

Chapter 20

Outpatient Management, Education, Support Groups and Standards of Care

INTRODUCTION

The majority of new-onset treatment is now done in an outpatient setting. Some Health Maintenance Organizations (HMOs) are cooperative in funding outpatient care. Outpatient care is less traumatic for the person with diabetes and the family. It usually saves the HMO money compared with the cost of hospital treatment. It is now relatively rare to hospitalize people with known diabetes in the U.S. to “assess how they are doing.” It is possible to have diabetes for over 20 years and never have a diabetes-related hospitalization.

This is a result of many factors, some of which are:

- ✓ age-appropriate education
- ✓ good family support
- ✓ regular clinic visits (every three months)
- ✓ close communication with the diabetes healthcare providers
- ✓ fulfilling the diabetes standards of care

TOPICS:

Goal Setting and Problem Solving

Monitoring (clinic visits and laboratory values)

TEACHING OBJECTIVES:

1. Indicate the importance and frequency of clinic visits as related to positive diabetes outcomes.
2. Present the minimum standards of care for diabetes management.

LEARNING OBJECTIVES:

Learner (parents, child, relative or self) will be able to:

1. State the anticipated clinic visit schedule, relate its importance as well as necessary items to bring (meter, written materials [especially Pink Panther book], labs, etc.).
2. List three expected tasks in good diabetes management.

TELEPHONE MANAGEMENT

Much of diabetes management can be done over the telephone, by fax or the e-mail message system. Some glucose meters can fax or e-mail glucose values. The extra equipment needed can be purchased from the meter company (see Appendix in Chapter 7).

The diabetes care provider should be called:

- ✓ prior to the next regularly scheduled injection if a severe hypoglycemic reaction has occurred
- ✓ if more than two mild reactions occurred within a short time
- ✓ anytime the urine ketones are moderate or large or blood ketones are above 1.0 mmol/L

People with diabetes should have checkups with the health team about every three months. This is the recommendation of the ADA Standards of Care. Some of these Standards of Care are included in this chapter.

At a clinic visit:

- ✓ the HbA_{1c} can be done (Chapter 14). It reflects the number of high blood sugars for the past three months.
- ✓ insulin adjustments can be made

FAX MESSAGES

Most families now have access to a fax machine. Blood sugar record sheets can be found in Chapter 7, or for pumpers, in Chapter 26. They hold either one week or two weeks of blood sugar records. The sheets are an ideal size to send through a fax machine.

We ask that records be faxed anytime the family feels they need some help. We prefer faxes to phone calls to report blood sugar values. The fax saves time and confusion when trying to listen and write down values while on the phone.

If the parents do not have access to a fax machine, most schools (and especially the school nurse) will provide a way to fax in the blood sugars.

Some good reasons for faxing records are:

- ✓ if over half of blood sugar values at any time of day are **above** the upper level for age (see Chapter 7) and the person/family needs some suggestions
- ✓ if there are more than two values **below** 60 mg/dl (3.25 mmol/L) in one week

When families fax the records, please remember to:

- ✓ include the insulin dosages
- ✓ record the time of any symptomatic low blood sugars (even if it was not possible to do a blood sugar test) and include any relevant information relating to why lows occurred
- ✓ include the sender's fax and phone number and when that person can best be reached

These same forms can be downloaded from Chapter 7 to use when e-mailing records. The text of the book is on the Center's website at: www.barbaradaviscenter.org.

It is only when records are kept that trends can be seen. Calling the healthcare provider **when** values are out of the target range is most helpful. Adjustments can then be made immediately. This prevents delaying any changes until the next clinic appointment.

CLINIC VISITS

When someone is attending our clinic for the first time, the visit usually takes a half to a whole day. Later visits will be shorter. Snacks should be brought to the appointment. Blood sugar records and meters must **ALWAYS** be brought along for the clinic visit. All meters we recommend have memories to store the last 100 to 250 blood sugar values and the ability to download the data upon arrival in the clinic. It is important to analyze this data at the time of the clinic visit.



Having a clinic visit every three months allows:

- ✓ a review of blood sugars: looking at both highs and lows
- ✓ changes in insulin dosage
- ✓ the HbA_{1c} test to be done
- ✓ growth to be followed
- ✓ a check for any problems
- ✓ continued education and introduction of new information/devices

In a clinic, the following people may be seen:

Clinic Nurse, Medical Assistant or Volunteer will:

- measure height and weight
- check the blood pressure
- check a blood sugar
- measure the hemoglobin A_{1c} (HbA_{1c})

- check for urine ketones and protein
- download blood glucose meters and pumps

Diabetes Nurse Educator will:

- continue the diabetes education
- introduce any new information and/or new devices available
- check prescription needs
- review diabetes management
- do the school health plan (if needed)

Doctor, Child Health Associate (P.A.) or Nurse Practitioner:

- checks to see how the person/family is doing with diabetes care goals
- reviews the blood sugar and HbA_{1c} results
- may change insulin or oral medication doses
- if using an insulin pump, evaluates the pump download
- does a physical examination
- coordinates the recommendations of all team members

Dietitian:

- reviews food intake and makes suggestions for changes if needed
- provides nutrition education and information about snacks and other food needs

Social Worker or Psychologist:

- assesses personal, family, school or other problems
- provides resource options for the individual or family
- monitors current family issues and their effect on diabetes management

It is also helpful to bring this educational book so that it can be used to review knowledge about diabetes.

EDUCATION, SUPPORT AND WORKING GROUPS

Some families gain extra support from meeting with other families who also have a family member with diabetes.

This meeting can happen at:

- ✓ the time of the clinic visits
- ✓ special group meetings
- ✓ special events: sports, picnics or Halloween parties

Additional education courses are important for families who do not live near a specialized diabetes clinic. These courses are important for people who were diagnosed at a young age and have reached an age when they are able to understand material they could not understand earlier.

Some of the additional education courses offered at our Center are:

- ✓ **Transition to Work and College Bound Workshop:** Offered as people become independent from their parents. A boost in knowledge at this time can be helpful in preventing later problems.
- ✓ **Grandparent's Workshop:** A one-day course. It is important that children with diabetes have the same relationships with grandparents as do other children (see Chapter 24). This likely involves staying with the grandparents. The workshop may also be useful for aunts and uncles, babysitters or others who are close to the child.

Grandparents wishing to have a child with diabetes stay with them need to know:

- ✓ basic knowledge about drawing up insulin and giving shots
- ✓ how to check blood sugars
- ✓ how to treat hypoglycemia

The grandparents may feel more confident in caring for their grandchild with diabetes as a result of such a course.

STANDARDS OF MEDICAL CARE

Standards of medical care for people with type 1 and type 2 diabetes have been published by the American Diabetes Association. The standards are for both care providers and the people with diabetes.

These standards can be found in:

“Diabetes Care” 28, Supplement 1, S4-43, Jan, 2006

Knowing these standards will allow people with diabetes to:

- ✓ assess the quality of medical care they receive
- ✓ determine their role in their medical treatment
- ✓ compare their treatment outcomes to standard goals

The person and/or family must assume some of the responsibility for meeting the standards of care outlined below.

For example:

- ✓ if the family member with diabetes has reached puberty and has had diabetes for at least three years, annual eye and kidney evaluations are needed. The family must set up the eye evaluation with an ophthalmologist covered by their HMO.
- ✓ they need to help the family member do two timed overnight urine collections for the important microalbumin test for the kidneys (directions at end of Chapter 22).

Some of the American Diabetes Association's recommended standards of care with a few modifications are outlined below.

- Insulin-treated people should have clinic visits every three months.
- HbA_{1c} or a similar test should be done at least every three months. This is done in our clinic using the DCA 2000 instrument (Bayer Diagnostics). The

method was shown by the DirecNet Study Group to be very accurate, and the result is available in six minutes. It is important for the care provider to have the result during the clinic visit so that changes can be made if needed.

- All people with diabetes must be taught a method of blood glucose testing.
- A comprehensive physical examination, including sexual maturation in adolescents, should be done **annually**.
- Parts of the physical exam affected by diabetes (e.g., height, weight, blood pressure, eyes, thyroid, liver size, deep tendon reflexes, injection sites, feet, etc.) should be checked **every three months**.
- People ≥ 10 years of age should have a dilated eye examination by an eye doctor within 3-5 years after the onset of diabetes. Screening for diabetic eye disease is **NOT** necessary before 10 years of age.
- Laboratory tests for microalbuminuria (Chapter 22) should be done annually in postpubertal people who have had diabetes for at least three years. People with type 2 diabetes should be checked initially and then annually.
- The occurrence of severe hypoglycemic episodes (episodes requiring the help of others [when not usually required], seizures or loss of consciousness) are serious and require the help of a diabetes specialist in preventing further episodes.
- The stress of illness frequently affects sugar control and necessitates more frequent monitoring of blood sugar and urine or blood ketones by the family. Medical help must be constantly available when moderate or large urine ketones or blood ketones above 1.0 mmol/L are detected.
- A lipid profile, including cholesterol, triglyceride, LDL and HDL should be performed at least every five years.

- High blood pressure (hypertension) and borderline elevations in blood pressure contribute to the development and progression of the chronic complications of diabetes. Elevations in blood pressure must be treated aggressively to achieve and maintain blood pressure in the normal range.

FOR PEOPLE WITH DIABETIC COMPLICATIONS

- Established diabetic eye disease requires care by an ophthalmologist experienced in the management of people with diabetes.
- The person with abnormal kidney function (proteinuria or elevated serum creatinine) requires heightened attention, control of other risk factors (e.g., hypertension and tobacco use) and consultation with a specialist in diabetic renal disease.
- People with cardiovascular risk factors should be carefully monitored. Evidence of cardiovascular disease (such as angina, decreased pulses and ECG abnormalities) requires efforts aimed at correction of contributing risk factors (e.g., obesity, use of tobacco, hypertension, sedentary lifestyle, hyperlipidemia and poorly regulated diabetes), in addition to specific treatment of the cardiovascular problem.

DEFINITIONS

ADA: American Diabetes Association.

Child Health Associate: A doctor's assistant who is trained to care for children.

Standards of Medical Care:

Recommendations made by an ADA panel for the minimum levels of care for people with type 1 diabetes as included and modified in this chapter.

QUESTIONS AND ANSWERS FROM NEWSNOTES

Q Why are regular clinic appointments necessary and how often should these be scheduled?

A It is our belief that clinic appointments should be scheduled approximately every three months.

This is also the recommended interval in the ADA “Standards of Medical Care”. The reasons for this are primarily preventive since this is where the emphasis in healthcare now lies. In the early 1900s the emphasis on healthcare was in the treatment of acute problems. This has now switched to a more preventive based healthcare, particularly relating to chronic diseases.

For people with diabetes, the visits every three months allow continued education and increased motivation for doing day-to-day monitoring of the diabetes. It is the experience of our Clinic and of other large diabetes clinics in the U.S. that if regular visits do not occur, diabetes monitoring and knowledge become lax.

In addition, it is very important to check the eyes and perform the remainder of the physical examination at regular intervals. We have seen a case where an eye specialist actually photographed the back of the eye and found normal eye photographs; four months later diffuse eye hemorrhages were present. The earlier such eye problems are detected and treated, the greater the chance for saving vision. In addition, with children, growth should be occurring. Many physicians believe that good diabetes control is one of the best means of assuring good growth. We feel that every three months is a good interval for checking the gain in height and weight. Other parts of the physical exam, such as the thyroid size, liver size and the injection sites are also important to check at regular intervals. The liver can be enlarged if someone is receiving too much insulin (extra sugar is stored) or not enough insulin (extra fat is stored).

In summary, the best management occurs with the family and team working together. Although every three months seems to be an average best time to return to the clinic, there are obviously some situations where more frequent visits are important.

