In Brief

About 25% of all residents of skilled nursing facilities (SNFs) have diabetes, and that proportion is expected to increase. SNF residents with diabetes have special needs related to nutrition, hydration, physical activity, and medical therapy. Vigilant assessment and maintenance of safety is also crucial for such patients, including but not limited to issues such as hyper- and hypoglycemia, polypharmacy, falls, lower-extremity problems, and transitions of care. Interventions to provide stable glycemic control; ensure adequate nutrition, hydration, and physical activity; decrease polypharmacy; prevent falls; facilitate transitions of care; and improve the diabetes-related knowledge of SNF staff can help to meet these needs. Although this article focuses on SNFs, many of the topics covered also apply to elderly people with diabetes in other long-term care settings.

Special Considerations for Older Adults With Diabetes Residing in Skilled Nursing Facilities

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Individuals with diabetes comprise a large proportion of residents in long-term skilled nursing facilities (SNFs). Data indicate the prevalence of diabetes among residents > 65 years of age is 22.5% in Caucasians and 35.6% in non-Caucasians.¹ In addition, residents with diabetes have greater rates of cardiovascular disease, kidney failure, visual impairment,² depression, falls,³ dementia, functional impairment, and dependency^{4,5} when compared to residents without diabetes. Thus, SNF residents with diabetes have many special needs that must be addressed by their health care team.

It is important to keep in mind, however, that this is a heterogeneous population. Some residents in SNFs and other long-term care facilities may have diabetes of long duration and live with many of the long-term complications of diabetes, whereas others may have newly diagnosed diabetes and needs that differ from those with multiple comorbidities and complications. In addition, some residents with diabetes will be in a SNF for post-acute care^{2,6} and have needs that are not the same as those of longer-term residents. This article focuses on the needs of long-term SNF residents with diabetes and provides an overview of important considerations when working with this growing patient population.

Nutritional Needs

Although obesity is on the rise in SNF residents,⁷ many older residents with higher comorbidity burdens may be undernourished. Type 2 diabetes in the elderly is often accompanied by sarcopenia (degenerative loss of skeletal muscle mass and strength).⁸ Estimates of protein energy malnutrition in this population vary from 16 to 65%.⁹ In addition, aging is characteristically associated with a blunting of the senses of smell and taste, with a potential resultant loss of interest in food. There may also be reduced saliva and swallowing difficulties, loss of teeth or dentition-related issues, and impairment of the absorption of food-derived vitamin B₁₂. Swallowing disorders can cause inadequate food intake, as can tremors, which may cause spilling of food by residents trying to feed themselves.⁹

SNF residents with diabetes should be screened and assessed for malnutrition, and such an assessment should include a medical and surgical history and a history of weight and nutrition habits. Residents' mouth and dentition should be checked as a routine component of physical examinations.

Regular monitoring of body weight is one easy and useful tool to screen for malnutrition.^{9,10} Weight losses $\geq 5\%$ have been linked to increased morbidity and mortality,¹¹ and a BMI < 18.5 kg/m² can be indicative of malnutri-

tion in U.S. nursing home settings.¹² To assess for malnutrition, SNF staff may find the Mini-Nutritional Assessment–Short Form¹³ helpful. This tool can predict undernutrition and assesses declines in food intake, weight loss, mobility, psychological stress/acute illness, neuropsychological problems, and BMI.

To improve the nutrition of residents with diabetes in SNFs and other long-term care facilities, restrictive meal plans should be avoided. A registered dietitian can be involved to help ensure the provision of nutritious, appealing foods that are culturally appropriate for residents. These meals should also take into account residents' food preferences, personal goals, and abilities.¹³ Communal meals also have been shown to increase intake and improve the nutrition status of residents.¹⁴

The major nutrition consideration for residents with diabetes is ensuring consistent and appropriate carbohydrate intake at meals. Nursing and other staff may require education to become proficient at monitoring the amount of carbohydrate residents eat—or, importantly, fail to eat—at a given meal.¹⁰ This is of particular importance for individuals who receive treatment with insulin or insulin secretagogues such as sulfonylureas.

Hydration Needs

Proper hydration is another important need that can easily be overlooked, particularly for frail elderly people with diabetes. Dehydration occurs frequently and is a form of fluid/electrolyte imbalance. In elderly residents of long-term care facilities, it can have many contributing causes, including decreased thirst sensation and lean body mass and age-associated decline in renal function. In addition, environmental and medical factors such as hot, humid weather, diarrhea, vomiting, and fever can contribute to dehydration. Functional factors, including immobility, dysphagia, visual impairment, and incontinence can also contribute to dehydration.¹⁵ Osmotic diuresis related to hyperglycemia can cause dehydration, which in turn can lead to worsening hyperglycemia and the development of potentially fatal hyperglycemic hyperosmolar syndrome (HHS).

Additionally, some facility issues may contribute to residents' dehydration.¹⁵ These include inadequate

staffing; attitudes and beliefs of staff; inadequate positioning of cognitively and functionally impaired residents to facilitate safe drinking (i.e., not sitting them up); inadequate staff knowledge; and incorrect documentation of food and fluid intake. As with carbohydrate intake, staff members may benefit from education about the importance of hydration, how to identify residents at risk for dehydration, how to estimate and encourage proper hydration, and how to correctly document residents' fluid intake.

Several different methods may be used to estimate adequate fluid intake. One common method is 100 ml/kg for the first 10 kg, 50 ml/kg for the next 10 kg, and 15 ml/kg for the remaining kilograms of body weight.¹⁶ Clinical signs of dehydration can include skin tenting, concentrated urine, oliguria, sunken eyes, orthostatic hypotension, tachycardia, constipation, weight loss, and mental confusion.¹⁵

A proactive approach to preventing dehydration in long-term care residents has been suggested by the Illinois Council on Long Term Care.¹⁷ This approach includes routine monitoring for signs of dehydration and observation of residents' fluid consumption with documentation in nursing notes. Other measures suggested by the Illinois council include:

- Keeping a list of residents at high risk for dehydration at strategic locations to remind staff to monitor fluids
- Establishing hydration protocols to be used when a resident's fluid and electrolyte status is threatened
- Scheduling fluid administration at least three times per day between meals
- Noting residents' preferences for types and temperatures of fluids
- Leaving easily accessible, filled, fresh water pitchers and glasses at residents' bedside and supplying straws and special glasses as needed
- Offering residents a full glass of water with medications and reviewing their medications (e.g., diuretics) to assess their possible effects on hydration status
- Using a positive approach when offering fluids, rather than merely asking whether residents want something to drink

Physical Activity

Activity is an important need for residents in long-term care. Some residents may be in a facility for rehabilitation from a cardiovascular insult or surgical procedure. For these residents, physical therapy will most likely be part of their care plan to facilitate a rapid recovery and return to their previous living conditions. Longer-term residents also need physical activity, which can help prevent further disability and falls as well as improve glycemic control, muscle strength, and psychosocial well-being. Other than severe heart disease, there are few absolute contraindications to increased physical activity in this population.¹⁸

There are several different forms of physical activity that can be performed by SNF residents, depending on their individual preferences and with consideration to their physical limitations. For residents with limited mobility, physical activity programs from a seated position (e.g., Sit and Be Fit,¹⁹ an award-winning Public Broadcasting System exercise program) can be implemented. Tai chi, offered three times per week for 6 months in a long-term care facility has been shown to improve physical and mental health–related quality of life.²⁰ Although this study did not specifically address residents with diabetes, the results may be applicable to this population.

Although specialty activity programs may not be feasible in some SNFs, research has shown that long-term care residents who participate in any activity, whether physical activity or social interaction, have lower rates of depression and improved glycemic control than residents who are nonparticipatory.²¹ Facility nurses and staff can encourage residents to participate in range-of-motion exercises and to be as physically active as possible. For bedridden patients, staff can help with passive range-of-motion exercises. For residents whose diabetes is treated with insulin or insulin secretagogues and who participate in physical activity, blood glucose levels should be checked before and after the activity to prevent, detect, and treat hypoglycemia as needed.²²

Glucose Monitoring

In addition to monitoring the weight and food and fluid intake of residents with diabetes, SNF staff should also

monitor these residents' glycemic control. Capillary blood glucose monitoring (CBGM) allows providers, residents, and facility staff to identify glycemic patterns to direct glycemic management decision-making.

Various types of glucose monitors are available for this purpose and can be used by either staff or residents who are capable and willing to self-monitor their glucose levels if state regulations and facility policies allow them to do so. Some monitors can sample from areas other than the fingertip (i.e., alternative site testing). Alternative site testing is only accurate when blood glucose is in a steady state, such as fasting and preprandially, although the palm can be used for postprandial measurements.^{23,24} However, alternative site testing is not generally recommended when hypoglycemia is suspected.²⁵

Although CBGM can be used to determine blood glucose values that are out of a resident's target range and to identify patterns in blood glucose fluctuations to evaluate the medication regimen, there are no data to guide the frequency of CBGM in long-term care settings. However, the Minnesota Department of Health has published guidelines on this topic.²⁶ This publication recommends that there be standing orders for CBGM or a protocol based on diabetes treatment for each resident with diabetes. The guidelines suggest the following schedule for CBGM frequency:

1. Testing during the first week after admission:
 - Residents treated with insulin should undergo CBGM four times daily, before meals and at bedtime
 - Residents treated with oral medicines or noninsulin injectable agents should undergo CBGM two times daily, varying the times before meals and at bedtime
2. Ongoing testing once a resident is stabilized, as ordered by a clinician:
 - Residents treated with insulin should undergo CBGM two times daily, varying the times before meals and at bedtime
 - Residents treated with oral medicines or noninsulin injectable agents should undergo CBGM two times weekly, varying the times before meals and at bedtime

3. CBGM frequency should be increased during times of illness, surgery, or stress or when staff detects a sudden change in the resident's condition

It is crucial for residents to have their own lancet devices or that single-use, disposable lancets are used to prevent the spread of blood-borne infections.²⁷ In addition, glucose meters should be cleaned regularly and maintained according to facility policies and manufacturer recommendations.

Long-term glycemic control is monitored through A1C testing; again, however, there are no data indicating how often A1C testing should be performed for residents in long-term care facilities. However, the California Healthcare Foundation/American Geriatrics Society Panel on Improving Care for Elders with Diabetes has published guidelines on this issue.²⁸ These guidelines suggest A1C testing every 6 months, or more frequently as indicated, for residents whose glycemic targets are not being met and annual testing for those whose A1C results have been stable for several years.

Risk Reduction and Mitigation

Safety is a major concern for all residents of long-term care facilities regardless of their diabetes status. However, residents with diabetes have special safety needs related to medication management (polypharmacy), prevention of hypoglycemia and excessive hyperglycemia, fall prevention, foot care, and transitions of care. Care transitions can be diverse and involve admission to and discharge from the long-term care facility, as well as transfers to and from acute-care facilities when necessary.

Polypharmacy risks

Polypharmacy has been defined in various ways ranging from situations in which a patient takes at least five medications²⁹ to situations in which a patient takes at least nine medications.³⁰ Regardless of the exact definition used, polypharmacy is common in residents of SNFs and other long-term care settings, particularly those with diabetes, who may be taking not only glucose-lowering medications, but also agents for the treatment of hypertension, dyslipidemia, and a multitude of other possible comorbidities. Whenever

polypharmacy exists, the potential for medication errors increases. Appropriately reducing polypharmacy when possible can help to reduce such errors and lower facilities' medication costs.²⁹

The key word in the previous sentence is "appropriately," because taking more than five (or nine) medications is not inherently inappropriate for particular patients who may need them. That said, streamlining residents' medication regimens to include the fewest number of medications possible can benefit both residents and the facilities in which they reside.

Insulin is the seventh most common drug involved in medication errors.³⁰ Long-term care facilities frequently use a sliding-scale dosing regimen for their insulin-requiring residents instead of a more physiologically sound basal-bolus regimen, which provides separate insulin dosing to cover basal, mealtime, and correction insulin needs.^{31,32} The routine and extended use of sliding-scale insulin has been linked to increased hypoglycemia risk, poorer glycemic control, and increased care burden for both nursing staff and residents.³²

Diabetes medications should be given in the lowest possible doses that will allow residents to meet their glycemic goals, which should be individualized with consideration given to the relative risk of hypoglycemia associated with the various therapy options, particularly in residents who are cognitively impaired or have multiple comorbidities or hypoglycemia unawareness. Glycemic targets should be determined based on residents' physical and cognitive status.

Recommendations regarding appropriate glycemic targets for long-term care residents are included in clinical guidelines from the European Diabetes Working Party for Older People³³ and in an American Diabetes Association (ADA) consensus statement on diabetes in older adults.³⁴ These documents suggest that an A1C of < 8.5% is a reasonable glycemic target for residents of long-term care facilities who have cognitive and functional impairment, multiple comorbidities, or limited life expectancy. This goal should be realized through the simplest possible medication regimen. A more stringent treatment goal may be appropriate for residents who have a longer life expectancy and those who may reside

in such facilities for a relatively short time period.³⁴

There is an ever-expanding selection of drug classes for glycemic control, including metformin, sulfonylureas, α -glucosidase inhibitors, incretin mimetics, DPP-4 inhibitors, insulin, and others. (A more complete discussion of the use of various drug classes in older adults can be found elsewhere in this issue [p. 20]). It merits mentioning that the sulfonylurea agent glyburide, in particular, should be avoided in older adults. The Beers Criteria, a publication of the American Geriatrics Society that lists potentially dangerous drugs for older adults, categorizes glyburide as a potentially inappropriate agent for use in older adults with diabetes because it is associated with a higher risk of prolonged hypoglycemia than other sulfonylureas or agents in other drug classes.³⁵

Hypoglycemia risks

Hypoglycemia, defined as a blood glucose level < 70 mg/dl, is common in long-term care residents treated with insulin or insulin secretagogues and can increase cardiovascular morbidity and mortality.³⁶ In addition, hypoglycemia may contribute to falls in these residents. Risk factors for hypoglycemia in residents include advanced age, multiple comorbidities, polypharmacy, renal or hepatic impairment, recent hospital admission, a history of hypoglycemia, increased physical activity, and poor nutrition.

Assessing hypoglycemia may be difficult because aging can bring about a deficiency in counterregulatory responses, leaving many residents with less intense adrenergic and neuroglycopenic symptoms of hypoglycemia.³⁷ Often the signs and symptoms are nonspecific and can include weakness, sleepiness, lack of coordination, and slurred speech. However, facility staff may misinterpret these signs and symptoms as a neurological issue, a vascular disorder, or simple fatigue. For residents whose diabetes is treated with insulin or an insulin secretagogue, hypoglycemia should be suspected first and immediately confirmed or ruled out with CBGM.

Treatment of hypoglycemia includes ingestion of 15–30 g of fast-acting carbohydrate such as glucose gel, glucose tablets (for residents who can chew), or orange juice. If a resident has altered consciousness, is severely cognitively impaired, or

is unable to swallow, staff should administer glucagon intramuscularly. Because glucagon can cause emesis, residents requiring this intervention should be turned on their side to avoid aspiration.

Hypoglycemia is a dangerous potential consequence of treatment with insulin or insulin secretagogues and can lead to emergency room visits, acute-care hospitalizations, or even death.^{34,38} All long-term care facilities should have a hypoglycemia protocol in place to facilitate rapid assessment and treatment when necessary.^{33,39}

Hyperglycemia risks

Although hypoglycemia is a major safety concern for residents with diabetes, hyperglycemia can also contribute to significant morbidity in this population. The ADA consensus report²⁹ recommends an A1C target of < 8.5% for many residents in long-term care facilities, including those with end-stage chronic illness, moderate to severe cognitive impairment, or two or more dependencies with regard to activities of daily living. It is important to avoid preprandial blood glucose levels > 200 mg/dl to reduce residents' risks for dehydration, electrolyte disturbances, urinary incontinence, nocturia, blurred vision, and falls that can occur secondary to excessive glycosuria. Severe hyperglycemia and pronounced glycosuria can also contribute to dehydration, which in turn can lead to the development of HHS.

Fall prevention

Residents with diabetes are at a higher risk for falls than residents without diabetes, and falls by residents with diabetes are more likely to result in injury.⁴⁰ There are numerous interrelated risk factors for falls in residents with diabetes, including dysglycemia (hyper- and hypoglycemia) and visual, hearing, vestibular (balance), and proprioceptive impairment. Fluid disturbances, including dehydration, fluid overload, and edema, also contribute to fall risk. Postural hypotension, another fall risk factor, can be caused by dehydration or by autonomic neuropathy or the use of antihypertensive medications. Other autonomic neuropathies are also risk factors, as are motor and peripheral sensory neuropathies, all of which may be common in residents with longstanding diabetes. Additional risk

factors for falls include foot, balance, mobility, and gait disorders; cognitive impairment; and depression. In addition, comorbid conditions that increase the risk for falls include cardiovascular disease, anemia, incontinence, sleep disorders, and arthritis. Medications used by residents with diabetes, especially centrally acting medications, psychoactive agents, cardiovascular agents, and insulin, can increase the risk for falls.

Prevention is the most important intervention for both falls and fall-related injuries.⁴⁰ Because falls usually have multiple causes, residents need multifactorial prevention strategies and interventions.

Glycemic control should be targeted to avoid extreme high and low blood glucose levels. Hyperglycemia (preprandial blood glucose levels > 200 mg/dl or A1C $\geq$ 9%) can lead to increased urination or incontinence, which may cause residents to hurry to the bathroom and fall in their haste. Hyperglycemia can also lead to nocturia (although the renal threshold for glucose varies from one person to the next), requiring residents to ambulate to the toilet at night. Residents who experience nocturia should have some lighting in their sleeping areas, non-glare lights in bathrooms, supportive footwear available at their bedside, and assistive devices, if used, placed within easy reach. Staff may need to assist residents to the bathroom or commode, and male residents may benefit from using a urinal at the bedside. Hyperglycemia may also cause blurred vision, dehydration, and orthostatic hypertension, which may contribute to fall risk. Thus, keeping preprandial blood glucose levels < 200 mg/dl will help to prevent hyperglycemia-related falls.⁴¹

At the other end of the glycemic spectrum, hypoglycemia is also related to falls. As noted previously, older residents often have less intense symptoms and so are not aware of the early signs of hypoglycemia.⁴¹ In addition, there is a mild decrease in hepatic glucose production in response to hypoglycemia.³⁷ Thus, hypoglycemia should be suspected and tested for in any resident treated with insulin or an insulin secretagogue who suddenly exhibits confusion, decreased cognition, or behavioral changes.

To help prevent falls, areas in which residents spend time should be well lit, preferably with non-

glare lighting, and residents should wear their glasses when they are out of bed. Because bifocals can make going downstairs difficult, stair cases should have handrails on both sides, and residents should be encouraged to use them. If residents have vestibular disorders, ambulatory assistance devices may help to prevent falls. The appropriate device should be determined by the facility's physical therapy personnel, and the resident should be instructed in its use. In addition, staff should encourage residents to use their assistive devices whenever ambulating. Residents with peripheral sensory disorders may benefit from therapeutic shoes to improve stability and balance. The cost of therapeutic shoes is covered by Medicare and Medicaid for eligible residents with diabetes.⁴²

Residents who are cognitively impaired or depressed are also at an increased risk for falls.⁴⁰ Cognitively impaired residents need a supportive environment and attention to any medications that may increase or exacerbate their cognitive impairment. These residents may benefit from assistive devices that are appropriate for their abilities. Cognitively impaired residents should be closely observed to avoid situations posing a high fall risk.

Residents who are depressed may benefit from medications that can improve their ability to concentrate and their attention span. However, extra care is required because some depression medications are also linked to an increased risk for falls.⁴⁰

As mentioned previously, residents with diabetes should have their medications reviewed periodically and administered in the lowest doses possible. One study of the cost of polypharmacy in a long-term care facility found that many medications could be reduced, not only saving money, but also significantly reducing polypharmacy, particularly of diabetes, central nervous system-active, and analgesic medications.²⁹ Although this study focused on costs, it showed that many medications, particularly those that increase fall risk, could be safely tapered, decreased, or discontinued.

Foot care

Many residents with diabetes have problems with their lower extremities. On admission, residents with diabetes should have a complete lower-extremity evaluation, including visual appearance and circulatory and

sensory status. It is preferable that this examination be done by a qualified foot care specialist.⁴³ A lower extremity-focused history should address balance, activity limitations, pain, lack of sensation, and previous foot problems such as ulcers and amputations. A renal history is also important because residents with end-stage renal disease are at very high risk for lower-extremity complications.⁴⁴

Once risk is determined, residents with diabetes will benefit from an individualized foot care plan. This plan should include a schedule for foot examinations and sensation testing. Findings from foot examinations should be documented so progress can be tracked. Documentation should include any redness or calluses, which could indicate high-pressure areas; edema; skin infections or break down; foot deformities and related problems; and toenail status.

For residents with dry skin, moisturizer should be applied daily (but not between the toes, to prevent maceration). Residents also need well-fitting, protective footwear. If toenails are thickened or for residents who cannot reach their feet, have visual problems, or have decreased feeling or circulation in their feet, nails should be trimmed by staff, rather than residents. Residents will benefit from having their nails trimmed to the shape of their toes, with the edges smoothed with an emery board.

Residents with very thick nails should have their nails trimmed by a specially trained health care provider. Residents with diabetes also need to be referred to a foot specialist if they have had a previous ulcer or amputation; large, painful, or erythematous ulcers; foot deformities; lack of sensation; or peripheral arterial disease.²⁶

Transitions of care

Transitions of care include initial admission to the facility, transfer to and from acute-care hospitals and emergency rooms, transfers within a facility (e.g., from one level of care to another), changes in providers, and discharge to home.⁴⁵ Transitional care is defined as actions that ensure coordination and continuity of care and are based on a comprehensive care plan.⁴⁵ Poorly executed care transitions can result in inadequate transfer of information regarding residents' course of treatment, health status, and medications. This can be particularly

detrimental to residents with diabetes who have complex care needs.

At the time of admission to a facility, all residents should be screened for diabetes. For residents with known diabetes, screening should include documentation of the current meal plan, activity level, medications, previous self-care education, self-care abilities, laboratory tests (including A1C, lipids, and kidney function), hydration status, and previous episodes of hypoglycemia (including symptoms and ability to recognize and self-treat).

Admission to a long-term care facility is a high-risk situation and increases the risk of transfer to an acute-care hospital. Transfers for acute care comprise 8.5% of all Medicare admissions, and 40% of these admissions happen within 90 days of admission to a long-term care facility.⁴⁵ In addition, residents are at a high risk for unplanned readmissions to acute-care hospitals within 30 days of discharge. One reason for these readmissions is medication changes that are made in the acute-care hospital or on discharge without appropriate transfer of information to the long-term facility staff. Sometimes, medications are changed because of formulary issues. Whenever a resident is transferred, it seems prudent to increase CBGM to two to four times daily until the resident's glycemic control has stabilized.

Another issue is lack of communication regarding residents' course of treatment and response to treatment in the acute-care setting, as well as results of completed and pending laboratory tests.⁴⁶

As previously mentioned, continuance of sliding-scale insulin after admission or transfer back to the long-term care facility is a longstanding problem for residents with diabetes.³² The American Medical Directors Association (AMDA) recommends that sliding-scale insulin dosing be reviewed 1 week after admission and converted to a more physiologically based basal/bolus regimen.³⁴

Continuity of care is important in all situations. Environmental changes that occur with care transitions may cause changes in blood glucose levels related to changes in carbohydrate intake, activity levels, and possibly the stress of change or illness. Medication reconciliation is particularly crucial in times of care transition. Several sample admission and transfer forms

are available for download from the AMDA website (<http://www.amda.com/tools/guidelines.cfm>). In addition, the AMDA's practice guideline, "Transitions of Care in the Long-Term Care Continuum," is available free for downloading (<http://www.amda.com/tools/clinical/toccp.pdf>).

Staff turnover is another issue that can affect the continuity of care needs of SNF residents. Staff turnover is typically high in such facilities, particularly among those who provide hands-on care.⁴⁷ Systems of care, thorough documentation, and appropriate communication can help to make up for high staff turnover and meet the often complex care needs of residents with diabetes. Focused, multidisciplinary quality improvement initiatives have been shown to decrease hypoglycemia rates and improve processes of diabetes care in SNFs.⁴⁸ In addition, a community quality improvement initiative was shown to decrease rehospitalizations for residents of SNFs.⁴⁹

Conclusion

Caring for residents with diabetes in SNFs and other long-term care facilities can be challenging. These residents may be newly diagnosed with diabetes, in which case reasonable glycemic control and prevention of long-term complications are appropriate goals. However, residents with longstanding diabetes and multiple comorbidities and complications may require different treatment goals and priorities.

Residents are at a particularly high risk for hypoglycemia and other treatment-related complications. Additionally, the individual needs and treatment considerations for residents with diabetes are diverse and may be related to their nutrition and hydration status, activity level, and medication management. These residents are also in need of safety precautions relating to prevention and treatment of hyperglycemia and hypoglycemia, fall prevention, foot care, and care transitions.

One way to help ensure that the needs of residents with diabetes are being met is to have protocols in place regarding medications, including sliding-scale insulin; identification and treatment of hypoglycemia; and monitoring of blood glucose. A team approach to care is imperative to help to ensure both continuity and quality of care. Thus, at times when health

care personnel who are familiar with these residents are not available, the residents' care can be carried out safely and seamlessly by other members of the care team.

To further this goal, facility staff may benefit from education programs geared to caring for residents with diabetes. These education programs can have several tiers, targeting registered nurses, licensed practical nurses, pharmacists, dietitians, and other hands-on caregivers such as medical and nursing assistants and aides. Because of time constraints facing many facility staff members, education modules that offer continuing education credit and can be completed at the facility may be beneficial. Alternatively, in-service training sessions targeting each shift or train-the-trainer education sessions may be helpful. Identification of a "diabetes champion" within each facility may additionally help to ensure high-quality care for residents with diabetes.

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