

Certified Diabetes Educators: Accessing an Untapped Resource

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Friedman
Diabetes
INSTITUTE
Beth Israel Medical Center

Epidemiology

- CDC: 1 of 3 born in 2000 will develop diabetes.
- 42.3% of population over 20 in US have either diabetes or a pre-diabetes state.

Diabetes Care, Cowie, 32:287-294,2009



AMERICAN DIABETES ASSOCIATION

59TH ANNUAL SCIENTIFIC SESSIONS

"The Fault, Dear Brutus, . . ."

GERALD BERNSTEIN, MD
PRESIDENT'S ADDRESS



JUNE 20, 1999

SAN DIEGO CONVENTION CENTER
SAN DIEGO, CALIFORNIA

Welcome to San Diego and the 59th Annual Scientific Sessions of the American Diabetes Association. Once again this is the largest meeting we have had and with the most submitted abstracts. It's been a great year to be president!

Over the past year, I have thought a great deal about the strong messages our last few presidents have delivered at this annual meeting: they have warned us about the future of a society heavily impacted by diabetes, they have pleaded for more research funding, and they have analyzed our health care delivery system and how we need to change it.

For me, the question comes down to this: Why are we facing a worldwide pandemic of diabetes early in the next century and what are we going to do about it? As president, I have focused on three areas: first, on public health and the implications for society, especially with the alarming rise in type 2 diabetes in children; second, on research and the urgent need for funding increases; and third, on the health care delivery system of the future.

As I look at the state of diabetes today, I can't help thinking of that great line in Shakespeare's *Julius Caesar* where Ilean and hungry Cassius says to Brutus, "men at some time are masters of their fates; the fault, dear Brutus, is not in our stars, but in ourselves."

Certainly the fault or the problem of diabetes is not in the stars. It is in ourselves. This morning I will focus on "the faults within" that have brought us to this point in the history of diabetes. I will identify a few of the most serious implications for public health, for research and for health care delivery. I will issue a challenge—will we or will we not take control of this devastating disorder and become the masters of our fate?

We have mastered so much else. In the developed world today, and in the United States in particular, we are masters of science, technology, industry and medicine. We have prospered beyond any other society in history. How ironic that this very prosperity has created the perfect environment for diabetes to flourish. How ironic that the wealthiest nation on earth is not investing in the research necessary to eradicate this costly illness. How frustrating that we don't have the health care system to diagnose and treat properly every case of diabetes.

THE EVOLUTION OF DIABETES

The fault within has much to do with policy decisions and modern lifestyles but it is also genetic. As a species we have been hunter-gatherers for more than 99 percent of our time on earth. Somewhere in there, the famous "thrifty gene" gave a few of our ancestors an advantage. They made it through a few extra days without food and survived. Of course, the gene multiplied. In the process, it is likely that a group of mutations occurred that make up the complex cluster of abnormalities we now call type 2 diabetes.

In primitive times, these mutations were probably never expressed, since the very factors that put people at risk for type 2 diabetes simply weren't there. In a disorganized society where food was unpredictable, obesity was highly unlikely. Everyone was physically active and they died young. So inactivity and aging weren't issues either. The Nauru and our Native American populations are certainly 20th century examples of this genetic structure, but their lifestyles are radically changed.

Today that group of genetic faults is rapidly proliferating. But it is now being expressed as diabetes mellitus, and three of the major risk factors for this disease have become more and more common: obesity, physical inactivity and aging. I suppose we could say that evolution got us here, so why not let evolution take care of it? After all, other species adapt to changing factors like a fluctuating food supply. When Darwin studied finches on the Galapagos Islands, he noted differences in beak size. He saw that there was a reciprocal relationship between the beak size and food availability. Lots of food, small beaks. Little food, big beaks. As humans we simply have not yet adjusted biologically to our current state of plenty. But this kind of adaptation occurs over tens—even hundreds—of thousands of years. We cannot wait for evolution to rid society of type 2 diabetes.

A DISEASE OF EPIDEMIC PROPORTIONS

Today, 16 million Americans have this disease. It is easy to calculate that in the next 30 years in this country alone, the number of people with diabetes will likely increase to 50 million. That constitutes an epidemic, and has been declared so by the Centers for Disease Control and Prevention. Worldwide, the CDC and the World Health Organization project that diabetes cases will rise 42 percent in the developed world and a staggering 170 percent in the developing world, as more and more people turn to sedentary lifestyles.

President's Address





“There are as many as 60 million people who are pre-diabetic [and] need intensive intervention.”

-- Ann Albright, Director of the CDC's Division on Diabetes Prevention, *WSJ*, November 18, 2009 ppD5.

IT'S ALL ABOUT RISK

- Cardiovascular
- Microvascular









Diabetes Education:
does it make a difference?

Agenda

- Facts
- Challenges
- CDE Value/Education
- CDE/Physician Collaboration
- Reimbursement
- Resources



FACTS

Facts

- 90% of people with diabetes are managed by PCP.*
- According to the Centers for Disease Control and Prevention (CDC), the average time of patient visits with a general or family practice provider in 2002 was 16.1 minutes.*
- Of all primary care office visits, only 14.3% include diet or nutrition counseling, 10% include exercise counseling.**

*Christopher D. Saudek, MD, President of the American Diabetes Association and a professor of medicine at Johns Hopkins University in Baltimore, Md. <http://clinical.diabetesjournals.org/content/20/2/65.full>

**Sharlene Emerson, MSN, FNP, CDE. <http://spectrum.diabetesjournals.org/content/19/2/79.full?sid=2361beec-800f-440b-bc70-5b06e34499ea>

Facts

- Primary care has a pivotal role in ensuring that all people with diabetes receive effective diabetes care.
- Morbidity and mortality from this terrible disease can be reduced.
- The cost of diabetes is in its complications.
- The tools needed for good diabetes care already exist.
- “No diabetes management tool—no new oral agent, insulin, or medical device—is as important as the services of a certified diabetes educator (CDE)”. *

* Christopher D. Saudek, MD, President of the American Diabetes Association and a professor of medicine at Johns Hopkins University in Baltimore, Md. <http://clinical.diabetesjournals.org/content/20/2/65.full>



Challenges

Challenges

- Referrals are not easy, there may be a wait for classes. (up to 2 months).
- No feedback from the education program.
- Concerned that medication regimens will be changed without referring physician input.
- Concern that patients will be encouraged to see a physician affiliated with the program (stealing their patients).

Challenges

- Research has shown that some PCPs may only be offering advice on risk reduction rather than specific education and skills to affect behavior change.
- With the need for patients with diabetes to attend to multiple disease processes and the inherent time limitations in primary practice, patients may not be receiving the education and skills training they need to adequately care for their diabetes.

Challenges

- ~ 15,000 CDEs in the country, ~ 50% are nurses.
- For every certified diabetes educator, there are an estimated 1,600 patients in need of services.
- 63% of diabetes educators reported seeing fewer than 500 patients per year, or two patient visits per day.
- 42% reported seeing more than 1,001 patients per year, or four patients per day.

Challenges

- 50–80% of people with diabetes are lacking the knowledge and skills to effectively manage their disease.
- Awareness about and understanding of the disease is less than satisfactory among patients, leading to delayed recognition of complications.

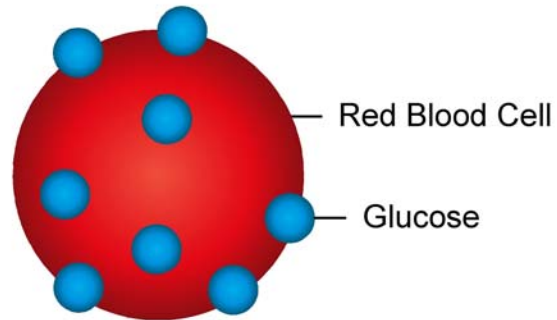
*U.S. Dept of Health and Human Services: Healthy People 2010. 2nd ed.
Washington D.C., U.S. Govt. Printing Office, 2000*



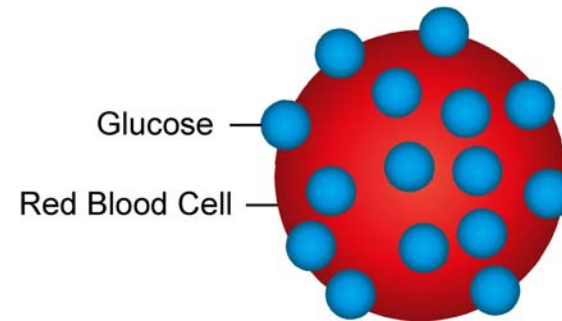
“Diabetes has increased dramatically over the past 10 years. That proves that diabetes is caused by global warming!”

Example

Normal Blood Glucose



High Blood Glucose





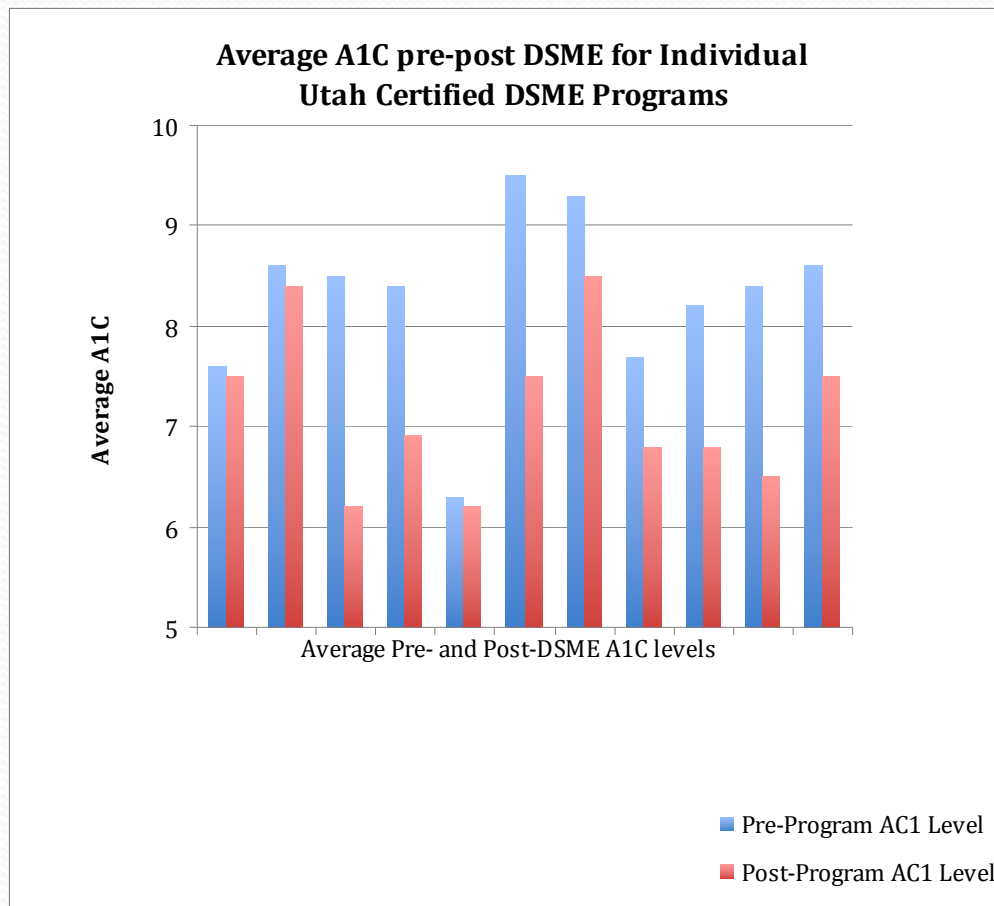
The Value of Diabetes Self- Management Education (DSME)

Diabetes Education

The overall objectives of DSME are to support informed decision-making, self-care behaviors, problem-solving and active collaboration with the health care team and to improve clinical outcomes, health status, and quality of life.

Note: Diabetes Self Management Training (DSMT) = Diabetes Self Management Education (DSME)

Diabetes Education Evidence Base



Diabetes Education

Role of CDEs

- CDEs have the expertise to help patients manage their diabetes.
- CDEs provide vital insights into self-care behaviors that help patients keep their diabetes in check:
 - managing blood sugar
 - oral and injectable medication dose adjustment instruction
 - nutrition and exercise information.
- Many CDEs also specialize in insulin pumps and continuous glucose monitoring systems.
- CDE empowers patients to partner in their own health care.



CDE/Physician Collaboration

Gerald J. Friedman Diabetes Institute

- Officially opened: November 14, 2007 (First World Diabetes Day sponsored by the UN)
- ADA Recognition Received December 26, 2007



Friedman Diabetes Institute (FDI)

Mission Statement

- The mission of the Gerald J. Friedman Diabetes Institute at Beth Israel Medical Center is to provide the highest quality comprehensive diabetes care; to raise public awareness of the needs of people with diabetes; to conduct research in diabetes; and to provide education for people with diabetes and their families, as well as for the general public and medical professionals.
- Our mission is best summarized by the acronym **CARE**
 - **C**are of patients
 - **A**wareness of their needs
 - **R**esearch into causes and mechanism of diabetes
 - **E**ducation of patients, the general public, and health professionals about diabetes

FDI Staff

- Two Registered Nurses
- Two Nurse Practitioners
- Two Registered Dietitians
- A Licensed Clinical Social Worker
- A Certified Exercise Physiologist (part time)
- Research Coordinator
- Pediatric Endocrinologist (1 day/week)

On FDI web

For Referring Physicians

Physicians can refer patients for diabetes education consultations with a nutritionist, exercise physiologist and diabetes nurse educator. For your convenience, the referral form can be downloaded after the presentation.

- **Please note: patients referred for these services will not be seen by an endocrinologist, but only by a nutritionist, nurse or exercise specialist.**
- If you have any questions, please contact us at (212) 420-3450.

Patient Information

Name _____ Date _____ D.O.B. _____

SS# _____ - _____ - _____ Phone# _____

Diagnosis DM 1 Pre-existing Diabetes with pregnancy Gestational
 DM 2 - Diet DM 2 - Oral agent DM2 - Insulin
 DM 2 - Oral agents + Insulin Other _____

Plan of Care (please choose all that apply)

Comprehensive Management Skills Group Class Insulin Instructions
 Comprehensive Management Skills (1:1) Management during Pregnancy
 Nutrition Management (1:1) Acute Complications
 Self-Blood Glucose Monitoring (1:1) Long-Term Complications
 Exercise Instructions (Stress Test (-)) Insulin Pump Start-up
 There are no contraindications toward participants in a fitness program
 I believe the applicant can participate, but urge caution because: _____
 The applicant should not engage in the following activities: _____
 Other _____

Diabetes Lab Results HbA1c _____ Date _____ See attached

Check if you would like patient to have: HbA1c Microalbumin Lipid Profile

Medications: _____

_____ See attached

Reason(s) for patient referral

Recurrent elevated BG levels: Recurrent hypoglycemia
 HbA1c > 8% Inappropriate utilization of diabetes services
 Fasting BG > 140 mg/dL ER Home Health Service
 Random BG > 180 mg/dL Hospital Physician Office
 Recent admission for DKA/HHNS Other _____

Diabetes Complications / Co-morbidities

Retinopathy Neuropathy Nephropathy HTN
 CAD Dermatopathy Hyperlipidemia Gastroparesis

Barriers for training

Non-adherence Morbid Obesity Impaired Mobility Visual Impairment
 Learning disability Eating Disorder Impaired Mental Status Hearing Impairment
 Impaired Psychosocial States Other _____

Language English Spanish Other _____

Physician's Signature _____ **Date** _____

Referring Physician _____ **Phone** _____ **Fax** _____

Address _____ **City** _____ **State/Zip** _____

Clinical Services

- Individual or group education series that focus on:
 - Blood glucose monitoring
 - Basic nutrition and meal planning
 - Medications
 - Prevention of acute complications
 - Prevention of chronic complications
 - Insulin Pump Training
 - Program for children with diabetes
 - Education for pregnant women with diabetes
- Support Groups
 - Monthly meetings of people with type 1 diabetes
 - Monthly meetings of people with type 2 diabetes
 - Bi-monthly meetings for young women with type 1 diabetes



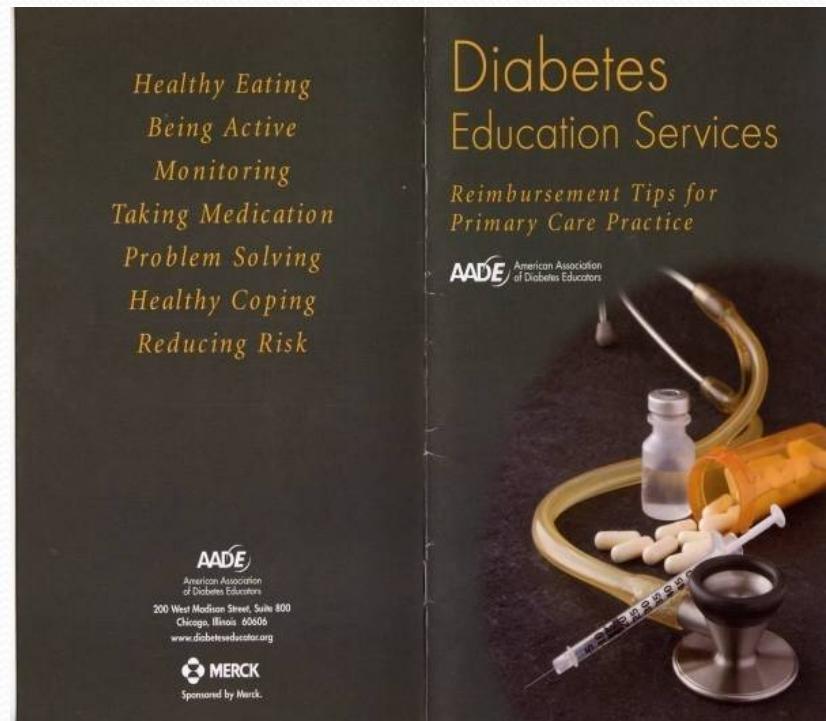
Reimbursement

What motivates Primary Care Physicians to provide Diabetes Education?

- Better healthcare outcomes
- Reimbursement

How can you get reimbursed for diabetes education?

- AADE has developed a guide: *Diabetes Education Services: Reimbursement Tips for Primary Care Practice*, to help primary care physician practice's appropriately bill for diabetes self-management training (DSMT) and medical nutrition therapy (MNT).



Reimbursement Tips for Primary Care Practice

- The Booklet covers
 - Getting Started
 - Referrals
 - Documentation
 - Billing & Distribution of Funds
 - Opportunities and Challenges

- Diabetes Education Services

● Can download it from:

http://www.diabeteseducator.org/export/sites/aade/resources/pdf/Reimbursement_Tips_2009.pdf

Getting Started

- Step #1: Obtain “Program Recognition”
- Step #2: “Provider” status from the Centers for Medicare/Medicaid Services (CMS) to bill
- Step #3: Determine fee for service and develop a “super bill” for billing third party payers
- Step #4: Obtain a database system that will track all of the American Diabetes Association (ADA), American Association of Diabetes Educators (AADE), or Indian Health Services (IHS) required information to maintain “Recognition” status.



Resources, Facts, & Figures

Resources

- If you would like to find a diabetes educator in your community, use the *Find an Educator tool*, which is available at:
 - <http://www.diabeteseducator.org/DiabetesEducation/Find.html>
- Find an ADA recognized program in you area at:
 - http://professional.diabetes.org/erp_zip_search.aspx
- Additional tools for physicians who are interested in learning best practices can be found at the following websites:
 - Institute for Healthcare Improvement (IHI): <http://www.ihl.org/ihl>
 - The Centers for Disease Control and Prevention (CDC): <http://www.betterdiabetescare.nih.gov/>
 - Medicare Learning Network (MLN): <http://www.cms.hhs.gov/MLNMattersArticles/downloads/MM3185.pdf>

Resources

- Average hemoglobin A1c (A1C) of people with diabetes in the United States at **9%**
- **\$174 billion**: Total costs of diagnosed diabetes in the United States in 2007
 - **\$116 billion** for direct medical costs
 - **\$58 billion** for indirect costs (disability, work loss, premature mortality)
- After adjusting for population age and sex differences, average medical expenditures among people with diagnosed diabetes were **2.3 times higher** than what expenditures would be in the absence of diabetes.

Resources

Morbidity and Mortality

- **High blood pressure**
 - In 2003–2004, 75% of adults with self-reported diabetes had blood pressure greater than or equal to 130/80 mmHg, or used prescription medications for hypertension.
- **Blindness**
 - Diabetes is the leading cause of new cases of blindness among adults aged 20–74.
 - Diabetic retinopathy causes 12,000 to 24,000 new cases of blindness each year.
- **Kidney disease**
 - Diabetes is the leading cause of kidney failure, accounting for 44% of new cases in 2005.
- **Neuropathy**
 - About 60% to 70% of people with diabetes have mild to severe forms of nervous system damage.
- **Amputation**
 - More than 60% of nontraumatic lower-limb amputations occur in people with diabetes.

Resources

Morbidity and Mortality

Deaths

- The seventh leading cause of death listed on U.S. death certificates in 2006.

Complications

- Heart disease and stroke
 - In 2004, heart disease was noted on 68% of diabetes-related death certificates among people aged 65 years or older.
 - Adults with diabetes have heart disease death rates about 2 to 4 times higher than adults without diabetes.
 - The risk for stroke is 2 to 4 times higher among people with diabetes.

Facts

Total	23.6 million in the United States- (7.8% of the population)—have diabetes.
Diagnosed	17.9 million people
Undiagnosed	5.7 million people
Pre-diabetes	57 million people
New Cases	1.6 million new cases of diabetes are diagnosed in people aged 20 years and older each year.

Data from the 2007 National Diabetes Fact Sheet
(the most recent year for which data is available)

Facts

- 83% of patients feel that they are eating healthy.
- 29% of their physicians believe this number.

- 77% feel that they are exercising appropriately.
- 18% of their physicians believe this number.

- 55% do not know their A1c level, have not had it checked or are unsure if they have had it tested.

Resources: Reimbursement

- **Only DSMT programs that have submitted their Certificate of Recognition from the AADE, ADA or HIS may bill Medicare for DSMT services.**
- Other payers might not require this, assuming any practice that bills using DSMT service codes G0108 or G0109 has a certificate.
- While Medicare will cover MNT that is provided by a RD or nutrition professional who meets specific requirements, other payer's coverage may extend to nutrition services provided by a diabetes educator.
- The Medicare Physician Fee Schedule (PFS) lists the fees that Medicare will pay for services based on localities and procedure codes. All providers have access to their local carrier's or FI's websites and can look up this information under Provider Pricing. The PFS is updated annually by CMS and tells providers what Medicare allows in payment for services to both participating and non-participating providers.

Evidence for Effectiveness of Diabetes Education

- A meta-analysis of the effect on glycemic control*
- **OBJECTIVE:** To evaluate the efficacy of self-management education on GHbA1C in adults with type 2 diabetes
- A TOTAL OF 31 STUDIES
- RESULTS
 - ↓ HbA1C by 0.76% more than the control group at immediate follow-up ($p < 0.05$);
 - ↓ by 0.26% at 1–3 months of follow-up ($p < 0.05$);
 - ↓ by 0.26% at 4 months of follow-up ($p < 0.05$); .
 - A decrease of 1% was noted for every additional 23.6 h of contact.

*Susan L. Norris, MD, MPH¹, Joseph Lau, MD², S. Jay Smith, MIS, MSC³, Christopher H. Schmid, PHD⁴ and Michael M. Engelgau, MD, MSC¹, Self-management education for adults with type 2 diabetes. *Diabetes Care* 25:1159-1171, 2002

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**“The red circles are your red blood cells.
The white circles are your white blood cells.
The brown circles are donuts. We need to talk.”**



Thank You!