

A Top Health Concern for Indiana Kids Know What to Look For; Know What to Do

The Issue

Diabetes is one of the top five health concerns in schools.¹ Until a cure is found, diabetes must be managed 24 hours a day, seven days a week². That is why it is important for teachers and youth workers to know the warning signs of this disease. Fortunately, when detected early, diabetes can be managed, and youth serving professionals can help a child with diabetes enjoy normal activities, including participating in sports, engaging in after-school activities, and taking field trips.

What we know

One in three children born in the year 2000 eventually will live with diabetes, according to a recent estimate by the American Diabetes Association. Currently about one in 400-600 children and adolescents have Type 1 diabetes.³ Juvenile diabetes is the second most chronic disease affecting children.⁴ More alarming, children as young as 10 years old are developing Type 2 diabetes, a disease often described as “adult-onset”

because it typically affects persons after age 40.⁵ Some 39,000 adolescents in the U.S. already have obesity-linked Type 2 diabetes, and nearly 2.7 million more may have blood sugar levels that could spur diabetes and other health problems.⁶

Because a link exists between weight and Type 2 diabetes, Indiana has real cause for concern. Between 2003 and 2005, the state saw a 3.5% increase in the number of high school students who were overweight. Of students in grades 9-12, some 15% reported being overweight. In 2005, exceeding the national figure of 13.1%.⁷

What we don't know

The cause of diabetes is a mystery; although genetics and obesity may contribute to the development of Type 1 or Type 2. Indiana does not have a diabetes registry, so Hoosier healthcare professionals who suspect the disease is on the rise have no way to measure its prevalence or make correlations to lifestyle factors.

¹ Urban Institute and Detroit Public Schools. (2004). Good health and learning go hand in hand in some Michigan schools. Retrieved on January 22, 2007 from <http://cenmi.org/LeadingChange/F04/article8A.asp>

² U.S. Department of Health and Human Services (June 2003). Helping the student with diabetes succeed: A guide for school personnel.

³ www.cdc.gov/diabetes/pubs/estimates05.htm#prev2

⁴ Committee on Homeland Security and Governmental Affairs. (2005, June). Juvenile diabetes: Examining the personal toll on families, financial costs to the federal health care system, and research progress toward a cure. Washington, D.C. U.S. Government Printing Office,

⁵ American Diabetes Association. (2000, March). Type 2 diabetes in children and adolescents. *Diabetes Care*, 23:3, 381-389.

⁶ National Health and Nutrition Examination Survey. (2006, May) Prevalence of diabetes and impaired fasting glucose levels among U.S. adolescents. *Archived Pediatric and Adolescent Medicine*, 160:523-528.

⁷ Indiana State Department of Health (n.d.) Youth Risk Behavior Survey. Retrieved on Dec. 7, 2006, from www.in.gov/isdh/dataandstats/ysrb/index.htm

High cost of diabetes

Diabetes is the single most costly chronic disease in America. Statistics that support this claim include:⁸

- Diabetes accounts for 32% of all Medicare expenditures.
- Diabetes patients in the U.S. incur medical expenses approximately 2.4 times higher than individuals without the disease.
- The national bill for diabetes-related hospital stays totaled \$10.2 billion in 2003, and the average length of stay for diabetic patients with complications was 5.5 days, at an average cost of \$20,700.

Beyond dollars and cents, the cost of the disease is incalculable for people who experience it. People with diabetes are two to four times more likely to suffer heart attacks and strokes, and diabetes is the leading cause of kidney failure, adult blindness, and non-traumatic amputations. The life expectancy for people with diabetes is shortened by an average of seven to ten years.

Now some good news

In spite of the troubling statistics, persons with diabetes have reason to be hopeful. Clinical research is ongoing, effective therapies are on the market, and more are in the pipeline. Awareness campaigns have helped remove the stigma of the disease and have educated the public that some incidents of Type 2 diabetes may be preventable; early detection of Types 1 and 2 can improve prognoses; and although diabetes cannot be cured, it can be managed. Hospital discharge rates indicate that Indiana children are doing a good job of managing their diabetes. Fewer children are discharged from Indiana's hospital because of a diabetes-related treatment. The discharge rate for children with a diabetes-related treatment is below the national rate, which may reflect the excellent job that the healthcare community is doing in educating parents/caregivers on how to manage their child's diabetes, resulting in fewer children being hospitalized for complications from diabetes.

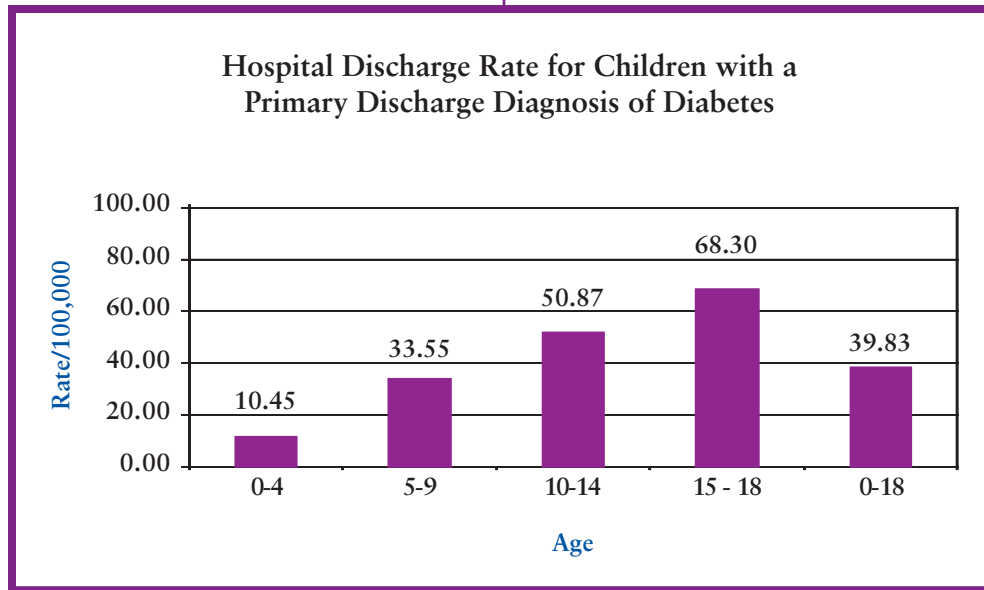


FIGURE 1:

INDIANA HOSPITAL DISCHARGES FOR DIABETIC CHILDREN BY AGES⁹

NOTE: HOSPITAL DISCHARGE RATES INCREASE WITH AGE.

⁸ American Diabetes Association. (2002). Economic costs of diabetes in the U.S. in 2002. *Diabetes Care*, 226:917-932.

⁹ Indiana State Department of Health

Reading the warning signs

The recommended test to diagnose pre-diabetes or diabetes is costly, time-consuming, and involves fasting. For these reasons it is not part of routine physical exams given schoolchildren or student athletes. The burden of recognizing early warning signs usually falls to alert adults—often parents and caregivers and other educators and youth workers—who interact regularly with children and teens. The initial step for these “first responders” is to know the difference between pre-diabetes, Type 1, and Type 2:

- Pre-diabetes occurs when a person’s blood glucose levels are higher than normal but not high enough for a diagnosis of diabetes.
- Type 1 develops when the body’s immune system destroys the hormone insulin that is needed to convert glucose into energy.
- Type 2 diabetes occurs when the body becomes resistant to the effects of insulin or does not produce enough.



Guidelines to know what to look for and what to do:

GUIDELINES FOR PARENTS AND OTHER CAREGIVERS:

- Encourage a well-balanced diet.
- Discourage dieting that is short-term and restrictive.
- Encourage moderate to vigorous activity at least 30 minutes a day, at least five days a week.
- Consult a doctor if a child is at risk—overweight, with a family history of diabetes, or displays warning signs.
- Know the warning signs of diabetes and or a diabetic emergency.
- Provide your school nurse with the child’s diabetes management plan and appropriate supplies.
- Inform all youth workers—teachers, administrators, coaches, lunchroom staff, bus drivers how to identify and respond to a possible diabetes-related incident.

GUIDELINES FOR TEACHERS AND YOUTH WORKERS:

- Learn and know the warning signs of diabetes.
- Encourage participation in physical activities.
- Communicate with parents about a child’s particular diabetic needs.
- Understand that children with diabetes have specific dietary needs, for example they must eat at regular intervals and may require between-meal snacks.
- Provide a private area where children can perform routine diabetes tasks.
- Be aware of a child’s capabilities and ability to provide self-care.
- Have an adult available who is trained to perform blood sugar tests if necessary.
- Make sure that the child has appropriate supplies available to take on field trips, sporting events, or activities away from your organization.
- Know the symptoms of a diabetic emergency.

Diabetes resources for youth workers

To learn more about diabetes visit:

www.lillydiabetes.com

www.aadenet.org

www.diabetes.org

www.jdrf.org

Helping the Student with Diabetes Succeed: A Guide for School Personnel—The National Diabetes Education Program developed this guide to educate and inform school personnel about diabetes, how it is managed, and how each member of the school staff can help meet the needs of students with the disease. School principals, administrators, nurses, teachers, coaches, bus drivers, healthcare, and lunchroom staff all play a role in making the school experience safe for students.

<http://ndep.nih.gov/resources/school.htm>

Diabetes Care Tasks at School: What Key Personnel Need to Know—Eight training modules for school personnel cover diabetes basics, hypoglycemia and hyperglycemia, blood glucose monitoring, insulin administration, glucagon administration, ketone testing, nutrition, and exercise and legal considerations.

www.diabetes.org/advocacy-and-legalresources/discrimination/school/schooltraining.jsp

Eat Smart, Grow Strong—This campaign encourages kids and families to eat better at home.

www.eatsmartgrowstrong.com

Children's Better Health Initiative—A series of publications designed to educate and entertain readers and promote good health and fitness among all children.

www.cbhi.org

Find Health Clinic—This Web site locates clinics that offer medical care to patients at no charge or for a very small fee.

<http://ask.hrsa.gov/pc/>

Indiana resources for children with diabetes

ADAPT—Located in the Riley Hospital Outpatient Center, ADAPT is an advanced education program for families whose children were diagnosed more than six months ago. The four, day-long sessions—one per month—prepare a family for insulin pump therapy.

<http://rileychildrenshospital.com/document.jsp?locid=35>

Camp John Warvel—This summer camp at the YMCA's Camp Crosley in North Webster is designed for youth with diabetes, ages 7-18. It is sponsored by the American Diabetes Association, Indiana Area.

www.diabetes123.com/camps/d_07_2h0.htm

Camp Until a Cure—Located in Noblesville, and geared to children ages 7-15 with Type 1 diabetes, the camp teaches youth to manage their disease while they enjoy summer sports and outdoor activities. Teen trips and family weekends are scheduled throughout the year. Visit

www.dyfoindiana.org

Children with Diabetes—is an online community for kids, families, and adults with diabetes. The organization provides forums, conferences, best practices, and other tools to enhance the life of individuals with diabetes.

www.childrenwithdiabetes.com

The Online Diabetes Support Team from Juvenile Diabetes Research Foundation International—This group comprises volunteers from around the country, adults and teens who have Type 1 diabetes plus parents, siblings, spouses, grandparents, and others. Each member has experienced the initial shock and challenges of coping with a new diagnosis and the ever-changing demands of living with Type 1 diabetes.

www.jdrf.org

For additional county and school district data, visit The Kids Count in Indiana Online Database at www.iyi.org.

Indiana Youth Institute Resources

IYI Weekly Update, a free, electronic newsletter featuring useful information such as training opportunities, free resources, new reports about youth, and a “Grant Tip of the Week.” Subscribe at http://www.iyi.org/weekly_updates/subscribe.asp

Kids Count in Indiana Data Book and online database, including state, county, and school district statistics on Indiana children and youth to support grant proposals and program initiatives. Access the database at <http://iyikcdb.iyi.org>

Virginia Beall Ball Library, a free lending library of youth development and nonprofit management materials, which can be borrowed easily by youth workers throughout the state, either on-site, online or through our toll-free main number. Search the catalog or sign up for an account at <http://www.iyi.org/library>

Youth Service Help Line, 877-IYI-TIPS, providing free phone assistance to youth organizations seeking quick answers to questions about fundraising, youth development and legal matters.

Free custom research on Indiana youth, at www.iyi.org/statistics_facts/data_request.html.

IYI's Web site, www.iyi.org, an online source for new reports on children, data for grant proposals, information about IYI's programs and library materials, and links to other valuable sources of youth development information.

Regional trainings, taught by nationally regarded instructors, offered at convenient locations across the state, on topics such as fundraising and working with youth.

Professional Development Grants, mini-grants for qualified youth workers to attend their choice of seminars, workshops, and conferences.

Kids Count in Indiana Conference, an annual fall conference designed to give Indiana youth workers the inspiration, networking opportunities, information and tools they need to serve children effectively.

Statewide assistance, providing free local service in all 92 Indiana counties. Call 1-800-343-7060 for information about how to contact the IYI Regional Field Representative near you.

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