



Care of Young Children With Diabetes in the Childcare and Community Setting: A Statement of the American Diabetes Association

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Diabetes management in children extends from the home to other settings where children spend a significant portion of their waking hours. For young children (generally, aged <5 years) with diabetes, this includes childcare centers. Given their age and developmental stage, young children require a carefully thought-out, proactive diabetes care plan for the childcare setting, developed jointly by the health care provider and parents/guardians, and implemented by childcare staff. In the U.S., federal laws and some state laws protect the rights of children with diabetes in childcare and other settings to ensure they receive appropriate assistance with the diabetes management and care. This American Diabetes Association (ADA) Statement addresses the legal rights of children in the childcare setting, outlines the current best practices for diabetes care, and provides resources and responsibilities for parents/guardians, childcare providers, and health care providers. The ADA intends for these tools and information to support the health and well-being of young children with diabetes and offer helpful guidance to those caring for them.

Diabetes remains one of the most common chronic health conditions of childhood (1). The Centers for Disease Control and Prevention estimates that 283,000 youth aged <20 years are diagnosed with diabetes, the vast majority of whom (86%) have type 1 diabetes (2). The SEARCH for Diabetes in Youth (SEARCH) study, a population-based registry from several large diabetes centers in the U.S., has reported a rising prevalence of diabetes over the past two decades (3). The most recent published data, obtained in 2017, showed an estimated prevalence of type 1 diabetes of 2.15 per 1,000 youth in the population, a 45% relative increase in this condition since 2001 (4). For type 2 diabetes, SEARCH estimated a prevalence of 0.67 per 1,000 youth aged 10–19 years, representing a near doubling in the number of youth since 2001 (4).

Though type 2 diabetes is rarely seen in children aged <10 years, type 1 diabetes frequently develops in younger children, at a rate that appears to be increasing (5). Indeed, among children aged 5–9 years, SEARCH estimates indicate an overall 1.9% annual increase in the incidence of type 1 diabetes from 2002 to 2015, with higher rates observed for children identifying as Black (2.7% per year), Hispanic (4.0% per year), or Asian and Pacific Islander (4.4% per year) (5). Though the change in incidence has been less significant in children aged <5 years, type 1

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diabetes incidence is also increasing by close to 1% annually for this group (5). Therefore, this ADA Statement will primarily focus on type 1 diabetes, though these recommendations are relevant for children with other forms of diabetes requiring glucose monitoring and/or insulin therapy (6).

The primary objective of this ADA Statement is to explain the unique diabetes management needs of young children (aged ≤ 5 years) with type 1 diabetes. These recommendations are relevant for children with other forms of diabetes (e.g., neonatal diabetes) requiring glucose monitoring and/or insulin therapy. Our goal is to describe recommendations for diabetes management in the childcare setting, which includes day care, preschool, camp, and other community programs where young children are enrolled. This ADA Statement is meant to guide childcare providers in caring for young children with diabetes and is not intended to provide specific medical or legal advice. While ADA Statements contain evidence-based recommendations, all the information that pertains to young children is expert opinion only. For more detailed information on the medical management of diabetes in children, please refer to ADA's *Standards of Care in Diabetes—2023* (7).

UNIQUE FEATURES OF DIABETES IN THE YOUNG CHILD

Recent data from the National Center for Education Statistics estimates that nearly 59% of infants, toddlers, and preschool-age children are enrolled in at least one weekly nonparental care arrangement across nearly 200,000 childcare programs in the U.S. (8,9). At this age, children depend on adults for all aspects of their diabetes care. Parents have expressed apprehension with enrolling their children with diabetes in childcare programs due to the need for available and willing trained staff to assist with the delivery of insulin and management of daily diabetes care activities (10,11). Strong partnerships among the child's health care providers, parents/guardians, and childcare staff can help ensure that young children with diabetes are safe in the childcare environment. This collaboration is essential to achieve an effective transition in modern diabetes care management practices from home to the childcare setting.

Managing diabetes in young children in childcare programs requires specific attention to the child's developmental stage (12) (Table 1). Like all children, children with diabetes in this age-group will have different and ever-developing cognitive, physical, and communication skills, which must be considered in their diabetes care plan. Young children may have difficulty communicating their thoughts and feelings, have unpredictable physical activity, and may engage in behaviors around food that would lead them to be considered a "selective eater." In particular, young children may not be able to express classic symptoms of hypoglycemia to alert caregivers, and they may have fears around some diabetes care tasks.

Additionally, the child's dynamic growth and development can result in frequent modifications to the diabetes care plan, both in terms of insulin requirements and the child's degree of participation in their care. Young children may have a higher sensitivity to insulin compared with older children, which typically requires smaller and more precise dosing. The age at which children can perform self-care tasks is variable and depends on the individual child's capabilities. For example, once the child enters the prekindergarten years, they may begin to participate in their care by indicating food preferences, checking blood glucoses, choosing a finger-stick or injection site, and alerting a caregiver about continuous glucose monitor (CGM) alarms. With further cognitive and physical development, they may verbalize symptoms of hypo- or hyperglycemia. However, young children are never expected to self-manage diabetes with full independence. The parent/guardian or other caregiver, including a childcare worker, must perform diabetes care tasks such as blood glucose monitoring, dietary management including counting carbohydrates, and insulin administration (13) (Table 2).

Trained staff members in childcare setting should always be available for children with diabetes. Unless state law requires clinically licensed staff members (such as a nurse) to administer insulin or glucagon, these medications can be administered by non-clinically licensed childcare workers. Childcare centers need to provide appropriate training and engage willing and capable staff, which may be challenging if there are limited resources or high staff turnover.

Parents and health care providers play a pivotal role in supporting childcare workers by addressing any barriers or questions related to the child's individual diabetes management plan. In turn, childcare workers should understand how to best support families who experience socioeconomic or health inequities that may impact diabetes management. For example, the childcare provider may assist in the provision of supplies for instances of low blood glucose (e.g., snacks, juice) and may help connect families with appropriate social support agencies, including the Supplemental Nutrition Assistance Program (SNAP).

Key Points

- The safety, health, and well-being of the child in the transition from home to the childcare setting are achieved through effective collaboration among the diabetes health care provider, parents/guardians, and childcare staff.
- Adults provide virtually all diabetes care to young children given their developmental stage.
- As children grow older and become closer to school age, they may participate in some care tasks, but adult supervision will still be required.
- Trained staff in the childcare setting is essential. While families and health care providers can help address barriers to diabetes care and education in the childcare setting, childcare workers should be sensitive to the different needs and resources of the families they serve.

LEGAL PROTECTIONS FOR CHILDREN WITH DIABETES AND PROVIDER LEGAL RESPONSIBILITIES

Federal antidiscrimination laws, including the Americans with Disabilities Act (14) and Section 504 of the Rehabilitation Act of 1973 (15), prohibit discrimination on the basis of disability. The Individuals with Disabilities Education Act requires prekindergarten, elementary, and secondary programs to identify children with disabilities and to provide them with a free and appropriate education (16). There is strong federal law emphasis on preventing disability-based discrimination in the childcare setting. The U.S. Department of Justice, responsible for enforcing federal antidiscrimination laws, has stated, "No child with a disability should be unlawfully denied access to a childcare center on the basis of his or her

Table 1—Major developmental milestones and their effect on diabetes in children

Developmental stages (ages)	Normal developmental milestones	Type 1 diabetes management priorities	Family issues in type 1 diabetes management
Infancy (0–12 months)	Developing a trusting relationship or bond with primary caregiver(s)	<ul style="list-style-type: none"> Preventing and treating hypoglycemia and hyperglycemia Avoiding extreme fluctuations in blood glucose levels 	<ul style="list-style-type: none"> Coping with stress Sharing the burden of care to avoid parent burnout
Toddler (13–36 months)	Developing a sense of mastery and autonomy	<ul style="list-style-type: none"> Preventing and treating hypoglycemia and hyperglycemia Avoiding extreme fluctuations in blood glucose levels due to irregular food intake 	<ul style="list-style-type: none"> Establishing a schedule Managing the selective eater Limit setting and coping with toddler’s lack of cooperation with care plan Sharing the burden of care
Preschooler and early elementary school (3–7 years)	Developing initiative in activities and confidence in self	<ul style="list-style-type: none"> Preventing and treating hypoglycemia and hyperglycemia Coping with unpredictable appetite and activity Positively reinforcing cooperation with care plan Trusting other caregivers with diabetes management 	<ul style="list-style-type: none"> Reassuring the child that diabetes is no one’s fault Educating other caregivers about diabetes management

disability. Simply put, no parent should have to worry that his or her child will be discriminated against in this way. . . . [T]he Department [has a] continued commitment to ensuring that children with disabilities enjoy equal access to childcare services” (17).

The Americans with Disabilities Act prohibits discrimination against people with disabilities by places of public accommodation, including camps and childcare programs. This includes a home-based child-care setting if the program is open to the public, as well as private nonreligious childcare programs. Childcare programs operated by

religious organizations, such as a church, are not subject to the nondiscrimination obligations under federal law unless the program receives federal funds; however, many religious-operated centers have published anti-discrimination policies. In addition, if a childcare program takes place in a religious center, such as a church, but is not operated by that church, the Americans with Disabilities Act still applies.

Childcare providers with obligations under the Americans with Disabilities Act must make reasonable modifications to their policies and practices to enable a

child with a disability, such as diabetes, to fully participate in the program unless the modifications impose an “undue hardship” or cause a “fundamental alteration” to the nature of the program (14,15,18). Therefore, the childcare program must conduct an individual assessment to determine whether it can meet the child’s needs without imposing undue hardship or fundamentally altering the program. In most cases, assistance with daily diabetes management care in the childcare setting should not impose undue hardship on or fundamentally alter a

Table 2—Diabetes care tasks prescribed by DMMP to be provided by childcare staff

Task	Frequency	Equipment/supplies (provided by parent/guardian)
Blood glucose monitoring	Before food intake and physical activity and when low or high blood glucose is suspected	Blood glucose meter, lancet, lancing device, test strips, CGM*
Insulin administration	Before or after food intake and to treat high blood glucose	Insulin, delivery device (pump, pen, syringe)
Food intake scheduling and monitoring	Snacks and meals provided and/or monitored to ensure food consumption is in accordance with insulin dosing	Food, carbohydrate information
Hypoglycemia treatment	Awareness that unusual behaviors after physical activity or insulin administration may signify hypoglycemia	Quick-acting carbohydrate and glucagon, blood glucose monitoring supplies
Hyperglycemia treatment	Awareness that increased urination or drinking may signify hyperglycemia	Non-carbohydrate-containing liquid, insulin
Ketone monitoring	Check ketones if repeated blood glucose tests show elevation above target range or if the child is ill	Urine or blood ketone strips, ketone monitor; access to insulin and management plans as outlined in the DMMP

*This device may or may not be used by the child.

childcare program, particularly where the practices set forth herein are followed.

Section 504 prohibits discrimination based on disability by any entity receiving federal funds, which includes some religious organizations. Types of programs covered by Section 504 might include after-school childcare programs offered by a public school system and childcare programs run by universities. The obligations of a childcare program subject to Section 504 are very similar to those under the Americans with Disabilities Act, including a requirement to conduct an individualized assessment of a child's needs. Both the Americans with Disabilities Act and Section 504 require programs to provide disability-related accommodations if they are necessary and reasonable. Many of the needed accommodations can be provided by the childcare program staff without significant costs. Such accommodations often include having a trained nonclinical employee who can perform blood glucose checks, monitor glucose levels if the child uses a CGM, administer insulin and glucagon, recognize and promptly treat hypo- and hyperglycemia, and make sure the child consumes needed carbohydrates, consistent with the guidance of the child's health care provider and parent/guardian.

The Department of Justice has initiated and resolved several complaints against privately operated childcare, camp, and recreational programs that fail to enroll and assist children with diabetes management needs. These complaints generally focus on legal requirements under the American Disabilities Act, based on findings that 1) a privately operated childcare program is a place of public accommodation within the meaning of Title III of the American Disabilities Act, and 2) children with diabetes should have an equal opportunity to participate in such programs. Equal opportunity includes provision of reasonable accommodations with respect to assistance with daily diabetes management consistent with the child's individual needs.

In addition to federal protections, many states have laws that impact the provision of diabetes care in the childcare and other community settings. Even though federal laws provide protection for children with disabilities, such as diabetes, state laws, regulations, or policies and guidelines often determine whether nonclinical staff in the childcare setting can administer medication,

including insulin and glucagon, to a child with diabetes. Some states have specific childcare licensing rules that place requirements on childcare programs to provide care to children with chronic illness, specify how staff must be trained, or specify whether and how medication may be administered to children. Some states' laws may require the child's medical provider to give consent to use a trained nonclinical individual; however, this is not common practice. It is important to note that childcare centers often do not have licensed health care providers; in this respect, they differ from schools, which usually have nurses. No matter what the state laws say, however, they do not eliminate a childcare program's obligations under federal antidiscrimination law, including to reasonably accommodate children with diabetes.

Children with diabetes in childcare programs still face discrimination despite the protections and requirements of federal and state laws. For example, some childcare programs refuse to enroll a child with diabetes, and some programs expel a newly diagnosed child from the program. Indeed, in a recent study of parents of young children with type 1 diabetes, 15% endorsed that their child was turned down or asked to leave daycare because of the diagnosis and 13% endorsed having to remove their child from daycare due to challenges with diabetes management (19). Some centers will enroll a child only if the parent/guardian agrees to come to the center to provide diabetes management assistance. Some programs have "no injection" or "no medication" policies that do not consider the individual child's needs. These blanket policies jeopardize the health and safety of the child and are generally unlawful (20,21).

For more information and resources to help with diabetes management in the childcare setting or if a child is experiencing discrimination in the childcare setting, call 1-800-DIABETES (342-2382), e-mail askada@diabetes.org, or go to www.diabetes.org/childcare.

Key Points

- Federal and some states' laws provide protections for children with diabetes in the childcare and other community settings.

- Despite federal and state laws, children in childcare programs still face discrimination, jeopardizing their health and safety or making it difficult for them to enroll or remain in childcare.
- The U.S. Department of Justice has found that childcare programs are subject to the American Disabilities Act. It has made clear that children with diabetes should have equal opportunity to participate in childcare programs, with reasonable accommodations that include assistance with daily diabetes management.
- Blanket bans of children with diabetes from a childcare program are generally unlawful, although specific state laws and regulations may affect how children with diabetes can receive diabetes management assistance in the childcare setting.
- It is essential for childcare providers to work with the health care provider and parent/guardian of a child with diabetes to identify a plan to meet the child's diabetes management needs safely and appropriately.

DIABETES CARE

The findings of Diabetes Control and Complications Trial (DCCT) showed that poor blood glucose control is the single most important risk factor for predicting micro- and macrovascular complications (22–24). Although the DCCT did not include young children (the lower age limit at enrollment was 13 years), the general message—optimize blood glucose control while avoiding hypoglycemia—has been clinically applied to young children (13). Furthermore, longitudinal studies have affirmed an impact of diabetes, and particularly uncontrolled diabetes, on the developing brain of children, reinforcing the importance of aiming for blood glucose levels as close to normal as possible and avoiding hypo- and hyperglycemia (25,26). The most recent guidance from the ADA recommends targeting a hemoglobin A_{1c} of <7% for most children, though a higher target of 7.5% may be appropriate for very young children (13,22). For children using CGM, another important metric is "time in range," defined as the proportion of time that blood glucose levels are between 70 and 180 mg/dL, with the goal being 60–70% or higher depending on the hemoglobin A_{1c} target (22,27).

At a minimum, to facilitate safe diabetes care in all childcare programs, some childcare staff must have a basic understanding of diabetes; be able to check blood glucose levels and recognize and respond to CGM alarms and data; administer insulin and glucagon; be able to prevent, recognize, and treat hypoglycemia and hyperglycemia; be able to handle diabetes emergencies; and know who to contact for help (28,29).

Nutrition and Physical Activities

As is the case for all children, it is recommended that children with diabetes follow a healthy and well-balanced diet (13). As parents/guardians remain primarily responsible for determining and providing appropriate food choices for children, they should educate the staff on general nutrition information, including carbohydrate content of the food. If a childcare program provides the meals and snacks, the parent/guardian and the childcare worker should coordinate to select food choices, set portion sizes, and establish meal and snack times. The childcare program should try to ensure that the child eats the appropriate amount of food that is being covered by insulin in accordance with the child's individualized Diabetes Medical Management Plan (DMMP), a written care plan developed by the child's diabetes health care provider prescribing needed diabetes care in the childcare setting. See the section on DMMP below for further details.

Often, children of this age-group can be selective eaters. Having a consistent mealtime or snack time routine can help with this. For children who regularly attend childcare programs for longer durations or where meals or snacks and physical activity are part of the daily schedule, sufficient staff should receive comprehensive training in diabetes management (that includes relevant dietary management). At least one trained staff member should be available at all times to help with food decisions, blood glucose monitoring, and insulin administration.

Childcare workers need to be sensitive to special occasions, such as parties or celebrations, where there may be food treats or a change in routine. The child should be allowed to participate in celebrations. Effective communication between the childcare staff and the parent/guardian can establish a plan to adjust the diabetes management in advance

(e.g., administering additional insulin to account for the birthday cake) so that the young child can feel included. Resources are available to parents/guardians, childcare providers, and health care providers to assist with this education and training (28,30).

Just as allowances must be made for variations in dietary intake, attention should be given to the activity level of the child with diabetes, which will likely affect their blood glucose levels (13). This can be challenging, as physical activity in young children is often unpredictable related to their play activities. Appropriate accommodations may include additional blood glucose monitoring, the provision of an additional snack, or an adjustment in insulin dosing, consistent with the health care provider's DMMP (discussed below).

Glucose Monitoring

Blood glucose monitoring is a core component of diabetes management and will enable the childcare workers to assess for hypo- or hyperglycemia and intervene (13). Blood glucose levels need to be checked before meals/snacks, before physical activity, and when the child exhibits symptoms of hypo- or hyperglycemia. These symptoms may be subtle, especially in young children. For this reason, younger children typically need more frequent blood glucose checks. Glucose monitoring may be completed with a traditional glucometer or a CGM. Many young children are unaware of their symptoms of hypo- or hyperglycemia, or they are not able to communicate their symptoms to adults. Therefore, it is developmentally inappropriate to expect young children to be able to monitor their own glucose levels.

Blood Glucose Meter (Glucometer)

Childcare employees may be asked to check blood glucoses using a blood glucose meter. Safe monitoring includes avoiding community exposure to sharps and other medical waste and minimizing trauma to the finger or relevant lancing site. Blood lancing devices must not be reused, point-of-care devices should only be used for the designated child, childcare providers should use gloves when testing, and all sharps should be properly disposed of in a sharps container provided by the parent. The ADA's Safe at School program is a helpful resource to assist childcare centers: diabetes.org/safeatschool.

CGMs

CGMs are increasingly used by children with diabetes, with the fastest rate of adoption seen in children aged <6 years (31). Use of CGM in young children has been shown to reduce hypoglycemia and hyperglycemia (32–34) and help to reduce parent/guardian anxiety about low blood sugar (35,36).

A CGM consists of a thin wire, or sensor, which sits under the skin; a transmitter, that works with a sensor; and a receiving device. Receiving devices will differ depending on the system and may include a proprietary receiver, smart device (e.g., smartphone or tablet), or insulin pump. The CGM will provide a glucose reading in real time and a trend arrow to let the observer know how quickly the blood glucose is changing and in which direction. Additionally, most CGMs feature programmable alerts to help identify glucose levels outside of the target range. For example, CGMs may identify impending hypoglycemia, allowing treatment prior to the development of symptomatic or severe hypoglycemia. These alerts may be customized to each child, though at a minimum should include a low blood glucose alert. Which alerts are used and what actions must be taken in response should be discussed with the parent/guardian and guided by the child's DMMP.

Today's CGMs have a high degree of accuracy (37,38), and most CGMs do not require confirmatory meter glucose tests for insulin dosing. Whether and when to perform a confirmatory meter glucose check should be included in the child's DMMP. Childcare providers may be asked to confirm a CGM blood glucose reading with a glucose meter (glucometer) in the case of glucose extremes (hypo- or hyperglycemia) or if the child is exhibiting concerning symptoms that do not match the CGM reading.

Many CGMs offer remote monitoring of glucose readings using a smart device app. Frequently parents/guardians or other caregivers will enable this feature to follow their child's glucose reading and receive programmed alerts. In some cases, childcare workers may be asked to monitor as well. Childcare employees should not be expected to use a personal device to monitor a child's CGM and cannot be expected to watch the CGM tracing at all times. Parents/guardians and childcare workers are encouraged to discuss in advance a plan for monitoring and responding to CGM

alerts, including what management is indicated at what times. For more information about CGM management, visit diabetes.org/sascgm.

Childcare providers should not require use of a particular blood glucose monitoring method (i.e., glucometer vs. CGM) for a child with diabetes as a condition of enrollment but, rather, should follow the guidance of the child's DMMP (discussed below) that is developed by the child's health care provider.

Insulin Administration

Children with diabetes who attend childcare programs require assistance with the administration of insulin and/or other medications. Insulin doses are tailored to the individual child's needs and are given at regular times throughout the day (typically in relation to meals and snacks) and to treat hyperglycemia in accordance with the child's DMMP. Training childcare staff on insulin administration using the child's prescribed device is a critical component of diabetes management, especially for those caring for children who participate in daylong (4–8 h) programs and who will likely need insulin administered during the programs. (See *RESOURCES* for the ADA's Safe at School program.)

Insulin can be administered in different ways, including using a vial/syringe, insulin pen, or an insulin pump/automated insulin delivery (AID) system. The parent/guardian and medical team decide what method of insulin delivery is best for a particular child. Similar to the increase in CGM use, young children are increasingly using insulin pumps for diabetes management (31). Insulin pumps allow for more precise insulin doses than can be achieved with a syringe or pen and offer additional features or functions. Some of the newest insulin pumps pair with select CGMs in AID systems with the goal of preventing hypoglycemia, treating hyperglycemia, and increasing the percentage of time children have blood glucose levels in the target range. For children using an insulin pump of any kind, a backup system for administration of insulin, either by syringe or pen, should whenever possible be available if a problem with the insulin pump arises. As with glucometer supplies, all sharps should be disposed of in a sharps container.

Hyperglycemia

Chronic hyperglycemia can have both short- and long-term consequences for the young child with diabetes, and therefore it is important to recognize and treat in accordance with the child's DMMP. Hyperglycemia may cause frequent urination (polyuria), resulting in "heavy diapers" or "wetting accidents" that commonly occur in this age-group irrespective of diabetes. A childcare provider unfamiliar with diabetes and polyuria may not realize that the child is hyperglycemic, requiring insulin, and instead may feed the child or give them juice, inadvertently aggravating hyperglycemia. Reviewing the blood glucose level, either by glucometer or CGM, is important whenever these symptoms are noticed.

Untreated hyperglycemia due to relative insulin deficiency may lead to ketone production, which can lead to diabetic ketoacidosis, a life-threatening condition. Ketones can be detected through two mechanisms, blood or urine tests, which assess different types of ketone bodies. Urine tests measure acetoacetate using a urine dipstick, which is the primary method used for most older children and adults with type 1 diabetes. However, many young children will have difficulty urinating on demand, and blood ketone measurement may be more appropriate. This method measures β -hydroxybutyrate, a precursor to the urinary measure, which will allow for earlier detection and response to ketones. Hyperglycemia and ketones can sometimes be a sign that an insulin pump is not infusing insulin properly; therefore, insulin administration to any child with hyperglycemia and ketones should be given by a subcutaneous injection.

Hypoglycemia

For the very young child, the most important diabetes management priorities are the prevention, management, and prompt recognition and treatment of hypoglycemia and the avoidance of wide fluctuations in blood glucose levels. Parents/guardians face the challenge of balancing the risk of long-term complications from hyperglycemia with the fear of acute hypoglycemia. Most notably, parents worry about the possibility of cognitive deficits and/or death if a severe hypoglycemic event is undetected and untreated. Hypoglycemia prevention and timely intervention are critical. While CGM and AID

systems have generally been found to increase time in range and decrease hypoglycemia, as documented in older children and adults, one must be prepared to treat hypoglycemia in anyone receiving insulin. Therefore, childcare staff must be educated on how to prevent and recognize hypoglycemia by monitoring the child's food consumption, activity, and behavior and confirming a suspected low with blood glucose monitoring (13,39,40). Parents/guardians should provide specific strategies, if needed, to help the childcare staff address the individual child's specific needs. Routine blood glucose monitoring at prespecified times may help with detection of hypoglycemia before it manifests with acute symptoms in the child. As noted above, CGMs may also identify impending hypoglycemia, allowing for earlier treatment.

Glucagon

Glucagon is a lifesaving medication to treat hypoglycemia. Its use is indicated if a child has severe hypoglycemia and is unable to eat or drink glucose, if a child is having a hypoglycemic seizure, or in the case of loss of consciousness. Any trained individual may administer glucagon. Glucagon can be given by injection or intranasal route, depending on the form prescribed by the child's health care provider. Childcare staff should be trained in the administration of all forms of glucagon. It is also important to ensure that the child's glucagon is readily accessible to staff and that the glucagon is not expired (22).

Psychosocial Considerations

Children with diabetes are children first and foremost. Therefore, while it is important for childcare staff to learn about diabetes management, it is equally important that staff treat the child with diabetes like all of the other children in their care. When a child with diabetes is having a difficult time, is being stubborn, or is being fussy, it is not always possible to tell if this is due to an out-of-range blood glucose or for another reason. The answer is frequently either in the CGM data, or at the "tips of their fingers" after a check of their blood glucose. In this way, childcare staff can know right away if the behavior is related to blood glucose levels or something else. This is especially important

because young children do not yet always have the language they need to effectively communicate or know when their glucose levels are out of range. Separation anxiety is sometimes heightened for children with diabetes because they trust and are accustomed to their parents providing their diabetes care.

Young children do well when they have a set of clear, concrete choices. This gives them a sense of independence and a sense of control within safe parameters. For children using diabetes devices (CGMs, insulin pumps), they may not experience any anticipatory anxiety around diabetes tasks. However, for those who check blood glucose levels with a meter, or take insulin with a syringe or pen, the anticipation may be worse than the actual poke itself. It is often very helpful to get diabetes tasks done as quickly and calmly as possible to reduce the time leading up to the injection and to help a child get back to the things they would rather be doing. It can also be helpful to reduce a child's anxiety by preparing the insulin and glucometer in another room before administering it to the child. Do not admonish a child if they are struggling with daily diabetes tasks; instead, work with them to come up with a solution that allows them to have their feelings and also complete the necessary tasks. It is important not to single out a child with diabetes but, rather, to treat the child like other children.

Key Points

- Improved glycemic control decreases long-term diabetes complications in adolescents and adults. Consistent, individualized insulin therapy is the standard of care for children with insulin-dependent diabetes.
- The key diabetes management priority for younger children is the prevention, recognition, and treatment of hypo- and hyperglycemia to keep the child safe and healthy. The childcare program is responsible for making sure staff are available to meet the child's diabetes needs, including the recognition and treatment of hypo- and hyperglycemia, blood glucose monitoring, and insulin and glucagon administration.
- Diabetes management requirements may vary depending on the length,

frequency, and activities of the childcare program.

- Regardless of the amount of time the child spends in the childcare setting, staff should understand the role of nutrition and physical activity in diabetes management and their impact on blood sugar.
- Childcare staff, working with parents/guardians and health care providers, should work to help children with diabetes manage both the practical daily diabetes care activities and the psychosocial challenges of having a chronic condition that requires ongoing attention and management.

DMMP

The child's DMMP or other written care plan prescribes and facilitates appropriate diabetes management and is essential to achieving glycemic control. The DMMP contains the medical orders that are the basis for the individualized care plan in the childcare setting. It is developed by the child's diabetes health care provider with input from the parent/guardian. A sample DMMP for the childcare setting is available from www.diabetes.org/childcare. The DMMP should address the specific diabetes care needs of the child and provide instructions for each of the following:

1. Glucose monitoring, including the frequency and circumstances requiring blood glucose checks and the use of CGM.
2. Insulin administration, including doses prescribed for specific blood glucose levels and carbohydrate intake, timing of administration, the storage of insulin, and the use of the prescribed insulin delivery device (e.g., syringe, pen, pump).
3. Symptoms and treatment of hypoglycemia, including indications for glucagon.
4. Symptoms and treatment of hyperglycemia, including monitoring for ketones and insulin administration.
5. Actions to be taken based on a child's ketone level.
6. How to prepare for field trips, disasters, or other scenarios.

The childcare program needs to coordinate and arrange diabetes management training for appropriate staff. This training may be provided by a diabetes

health care professional, a health care professional with sufficient knowledge of modern diabetes management procedures, and/or the parent/guardian. The training should be provided at an appropriate level of complexity and with the objective to empower childcare staff to provide necessary assistance to the child. All staff members responsible for the child should have a basic knowledge of the child's diabetes, understand basic diabetes management, and know who to contact for help. Designated staff members who will be performing diabetes care tasks need adequate training on those tasks, including blood glucose monitoring, insulin and glucagon administration, monitoring of carbohydrate intake and physical activity, and recognizing and treating hyperglycemia (monitoring for excessive urination or thirst, allowing bathroom privileges, and administering insulin) and hypoglycemia (monitoring for sleepiness, lethargy, shakiness, or other symptoms and providing appropriate carbohydrate sources when needed). There should consistently be at least one staff member available who has been trained on emergency treatment, including glucagon administration. The ADA provides a wide variety of training resources on these processes, available from diabetes.org/sastraining.

RESPONSIBILITIES OF FAMILIES, CHILDCARE PROGRAM, AND HEALTH CARE TEAM

1. The parent/guardian should provide the childcare program with the following:
 - A completed DMMP or other written care plan, signed by a child's diabetes health care provider.
 - Information about diabetes management and training resources, as needed.
 - Current and accurate emergency contact information including phone numbers for the parent/guardian and the child's diabetes health care provider.
 - Materials, equipment, supplies, insulin/medication, and food needed for diabetes management and ongoing monitoring of supplies for replenishment or replacement if expired.
 - An appropriate container for the disposal of sharps.
 - A method of communication between the parent/guardian and the childcare program, such as a logbook

or electronic diabetes management application.

- Basic diabetes training (as needed) for all childcare staff members who have responsibility for the child and more advanced child-specific training for the designated childcare staff member(s) responsible for assisting with diabetes management tasks.
 - Information about factors that may impact blood glucose levels, such as the child's daily activity level, food intake prior to arrival at the center, and whether the child is experiencing an illness.
 - Consent to release confidential health information so that the childcare program can communicate directly with the child's diabetes health care provider, with direction on when such communication is appropriate.
2. The childcare program should:
 - Understand federal and state laws and regulations as they apply to children with diabetes.
 - Allow enrollment of children living with diabetes as required by law.
 - Provide support to all families of children in its care, including those with limited access to resources or those with language barriers, and share community resources for families of children with diabetes, including resources for food and other supportive services.
 - Assess how the childcare program will provide routine and emergency care after consulting with parent/guardian and reviewing the DMMP.
 - Recruit, designate, and train staff who will be responsible for the provision of diabetes care to the child.
 - Work with parents/guardians to arrange for training of all staff members who have responsibility for the child and more advanced child-specific training for designated childcare staff member(s) responsible for assisting with diabetes management tasks.
 - Provide secure and prompt access to diabetes materials, equipment, supplies, insulin/medication, and food to trained staff members, regularly check supplies and medication, and inform parents/guardians of missing or expired items.
 - Be mindful of the child's dietary needs. Provide meal and snacks as per the child's dietary plan.
 - Maintain accurate documentation of all diabetes care provided to a child in its care.
 - Collaborate with parents/guardians and/or the child's health care providers to obtain current information about diabetes management and the child's current needs.
 - Regularly communicate with the parent/guardian about blood glucose results, insulin administration, treatment of hypo- and hyperglycemia, food intake, and physical activity using a logbook, electronic application, or other agreed-upon method.
 - Monitor glucose and ketone levels as described in DMMP or when there are symptoms of hypo- or hyperglycemia. Communicate with families and health care providers as needed.
 - Keep sharps container in secure location, ensure staff is trained in proper handling and disposing of sharps.
 - Ensure that children with diabetes have equal opportunity and participation in program activities, except as necessary to meet their diabetes management needs.
 - Respect the child's and family's confidentiality and right to privacy.
 3. The child's diabetes health care team should:
 - Provide a completed and signed DMMP or other written care plan containing medical orders with updates as needed.
 - In conjunction with the parent/guardian, provide basic and comprehensive training to childcare staff.
 - Provide guidance for frequency of glucose and ketone monitoring, normal ranges, and treatment for high and low readings.
 - Describe dosing for meals and snacks. Describe amount of carbohydrates to use to treat hypoglycemia and frequency of treatment.
 - Be available to respond to questions about the child's diabetes management needs in the childcare setting, with parental consent.
 - Provide ongoing diabetes expertise and guidance as needed.
 - Advocate, as needed, to ensure a child's needs are met while in the childcare setting.

KEY PRINCIPLES FOR THE PROVISION OF DIABETES CARE IN THE CHILDCARE SETTING

Here, we reiterate the discussed concepts. The section includes the legal principles and the roles and responsibilities of the individuals involved.

1. **Acceptance for enrollment.** Childcare programs should not deny admission to a child based on their diabetes or the need for diabetes care. If a childcare program has concerns about its ability to successfully support the child, there should be an interactive process involving the childcare program, the parent/guardian, and the child's health care team on how such concerns can be addressed, including through education and training.
2. **Written care plans.** An individualized DMMP or other written care plan should be developed by the child's diabetes health care team in collaboration with the parent/guardian, to be provided to the childcare program's staff.
3. **Provision of diabetes management assistance by childcare staff.** After consulting with the parent/guardian and reviewing the child's DMMP, the childcare program should perform an assessment of the child's needs and determine how it will provide daily diabetes management tasks.
4. **Basic diabetes training for staff in a childcare setting.** The childcare provider should work with the parents/guardians to arrange for training by a health care professional with sufficient knowledge of modern diabetes management procedures and/or by the parent/guardian, including child-specific training. All childcare staff members who are responsible for the child with diabetes should receive basic training that provides:
 - a. **An overview of diabetes that includes information on how to recognize and respond to hypo- and hyperglycemia.**
 - b. **Training on identifying medical emergencies and contacting the right personnel with questions or in case of an emergency.**

5. **More detailed diabetes training for childcare staff who will be responsible for assisting the child with daily diabetes management tasks.** This training should include:
 - a. **All components of basic diabetes training as listed above.**
 - b. **Instruction on when and how to perform blood glucose monitoring, insulin and glucagon administration [including through the administration method(s) prescribed by the treatment team and used for the child], and urine and/or blood ketone checks.**
 - c. **Training on the recognition and treatment of hypoglycemia and hyperglycemia.**
 - d. **Basic carbohydrate counting/monitoring of carbohydrates.**
 - e. **Child-specific training to implement the child's individualized DMMP or other written care plan.**
6. **Adequate coverage of trained staff.** The number of staff members trained should be sufficient to ensure that at least one staff member who can provide routine and emergency diabetes care, such as insulin and glucagon administration, will be available to assist the child at all times.
7. **Participation in diabetes care should be allowed for capable children.** Child-care programs should support the child in his or her development by allowing and encouraging participation in diabetes tasks in accordance with the child's competencies, as outlined in the DMMP. A preschooler may be able to participate in his or her diabetes care by checking blood glucose, choosing a finger-prick or injection site, or alerting staff to CGM alarms, with supervision and support of adults with appropriate training.

CONCLUSIONS

The needs of young children with diabetes can be successfully met in the childcare setting. Young children require a carefully thought-out, proactive diabetes management plan that is developed with the health care provider, parents/guardians, and childcare staff. Unfortunately, despite the best efforts of the parents/guardians and diabetes care providers, there remain challenges to ensuring that children with diabetes have the opportunity to participate and thrive in the

childcare setting. This need not be the case. Modern diabetes management tools can allow parents/guardians and childcare workers to overcome challenges and ensure the health and well-being of children with diabetes. The rights of the young child with diabetes are protected by federal and state antidiscrimination laws. Those who act in violation of these rights may be subject to legal action. Recommended resources for parents are listed below. Parents/guardians of young children with diabetes are encouraged to share this ADA Statement with their child's health care team and childcare provider. Ensuring the long-term health of and providing effective support of young children with diabetes is of paramount importance.

ADA RESOURCES

- Childcare setting tools (including childcare DMMP), www.diabetes.org/childcare
- Safe at School resources and information, www.diabetes.org/safeatschool
- Diabetes Care Tasks at School: What Key Personnel Need to Know, www.diabetes.org/schooltraining
- Helping the Student With Diabetes Succeed: A Guide for School Personnel, www.diabetes.org/sasguide
- Safe at School guidelines for CGM, www.diabetes.org/sascgm

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