Waterloo Region District School Board

Administrative Procedure 1530

DIABETES MANAGEMENT

Responsibility:	*Executive Superintendent Human Resources and Organizational Development*
Legal References:	*Nil*
Related References:	*AP1460 Administration of Medication* *IS-98-00 Administration of Medication in WRDSB and WCDSB* *Appendix A – Hypoglycemia Emergency Action Flowchart* *Appendix B – Diabetic Management for Independence* *Appendix C – School Health Support Services – Diabetic Nursing Program* *Appendix D – Diabetic Resource List* *Appendix E – Diabetes Emergency Treatment Protocol Registration*

1. Preamble

1.1 The procedures that follow provide guidelines and expectations for responding to children with diabetes. It outlines the nature of diabetes, its various types and related issues of concern.

1.2 The Diabetes Management: A Protocol for Schools is a guideline to be used by school and community personnel to support and ensure the safety of children with diabetes in our schools. The development of this document was a collaborative project involving representatives from the Halton/Peel/Thames Valley District School Boards, Community Care Access Centre of Waterloo, the Canadian Diabetes Association and WRDSB internal and external stakeholders including families.

1.3 The Waterloo Region District School Board has adopted these guidelines for use in our schools. Board staff and the local chapter of the Canadian Diabetes Association have reviewed this procedure.

2. Purpose

2.1 To provide school personnel in the Waterloo Region District School Board with information and guidelines regarding the requirements of care for students with diabetes.

2.2 To provide information about the management of risks associated with diabetes for all involved parties.

2.3 To develop information and resources for school personnel about the management of diabetes in school children including the importance of a communication and safety plan.

3. Introduction

Diabetes mellitus is a disease resulting from a lack of insulin action. Insulin is a hormone produced by the pancreas. Without insulin, carbohydrates (starch and sugars) in the food we eat cannot be converted into the energy (called blood glucose or “blood sugar” [note: terms ‘blood glucose’ and ‘blood sugar’ are interchangeable]) required to sustain life. Instead, unused glucose accumulates in the blood and spills out into the urine.

The majority of people with diabetes develop the problem in adulthood. They can still produce some insulin and may be able to control their diabetes by diet alone or with oral medication.

Children and adolescents with diabetes are different; they are unable to make any insulin and must take insulin injections each day.

At this time, no one knows why children and adolescents develop diabetes. It is known, however, that this disease is not the result of poor eating habits nor is it infectious.

4. Philosophy of Diabetes Management

The ultimate goal of diabetes management within the school setting is to have the child be independent with their care. This independence includes the specific management of diet, activity, medication (insulin) and blood sugar testing, as required. Independence of care also includes the development of self-advocacy skills and a circle of support among persons who understand the disease and can provide assistance as needed.

Children are diagnosed with diabetes at various stages of their lives. Some will be very young, and others older and more mature, some will have special needs. The goal for all children is to become as independent as possible, as soon as possible, in managing their diabetes. The role of the school is to provide **support** as the child moves from dependence to independence and to create a supportive environment in which this transition can occur. Nevertheless, the ultimate responsibility for diabetes management rests with the family and the child.

It is important that the school develop awareness for all staff, that each student has a safety plan and that there are clear emergency procedures for all teachers who have a child with diabetes. Sample forms are contained in the appendix of this document.

5. General Information

"Managing diabetes is a full time job for the family and student with diabetes. Teachers and school personnel are in a very special position, and their understanding of the unique needs of the student with diabetes is important."- Jim Whitson, Chair – Ontario Division, Education Task Force, Canadian Diabetes Association.

School-aged children with Type 1 diabetes spend 30 to 35 hours a week in the school setting. This represents more than half of their waking weekday hours. School personnel can support a student with diabetes by learning about the disease and by having frequent, open communication with parents and the child. This will help to reduce apprehension and anxiety in the child and parent, provide a positive attitude toward the child's participation in school activities and contribute to the student's well-being.

When the blood glucose is in proper balance, the child or adolescent will behave and achieve as others. In terms of academic performance, physical activity, behaviour and attendance at school, the teacher's expectations of the student should be the same as for a child who does not have diabetes.

6. Emergency Versus Non-Emergency

It is important to distinguish between non-emergency and emergency situations.

6.1 Non-Emergency Situations

In non-emergency situations, including routine care, students with diabetes or their parents will administer the insulin injections.

6.2 Emergency Situations (Life Threatening)

In emergency, life-threatening situations, where a student suffering from low blood sugar is unable to self-administer the appropriate treatment because they are unresponsive or unconscious, the response of school staff shall be a 911 call for Emergency Medical Services.

Glycogen injections (Glucagon) in these situations will not be administered by school staff.

6.2.1 Emergency Medical Services personnel require the following, if available:

- Student's name;
- Date of birth;
- OHIP number;
- Emergency contact information;

- Medical history – available on the OSR card and the Emergency Treatment Form;
- Observations about what the student was doing prior to the event;
- Medications and any treatment prior to EMS arrival.

7. Definitions: Three Main Types of Diabetes

7.1 Type 1 Diabetes

Type 1 Diabetes usually affects children and adolescents and is the focus of this document. In Type 1 Diabetes, the pancreas is unable to produce insulin and injections of insulin are essential.

7.1.1 Overview

The treatment of diabetes is a balancing act. Food on the one side increases the amount of glucose in the blood. Exercise and insulin on the other side lower the blood glucose level by allowing the glucose to be used for energy.

The goal of the balancing act is to keep the blood glucose levels in a healthy range.

The student's doctor determines the target range for each individual child. The parents should inform the school staff of the child's optimal levels if the child is not independent with diabetes management. Most students will be aware of their blood sugar targets.

7.1.2 Why is it so important to achieve optimal blood sugar control?

Recent research (Diabetes Control and Complications Trial (DCCT) – 1993 and the United Kingdom Prospective Diabetes Study (UKPDS) – 1995) has provided evidence that good blood sugar control can reduce the risk of complications.

Such complications – kidney disease, blindness, limb amputation and sexual dysfunction not only take their toll in human suffering but cost Canada's health care system over $9 billion annually for direct and indirect health care services.

7.2 Type 2 Diabetes

Type 2 Diabetes comprises 90% of diabetes in Canada. It usually develops in adulthood, although recently increasing numbers of children in high-risk populations are being diagnosed. In Type 2 Diabetes, the pancreas may produce some insulin, but the body is unable to use the insulin that is produced effectively. Type 2 Diabetes may be controlled with diet and exercise or with oral medication. Eventually, people with Type 2 Diabetes may need insulin.

7.3 Gestational Diabetes

Gestational Diabetes affects 4% of pregnant women and usually goes away after the baby is born.

8. Issues of Concern

8.1 Adjustment Period After Diagnosis

When a child has recently been diagnosed with diabetes, the parents usually feel a feel a variety of emotions. The fact that diabetes is a serious disease with significant complications and that their child will have to live with the complexities of its management for the rest of their lives, or until a cure is found, is quite overwhelming. The first year after diagnosis may be difficult while the family and student work with the Diabetes Health Care Team to adjust to all they have to learn and do to cope with life with diabetes.

8.1.1 School personnel can help by:

- Learning as much as possible about diabetes at www.diabetes.ca
- Communicating openly and regularly with families, ensuring staff and family have a plan in place to best support the student;

- Providing special considerations as suggested in the Canadian Diabetes Association publications, “Kids with Diabetes in School” and “Kids with Diabetes in Your Care”;
- Helping other students in the class understand diabetes. This might be done by the parent, CCAC the Canadian Diabetes Association, or the student himself or herself.

8.2 Move Towards Independence

Parents and school personnel need to support the child while encouraging him or her to develop independent diabetes management skills. Children must learn to manage their own diabetes. They can do it. Even very young children can share the work of managing diabetes. How much a student can do depends on his or her age, how long he or she has had diabetes and any disabilities or special needs. (Refer to Appendix B – Diabetic Checklist for Independence)

8.3 Hypoglycemia (Low Blood Glucose) – An Emergency

Hypoglycemia is an emergency situation caused by LOW blood sugar. The situation can develop within minutes of the child appearing healthy and normal.

8.3.1 Mild to Moderate hypoglycemia

Common in the school setting. School personnel need to know the causes, symptoms and treatment of hypoglycemia. School personnel can misinterpret symptoms of mild to moderate hypoglycemia. The nature of the emergency is often misunderstood, placing a student at serious risk. The Signs and Symptoms of Hypoglycemia chart in the appendix is a guide to be consulted.

8.3.2 Severe Hypoglycemia

Occurs in 3-8/100 students with diabetes per year and occurs most commonly at night. Severe hypoglycemia is rare in the school setting. In severe hypoglycemia, the student may be unconscious or conscious. There may be seizures. If the student is unconscious, having a seizure or unable to swallow, **do not** give food or drink. Roll the child on his/her side and seek medical assistance immediately.

Causes	**Symptoms**	**Treatment**
Low blood glucose usually develops as a result of one or more of the following: · insufficient food due to delayed or missed meal; · more exercise or activity than usual without a corresponding increase in food and/or; · too much insulin. Low blood sugar is below 4 mmol/l on a blood glucose meter. Symptoms may not always be present.	A person who is experiencing hypoglycemia will exhibit some of the following signs: · cold, clammy or sweaty skin; · pallor; · shakiness, lack of coordination (i.e., deterioration in writing or printing skills); · irritability, hostility, and poor behaviour; · a staggering gait; · eventually fainting and unconsciousness. In addition the child may complain of: · nervousness; · excessive hunger; · headache; · blurred vision and dizziness; · abdominal pain and nausea.	It is imperative at the first sign of hypoglycemia you **give sugar immediately.** If the parents have not provided you with more specific instructions which can be readily complied with, give: · 4 oz./125 ml of regular pop (not diet pop); · 4 oz./125 ml of fruit juice; · 2 teaspoons/10 ml or 2 packets of sugar; · 2 glucose tablets; · 2 teaspoons/10 ml honey. After treating with sugar, wait 15 minutes, retest blood glucose. If meal or snack is longer than 1 hour away, add small snack (10-15g of starch with protein i.e., granola bar, cheese/crackers).

If there are any symptoms apparent, sugar should be given immediately.

In terms of academic performance, physical activity and attendance at school, the teacher's expectations of students should be the same as if he or she did not have diabetes, unless otherwise directed.

8.3.3 Notes

- It may take some coaxing to get the child to eat or drink but you must insist.
- If there is no noticeable improvement in about 10 to 15 minutes, repeat the treatment. When the child's condition improves, he or she should be given solid food. This will usually be in the form of the child's next regular meal or snack.
- Until the child is fully recovered, he or she should not be left unsupervised. Once the recovery is complete, the child can resume regular class work. If, however, it is decided that the child should be sent home, it is imperative that a responsible person accompany him or her.
- Parents should be notified of all incidents of hypoglycemia. Repeated low blood glucose levels are undesirable and unnecessary and should be drawn to the parent's attention so that they can discuss the problem with their doctor.
- **Do not give food or drink if the child is unconscious. Roll the child on his/her side and seek medical assistance immediately.**

8.4 Glycogen (Glucagon)

Glycogen is an emergency drug that is used to treat hypoglycemia. It should only be used under the direction of a physician. Glycogen is a naturally occurring substance produced by the pancreas and it enables a person to produce his or her own blood glucose to correct a hypoglycemic state.

School staff should be educated about the potential for hypoglycemia in a student with diabetes; however, school staff will not administer glycogen injections.

In an emergency situation, where a student is severely hypoglycemic, trained EMS paramedics may do a glycogen injection. It is important to note that hypoglycemia presenting in a school setting would not normally be an immediate life-threatening condition – that is, ambulances with advanced care paramedics can respond immediately. Paramedics will make the proper assessment and provide treatment, as required. For specific guidelines for sports, field trips and other co-instructional activities, please see section 12.

8.5 Hyperglycemia – High Blood Glucose

Hyperglycemia is not usually an emergency condition requiring immediate treatment; however, prevention of hyperglycemia is key to delaying or avoiding serious complications. The parents and the child's physician need to be aware of persistent hyperglycemia.

8.5.1 High Blood Glucose

Children with diabetes sometimes experience high blood glucose. The earliest and most obvious symptoms of high blood glucose are increased thirst and urination. If noticed, these should be communicated to the parents to assist them in long-term treatment. They are not emergencies that require immediate treatment.

8.5.2 Causes

High blood glucose often develops as a result of one or more of the following:

- Too much food;
- Less than the usual amount of activity;
- Not enough insulin; and/or
- Illness.

Many times, however, there does not seem to be an obvious explanation.
(Kids with Diabetes In Your Care – Canadian Diabetes Association)

8.5.3 In the classroom, the behaviour of students with hyperglycemia may be taken for misbehaviour (i.e., frequent requests to go to the bathroom or requests for frequent drinks).

8.6 Interference with School Activities

When blood sugar levels are outside the target range (i.e., hypoglycemia or hyperglycemia) the student's learning, behaviour and participation may be affected.

Hyperglycemia and hypoglycemia may also affect the student's behaviour; however, having diabetes is not an excuse for inappropriate behaviour.

9. Blood Glucose Self-Monitoring: Testing Blood Sugar

9.1 Why do it?

Self-Monitoring of blood glucose is mandatory for achieving the target blood sugar levels. Blood sugar levels will change with eating, physical activity, stress, or illness. Sometimes the blood sugar fluctuates for no apparent reason.

9.1.1 Knowing blood sugar levels will:

- Help the student understand the balance of food, insulin and exercise;
- Help the doctor adjust insulin and food;
- Help avoid the consequences of hypoglycemia and hyperglycemia;
- Monitoring will give early warning without waiting for the onset of symptoms.

9.2 Equipment

9.2.1 A small meter, which runs on batteries (there are various meters on the market)
9.2.2 Test strips
9.2.3 Lancet device
9.2.4 Lancets
9.2.5 Logbook

9.3 Procedure for Blood Glucose Monitoring (to be done by the student or guardian)

9.3.1 The student washes hands with warm water and soap.
9.3.2 Inserts a lancet in the lancet device.
9.3.3 Places a test strip in the meter.
9.3.4 Pokes the side of the finger-tip and obtains a drop of blood.
9.3.5 Places the blood on the area indicated on the test strip.
9.3.6 Waits for 5 to 45 seconds, depending upon the meter.
9.3.7 Notes the reading and records in log book or automatically recorded in meter.

Timing varies with the individual and is done according to the advice of the child's physician and parents. Usually the blood glucose is tested before meals, before bed and before/during/after exercise.

9.4 Ketone Monitoring

This monitoring is not usually done daily as with blood glucose testing, however, some students with diabetes monitor their ketone levels according to guidelines prescribed by their healthcare professional. Teachers and other school personnel have no responsibilities in the actual procedure.

9.4.1 It is important for the teacher:

- To understand and accommodate the student who needs to monitor ketones;
- To call the parents immediately if any student with diabetes becomes ill, especially with vomiting (see 9.5.5 below)

9.5 What Teachers Should Know about Ketones

9.5.1 Hyperglycemia (see High Blood Glucose) may result in ketones in the blood and urine.
9.5.2 In hyperglycemia, glucose stays in the blood and the body cannot use it for fuel. The body then breaks down fat for fuel. This process produces ketones as a by-product. If ketone levels continue to rise, the blood becomes acidic.
9.5.3 Rising ketone levels can spiral into the potentially dangerous condition known as Diabetic ketoacidosis (DKA).
9.5.4 Left untreated DKA can kill.
9.5.5 DKA usually develops over several days, but frequent vomiting can cause the ketones to build up in just a few hours.

9.5.6 The flu and stomach viruses are common contributors to DKA.
9.5.7 Students on insulin pumps develop DKA more quickly than if they were using injected insulin.
9.5.8 High blood glucose plus ketones may mean that the student needs more insulin than their usual regimen calls for.
9.5.9 Each student should have individualized guidelines explaining how to handle sick days and what to do if ketones are on the rise.

Example:

"…Pieter Van Staalduinen, a ten year old with type 1 diabetes, felt dizzy while sitting in class at his school in Calgary. With the strips he carries with him at all times, Pieter went to the bathroom and used one of the strips to test his urine. Sure enough, his ketone levels were high.

He called his father, who left work and drove to Pieter's school, gave him a shot of insulin, hung around for a while, then checked Pieter's ketone levels again. Normal range. Father and son went their separate ways, having nipped a potentially serious complication of type 1 diabetes in the bud."

Diabetes Dialogue, Winter 2001; Volume 47 No. 4

10. Insulin Injections

Recent advances in medical devices allow people with diabetes to choose the way they administer their insulin:

- Conventional syringe and vial method
- Insulin pen
- Insulin pump

Most insulin injections are administered outside school hours – before breakfast and supper and at bedtime. However, the insulin regimen varies with the individual and some students do require an insulin injection before lunch.

11. Student Diabetes Management: Roles and Responsibilities

Area	Who	Role & Responsibilities	Special Considerations
School Registration (new students) and New Diagnosis	Principal Parent Student (If appropriate)	Together determine whether or not the student is able to safely manage his/her diabetes management. Appendix B – Diabetic Checklist for Independence is a guide only for student independent decision making.	Diabetes Management Plan and Student Diabetes Information Card should be available.
Communications	Principal School Staff Parents	Establish clear communication methods between school and home. Follow established procedures for alerting staff of student medical needs.	Safe storage of equipment should be communicated to all staff.
Referral	Principal CCAC	Principal contacts CCAC to provide supervision/recommendations to school staff (i.e., regarding training) or direct treatment, if required.	Contact Information: Community Care Access Centre 141 Weber St. South Waterloo 519-748-2222 www.ww.ccac-ont.ca
Training	Principal	Decide upon the need for: General in-service for all staff in contact with the student. Specific training for team support (i.e., according to development level and medical needs). Contact CCAC to arrange training **in collaboration with** parents. Determine which staff should attend the training.	Contact Information: Cambridge Memorial Hospital Diabetic Education Clinic, Nurse Diabetic Educator 519-621-2330 Grand River Hospital Diabetic Education Clinic, Nurse Diabetic Educator 519-749-4300 Establish a team of staff members to be trained to provide support for specific training, as required.

Support	Staff	Offer support to student by: -learning about diabetes -promoting open communication with parents -offering positive attitude toward student's full participation in school activities -providing safe and hygienic location for student to conduct diabetes management -monitoring the self-care practices and routines by the student	
Supplies	Parents Student Staff	Clear procedures provided to staff and student about the safe disposal of materials that come in contact with blood	
Invasive Procedures: injections blood glucose testing	Student Parents Trained Staff	Staff will not make medical judgments or perform invasive procedures (i.e., injections, blood testing). **In emergency situations, life-threatening situations** where a student is unresponsive or unable to self-administer the appropriate treatment, the school response shall be a 911 telephone call.	

If a student is not taking responsibility for his or her diabetes care, it may be due to other factors, such as language, cognitive ability, maturity level, behavioural issues and psychosocial barriers. This calls for communication between parents, teachers and possibly other professionals.

12. Sports and Co-Instructional Activities

12.1 Children with diabetes should be encouraged to participate in as many activities as they choose. They should not be excluded from school field trips. School sports and other co-instructional activities can promote self-esteem and a sense of well-being.

12.2 For children who wish to participate in vigorous physical activity, good planning is essential so that the blood glucose balance is maintained. The major risk of unplanned vigorous activity is low blood glucose. Eating additional food can prevent this.

12.2.1 Parents should be notified of special days that involve extra activity so that they can ensure that the child has extra food to compensate.

12.3 Sports or other activities that take place during mealtime require extra planning. Timing of meals and snacks may be varied and the insulin dose adjusted so that children with diabetes can safely participate.

12.3.1 It is advisable that both the parent and the child with diabetes carry some form of fast-acting sugar such as glucose tablets or juice boxes on outings or sports events.

12.4 It is critical that the child's teachers, especially Physical Education teachers and coaches, are familiar with the symptoms, treatment and prevention of hypoglycemia and hpyerglycemia. It is also important for teachers to communicate in advance, changes in the student routines and schedules that may impact insulin testing and insulin levels (i.e., unplanned vigorous physical activity not normally in a student timetable).

Appendix A

HYPOGLYCEMIA EMERGENCY ACTION FLOWCHART
(Low Blood Sugar)

OVERVIEW

HYPOGLYCEMIC REACTION

This student has Type1 Diabetes and could develop hypoglycemia (low blood sugar reaction) which is an acute condition. It means that the blood sugar level has fallen below 4.0 which is too low for the brain to function properly. If this condition is not treated immediately it can lead to unconsciousness or seizure. A hypoglycemic reaction can occur at any time or place. Each student will have their own unique symptoms of feeling low. Refer to the students "Hypoglycemic Emergency Action Plan" for individual signs and symptoms of a hypoglycemic reaction.

SYMPTOMS

Possible symptoms are observed
- -cold, clammy, sweaty skin
- -hunger
- -quietness, pallor, extreme tiredness
- -dizzy, blurry vision
- -shakiness
- -headache

or

If the student states they are feeling "low", looking unwell or acting strangely.

or

Signs of a severe hypoglycemic reaction are observed –
Unresponsive
Unconscious
Having a seizure

ACTION/EMERGENCY PLAN

Instruct student to check their blood sugar using his/her meter to confirm symptoms.
If meter is unavailable, manage as if blood sugar is below 4.0.

If reading is above 4.0 and student feels unwell:
-stay with student
-notify parents for further instructions

If reading is **below 4.0** and student is alert, manage low blood sugar **immediately** with one of the following:

6 oz (175 ml) juice/pop (not diet)
Or 3 glucose tabs
Or 5-6 lifesavers or _____

Stay with student.
Do not allow student to use stairs.

Student is:
1. Unresponsive
2. Unconscious
3. Having a seizure

❑ remain with student
❑ place student on his/her side (if unconscious)
❑ call 911 or notify principal/designate to call 911 and advise the dispatcher that the student has Type 1 diabetes and his unconscious/unresponsive/seizuring
❑ stay with student until the ambulance arrives
❑ call parents/guardians

Repeat blood sugar check 15 minutes after taking above intervention.

If blood sugar reading is above 4.0 and next scheduled snack/meal is less than 1 hour NO further follow-up required.

If next snack/meal is *more* than 1 hour student needs a snack (provided by parent)

If blood sugar reading is still below 4.0, repeat previous interventions.

If after two interventions blood sugar is still less than 4.0
❑ stay with student
❑ notify parents
❑ repeat above action

Appendix B

DIABETIC CHECKLIST FOR INDEPENDENCE

Age appropriate skills in Diabetic Management (adapted from: Yasuda, Carpenter and Kaiserman, Diabetes Spectrum, 2005)

Preschool 4 -6 Year (Developmental Stage Preoperational)	**School Age 7-12 Years (Developmental Stage Concrete Operational – Children begin to understand that things change)**	**Teens/Adolescents 13-18 Year (Formal Operational-Ability to think in abstract terms)**
Requires supervision while completing diabetic care tasks	Progressing to independence	Doing self-treatment
Learning meaning of high/low blood glucose	Beginning to understand consequences of actions	Transitioning to independence, understands patterns of blood glucose levels
Learning importance of eating meals and snacks	Planning diabetic regimen around normal activities	Needing to coordinate school, work and meals
Progressing to doing their own blood sugar checks	Ability to learn technical skills such as self-injection, blood sugar testing and button pushing for pump, working towards independence	Learning more complex accommodation for sports; missed or delayed meals due to interruption of routines, complication prevention
Wanting to push buttons on the insulin pump	Learning target blood sugar levels	May need to find new pattern management methods
	Can identify effects of exercise and blood sugar levels, understands causes of high/low blood glucose levels	May be experiencing grief and denial of diabetes due to the restraints it places on normal life
		Begins to make proactive adjustments to insulin regimen to accommodate variation in meals and activity

Appendix C

SCHOOL HEALTH SUPPORT SERVICES – DIABETIC NURSING PROGRAM

This guide is for the use of Medical Personnel and information for school staff as student care will require regular communication between family, school, and nurse.

The school health diabetic nursing program is funded through the Waterloo Wellington Community Care Access Center and provided by local nursing agencies. Diabetic Education Centers at our local hospitals and families are important partners in this program.

This program enables nurses to provide nursing visits during regular school days for school children with diabetes.

In order to provide the best care possible for your child at school, the school diabetic nurses need your help and assistance in ensuring we all work together. We have created this letter to ensure understanding between parents, nurses and the schools when the school health nursing program is engaged to provide care to your child.

EXPECTATIONS OF FAMILIES PARTICIPATING IN THE SCHOOL HEALTH NURSING PROGRAM:

How do the School Health nurses receive orders (including updates) for my child?

- Registered Nurses are only able to receive **medical orders from a physician or Nurse Practitioner. The orders must contain specific parameters regarding insulin dosages.**
- Registered Nurses can receive these written orders signed by the Physician or Nurse Practioner from the parents or directly from the physician or diabetic education clinic.
- It is the parents' responsibility to ensure the nursing agency is updated the same day that orders are changed.

What supplies are to be sent to school?

- Sharps container (parents can pick them up at any local pharmacy and can return to the pharmacy for disposal when full).
- Lancets have to be disposed of in a sharps container. The CCAC's school health nursing program recommends this be completed at home before or after school.
- If your child is unable to inject themselves, the Registered Nurses must use "Auto Shield" needles for health and safety reasons. Ask your diabetic educator where to purchase these needles.
- Urine strips must be supplied by parents and replenished as needed for the school health nurse to use.

- Ketone strips must be supplied for children on pumps and must be replenished by parents as needed.
- Glucometer must be supplied by parents. Your child is expected to be carrying the meter and must have strips and extra batteries available.
- Insulin Pen must be supplied by parents for those on injections. Your child is expected to be carrying their insulin pen/ kit. Insulin pens/kits must include an extra cartridge of insulin.

Role of the Parent:

- A logbook or communication book for use between the school nurse and the parent must be utilized so that Blood Glucose (BG's) and any concerns (supplies running low, juice box was used, etc.) can be added into the book. This book must go back and forth on a daily basis and is to be used by parents and the school diabetic nurse.
- Treatment for lows/ emergency diabetes kit must be provided by parents for the child at school with clear direction regarding how much carb is required to treat a low for school staff.
- Each specific food item provided in your child's lunch must have a carb count attached to it either on a list such as a recipe card or with a sticker placed on the item of food.
- The standard of care for school diabetic nurses is that insulin will be given after your child has eaten their lunch unless otherwise instructed by physician, nurse practitioner or the diabetic education clinic nurse.

When you will be contacted for management and planning of your child's diabetes while at school:

- If there are lows under 2.
- When your child has more than 2 lows/ day.
- If blood sugars are greater than 20.

When you will be contacted to pick up your child from school:

- If your child is on a pump and the blood sugars are over 16, and there are ketones detected, you will be notified to come to the school and manage this potential high risk situation.
- If your child is on an insulin pen or insulin injections and the blood sugar is over 20 and they have signs and symptoms of vomiting and/or lethargy, parents will be called to pick up their child. If this is not possible, the school will engage the child's emergency plan which will include calling 911 to access appropriate care.
- If your child is on an insulin pen or insulin injections and your child is not responding to treatment, you will be called to come and pick up your child at the school. If this is not possible, the school will engage the child's emergency plan which will include calling 911 to access appropriate care.
- Parents whose children who are on pumps will be called to pick up their child at school if there are site or pump issues. The school nurse will not have orders to correct this issue. The school nurse will not change infusion sets or give insulin via pen/ syringe in this situation.

- The school nurse will not be able to trouble shoot pump issues such as using the bolus wizard to give injections, or modifying delivery systems, etc. In the event that the bolus cannot be given through the pump, the school nurse is not expected to calculate doses to be given by injection. Parents or an alternate caregiver are expected to come and pick up their child from school. If this is not possible, the school will engage the emergency plan for the child which will include calling 911 to access appropriate care.

Rights of a Student with Diabetes:

- Being able to use the washroom and go out for drinks as needed.
- Eat in the classroom with the other children. *
- Have their blood sugar tested in their classroom if needed (including having meters and sharps containers available and safely stored).
- The student has the right to have available treatment for lows (such as juice, dex tablets, jelly beans, skittles, etc.) in the classroom.
- The school must provide a safe place for the student to perform diabetic care if not comfortable in the classroom.
- The child has the right to advise adults in the school that they are not feeling well and to request assistance of responsible adults in the school.

*Collaboration with the school is important to ensure the supervision needs of the child are met.

What the nurses will do:

- Support and teach children to become independent with their diabetic care.
- Communicate with families, schools and the medical team regarding the child's care.
- Deliver competent diabetic nursing care at prescribed times during the regular school day.

Appendix D

DIABETES RESOURCE LIST

RESOURCE LIST FOR FAMILIES, SCHOOL STAFF AND SERVICE PROVIDERS STUDENTS WITH DIABETES IN SCHOOL

Assistive Devices Program – Diabetic Equipment and Supplies
(Ministry of Health and Long-Term Care)
Website: http://health.gov.on.ca/english/public/pub/adp/diabetic.html

Canadian Diabetes Association
Website: http://www.diabetes.ca/get-involved/helping-you/advocacy/kids-in-school/

- Kids with Diabetes in School
  - Teacher's Checklist
- Standards of Care for Students with Type 1 Diabetes in School (2008)

Diabetes Education Centres:

Cambridge Memorial Hospital
Diabetic Nurse Educator
Telephone: (519) 621-2330
Ext. 2345

Grand River Hospital
Diabetes Nurse Educator
Telephone: (519) 749-4300
Ext. 3714
Website: www.

Children with Diabetes at School – Community for Kids, Families and Adults with Diabetes
Website: http://www.childrenwithdiabetes.com

Diabetes in Ontario Schools
Website: www.diabetesinschools.ca

Health Canada – Canada's Food Guide
Website: www.healthcanada.gc.ca/foodguide

Joslin Diabetes Clinic, affiliated with Harvard Medical School
Website: www.joslin.harvard.edu

Juvenile Diabetes Research Foundation
Website: http://www.jdrf.ca/

Diabetes in School

- Back to School Basics – For Parents
- Back to School Basics – For Kids

Kids & Teens

- Just for Kids – JDRF Kids On-line

- For Teens

Diabetes in College

- Preparing for College
- Letter to college Roommate
- Alcohol and Type 1 Diabetes
- What Happens When My Child Goes off to College
- Travelling with Diabetes

SickKids
Website: http://www.sickkids.ca/endocrinology/what-we-do/diabetes-programs/indix.html

Diabetes Programs

- Newly Diagnosed Child with Diabetes
- After the Honeymoon
- Transition to Teens
- Transition to Adult Diabetes Care

INTERNATIONAL:

American Diabetes Association
Website: http://www.diabetesarchive.net/for-parents-and-kids/for-schools/diabetes-management.jsp

- Diabetes Care at School
- Diabetes Management at School
  - Three Elements of a School Plan:
    -Information packet
    -Health Care Plan
    -Diabetes Care Plan

Kids Health Centre – Diabetes
Website: http://kidshealth.org/parent/centers/diabetes_center.html

- Kids Health in the Classroom
  -Teacher's Guide Diabetes – Pre K to Grade 2
  -Teacher's Guide Diabetes – Grade 3 - 5
  -Teacher's Guide Diabetes – Grade 6 - 8
  -Teacher's Guide Diabetes – Grade 9 - 12

Appendix E

DIABETES EMERGENCY TREATMENT PROTOCOL REGISTRATION

NOTE: Please type or print neatly and submit the original, signed copy to your son/daughter's principal in a timely manner.

In the case of ongoing serious medical conditions, (such as but not limited to severe, life-threatening allergies, diabetes, epilepsy, heart condition, asthma), this authorization will terminate on June 30 of each school year. Please ensure to notify the principal if the prescription changes or expires. This authorization may be cancelled upon receipt of written notification to the principal.

Student Name: _____ Date: _____

School Name:_____ Home Room:_____

Principal's Name:_____ Teacher's Name:_____

Year/Grade:_____

Pick-up and Drop-Off Bus Route Numbers (if applicable):

_____

Home Address:_____

_____

Student's Photo

SYMPTOMS AND WARNING SIGNS (To be completed by parent/guardian):

_____

GENERAL COURSE OF ACTION:

- At the first sign of low blood glucose, give sugar immediately:
- 4 oz. (125 ml) of regular pop (not diet pop): OR
- 4 oz (125 ml) of fruit juice (Junior juice box): OR
- 2 tsp (10 ml), 2 packages of sugar; OR
- 2 glucose tabs
- Wait 10-15 minutes (have the student sit quietly, do not allow him/her to walk around)
- If there is no improvement, repeat the treatment
- DO NOT LEAVE THE STUDENT ALONE
- If the student is unconscious, having a seizure or unable to swallow, do not give food or drink.
- Roll the student on his/her side
- Call 911 or emergency medical services
- Inform parents/guardians

CALL PARENTS/GUARDIANS:

Mother's Name	Telephone Number	Email Address
Father's Name	Telephone Number	Email Address
Emergency Contact Name	Telephone Number	Email Address

SPECIFIC COURSE OF ACTION: (To be completed by parent/guardian):

_____

_____

_____

PARENT/GUARDIAN AUTHORIZATION RE: CONSENT TO RELEASE

I/we give consent for school staff to use and share the information provided in this form as required to attend to the education, health and safety of myself/my child. This may include:

- The pertinent information contained within will be shared with Student Transportation and applicable contracted bus operators (including our child's bus driver where appropriate);
- Posting of the student's photograph (physical and/or electronic) in the school so that all staff, volunteers and visitors are aware of the medical condition;
- And any such other circumstances that may be necessary to ensure the health and safety of your child.

_____ _____

Parent/Guardian Signature (or student if 18 years or older) Date

PARENT/GUARDIAN AUTHORIZATION RE: CONSENT TO TRANSFER TO HOSPITAL

I/we give consent for my child to be transported to a hospital if deemed necessary by school staff, and if necessary, a staff member may also accompany my child during transport. Note: The principal shall decide if an ambulance is to be called.

_____ _____

Parent/Guardian Signature (or student if 18 years or older) Date

The personnel information on this form is collected under the authority of the Education Act and will only be used to record a student's diabetes emergency information. Access to this information will be limited to those who have an administrative need, to the student to whom the information relates and the parent(s)/guardian(s) of a student who is under 18 years of age. If you wish to review this information or have questions regarding its collection please contact your school principal.

The information collected will be protected against theft, loss and unauthorized use of disclosure.

THIS FORM MUST BE COMPLETED IN A TIMELY MANNER, INCLUDE ORIGINAL SIGNATURE(S) AND SUBMITTED TO THIS SCHOOL PRINCIPAL

PRINCIPAL'S ACKNOWLEDGEMENT

I have reviewed the information provided in this form, obtained clarification if required, and acknowledge its receipt.

_____ _____

Principal's Signature Date