Workshop Objectives

- List two elements of effective communication with families of children with special health care needs.
- Describe the relationship between childhood obesity and type 2 diabetes.
- Describe the difference between type 1 and type 2 diabetes.
- Name three components of a special health needs care plan.

Background: Obesity in children
Health Risks of Obesity

- Heart Disease
  - ↑ Total cholesterol
  - ↑ Serum triglycerides
  - ↑ Blood pressure
- Breathing Problems
- Type 2 Diabetes
- Musculoskeletal Problems
- Weight Discrimination

What Factors Affect Obesity?

- Biology
  - Genes
- Behaviors
  - Diet
  - Physical activity
- Environments
  - Social
  - Physical

We can change everything...Focus on what we can change!

BMI or Body mass index

- Normal weight: BMI falls between the 5th and the 85th percentiles
- Underweight: BMI below the 5th percentile
- At risk for overweight: BMI between the 85th and 95th percentiles
- Overweight: BMI at or above 95th percentile (CDC)
Early Childhood

- Has an impact on BMI in later childhood and adulthood.
- Children spend more time in out-of home care than ever before.

Influences on BMI in early childhood

- Breastfeeding
- Introduction of complementary foods (4-6 months)
- Beverages
- Feeding practices
- Active play and sedentary time
- Sleep, screen time
- Environment: fixed and portable play equipment

Taking Action

- Factors within our control
  1. Nutrition (eating and breastfeeding support)
  2. Physical activity/sedentary time/sleep
  3. Feeding interactions/practices/behaviors

**Focus on what we can change!**
**Nutrition**

- Young children need to eat nutritious foods because their bodies are growing rapidly.
- Children learn healthy (or unhealthy) eating habits at a very young age.

**STRENGTHS for Head Start Families**

**BARRIERS for Head Start Families**

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**Beverages**

- Water is the best choice for thirsty children.
- Soda and fruit drinks are full of sugar and “empty calories” (few nutrients, many calories).
- Low fat milk with meals and snacks.

**STRENGTHS for Head Start Families**

**BARRIERS for Head Start Families**

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**Feeding Practices/Behaviors**

- Gently encourage, but don’t force children to try a bite of a new food.
- Forcing children to clean their plates can lead to overeating and weight problems.
- Offer healthy foods to children and then let them decide if and how much to eat.
- Don’t use food as reward or punishment.
- Importance of Family Meals
- Healthy Celebrations

**STRENGTHS for Head Start Families**

**BARRIERS for Head Start Families**

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The Importance of Family Meals

- Family meals improve dietary quality and promote healthy weight
  - Increase intake of fruits, vegetables, grains, calcium-rich foods, protein, iron, fiber, and Vitamin A, C, E, B-6 and folate
  - Lower intake of soft drinks and snack foods
- Family meals lower risk-taking behaviors
  - Kids who eat dinner with their families 5 times a week or more are least likely to take drugs, feel depressed, or get into trouble
- Family meals improve family relationships and emotional health
  - Emotionally content and positive peer relationships
  - Work hard in school
  - Improved family communication and stronger family ties
- Family meals improve academic performance
  - Improved vocabularies and reading skills
  - Improved achievement test scores
  - Higher grades

Physical Activity

STRENGTHS for Head Start Families
BARRIERS for Head Start Families

• Moderate Intensity
• Vigorous Intensity
• Screen Time
• Sedentary Time
• Sleep

Benefits to Children:

• Stress and behavior management
• Sleeping better
• Feeling better overall
• Improved self-esteem
• Healthy bones, muscles, and joints
• Weight control and lower risk for health risks of childhood obesity
Diabetes is…

- Common and increasing
- Serious: leads to long term complications and medical emergencies
- Chronic: 24/7, doesn’t go away
- Costly: risen to $245 billion in 2012 from $174 billion in 2007. That’s a 41% increase in five years!

What is Diabetes?

- Type 1 Diabetes: The pancreas does not produce insulin because of an autoimmune process.
- Type 2 Diabetes: Either the body does not produce enough insulin or the body cells cannot use the insulin properly (insulin resistance). Certain risk factors can be reduced.

*Insulin is a hormone that is needed for the body to use glucose for energy.

Type 2 Diabetes

- 1 in 8 Americans (approximately 29 million people) are diagnosed with Type 2 Diabetes
- More than 1 in 3 have a family member with the disease.
- By 2050, some predict that 1 in 3 will have the disease.
Risk Factors for Type 2

**Genetic/inherited**
- Family history of type 2 diabetes
- Ethnic groups with higher rates: African American, Hispanic, American Indian and Alaskan Natives, Asian Americans and Pacific Islanders

**Physical/environmental**
- Obesity
- Sedentary lifestyle
- Gestational diabetes or had a baby over 9 lbs.
- History of elevated blood sugar
- Over age 45

Our task in working with children and families is twofold…

1. Reducing risk factors for children who don’t have diabetes.
2. Facilitating the care of children with diabetes so they are safe and can participate fully.

Signs and Symptoms

Similar between types of Diabetes:

- Hyperglycemia (too much sugar in the blood)
- Thirst, bedwetting, hunger, increased urination, weight loss, tired, blurred vision.
Taking Care of Children with Diabetes

Goals:
• Support participation and safety.
• Minimal diabetes related emergencies.
• Support of long term health of children with diabetes.

Taking Care of Children with Diabetes

1. Monitor blood glucose levels
2. Give multiple daily insulin doses
3. Diet; carbohydrate intake
4. Regular physical activity

*With good care, many long term and short term complications can be prevented or delayed.

Taking Care of Children with Diabetes

Balancing Act:
Carbohydrate intake (causes blood sugar to increase)
Insulin doses (causes blood sugar to decrease)
Physical activity (causes blood sugar to decrease)

* Blood sugar is also affected by growth, emotional stress and illness
Taking Care of Children with Diabetes

**Insulin delivery:**

- Insulin pump
- Insulin pen

**Syringes**

Type 2 Diabetes

- May be treated by balancing carbohydrate and fat intake, physical activity, oral medication and/or insulin.

Testing Blood Sugar

- Normal range for children ≤ 7 years old is 80-180 mg/dl
- Need to check blood sugar throughout the day
- Before lunch and with s/s of hyper/hypoglycemia
Hypoglycemia
(low blood sugar i.e. too little food, too much insulin, extra exercise)

Sudden onset, shaky, sweaty, weak, dizzy, irritable, headache, may progress to seizure or loss of consciousness.
• If unresponsive, call 911, administer glucagon according to care plan, notify parents. *glucagon is safe, you can’t overdose.

Hyperglycemia may lead to Diabetic Ketone Acidosis (DKA)

Dangerously high blood sugar.
Evidence of ketones in the urine.
Child will need immediate insulin to correct.

Sample 504 Plan from the Americans with Diabetes Association

Taking Care of Children with Diabetes

Who can give insulin in a child care center?
Small group discussion:
What have your experiences been?
What needs to be in place for a child with diabetes to participate in your program?
Successes, lessons learned??

Anemia

• A common blood disorder
• Occurs when the level of healthy red blood cells (RBCs) in the body becomes too low.
• RBCs contain hemoglobin, which carries oxygen to the body's tissues.
• According to WHO a normal hemoglobin level for children age 6 months to 4 years is at or above 11 g/dL.

Anemia can result from:
• inherited disorders (such as sickle cell anemia or thalassemia),
• nutritional problems (such as an iron or vitamin deficiency),
• infections,
• blood loss,
• some kinds of cancer, or
• exposure to a drug or toxin.
Red Blood Cells

Hemoglobin

The protein found in RBCs that is responsible for carrying oxygen. It contains iron, which is what the oxygen binds to.

Iron Deficiency Anemia (IDA)

- The most common cause of anemia in young children.
- Young children who drink excessive amounts of milk are at increased risk for iron deficiency.
- WHY???
Iron Deficiency Anemia (IDA)

- What is the result of IDA (Why do we care?)
- Your body needs iron to make hemoglobin. Hemoglobin is an iron-rich protein carries oxygen from the lungs to the rest of the body.
- IDA can put them at risk for learning and behavioral problems.

What causes IDA?

- Kids who don't eat enough or who eat foods that are poor sources of iron are at risk for developing the condition.
- Poverty is a contributing factor to IDA because families living at or below the poverty level may not be getting enough iron-rich foods.
- IDA may contribute to lead absorption in children, especially for children living in older, substandard housing.

Treating Anemia

- Treatment depends upon the cause of the anemia.
- Develop a care plan.
- Work as a team that includes the health care provider, the nutritionist, the family, the cook and the menu planner and the teaching staff.
Food Allergies

- Video

What is a food allergy?

- An allergic reaction is triggered when the immune system mistakenly overreacts to a food that it thinks is a harmful invader.

- Inflammatory reactions in the tissues of the skin, the respiratory system, the gastrointestinal tract, and the cardiovascular system occur.

Children with food allergies

- Protect them from foods to which they are allergic
- Manage a child’s reaction if he eats a food to which he is allergic
- Give epinephrine when a child has a life-threatening allergic reaction
Most common food allergies

• Any food can trigger an allergic reaction, though some foods cause the vast majority of negative reactions.
• Eight foods account for 90 percent of all food allergies:
  • Shellfish
  • Fish
  • Soy
  • peanuts
  • tree nuts (like walnuts and cashews)
  • eggs
  • Wheat
  • Milk

The most common foods that cause problems in children are

  – Eggs
  – Milk
  – Peanuts

allergies vs intolerances

• A food allergy occurs when the immune system reacts to a food protein causing symptoms that can affect the respiratory system, gastrointestinal tract, skin, and/or cardiovascular system.
• A food intolerance is a digestive system response to food and does not involve the immune system
  • Symptoms may include nausea, stomach pain, gas, cramps or bloating, vomiting, heartburn, or diarrhea
  • Food intolerances are much more common than food allergies
Food Allergy Facts

• Children younger than three are at higher risk for food allergies
  – 5-8% of children under three have allergic reactions to food
• Anaphylaxis is more common in children with food allergies AND asthma
• Tree nuts and peanuts are the leading causes of anaphylaxis

Food Allergy Facts

• There appears to be a genetic link when it comes to food allergies.
  – A child has about a 10% risk of developing an allergy if neither parent has one
  – If one parent has an allergy, a child has a 20 to 50% chance of having it, too
  – If both parents have an allergy, the child’s chances of having it vary from 40% to 100%

Food Allergy Facts

• Some children outgrow their food allergies, but some do not
• Children have the best chance of outgrowing allergies to eggs, milk, or soy
• They are unlikely to grow out of peanut, tree nut, fish, or shellfish allergies
Food Allergy Symptoms

- Most allergic reactions are **mild**: runny nose, sneezing, itching skin, hives, and digestive upset
- **Severe** life threatening allergic reactions are less common: tongue, lips, or throat may swell, death can occur without immediate medical help
- Unfortunately, sudden severe allergic reactions (known as anaphylaxis) to food cause 200 deaths annually in the United States

Anaphylaxis

- Anaphylaxis is a life threatening allergic reaction
- The generalized symptoms of anaphylaxis cannot be reversed by giving an antihistamine
- Epinephrine is the drug of choice for anaphylaxis (Epi-pen)

Anaphylaxis

- The most common reason for food allergy-related deaths is delaying or not giving epinephrine
- There is no contraindication to the use of epinephrine for a life-threatening allergic reaction
Anaphylaxis

• 911 should be called any time epinephrine (Epi-pen) is given and the child should immediately be transported to a hospital even if symptoms appear to have resolved
• Epinephrine kits are available by prescription only

Epinephrine

• begins working immediately.
• helps you breathe by relaxing constricted airways in the lungs
• It also reverses dropping blood pressure by constricting small blood vessels

Injectable Epinephrine

• Epi Pen Jr. is a prescription of epinephrine in a lightweight “pen.” The pen contains one dose (.15 mg) of epinephrine for a child.
• Twinject is a different brand of auto-injectable epinephrine that contains two doses. It is also available in a .15 mg dose for small children
What do you do when a child who has an epi-pen reacts?

- If the child has a prescription for epinephrine, GIVE IT!

Caregiver fears

- Treatment with epinephrine is usually delayed because caregivers
  - lack knowledge about when and how to give the drug
  - Are afraid they will hurt the child
  - Have concerns about liability

Policies for food allergy:

- Communicate with food service staff and teaching staff about the dangers of even small amounts of food ingested by a child with allergies.
- Work with parents on a written Asthma Action Plan. (see handout)
- Communicate the plan to staff.
- Train staff on use of epi-pen.
- Consider a “No Nut” Policy for severe allergies.
True or False

1. You should stock a supply of epi-pens in your first aid kit.
2. Keep epi-pens under lock and key in an office or other out-of-the-way place.
3. Protect epi-pens from exposure to light and extreme heat.
4. Epi-pens have a long shelf life and rarely need to be replaced.
5. Call 911 after administering epi-pen.
6. Replace any auto-injector if the solution is discolored or contains a precipitate.
7. Always remove the clothing to expose the skin before giving an epi-pen.

Children’s Books

• The Peanut Butter Jam- Elizabeth Sussman Nassau
• No Nuts For Me- Aaron Zevy
• Allie The Allergic Elephant- Nicole Smith