human Services,* Agency for Toxic Substances & Disease Registry, *Toxicological Profiles, http://www.atsdr.cdc.gov/toxprofiles/index.asp.*

[10] US Dept. of Labor, Occupational Safety and Health Standards, 29 CFR 1910.1200 (g)(1) and (2).

[11] Katcher, L.K. (1981). Scald Burns from Hot Tap Water. Journal of Am Med Assoc., 246(11), 1219-1222.

[12] Moritz, A.R., Henriques F.C. Jr. (1947). Studies of Thermal Injury: II. The Relative Importance of Time and Surface Temperatures in the Causation of Cutaneous Burns. Am J Pathology, 23, 695-720.

[13] US Dept. of Health and Human Services. Centers for Disease Control and Prevention. Emergency Preparedness & Response, *https://www.cdc.gov/masstrauma/factsheets/public/burns.pdf.*

[14] *Electrical Safety Foundation International Resource Library.*

[15] Tideiksaar, R. (1998). Falls in Older Persons: Prevention and Management (2nd Edition). Baltimore, MD: Health Profession Press.

[16] Warren, M. (2001), Occupational Therapy Practice Guidelines for Adults with Low Vision, The American Occupational Therapy Association, Inc.

[17] Taylor, J.A., Brown, A.K., Meredith, S., Ray, W.A. (2002). The fall reduction program: a comprehensive program for reduction of falls and injuries in long-term care residents. Nashville, TN: Department of Preventive Medicine, Vanderbilt University School of Medicine.

[18] US Department of Labor, , Occupational Safety & Health Administration. Guidelines for Nursing Homes (Revised March 2009), https://www.osha.gov/ergonomics/guidelines/nursinghome/final_nh_guidelines.html.

[19] *Gastmans, C. and Milisens, K. (March 2006). Use of physical restraint in nursing homes: clinical-ethical considerations. J Med Ethics, 32(3), 148–152.*

[20] US Dept. of Health and Human Services. Food and Drug Administration, Bed Rail Safety, http://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/GeneralHospitalDevicesandSupplies/HospitalBeds/ucm123676.htm.

[21] US Dept. of Health and Human Services, Food and Drug Administration, Recommendations for Consumers and Caregivers about Bed Rails. http://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/HomeHealthandConsumer/ConsumerProducts/BedRailSafety/ucm362843.htm.

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