Care CEUs

Continuing Education for Nursing Home Administrators

Diabetes Management

Section 1: Introduction

Imagine waking up every morning not to the soft light of the sun, but to the insistent, sharp sting of a lancet against your fingertip. Before you've even had a chance to say good morning or take a sip of coffee, you are already faced with the demands of a condition that never takes a day off. For a resident in your care, Type 2 diabetes isn't just a diagnosis on a chart; it's a silent, relentless companion that dictates the rhythm of their entire day. Every meal becomes a math problem rather than a pleasure, as they scan the plate not for what looks delicious, but for the hidden carbohydrates that might send their numbers climbing. The simple independence of choosing a snack or going for an extra walk is shadowed by a constant, quiet anxiety: *Is this choice going to make me feel dizzy later?*

The real weight of the condition shows up in those small, vulnerable moments that staff might easily miss. It's the late afternoon when a resident suddenly feels their hands begin to shake and a cold, clammy sweat breaks out, a terrifying flash of confusion where they can't quite find the right words to tell you they're "crashing." Or, it's the heavy, bone-deep exhaustion of a high-sugar day, where they feel trapped in a cycle of extreme thirst and trips to the bathroom, their body physically worn out from trying to manage the excess glucose. When we look at diabetes through their eyes, we see that "compliance" isn't just about following rules; it's a daily, high-stakes effort to feel like themselves again. Our job is to bridge that gap, turning a clinical requirement into a supportive partnership that gives them back their sense of peace.

While these personal struggles happen behind closed doors every day, they represent a massive, collective challenge for the facilities we lead. The individual experience of managing this condition is mirrored at the administrative level, where we must find the middle ground between clinical safety and resident autonomy. To understand the true scale of this responsibility, we have to look at

the numbers, and the reality is that the personal burden felt by one resident is actually shared by a significant portion of your entire community.

In the ecosystem of long-term care, diabetes mellitus is more than a chronic condition; it is a pervasive clinical and administrative challenge that requires a sophisticated, interdisciplinary approach. For Nursing Home Administrators (NHAs) and Assisted Living Administrators (ALAs), managing diabetes is a high-stakes balancing act. It requires weighing the clinical necessity of glycemic control against the regulatory mandate to honor resident rights, provide person-centered care, and maintain a high quality of life.

As the population ages, the prevalence of diabetes in skilled nursing and assisted living settings continues to climb. Statistics suggest that nearly 33% of adults over the age of 65 have diabetes (Endocrine Society, 2022). For the administrator, this means that roughly one out of every three residents requires:

- Specialized dietary planning and carbohydrate monitoring.
- Complex medication administration and insulin timing.
- Frequent skin assessments and high-level nursing surveillance.

Diabetes is often a driver behind some of the most common and costly complications in LTC facilities. Administrators can see the impact of unmanaged glucose levels in several key areas:

- Falls and Fractures: Fluctuations in blood sugar can lead to dizziness, confusion, and peripheral neuropathy, which are primary contributors to resident falls (Kennedy & Henderson, 2025).
- Hospital Readmissions: Poorly managed diabetes is a leading cause of acute transfers for hypoglycemia, urinary tract infections (UTIs), and cardiovascular events (Kennedy & Henderson, 2025).

- Wound Care Costs: Diabetic foot ulcers are notoriously difficult to heal, requiring expensive supplies, specialized nursing time, and intensive oversight to prevent amputation.
- Regulatory Scrutiny: Because diabetes impacts everything from nutrition to skin integrity, it is a frequent focal point for state and federal surveyors under F-Tag 684.

To effectively manage a facility, an administrator can recognize that diabetes in the elderly does not always look the same as it does in younger populations. The "classic" symptoms of thirst and frequent urination are often absent; instead, it may manifest as a sudden change in mental status, a new onset of incontinence, or an unexplained decline in mobility.

This course is designed to bridge the gap between clinical knowledge and administrative leadership by exploring the full spectrum of diabetes management. We will begin by reviewing the endocrine system and the specific pathophysiology of diabetes mellitus (Type 1 and Type 2), moving into the acute risks and long-term complications that affect our residents, such as cardiovascular disease, neuropathy, and chronic skin ulcers. From there, we will evaluate modern treatment options, ranging from pharmacological interventions like insulin and oral agents to non-pharmacological strategies like diet and exercise. Finally, we will translate this clinical foundation into administrative action by discussing Quality Assurance and Performance Improvement (QAPI) protocols, effective staff training models, and the professional resources available to help you protect your residents and ensure your facility remains a leader in compassionate, compliant care.

Section 2: What is Diabetes

To provide high-quality care, it is important to understand the internal systems that drive human health. This section focuses on the endocrine system, which uses chemical messengers to regulate almost every major function in the body, and diabetes specifically. By understanding how the body is supposed to signal and balance itself, we can more clearly identify what happens when those signals fail, most notably in the case of diabetes mellitus. We will explore the anatomy of this system, the mechanics of insulin, and the specific ways different types of diabetes impact individuals.

The Endocrine System

The endocrine system is a complex network of tissues, primarily glands, responsible for creating and releasing hormones. These hormones function as vital chemical messengers that coordinate diverse bodily functions by traveling through the bloodstream to reach specific organs, skin, muscles, and other tissues (Cleveland Clinic, 2023). Essentially, these hormonal signals act as instructions, telling the body what to do and when to do it, making them indispensable for maintaining overall health (Cleveland Clinic, 2023). Because hormones travel systemically, the stability of this system is paramount; even minute amounts can trigger significant physiological changes. When the body produces too much or too little of a specific hormone, the resulting imbalance can present as noticeable clinical symptoms that impact daily wellbeing (Cleveland Clinic, 2023).

The primary objective of the endocrine system is to maintain homeostasis, or a constant internal balance, while continuously monitoring hormone levels in the blood. These messengers deliver instructions by "locking" into specific target cells (Cleveland Clinic, 2023). With over 50 different hormones, the system influences nearly every aspect of health, including the regulation of metabolism, blood

pressure, fluid balance, and electrolytes. Furthermore, it governs growth, sexual function, sleep-wake cycles, and mood (Cleveland Clinic, 2023). An imbalance can lead to wide-ranging effects, such as unexplained fatigue, changes in body temperature, or fluctuations in weight.

The anatomy of the endocrine system includes endocrine glands, organs, and related tissues. Glands are specialized tissues that release substances directly into the bloodstream. In the brain, the pineal gland manages sleep via melatonin, while the pituitary gland releases eight hormones that often trigger other glands to act (Cleveland Clinic, 2023). The hypothalamus serves as the link between the endocrine and nervous systems. In the neck, the thyroid gland controls metabolism, supported by the parathyroid glands, which regulate blood calcium (Cleveland Clinic, 2023). Near the kidneys, the adrenal glands manage stress and blood pressure, while the ovaries and testes produce sex hormones like estrogen and testosterone (Cleveland Clinic, 2023).

Beyond traditional glands, several organs play a significant role in hormone production. The pancreas is a vital dual-purpose organ in the abdomen that releases insulin and glucagon to maintain healthy blood sugar levels (Cleveland Clinic, 2023). Even adipose tissue (body fat) is an active endocrine tissue, releasing hormones like leptin. Other contributors include the digestive tract, which releases metabolic hormones like gastrin; the kidneys, which produce erythropoietin; and the heart, which releases peptides when blood pressure rises (Cleveland Clinic, 2023).

While this is a lot of information, seeing how these glands and organs work together to maintain balance gives us a clearer picture of how health is managed. The pancreas acts as a built-in sugar monitor, and its ability to manage glucose levels is the cornerstone of metabolic health (Cleveland Clinic, 2023). When the relationship between the pancreas and the body's cells is disrupted, it leads to

chronic conditions like diabetes. This sets the stage for a closer look at what happens when the endocrine system is no longer operating at its peak.

Diabetes Mellitus

Diabetes mellitus is a medical condition characterized by elevated levels of glucose, or sugar, in the bloodstream. This occurs because the body either cannot produce any insulin, does not produce enough, or fails to use it effectively (Cleveland Clinic, 2023). While most variations are lifelong, they can be controlled through medical treatments and lifestyle adjustments.

The primary fuel for cells is glucose, derived from carbohydrates. To move this sugar from the blood into the cells for energy, the body requires insulin, produced by the pancreas (Cleveland Clinic, 2023). You can think of insulin as a "key" that unlocks the cells. When this "key" is missing or malfunctioning, sugar accumulates in the blood, a state known as hyperglycemia. Over time, this can lead to cardiovascular disease, nerve impairment, and vision problems (Cleveland Clinic, 2023). It is important to distinguish this from the rare diabetes insipidus, which is biologically distinct despite similar symptoms like frequent urination (Cleveland Clinic, 2023).

Diabetes insipidus is a rare condition where the body’s fluid levels get out of balance, leading to extreme thirst and a massive increase in bathroom trips. Although the name sounds almost identical to diabetes mellitus (high blood sugar), the two are not actually related (Mayo Clinic, 2021). While the "common" form of diabetes involves sugar and insulin, diabetes insipidus is caused by a hormone issue that prevents the kidneys from holding onto water. To put the impact into perspective, an average adult typically produces about 1 to 3 quarts of urine a day, but someone with diabetes insipidus can produce up to 20 quarts

daily (Mayo Clinic, 2021). There is currently no cure, but treatments are very effective at managing the thirst and preventing dehydration.

While it is helpful to understand the difference between diabetes mellitus and diabetes insipidus, the vast majority of cases you will encounter involve diabetes mellitus, which presents its own specific set of warning signs. Symptoms vary by type and severity but commonly include persistent thirst, dry mouth, frequent urination, and exhaustion. Individuals may also experience blurred vision, slow-healing wounds, or numbness in the extremities (Cleveland Clinic, 2023). While Type 1 symptoms often appear rapidly, Type 2 and prediabetes can develop so gradually that they go unnoticed, sometimes only appearing as darkened skin patches or being discovered during routine blood tests (Cleveland Clinic, 2023).

Type 1 Diabetes

Type 1 diabetes is defined by an autoimmune response where the immune system mistakenly destroys the insulin-producing cells in the pancreas, causing the body to stop producing this vital hormone entirely (CDC, 2024). Consequently, individuals must rely on daily insulin administration as a life-sustaining necessity (CDC, 2024).

While frequently identified in children, it can be diagnosed at any point in life. Currently, there is no known cure or prevention (CDC, 2024). Approximately 2.1 million Americans are living with Type 1 diabetes (CDC, 2026). Globally, the impact is rising, with an estimated 9.5 million people living with the condition, representing a 13% increase since 2021 (Ogle et al., 2025). This growth is particularly sharp in lower-income countries (Ogle et al., 2025).

Type 2 Diabetes

In Type 2 diabetes, cells stop responding to insulin properly, a condition known as insulin resistance (CDC, 2024). Because the cells ignore the signal to let sugar in,

the pancreas tries to compensate by working overtime. Eventually, the pancreas can no longer keep up with the demand, and sugar builds up in the bloodstream, leading to prediabetes and eventually Type 2 diabetes (CDC, 2024). High sugar levels over long periods cause wear and tear, leading to heart disease, vision loss, and kidney failure (CDC, 2024).

Historically diagnosed in adults aged 45 and older, recent trends show an increase in younger populations (CDC, 2024). Approximately 40.1 million Americans—nearly 12% of the population—are living with diabetes (CDC, 2026). Notably, a staggering 115.2 million Americans have prediabetes, including 31.3 million adults over age 65, highlighting a significant demand for geriatric chronic disease management (CDC, 2026).

Gestational Diabetes

This form occurs when hormonal shifts during pregnancy lead to insulin resistance, causing blood sugar levels to rise (Mayo Clinic, 2024). Although glucose levels usually return to baseline after delivery, both the mother and child face a heightened risk of developing Type 2 diabetes later in life (Mayo Clinic, 2024). While gestational diabetes is not typically a concern within the geriatric population, understanding it provides a more complete perspective on how different life stages and hormonal changes can trigger the variations of Diabetes.

Sugars

When foods or drinks containing carbohydrates are consumed, the body breaks them down into a type of sugar called glucose. This glucose then enters the bloodstream, raising blood sugar levels to provide the essential fuel required for the body to function throughout the day (American Diabetes Association, 2024). In a healthy system, the pancreas releases insulin to facilitate the absorption of this glucose into the cells. However, when this process is disrupted, it can lead to

hyperglycemia (high blood sugar) due to a lack of insulin or poor cell response, or hypoglycemia (low blood sugar), which can be caused by insufficient carbohydrate intake or a medication imbalance (American Diabetes Association, 2024).

There are three main types of carbohydrates: starches, sugar, and fiber. To maintain metabolic balance, the clinical goal is to prioritize nutrient-dense carbohydrates that are high in fiber and low in added sugars (American Diabetes Association, 2024). Non-starchy vegetables, such as broccoli and tomatoes, should be prioritized because their high fiber content results in a smaller impact on blood glucose. While diet plans should include some minimally processed starches, it is best to limit refined, highly processed options like sugary drinks, white bread, and sweets, as these can negatively impact blood sugar management (American Diabetes Association, 2024).

Later in this course, we will explore specific food recommendations and dietary guidelines from the Centers for Disease Control (CDC) and the American Diabetes Association, including a deeper look at the "Diabetes Plate" and an extended list of recommended foods to support effective resident management.

Connecting the Dots

In summary, the endocrine system acts as a vital communication network, using hormones to maintain the body's internal balance, or homeostasis (Cleveland Clinic, 2023). Every component plays a role in regulating energy, mood, and metabolism, from the "master" signals of the pituitary gland to the blood-sugar monitoring of the pancreas. When these hormonal pathways are disrupted, whether through the autoimmune destruction of cells in Type 1 diabetes or the insulin resistance seen in Type 2 and gestational diabetes, the body loses its ability to process glucose effectively.

A simple way to remember this distinction is that Type 1 diabetes is a supply problem where the body cannot produce the "key" (insulin), while Type 2 is an access problem where the body has the "key" but the "lock" on the cells no longer works correctly. Mastering these biological basics allows us to move beyond simply recognizing symptoms like thirst or fatigue to understand the root causes of hyperglycemia and its long-term complications. Ultimately, this foundational knowledge ensures that as we move into specific diabetes management strategies, we understand how the endocrine system drives overall health (Cleveland Clinic, 2023).

Comparison of Type 1 and Type 2 Diabetes		
	Type 1 Diabetes	**Type 2 Diabetes**
Primary Cause	Autoimmune reaction; the body attacks its own insulin-producing cells (CDC, 2024).	Insulin resistance; cells stop responding to insulin effectively (CDC, 2024).
Insulin Production	The pancreas produces little to no insulin.	The pancreas produces insulin, but it is not enough or is not used correctly.
Age of Onset	Often children and young adults, but it can occur at any age.	Typically adults 45+, but increasingly common in younger populations (CDC, 2026).
Primary Treatment	Daily insulin injections or an insulin pump are required for life (CDC, 2024).	Lifestyle changes (diet/ exercise), oral medications, and sometimes insulin.
Prevention	Currently, there is no known way to prevent it (CDC, 2024).	Can often be prevented or delayed with healthy lifestyle habits.
Prevalence	Roughly 5-10% of all diabetes cases.	Roughly 90-95% of all diabetes cases (CDC, 2026).

The above comparison table provides a concise summary of the clinical distinctions between Type 1 and Type 2 diabetes to facilitate a more comprehensive understanding of these conditions.

Key Takeaways

- The endocrine system maintains homeostasis (internal balance) by using hormones as messengers to coordinate vital functions like metabolism, blood pressure, and mood.
- Type 1 Diabetes is an autoimmune condition where the body stops making insulin.
- Type 2 Diabetes occurs when cells become resistant to insulin.
- Gestational Diabetes is caused by hormonal shifts during pregnancy.

Section 3: Risks of Diabetes

Building upon the overview of the endocrine system and the various forms of diabetes explored in Section 2, the remainder of this course will focus primarily on Type 2 diabetes. This emphasis is driven by the fact that Type 2 accounts for the vast majority of cases in the United States and is significantly more prevalent within the geriatric population, where an estimated 33% of adults over the age of 65 are living with the condition (Endocrine Society, 2022).

In Section 3, we will examine the specific risks associated with Type 2 diabetes and its broader impact on geriatric health. This includes an analysis of how the disease contributes to significant complications for older adults, such as frailty, increased fall risks, and other factors that influence long-term care and overall quality of life.

Identifying the warning signs of diabetes in older adults can be challenging, as the symptoms often manifest slowly and may be easily overlooked. Common

indicators include persistent fatigue, increased thirst or hunger, unintentional weight loss, and more frequent urination. Additionally, blurry vision and slow-healing skin infections or bruises can serve as critical red flags (Stein, 2024). Many individuals over the age of 65 may mistakenly dismiss these changes as a normal part of the aging process; however, these shifts often signal an underlying metabolic issue that requires a clinical consultation with a primary care physician (Stein, 2024).

The consequences of undiagnosed or poorly managed diabetes in this demographic are significant, often leading to severe health complications. Adults aged 65 and older are at a heightened risk for chronic conditions such as kidney disease or kidney failure, vision loss, cardiovascular issues, including heart disease and stroke, and skin issues (Endocrine Society, 2022). Furthermore, diabetes can lead to peripheral vascular disease (PVD), characterized by narrowed blood vessels, and peripheral neuropathy, which involves debilitating nerve damage (Endocrine Society, 2022).

Managing these risks is complicated by a high susceptibility to low blood sugar, or hypoglycemia, which is particularly dangerous for seniors (Endocrine Society, 2022). Understanding these complications is vital for administrators and clinicians, as they directly impact the complexity of care and the quality of life for residents in geriatric settings.

Long-Term Complications of Diabetes

Chronic hyperglycemia (high blood sugar) acts as a systemic toxin, gradually deteriorating the blood vessels and nerves that support vital tissues and organs. In a clinical or caregiving environment, it is helpful to know that these complications are not isolated events but rather the result of cumulative damage over time.The

severity of these risks is underscored by the fact that in the United States, diabetes is the eighth leading cause of death (Cleveland Clinic, 2023).

Note: Unless otherwise specified, the following information regarding long-term complications is provided by the Cleveland Clinic (2023).

Cardiovascular and Circulatory Health

Cardiovascular disease remains the most common long-term complication associated with diabetes. This category includes:

- Coronary Artery Disease: The progressive narrowing of the arteries that supply the heart muscle.
- Heart Attack: A critical interruption of blood flow to the heart.
- Stroke: A disruption of blood flow to the brain, often resulting from vascular damage.
- Atherosclerosis: The hardening and clogging of the arteries, which serves as the underlying cause for many of these cardiac events.

Major Organ and Sensory Damage

Sustained high glucose levels can lead to the permanent loss of function in several vital systems:

- Nephropathy: Chronic kidney damage that can progress to kidney failure, necessitating dialysis or a transplant.
- Retinopathy: Deterioration of the blood vessels in the retina, which is a leading cause of blindness.
- Neuropathy: Nerve damage that typically manifests as numbness, tingling, or chronic pain, particularly in the extremities.

- Hearing Loss: A significantly increased risk of auditory impairment compared to the general population.

Physical and Systemic Complications

Vascular and nerve damage often present as visible or functional physical ailments that require daily monitoring:

- Foot Conditions: Development of ulcers and poor circulation, which can go unnoticed due to loss of sensation.
- Amputations: A severe outcome occurring when infections or tissue death (gangrene) become untreatable.
- Skin Infections: A heightened susceptibility to both bacterial and fungal infections.
- Gastroparesis: Damage to the vagus nerve that prevents the stomach from emptying normally, affecting digestion and nutrition.
- Oral Health Issues: An increased prevalence of gum (periodontal) disease.
- Sexual Dysfunction: Nerve and vessel damage leading to conditions such as erectile dysfunction or vaginal dryness.

Mental Health Impact

The psychological burden of managing a chronic condition is a critical component of holistic care. Individuals living with diabetes are two to three times more likely to experience depression than those without the disease. This mental health strain can create a difficult cycle, as depression often makes it harder for a patient or resident to adhere to their necessary diabetes management routines.

Diabetic Ulcers and Advanced Wound Healing

For NHAs and ALAs, managing foot and toe ulcers is a critical aspect of resident care and risk management. An ulcer is defined as an open wound or sore that fails to heal or recurs. Approximately 15% of individuals with diabetes will develop a foot ulcer, typically on the bottom of the foot (Cleveland Clinic, 2022). These wounds are highly serious, as ulceration precedes 85% of all diabetes-related amputations in the United States (Diabetic Wound Care, 2024).

Ulcers form due to a combination of factors, including poor circulation, obesity, and physical foot conditions like bunions or hammertoes. However, the most significant contributor is neuropathy. Over time, elevated blood glucose levels cause nerve damage that reduces or eliminates a resident's ability to feel pain (Diabetic Wound Care, 2024). Consequently, a minor scrape, cut, or puncture can rapidly evolve into a serious ulcer without the resident being aware of the injury (Cleveland Clinic, 2022).

Administrators should note that risk is significantly higher in Black, Native American, and Hispanic populations, as well as older men. Additional risk factors include:

- Using insulin or having diabetes-related kidney, eye, or heart disease.
- Lifestyle behaviors such as tobacco and alcohol use.
- Peripheral arterial disease, which reduces blood flow to the extremities (Cleveland Clinic, 2022).

Ulcers vary in size from 1 centimeter to the size of the entire foot. Clinical staff must monitor for early skin changes such as dryness, cracking, scaly skin, or redness. Because neuropathy often masks pain, staff should look for advanced signs (Cleveland Clinic, 2022):

- Drainage and Odor: Fluid or staining on socks and a strong odor are frequent indicators of infection.
- Color Variations: Ulcers may appear pink, red, yellow, or grey. Black tissue indicates necrosis, or gangrene.
- Structural Changes: The appearance of calluses or a "halo" (a ring of hard skin) around the wound center (Cleveland Clinic, 2022).

Types of Ulcers

Older adults are primarily affected by two distinct types of ulcers: Neurotrophic (Diabetes-Related) Ulcers, which stem from nerve damage and a loss of sensation, and Arterial (Ischemic) Ulcers, which are caused by restricted blood flow to the extremities.

Neurotrophic ulcers are primarily caused by impaired sensation and typically develop at pressure points on the bottom of the foot. These wounds are characterized by "punched out" borders and, most notably, a complete lack of pain (Packer & Manna, 2023).

The development of these ulcers is the result of systemic nerve damage that affects the feet in two significant ways. First, the damage changes the mechanics of how a person walks, creating abnormal pressure on specific spots of the foot. Simultaneously, it strips away the body's ability to feel pain. Because the warning sign of pain is absent, a resident may suffer a minor injury—such as a blister or a small cut—and never realize it. This allows the wound to progress and worsen entirely unnoticed. This specific type of nerve damage is responsible for 60% to 70% of all diabetic foot ulcers (Packer & Manna, 2023).

Arterial (Ischemic) ulcers arise from Peripheral Arterial Disease (PAD) and are caused by significantly reduced blood flow to the extremities. These ulcers

typically form on the heels, the tips of the toes, or the lateral borders of the feet (Packer & Manna, 2023). PAD is a major contributor to diabetic complications, accounting for up to 50% of all diabetic foot ulcers (Packer & Manna, 2023).

Unlike neurotrophic ulcers, ischemic ulcers do not bleed and are characterized by irregular margins and pale skin. They are typically very painful—especially at night or when the legs are elevated—and are often accompanied by cold extremities and absent peripheral pulses (Packer & Manna, 2023).

Healthcare providers diagnose ulcers based on appearance, location, and the condition of the surrounding skin. Imaging such as X-rays, CT scans, or MRIs may be ordered to determine the depth of the wound or if an infection has reached the bone (Cleveland Clinic, 2022). Helpful ways to heal wounds include:

- Removing all pressure from the area using special footgear, braces, or wheelchairs, often referred to as off-loading pressure.
- Removing dead skin and tissue from the wound through debridement.
- Modern wound care prioritizes a moist, covered environment for optimal healing, as ‘airing out’ or using hydrogen peroxide can lead to tissue dehydration and chemical damage (Diabetic Wound Care, 2024).
- Tightly controlling blood glucose is vital to enhance the body's ability to fight infection and speed up healing.

Prevention Strategies for Facilities

Since foot ulcers are preventable, administrators should ensure staff follow these guidelines (Diabetic Wound Care, 2024):

1. Staff must inspect at-risk residents' feet daily, especially the soles and between the toes, for cuts, blisters, or redness.

2. Specialists can use tools like a monofilament to test for neuropathy and identify high-risk residents early. Regular podiatry visits are important.
3. Any abnormality, regardless of how simple it seems, should be reported to a podiatrist or the attending physician immediately.
4. Residents should avoid walking barefoot and be encouraged to wear appropriate shoes and socks at all times.

If an infection becomes unresponsive to treatment, surgical intervention may be required. An estimated 14% to 24% of Americans with diabetes who develop an ulcer will eventually require an amputation (Cleveland Clinic, 2022).

Venous and Pressure-Related Concerns

For facility administrators, oversight of skin health requires a broad perspective. While diabetic foot ulcers are a primary concern, they often coexist with other conditions that can slow down healing and complicate care. Understanding these alternative causes is essential for ensuring that staff are conducting comprehensive evaluations and not overlooking underlying issues that require different treatment approaches (Packer & Manna, 2023).

Venous leg ulcers are actually the most common type of leg wound, affecting about 3% of seniors over age 65. These are usually found in the "gaiter region" (the area from the mid-calf down to the ankle) rather than on the bottom of the foot (Packer & Manna, 2023). These wounds are typically shallow with uneven edges and may be accompanied by varicose veins or skin darkening. If a resident with diabetes develops a wound in this calf-to-ankle area, administrators should ensure the care team evaluates them for vein-related circulation issues (Packer & Manna, 2023).

Pressure ulcers are a constant risk for residents with limited mobility or those wearing poorly fitted shoes. These usually form over bony areas like the heel or the ankle bone. Because neuropathy prevents residents from feeling the "warning sign" of discomfort, they may not shift their weight or complain about tight shoes. Oversight should focus on "offloading" strategies, using simple devices to keep pressure off these bony spots, to prevent serious complications like bone infections or sepsis (Packer & Manna, 2023).

Administrators should also be aware of Necrobiosis Lipoidica Diabeticorum, often called "shin spots." While rare, affecting about 1% of people with diabetes, these appear as purplish-red or yellowish patches on the shins. While they might look concerning to family members or staff, they are usually harmless and rarely need specific medical treatment (Packer & Manna, 2023).

Finally, some wounds are caused by autoimmune issues or inflammation of the blood vessels (vasculitis). These make up about 5% of skin ulcers and can appear in multiple spots at once. One aggressive version, Pyoderma Gangrenosum, starts as a small blister but quickly turns into a painful, deep sore. This is often linked to other conditions like inflammatory bowel disease. Recognizing that a wound might be related to a resident's overall immune system rather than just their blood sugar is key to getting them the right specialist care (Packer & Manna, 2023).

Connecting the Dots

The long-term complications of Type 2 diabetes represent one of the most significant challenges in geriatric care, extending far beyond simple blood sugar management. For nursing home and assisted living administrators, understanding the impact of Diabetes Mellitus is foundational to effective risk management and resident safety. Because the condition exerts a cumulative toll on nearly every

system in the body, from cardiovascular health and major organ function to vision and mental health, clinical vigilance must be proactive rather than reactive.

The underlying causes of hyperglycemia vary significantly by type, which leads to the specific risks a resident faces. Type 2 diabetes is primarily driven by insulin resistance, where cells in the liver, fat, and muscles stop responding correctly to insulin due to factors like genetics, obesity, or lifestyle habits. In contrast, Type 1 is an autoimmune disorder where the immune system mistakenly destroys insulin-producing cells in the pancreas (Cleveland Clinic, 2023). Beyond these primary types, diabetes can also stem from physical damage to the pancreas, rare genetic mutations, or the long-term use of specific medications, such as corticosteroids and certain HIV treatments, which can trigger the onset of Type 2 diabetes (Cleveland Clinic, 2023).

Failure to manage these underlying causes can lead to immediate, life-threatening crises. For Type 1 patients, a lack of insulin can cause diabetes-related ketoacidosis (DKA), a state where the body breaks down fat for fuel and turns the blood acidic, leading to labored breathing and vomiting. Those with Type 2 may face Hyperosmolar Hyperglycemic State (HHS), which involves extreme dehydration and confusion. Conversely, those using insulin must also be monitored for severe hypoglycemia—dangerously low blood sugar that can result in seizures or disorientation (Cleveland Clinic, 2023).

In the long term, chronic high blood sugar damages the nerves and blood vessels throughout the entire body. This vascular damage frequently leads to cardiovascular issues such as heart attacks, strokes, and narrowed arteries. Other serious consequences include kidney failure (nephropathy), blindness (retinopathy), and significant nerve damage (neuropathy) (Cleveland Clinic, 2023). This neuropathy creates a specific "silent" risk: the diabetic foot ulcer. The interplay between nerve damage, poor circulation, and reduced sensation means

residents may suffer serious injuries without feeling any pain. As a result, daily inspections and proactive reporting by staff serve as essential safeguards against infection and amputation.

Administrators must also recognize that diabetic wounds do not exist in isolation. Venous ulcers, pressure ulcers, and rarer conditions like vasculitis-related wounds can coexist with or mimic diabetic complications; misidentification can delay appropriate treatment. Therefore, care teams must be equipped to conduct comprehensive skin evaluations that account for a full range of etiologies. Beyond physical health, the disease impacts quality of life through hearing loss, gum disease, and sexual dysfunction. The psychological burden is equally heavy, as individuals with diabetes face a significantly higher risk of developing depression compared to the general population (Cleveland Clinic, 2023).

We mention the statistics often, but they carry a weight that's hard to ignore: with one in three seniors now living with Type 2 diabetes, this has become a defining challenge for almost every facility in the country (ADA, 2024). Navigating this isn’t just about following a care plan; it’s about building a culture where everyone, from the nursing team to the podiatry clinic, is looking out for the same red flags. When we prioritize tight glycemic control and real interdisciplinary teamwork, we do more than just avoid a citation; we’re actively protecting our residents from life-altering complications and giving them a much higher quality of life.

Knowledge Check

Review the questions below and test your understanding of the material covered in Section 3.

1. According to the text, what percentage of adults over age 65 are estimated to be living with diabetes?

A. 10%

B. 15%

C. 33%

D. 50%

2. Which condition is a "silent" risk because the resident may not feel pain while a serious wound develops?

   A. Retinopathy

   B. Neurotrophic Ulcers

   C. Gastroparesis

   D. Nephropathy

3. Which acute complication is specifically associated with Type 2 diabetes and involves extreme dehydration and confusion?

   A. Diabetes-related ketoacidosis (DKA)

   B. Hypoglycemia

   C. Hyperosmolar Hyperglycemic State (HHS)

   D. Gastroparesis

Answers

1. C
2. B
3. C

Key Takeaways

- Effective facility management requires daily skin inspections, tight glycemic control, and "off-loading" (removing pressure from wounds).
- Because nerve damage often masks pain, older adults may not notice injuries, making "painless" neurotrophic ulcers the leading precursor to diabetes-related amputations.
- Beyond physical damage to the heart, kidneys, and eyes, diabetes significantly increases the risk of depression (2–3 times more likely), which can create a dangerous cycle of poor self-care and treatment non-adherence.

Section 4: Treatments for Diabetes

Building upon our understanding of the long-term complications and systemic risks explored in Section 3, we now turn our focus to the clinical and lifestyle interventions used to manage diabetes. Effective treatment in a geriatric setting requires a balanced, interdisciplinary approach, one that harmonizes pharmacological therapy with proactive lifestyle management.

In Section 4, we will examine the standard treatment options for Type 1 and Type 2 diabetes, with a specific emphasis on a "Food is Medicine" philosophy. Both types of diabetes are profoundly influenced by nutritional intake and physical activity, which can either mitigate or exacerbate the progression of the disease. By mastering the pillars of nutrition, exercise, and medication management, facility administrators and clinical staff can more effectively stabilize blood glucose levels and reduce the likelihood of the life-threatening complications previously discussed.

Food is Medicine: What does this even mean?

Before discussing medications or insulin, it is essential to look at food as a primary tool for health. For both Type 1 and Type 2 diabetes, symptoms can be managed through diet. While Type 1 diabetes requires insulin regardless of food intake, nutrition still plays a critical role in overall stability. For Type 2 diabetes, proper nutrition can "make or break" the disease process. Scholars and physicians recommend a healthy eating plan that focuses on fruits, vegetables, lean proteins, and whole grains (Cleveland Clinic, 2026). This "Food as Medicine" approach emphasizes foods high in key micro and macronutrients while suggesting a reduction in saturated fats, refined carbohydrates, and sweets. In the context of a liberalized diet, sugary foods are acceptable on occasion, but they should not be the daily norm (Cleveland Clinic, 2026).

To understand how food functions as medicine, one must first understand the structural components of nutrition. If your body was a building, macronutrients would be the foundation. They are your main source of energy and consist of carbohydrates, lipids (fats), and proteins (Cleveland Clinic, 2026). Carbohydrates, which include sugars, starches, and fiber, act as the primary energy source powering your body. Lipids are found in fats, oils, meat, and dairy; they perform vital functions such as storing energy and aiding in fat digestion. Proteins are equally essential, as they help to build and repair muscle tissue while also assisting in hormone regulation (Cleveland Clinic, 2026).

Supporting this foundation are micronutrients, which include essential vitamins and minerals. Although you need fewer micronutrients than macronutrients, they remain vital for health. Vitamins are substances produced by animals and plants, and the food you eat is your main source for most of them. For example, Vitamin A supports the immune system and vision, while the family of B vitamins (B1–12) helps the body turn food into energy. Vitamin C assists in tissue growth and

wound healing, Vitamin D partners with calcium to maintain healthy bones, Vitamin E protects cells, and Vitamin K is necessary for blood clotting (Cleveland Clinic, 2026).

Minerals also support your health in diverse ways, entering the food supply through plants and the animals that eat them. Essential minerals include calcium for strong bones, chromium to help metabolize carbohydrates and fats, and potassium to help prevent high blood pressure. Others, like magnesium, help convert food into energy, while iron is necessary for making hemoglobin in red blood cells. These various nutrients come together in five main food groups—dairy, fruit, grains, protein, and vegetables—to create the balanced meals necessary for good nutrition (Cleveland Clinic, 2026).

Building on this concept of food as medicine, the specific ratio of these macronutrients acts as a targeted intervention for managing chronic conditions. Because macronutrients provide the energy and structural components the body needs to maintain its systems, adjusting their intake can have a significant impact on a patient's health (Demarco & Dahl, 2025). While every healthy diet requires a balance of these "big three" components, the proportions must be tailored to the individual’s medical history. For instance, while it is generally recommended that 45% to 65% of daily calories come from carbohydrates to fuel the central nervous system, the specific percentage chosen within that range is heavily dependent on an individual’s health goals and existing medical conditions (Demarco & Dahl, 2025).

This individualized approach is why a diet plan for a resident with diabetes looks markedly different from that of a healthy 75-year-old without comorbidities. For a healthy older adult, the focus may be on maintaining the Recommended Dietary Allowance of 0.8 grams of protein per kilogram of body weight to support muscle tissue and bone health (Demarco & Dahl, 2025). However, for a resident with

diabetes, the "ideal" macronutrient ratio is adjusted to manage blood glucose levels more strictly. There is no single "ideal" ratio for everyone; instead, the diet is treated as a clinical tool where the balance of carbs, fats, and proteins is precision-tuned to the resident's specific metabolic needs rather than following a standard age-based guideline (Demarco & Dahl, 2025).

Ultimately, modern care mandates a balance between traditional therapeutic diets, which strictly manage conditions like diabetes or renal disease through restriction, and a liberalized diet approach that prioritizes an individual's autonomy and quality of life. While therapeutic diets target clinical stability, they often inadvertently increase the risk of malnutrition by removing the joy and familiarity of food, particularly for older adults facing social isolation or sensory changes (Farrow, 2023). To combat this, NHAs and ALAs must champion robust dietary programs capable of delivering meals that are both healthy and high in culinary appeal. By providing food that looks and tastes delicious while relaxing rigid restrictions, facilities can improve nutrient intake and socialization, ensuring that residents are not just meeting clinical benchmarks but are genuinely satisfied with their daily dining experience (Farrow, 2023).

An Active Lifestyle

Beyond nutritional choices, maintaining an active lifestyle is a critical pillar of diabetes management for older adults. Regular physical activity directly counters the core mechanics of the disease by increasing insulin sensitivity and reducing insulin resistance (Cleveland Clinic, 2023). Because diabetes significantly elevates the risk for cardiovascular complications, exercise serves a dual purpose: it helps control blood glucose levels while simultaneously assisting in the maintenance of a healthy weight, blood pressure, and cholesterol profile (Cleveland Clinic, 2023).

The systemic benefits of exercise are extensive, often providing improvements in health even when there is no change in body weight. For instance, regular activity has been shown to lower HbA1c values by an average of 0.7 percentage points across diverse ethnic groups, regardless of the specific medications or diets being followed (Harvard Health Publishing, 2023). Research indicates that all forms of exercise—whether aerobic, resistance training, or a combination of both—are effective at lowering these values. For previously sedentary older adults, combining resistance and aerobic training proves more beneficial than either alone in reducing insulin resistance (Harvard Health Publishing, 2023). Furthermore, the impact on longevity is significant; people with diabetes who walk just two hours per week have a lower risk of mortality from heart disease, while women who engage in four hours of moderate to vigorous exercise weekly can reduce their heart disease risk by 40% (Harvard Health Publishing, 2023).

To maximize safety and efficacy, older adults should be mindful of the timing and monitoring of their activity. The optimal time to exercise is generally one to three hours after a meal, a period when blood sugar levels are typically at their peak (Harvard Health Publishing, 2023). For those who utilize insulin, strict monitoring is required to prevent exercise-induced hypoglycemia. If blood glucose is below 100 mg/dL prior to starting, a small snack or piece of fruit is recommended to stabilize levels. Because the risk of hypoglycemia can remain elevated for six to 12 hours following a strenuous workout, post-exercise testing is equally vital (Harvard Health Publishing, 2023). Finally, for emergency preparedness, it is a good idea for individuals with diabetes to carry glucose tablets or hard candy and wear a medical alert bracelet to notify others of their condition and insulin status, especially if they are exercising routinely or in public spaces away from medical personnel (Harvard Health Publishing, 2023).

Creative Strategies for Active Communities

To bring these health benefits to life, NHAs and ALAs can transform "exercise" into the social highlight of the day by blending clinical expertise with pure fun. By partnering activities staff with physical therapists and guest fitness instructors, communities can offer a vibrant menu of movement that goes far beyond the standard gym routine. Options can include high-energy fitness sessions using stability balls, water aerobics in the community pool (if available), or competitive Wii Sports / gaming console tournaments that get the heart pumping. For those seeking a slower pace, garden walking clubs, chair yoga, or even ballroom dance lessons can provide a perfect mix of aerobic and resistance training. By involving outside trainers for specialized classes like Tai Chi or seated Pilates, leadership can ensure that staying active feels less like a medical requirement and more like a celebrated part of daily community life.

A diverse program can provide a range of active offerings tailored to every level of mobility. For residents who are fully ambulatory, scavenger hunts or outdoor lawn games are excellent ways to encourage weight-bearing exercise. For those who self-propel in wheelchairs, activities like "Noodle Hockey" or balloon volleyball allow for high-intensity movement and cardiovascular work from a seated position. Even for residents who are mostly immobile, activity staff and therapists can implement passive range-of-motion games or sensory-based movement so that every individual, regardless of physical limitation, has the opportunity to benefit from an active lifestyle.

Beyond these variety-based activities, staff can establish dedicated strength training programs that offer a predictable and recurring structure. Making the same type of 15–30 minute fitness class available three times a week allows residents to participate in a routine that builds upon itself. This consistency can be a great asset, as recurring sessions help ensure that muscle strength is progressively built and maintained over time, supporting the metabolic stability necessary for diabetes management.

To keep this momentum going during social hours, NHAs and ALAs can introduce low-impact games that turn physical activity into a lively group experience. These activities can be designed to be accessible for all mobility levels while encouraging the consistent movement that supports glucose management:

- Balloon Volleyball: A fantastic way to improve range of motion and upper-body strength. Using a soft balloon instead of a ball allows for slower reaction times and inclusive seated play.
- Bean Bag Toss (Cornhole): This classic game encourages standing, balance, and repetitive underhand tossing, providing light resistance training for mobile residents.
- Scavenger Hunts: Staff can organize a "Walking Scavenger Hunt" around the community grounds to turn a standard walk into an engaging mental and physical challenge.
- Seated "Noodle" Hockey: Using pool noodles as sticks and a large inflatable ball, residents can get a great cardiovascular workout right from their chairs or wheelchairs.
- Bocce Ball or Lawn Bowling: These games focus on coordination and steady movement, offering a low-intensity way to stay on one's feet and socialize.

By integrating these play-based movements into the social calendar, administrators can ensure that all residents, regardless of their mobility, have the chance to reap the benefits of physical health in an enjoyable, low-pressure environment.

Standard Treatment for Type 1 Diabetes

Because Type 1 diabetes currently has no known cure, treatment is primarily about stepping in for the body to perform a job it can no longer do alone. Since the pancreas has stopped producing insulin, management focuses on a precise, daily balance of medication, technology, and lifestyle. The big-picture goal is to keep blood sugar levels as close to a normal range as possible, specifically between 80 and 130 mg/dL before meals and no higher than 180 mg/dL two hours after eating, to prevent long-term health complications (Mayo Clinic, 2024). Achieving this requires a combination of constant blood sugar monitoring, accurate carbohydrate counting, and a commitment to healthy nutrition and regular exercise.

Since stomach enzymes would destroy insulin if it were swallowed as a pill, it must be delivered directly under the skin via injections or a pump. Most people use a "basal-bolus" regimen, which involves a combination of different insulin types to mimic how a healthy pancreas works (Mayo Clinic, 2024).. This often includes rapid-acting or short-acting "mealtime" insulins that start working in 15 to 30 minutes to handle glucose spikes from food, paired with intermediate or long-acting insulins that provide a steady "background" flow. These long-acting versions can last between 14 and 40 hours, keeping levels stable between meals and while a person sleeps (Mayo Clinic, 2024). Research has shown that taking three or more injections a day to mimic these natural rhythms is highly effective at improving overall blood sugar levels.

Modern medicine has moved far beyond simple syringes, offering several high-tech delivery and monitoring methods that make management more precise. Insulin pens provide a discreet way to inject, while insulin pumps offer a programmable, continuous stream of insulin through a tiny catheter worn under the skin (Mayo Clinic, 2024). To ensure these doses are accurate, monitoring is

essential. While traditional finger-prick tests remain a standard, many individuals now use Continuous Glucose Monitors (CGM). These smart sensors check glucose levels every few minutes and send the data to a phone or pump, making it much easier to spot dangerous highs or lows before they become an emergency (Mayo Clinic, 2024).

The most advanced option currently available is the hybrid closed-loop system, frequently referred to as an "artificial pancreas." This advanced technology links a CGM directly to an insulin pump, allowing the device to automatically adjust insulin doses in real-time based on the sensor's readings (Mayo Clinic, 2024). Although these systems still require some user input—such as confirming blood sugar levels or entering carbohydrate counts for meals—they represent a massive leap forward in automating the complex demands of the disease. By combining these advanced tools with an active lifestyle, individuals with Type 1 diabetes can navigate their diagnosis with confidence and lead full, healthy lives.

Standard Treatment for Type 2 Diabetes

While previous sections emphasized the critical role of nutrition and physical activity, medical interventions are often necessary to keep blood sugar within a target range. Even when medications are introduced, a healthy diet and an active lifestyle remain the fundamental pillars of treatment (Mayo Clinic, 2025). This section focuses on the pharmaceutical and surgical therapies used when lifestyle modifications alone are not enough to maintain an A1C—the average blood sugar over two to three months—below the common target of 7% (Mayo Clinic, 2025).

Healthcare teams utilize a wide array of medications targeting different biological processes. The most common first-line treatment is Metformin, which helps the body use its own insulin more effectively while reducing glucose production in the liver (Mayo Clinic, 2025). Other oral options include Sulfonylureas and Glinides,

which stimulate the pancreas to release more insulin, and SGLT2 inhibitors, which prompt the kidneys to filter excess sugar out of the body through urine. Newer GLP-1 receptor agonists, often administered by injection, have become significant in modern care because they slow digestion and are frequently associated with weight loss and a reduced risk of heart attack or stroke (Mayo Clinic, 2025).

For many, insulin therapy eventually becomes a necessary part of the management plan. Rather than being a last resort, insulin may be prescribed early to ensure stability. This can involve long-acting insulin for "basal" coverage throughout the day or short-acting insulin taken at mealtimes to manage glucose spikes (Mayo Clinic, 2025). To track effectiveness, Continuous Glucose Monitoring (CGM) is increasingly utilized across both Type 1 and Type 2 care. These sensors provide real-time data and alerts every few minutes, allowing for more precise adjustments than traditional finger-prick testing (Mayo Clinic, 2025).

An interesting thought to consider is that a Type 2 diagnosis does not always mean a lifetime of insulin dependency. While Type 1 requires lifelong insulin because production stops entirely, those with Type 2 may eventually stop insulin therapy if they successfully address the underlying driver: insulin resistance (Crawford, 2025). Research indicates that reversing this resistance is possible through dedicated lifestyle interventions, but the most significant impact often comes from modest weight reduction. Losing as little as 10% of body weight has been shown to restore the body's natural insulin response, effectively reversing the disease state in many cases (Crawford, 2025). Furthermore, modern GLP-1 medications can support long-term weight maintenance, helping individuals maintain healthy ranges and potentially eliminating the need for supplemental insulin (Crawford, 2025).

Section 5: Quality Assurance, Compliance, and Safety

The final pillar of effective diabetes management in long-term care rests upon the integration of clinical knowledge into a rigorous framework of operational oversight. While previous sections detailed the pathology and treatment of the disease, Section 5 focuses on the administrative systems necessary to ensure resident safety and regulatory adherence. By leveraging Quality Assurance and Performance Improvement (QAPI) structures and fostering a facility-wide culture of vigilance, administrators can move beyond reactive crisis management toward a proactive, systemic approach to diabetic care. This section provides the tools and strategies needed to translate clinical guidelines into daily staff behaviors that protect both the resident and the facility's compliance standing.

Staff Training Suggestions

In the regulated environment of long-term care, Quality Assurance Performance Improvement (QAPI) is essential for maintaining CMS compliance and securing Medicare and Medicaid funding. While clinical errors are a reality in any high-stakes setting, ongoing staff training serves as your primary defense. This course has outlined the complexities of diabetes management; your next challenge is translating that knowledge into a continuation of your facility-wide culture of vigilance.

Diabetes care is not a siloed responsibility reserved for nursing staff. To mitigate risk, every employee, from food service and housekeeping to office staff, can be empowered as an extra set of eyes. When your entire team is trained to recognize the signs and symptoms of metabolic distress, you create a safety net that ensures faster intervention and better resident outcomes.

Developing impactful in-services can be a daunting task for even the most seasoned leader. To support your efforts, we have designed a ready-to-use training suggestion below. This interactive format is intended to streamline your preparation while ensuring your team, regardless of their department, gains the confidence and skills necessary to protect your residents.

Suggestion #1: Turn Your Next In-Service into a Fun and Engaging Event

To boost retention and build team spirit, move away from the traditional lecture and try an Interactive Response Challenge!

The Activity

1. Team Up: Break your staff into small, cross-departmental teams (mix housekeeping, dietary, and office staff with clinical leads).
2. The "Code Blue-ish" Challenge: Give each team a scenario involving a resident showing signs of Hypoglycemia(Low Blood Sugar). Ask them: "What do you see, and what do you do?" Give teams a chance to converse and figure it out.
3. The Flash Presentation: Have 2–3 teams present their emergency "Action Plan" to the greater group.
4. The Switch: Repeat the process for Hyperglycemia (High Blood Sugar).
5. Wrapping it up: Conclude the session by addressing any gaps in the team's responses. Use the chart below (or similar) to explicitly review the clinical signs and symptoms of hyperglycemia and hypoglycemia, ensuring every staff member leaves with a clear, standardized understanding of what to monitor.

Why it works: Hands-on, group-oriented learning transforms passive listeners into active responders. By practicing these scenarios in a fun, low-pressure environment, your staff builds the "muscle memory" needed to act fast in a real crisis. Plus, it's a fantastic way to break down department silos and strengthen team bonding!

To assist your team in identifying these risks, it is helpful to visualize the two extremes of blood sugar levels that can lead to medical emergencies. Below is a quick and easy to understand breakdown of hypoglycemia and hyperglycemia, with information retrieved from the Institute for Quality and Efficiency in Health Care (2023).

Hypoglycemia (Low Blood Sugar)	**Hyperglycemia** (High Blood Sugar)
• Extreme hunger • Sudden shakiness or tremors • Excessive sweating or chills • Irritability, anxiety, or confusion • Rapid heartbeat • Dizziness or lightheadedness • Shivering, restless **Urgency: Needs sugar/glucose FAST!**	• Extreme thirst • Frequent urge to urinate • Blurred vision • Dizziness • Fruity-smelling breath (acetone) • Nausea or stomach pain • Extreme cases: confusion or loss of consciousness **Urgency: Needs clinical evaluation/insulin!**

Suggestion #2: A Case Study as a Learning Tool

To illustrate the high stakes of resident monitoring, move beyond the textbook and use a comparative narrative. This exercise helps staff visualize how their individual observations—no matter their department—can change the course of a resident's life. Feel free to customize the names and specific circumstances of the case study to reflect the real-world environment and residents in your community, making the training more relatable for your team.

The Context: Mr. Miller is 78 years old and living with Type 2 diabetes. He is currently on a sliding-scale insulin regimen and loves spending his mornings in the community garden.

The Challenge

Present these two outcomes to your staff and ask: *"What were the moments in which we could have changed the story?"*

- **Scenario A:** The Trained Team (Success)
    - 7:30 AM: A dietary aide notices Mr. Miller barely touched his breakfast. She alerts the floor nurse.
    - 10:00 AM: While gardening, a housekeeping assistant notices Mr. Miller seems unusually confused and is leaning against a bench, looking pale and sweaty.
    - The Result: Recognizing the signs of hypoglycemia, the housekeeper alerts a nurse immediately. Mr. Miller's blood sugar is 58 mg/dL. He is treated with a glucose tab and a snack, avoiding a fall or an ER visit.
- **Scenario B:** The Untrained Team (Risk)
    - 7:30 AM: The dietary aide clears the plate but assumes Mr. Miller just "isn't a breakfast person" and doesn't report it.

- 10:00 AM: The housekeeper sees Mr. Miller leaning on the bench and assumes he is just tired from the sun. She continues her rounds.
- The Result: Mr. Miller loses consciousness and falls, suffering a hip fracture. The facility faces a "Failure to Monitor" deficiency, and the resident faces a permanent decline in mobility.

When we compare these two scenarios, the difference between a "minor incident" and a "life-altering injury" didn't rely on high-tech medical devices. The difference relied on communication.

Why a situation based case study works

- It identifies a chain of events. It teaches staff that a fall is rarely an isolated event; it is often the final step in a chain of missed "red flags."
- It can empower non-clinical members of your team. It proves that dietary and housekeeping staff are often the first line of defense in preventing a medical crisis.
- It highlights regulatory impact. It demonstrates how proper monitoring protects the facility from potential citations and legal risks.

Note: *These stories are brief, simplified examples intended to highlight specific "red flags." In a real-world setting, diabetes symptoms can be even more subtle or masked by other medications. Consistent, facility-wide vigilance is the only way to catch what a single person might miss.*

Call for Leadership

For the NHAs and ALAs, this case study serves as a powerful foundation for culture building. To effectively lead your team, it is essential to emphasize that clinical equipment is secondary to the team members walking the halls every day. When

discussing these scenarios with your staff, explain that while medical devices provide data, the staff provides the necessary context. A glucometer can only report a number once the crisis has already arrived, but an alert staff member can spot the behavioral changes that predict a crash hours in advance.

A critical part of an administrator's role is removing the psychological barriers to reporting. Staff members in housekeeping or dietary may hesitate to interrupt a busy nurse with a small observation, fearing they are being a nuisance. You can bridge this gap by establishing that there is no such thing as a false alarm in your facility. Shift the perspective so that every employee understands that an observation about a resident’s mood or appetite is just as vital as a physician’s order. This creates a zero-barrier culture where the entire team feels empowered to act as the resident's voice.

Furthermore, it is helpful to frame communication as the primary link in the chain of resident safety. A fall or a medical emergency is rarely a spontaneous accident; it is often the final result of missed signs, such as a missed meal or increased lethargy. By reporting these subtle shifts, staff members are doing more than just documenting behavior, they are actively preventing hip fractures, avoiding state survey deficiencies, and shielding the facility from legal risks. Remind your team that when a resident's blood sugar is imbalanced, they often lose the cognitive ability to ask for help, making the team’s collective vigilance their only true safety net.

QAPI Program

Quality Assurance Performance Improvement (QAPI) programs are a regulatory necessity for senior living communities and serve as a vital framework for managing high-risk conditions like diabetes. Because diabetes affects nearly every aspect of resident health, administrators can leverage the QAPI process to move

beyond basic compliance and toward superior clinical outcomes. This process allows for a holistic review of care, ensuring that the facility remains proactive in its approach to chronic disease management.

When evaluating diabetes care within a QAPI framework, teams could routinely review clinical protocols, such as the accuracy of symptom management and the efficacy of nursing practices regarding glucometer calibration and proper insulin storage. Medication safety is another area that could be examined by reviewing insulin administration records to reduce potential errors or by tracking the facility's progress in transitioning away from unstable sliding scale regimens. Furthermore, administrators could assess resident well-being by measuring the success of person-centered initiatives, such as the implementation of liberalized diets and the maintenance of skin integrity, which directly influence the overall quality of life for those living with diabetes.

By integrating these metrics into ongoing QAPI cycles, a facility can identify patterns of concern early, helping to maintain a safer environment for both residents and staff. It is important to remember that these are simple suggestions intended as general guidance. Administrators should always assess the specific clinical needs of their unique communities and ensure that all initiatives align with their established facility policies and state-specific regulatory requirements.

Compliance

Note: *All F-Tag regulatory information in this section is derived directly from the CMS State Operations Manual, Appendix PP.*

In the regulatory landscape of long-term care, diabetes management is evaluated as a systemic process that triggers federal enforcement actions primarily through specific F-Tags. At the core of these regulations is F-684 (Quality of Care), which mandates that facilities provide the necessary care and services for a resident to

attain or maintain their highest practicable physical, mental, and psychosocial well-being. When an administrator fails to ensure blood glucose stabilization or consistent adherence to physician-ordered monitoring, the facility may be cited for a failure in clinical oversight. Mismanagement that results in acute crises, such as preventable episodes of severe hypoglycemia, can be categorized as a deficiency at the level of Immediate Jeopardy (IJ), representing the most severe regulatory non-compliance.

Skin integrity and wound management represent significant compliance vulnerabilities under F-686. Because diabetes impairs healing and sensation, the CMS survey process emphasizes the facility's preventative protocols. If a resident with neuropathy develops a foot ulcer that was not identified during scheduled skin inspections, surveyors may determine that the facility's monitoring systems are insufficient. In such instances, the facility is cited for the failure to implement necessary preventative strategies, such as pressure redistribution or off-loading. This typically results in a clinical deficiency regarding the wound and a concurrent citation for failing to adhere to the resident's individualized comprehensive care plan.

The coordination between nursing and dietary departments is scrutinized under F-800 (Dietary Services) and F-759 (Medication Errors). For residents with diabetes, the timing of nutritional intake is clinically linked to the administration of insulin. If the dietary department does not deliver a therapeutic diet, such as a consistent carbohydrate meal, at the scheduled time, or if the nursing department administers rapid-acting insulin without the presence of a meal, the facility is liable for a medication administration error. Furthermore, failure to notify an attending physician of significant changes in status, such as blood glucose readings that fall outside of pre-established clinical parameters, violates F-580. This regulation ensures the facility maintains integrated communication with the resident's medical team.

Ultimately, the responsibility for compliance rests on the administrator to demonstrate staff competency and training under F-941. During the survey process, inspectors could interview staff members to evaluate their understanding of hyperglycemia and hypoglycemia indicators. If personnel are unable to identify these clinical signs or explain the facility's emergency protocols, the administrator may receive a citation for a failure in staff competency. Consequently, compliance is based on maintaining documented processes for regular inspections, accurate medication timing, and interdisciplinary communication.

Beyond these federal standards, administrators must also navigate complex layers of localized and organizational oversight. Individual states may enforce more stringent licensing requirements or specific reporting mandates regarding diabetic complications and infection rates. Furthermore, corporate compliance offices and facility Medical Directors often establish internal protocols and Quality Assurance and Performance Improvement (QAPI) benchmarks that exceed federal minimums. These internal expectations are designed to mitigate risk and standardize care across multi-facility organizations, requiring administrators to remain vigilant in aligning daily operations with both public law and private clinical governance.

Fostering a Culture of Vigilance and Excellence

The primary goal of an NHA or ALA is to build an environment where clinical data is supported by real-world human observation. This section has shown that while QAPI programs and Appendix PP regulations provide the necessary rules for safety, a successful program truly relies on a culture of open communication. By using interactive training and case studies, you empower every department—from housekeeping to nursing—to recognize "red flags," transforming your entire staff into a powerful safety net for your residents.

By removing barriers to reporting and ensuring every staff member is competent, you go beyond just meeting federal rules; you set a higher standard for chronic disease management. Effective diabetes care reflects the overall health of your facility, where stable blood sugar, healthy skin, and resident happiness are the true measures of success. When everyone understands their role in the chain of care, you create a community that is safer, more compliant, and dedicated to the best possible quality of life for your residents.

Key Takeaways

- Hypoglycemia requires immediate glucose to treat symptoms like shakiness and confusion, Hyperglycemia presents with extreme thirst and fruity-smelling breath, requiring clinical evaluation or insulin to prevent serious complications
- Effective management requires a whole team approach. Training non-clinical staff (housekeeping, dietary, and office) to recognize "red flags" creates a facility-wide safety net that prevents medical crises.
- Regulatory success and QAPI programs depend on reliable systems rather than luck. Consistent skin inspections, accurate medication timing, and interdisciplinary communication are your excellent defenses against high-level citations.

Section 6: Professional Resources

The landscape of diabetes management is supported by an extensive array of evidence-based literature and clinical tools. From global health authorities to specialized research institutions, the internet provides a wealth of guidance tailored to newly diagnosed individuals, their support networks, and the clinicians

responsible for their care. These resources cover the full spectrum of the disease, including prediabetes, Type 1, and Type 2 diabetes.

While the following list introduces several highly regarded organizations—including the CDC, the World Health Organization, and various physician research groups—it is by no means exhaustive. Given the global nature of diabetes research, new insights and management protocols are continuously emerging from hospital systems and academic parties worldwide.

The table below serves as a starting point for administrators and clinicians seeking to deepen their professional knowledge or provide educational materials to residents and their families.

Organization and Hyperlink	Target Audience	Primary Resource Focus
American Diabetes Association (ADA) https://diabetes.org/	Clinicians & Patients	Clinical Standards of Care, lifestyle management, and advocacy.
American Diabetes Association (ADA) Diabetes Food Hub https://diabetesfoodhub.org/	Clinicians & Patients	Clinical Standards of Care, lifestyle management, and advocacy.
Centers for Disease Control (CDC) https://www.cdc.gov/diabetes/index.html	General Public & Providers	National Diabetes Prevention Program (DPP) and statistical data.

Endocrine Society https://www.endocrine.org/clinical-practice-guidelines/diabetes-mellitus-and-glucose-metabolism	Specialists & Researchers	Clinical practice guidelines and hormone health research.
Association of Diabetes Care & Education Specialists (ADCES) https://www.adces.org/	Educators & Care Teams	Practical tools for self-management training and staff education.
Cleveland Clinic https://my.clevelandclinic.org/health/diseases/7104-diabetes	Patients & Families	Clear, patient-friendly explanations of complications and treatments.
Mayo Clinic https://www.mayoclinic.org/diseases-conditions/diabetes/symptoms-causes/syc-20371444	Patients & Families	Clear, patient-friendly explanations of complications and treatments.
Quality Insights https://www.qualityinsights.org/	Healthcare Providers	10 Free Diabetes Resources: Toolkits and guides to empower care teams.
National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) https://www.niddk.nih.gov/health-information/diabetes	Healthcare Providers	Support for Patients & Referrals: Clinical tools for lifestyle changes and referrals.

Spotlight: The ADA Diabetes Food Hub

In Section 4, we explored the critical role that nutrition plays in managing blood sugar levels and supporting overall resident health. The following resource is a powerful tool that reinforces those principles and gives your team a practical way to put them into action on a daily basis.

While each of the organizations listed above offers essential clinical guidance, the ADA Diabetes Food Hub warrants a more detailed look because it provides the practical, day-to-day application of those medical standards in a way that directly impacts the dining experience. While other resources focus on policy and diagnostic criteria, this tool bridges the gap between clinical theory and the actual meals served to residents, staff, and families.

Transitioning from abstract medical advice to a resident's dinner plate can be one of the most challenging aspects of care. The Food Hub is a valuable resource that transforms clinical requirements into actionable, enjoyable meals, helping teams move away from restrictive labeling and toward a more liberalized, person-centered approach to dining. By focusing on "real food" rather than clinical restrictions, it simplifies the complex task of nutritional management.

The Food Hub is a versatile tool that extends beyond the facility's kitchen, offering significant benefits for residents in short-term rehab who are preparing for discharge. By introducing these individuals to the platform's nutritional breakdowns and grocery list features, staff can provide them with a practical roadmap for managing their diagnosis independently once they return home. Similarly, it serves as a helpful guide for family members and visitors who want to support their loved ones but may be unsure how to choose or prepare appropriate meals.

Beyond resident care, this resource is an excellent addition to employee wellness initiatives. Because many healthcare professionals manage their own diabetes, leaders can share these tools to support the health and energy of their team members. The platform offers nutritional transparency for every recipe, customizable meal calendars, and a wide variety of culturally diverse cuisines—including Mediterranean, Latin American, and Asian-inspired dishes. By raising awareness of these types of resources, administrators can foster a more informed environment where residents, families, and staff all have access to evidence-based nutritional guidance.

Section 7: Conclusion

Thank you for completing this course on Diabetes Management. We encourage you to take these tools and insights back to your leadership teams and share them with all team members to foster a more proactive, interdisciplinary approach to resident care.

This course began by exploring the endocrine system and the biological mechanisms of diabetes, highlighting the critical distinction between Type 1, an autoimmune supply problem, and Type 2, a progressive insulin resistance issue. We then examined the significant risks associated with chronic hyperglycemia, including cardiovascular disease, kidney damage, and the dangerous "painless" neurotrophic ulcers that often lead to amputations. The curriculum also addressed essential treatment strategies, emphasizing the importance of proper nutrition, the metabolic benefits of regular physical activity, and the complexities of modern insulin therapy. Finally, we translated clinical knowledge into administrative action by discussing staff training options and the use of QAPI protocols to ensure regulatory compliance and resident safety.

By empowering every department, from nursing to housekeeping, to recognize the subtle red flags of glucose imbalance, you can create a comprehensive safety net for your residents. Remember that effective diabetes management in a long-term care setting is not a one-time effort but an ongoing commitment. It requires regular staff education refreshers, consistent communication between clinical and non-clinical teams, and a willingness to revisit and refine your facility's protocols as best practices and regulatory standards evolve. The residents in your care depend on a team that is not only well-informed, but also vigilant and collaborative in applying that knowledge every single day.

As a next step, we encourage you to begin by identifying the areas within your facility where gaps in diabetes awareness may already exist. Consider conducting informal assessments with staff across departments to gauge their comfort level with recognizing early signs of hypo- and hyperglycemia. From there, work with your clinical leadership to develop or update your facility's diabetes care protocols, ensuring they are clearly documented, easily accessible, and integrated into your broader QAPI framework. Establishing a routine, whether it is a monthly care conference discussion, a quarterly training session, or a simple visual aid posted in common areas, can go a long way toward keeping diabetes management at the forefront of your team's awareness.

It is also worth noting that the landscape of diabetes care is constantly advancing. New medications, evolving nutritional guidelines, and emerging research on the relationship between diabetes and cognitive decline are all areas that may shape how long-term care facilities approach resident management in the coming years. Staying current with these developments, through continuing education opportunities, professional networks, and updated regulatory guidance, will ensure that your facility remains not only compliant, but truly ahead of the curve in resident care.

We hope this information helps you lead your facility toward higher standards of compassionate and compliant care.

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