

Dentists Offer Diabetes Screening:



FREE Diabetes Screening

In partnership with American Diabetes Association and "The Voice of Diabetes," with Anastasia.

3rd Tuesday of Each Month



Dentists Offer Diabetes Screening:

- “My Dentist Complete Care Dentistry” announced today that they will continue offering FREE DIABETES SCREENINGS on the third Tuesday of every month, after the overwhelming success of November 15th’s Diabetes Danger Zone Day.
“My Dentist” has launched this program to promote oral health in patients with diabetes, and help prevent and screen for diabetes in dental patients receiving routine care who may be in the “Diabetes Danger Zone.”



Diabetes Danger Zone Day at *My Dentist*

- Are you living with diabetes? If you are, you know that the disease can cause problems with your oral health as well as many other parts of your body. However, it's estimated that as many as 1 in 3 adults currently have the disease, and don't even know it. Furthermore, diabetes is the 6th most common cause of death and its prevalence is growing, as Americans are living longer.
- *Diabetes Danger Zone Day at My Dentist will be held on the third Tuesday of every month. Patients will receive a FREE DIABETES SCREENING which includes a complimentary tooth pocket depth analysis and a blood glucose screening.*



“Teaching Casual Random Blood Glucose Screening to Second-Year Dental Students”

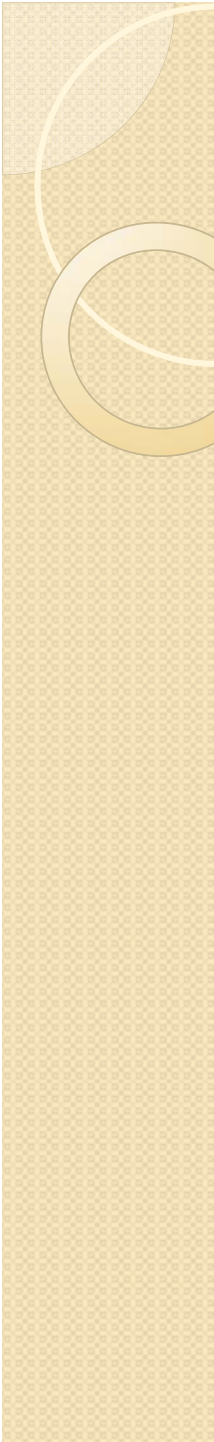
**Thomas W. Radmer, D.D.S., M.S.; Moawia M. Kassab, D.D.S., M.S.;
Denis P. Lynch, D.D.S., Ph.D.; Martin Walsh, B.S.**

- *Marquette University School of Dentistry*
- *November 2009 • Journal of Dental Education*



Marquette Dental School:

- The program at Marquette has evolved into one of screening all diabetic patients prior to providing care on any given day.
- Casual Random screening (non-fasting) is taught to students in the fall semester of their sophomore year.
- For patients with a prior history of DM undergoing surgery, screening tests are accomplished at the time of appointment.
- All clinics in the school of dentistry, as well as our statewide community health facilities, are equipped to accomplish random blood glucose screening tests.
- Diabetic management for outpatient surgery has been incorporated into the core curriculum for third year dental students, as they rotate through the division of surgical sciences.
- We refer all patients for medical follow up when RBGS values fall below 60 or above 180 mg/dL.



U.S. Prevalence of Diabetes: (2011)

Total: **25.8 million** with diabetes

Diagnosed: **18.8 million** people – 8.3 of population
(90%+ have Type 2)

Undiagnosed: **7 million** people

79 million have pre-diabetes*

*Studies show that most people with pre-diabetes will develop type 2 diabetes within 10 years if they don't make some lifestyle changes. They also have a higher risk of developing cardiovascular disease.



Diabetes In The U.S. (2010)

- 8.3% of all Americans
- 11.3% of adults age 20 and older
- 27% of adults 65 and older
- 1.9 million diagnosed in 2010
- Predicted - 33% of all Americans by 2050
- Pre-diabetes
 - 35% of adults age 20 and older
 - 50% of Americans 65 and older



Complications of Diabetes:

- Heart Disease and Stroke
- High Blood Pressure
- Blindness
- Kidney Disease
- Neuropathy
- Amputation
- Depression
- **Periodontal Disease**



Do You Like These Numbers?

- 2007 – Diabetes contributed to 231,404 deaths.
- New cases in 2010 – 1.9 million
- Want to do something about this?????

- **You Can!!!!**



Diabetes Mellitus:

Type 1: Autoimmune beta cell destruction, absolute insulin deficiency.

Type 2: Insulin resistance, other mechanisms, eventual beta cell failure over time.



Diabetes Risk and Prevention:

- **Risk:**
- Type 1 – mostly unknown, some familial
- Type 2 – obesity, smoking, sedentary lifestyle, familial

- **Prevention:**
- Type 1 – none known
- Type 2 – lifestyle management



Screening for Diabetes:

- Testing should be considered in all adults who are overweight
- **And**
- Physical Inactivity
- High-risk race/ethnicity
- Hypertension (greater than 140/90)
- Older than 45
- A family Hx of diabetes
- Large babies (over 9 lbs.)

Diabetes Diagnosis:

Category	FPG (mg/dL)	2h 75gOGTT	A1C
<u>Normal</u>	<100	<140	<5.7
<u>Prediabetes</u>	100-125	140-199	5.7-6.4
<u>Diabetes</u>	$\geq 126^{**}$	≥ 200	>6.5

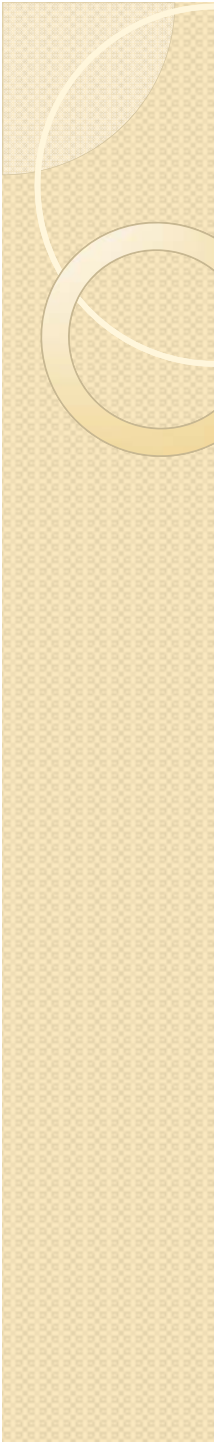
Or patients with classic hyperglycemic symptoms with plasma glucose ≥ 200

** On 2 separate occasions



Diabetes and Periodontal Disease:

- Strong and growing evidence points to an association between diabetes and periodontal disease.
 - One third of patients with diabetes have oral
 - complications, mainly periodontitis and tooth loss.
 - Large body of evidence shows that periodontal disease is a complication of diabetes mellitus.
 - Periodontal disease is more severe in individuals with diabetes, especially those with poor control.



International Journal of Dental Hygiene:

- A recent study finds that **Over 90% of People with Gum Disease Are at Risk for Developing Diabetes.**



CDC:

Diabetes rose dramatically from mid-1990's to 2010. Prevalence of the disease increased by at least 50% in 42 of the country's 50 states.



F.C.D.C.

- A Federal Centers for Disease Control and Prevention study finds an alarming increase in Type 2 diabetes and pre-diabetes among adolescents age 12 to 19.



Prediction:

- **This epidemic will bankrupt our medical system without significant intervention.**

Diagnosing Diabetes in the Dental Chair:

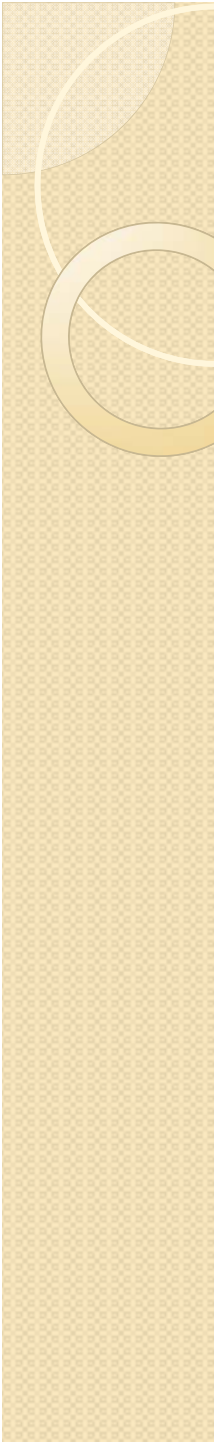


- “In light of these findings, the dental visit could be a useful opportunity to conduct an initial diabetes screening; an important first step in identifying those patients who need follow-up testing to diagnose the disease,” says Sheila Strauss, who determined that 93 percent of subjects who had periodontal disease were considered to be at high risk for diabetes and should be screened for diabetes.



Dental Disease

- Periodontal (gum) disease is more common in people with diabetes.
- Among young adults, those with diabetes have about twice the risk of those without diabetes.
- Adults aged 45 years or older with poorly controlled diabetes were 2.9 times more likely to have severe periodontitis than those without diabetes.
- The likelihood was even greater (4.6 times) among smokers with poorly controlled diabetes.
- About one-third of people with diabetes have severe periodontal disease consisting of loss of attachment (5 millimeters or more) of the gums to the teeth.

- 
- A study published recently in the journal *Pediatrics*, found that the percentage of adolescents age 12 to 19 with Type 2 diabetes or pre-diabetes nearly tripled from 9% in 1999 to 23% in 2008.



High Blood Sugar Increases Risk for Surgical Site Infection:

- Science Daily (July 25, 2012) — Two recent studies looked at surgical site infections and hyperglycemia, the technical term for high blood glucose, or high blood sugar.



Jennifer Litchman: (Office of the President)

“I spoke with President Perman, and he was very interested in your idea about dentists screening for diabetes, and has lately been talking about dentists’ role in helping to fight the obesity epidemic. In fact, we used an important article from 2011 from the Journal of the American Pharmacists Association about the role of dentists in counseling patients about obesity in our November 2011 Summit on Childhood Obesity”.



**Dr. Harry Goodman:
Director, Office of Oral Health
MD. Department of Health and Mental Hygiene**

“This is very exciting that you are looking into this and speaking of being kept in the loop, I would love to be kept in the loop on this as you proceed. I think there is a lot of attention being paid to diabetes management here and we are really pushing interdisciplinary strategies such as the one you are looking into, especially ones to train future. If it becomes a funding issue, let me know. We will be reapplying for our 5-year CDC grant beginning in February so that we are hopefully funded beginning Fall 2013. I know CDC would love to see such a program and our collaboration”.



Kristi Silver, MD:

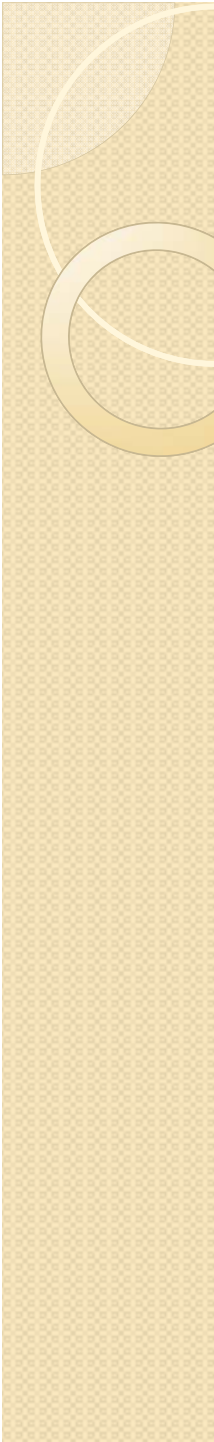
Associate Professor of Medicine
Division of Endocrinology, and Diabetes
UMSOM

- “I would be happy to support this project”.



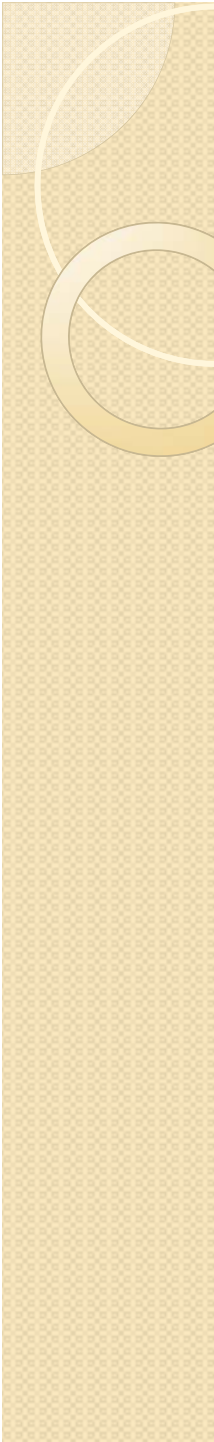
Maryland State Board of Dental Examiners:

- I recently gave a presentation to the Dental Board on this topic.
- “All Board Members are fully supportive of the idea” - President of the MSBDE.



The prevalence of diabetes mellitus (DM) has been dramatically increasing. Instances of patients' not being aware of their diabetes have been reported widely, as have instances of poor control of DM or pre-diabetes among patients who have the disease.

Approximately one-quarter of the US population has impaired glucose metabolism. These facts indicate that **blood glucose screening** is needed.



Despite the known morbidity of diabetes, detection remains suboptimal. Researchers estimate that 30% of people who meet the criteria for having the disease are unaware of the condition. The American Diabetes Association (ADA) recommends opportunistic screening in the health care setting.

Dental offices are indeed health care settings, and therefore the feasibility of obtaining blood glucose measurements in the dental office is a worthy endeavor.



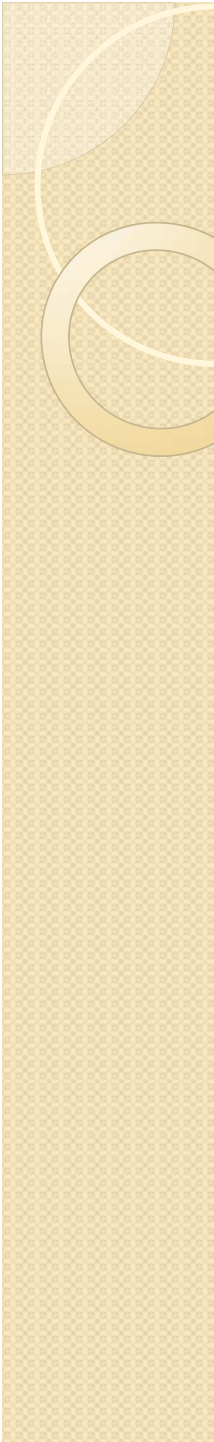
“Random Blood Glucose Testing in Dental Practice”

JADA

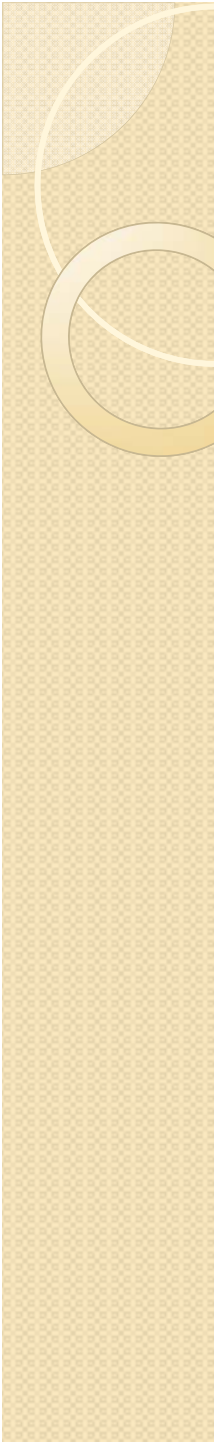
- A community-based feasibility study from The Dental Practice-Based Research Network

Andrei Barasch, DMD, MDSc; Monika M. Safford, MD; Vibeke Qvist, DDS, PhD, DrOdont;

- **Randall Palmore, DMD; David Gesko, DDS; Gregg H. Gilbert, DDS, MBA; for The Dental Practice-Based Research Network Collaborative Group**



As part of The Dental Practice-Base Research Network, the authors conducted a study in community dental practices to test the feasibility of screening patients for abnormal random blood glucose levels by means of glucometers and finger-stick testing. ..



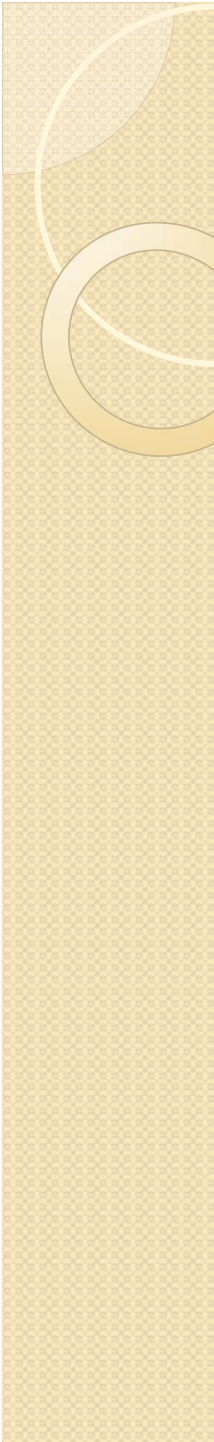
Blood glucose testing (BGT) was well received by patients and practitioners . These results support the feasibility of implementation of BGT in dental practices.

Detecting diabetes and referring to the appropriate service are major public health objectives. DHHS rates screening for diabetes as one of the top measures that need to be implemented in the health care system.

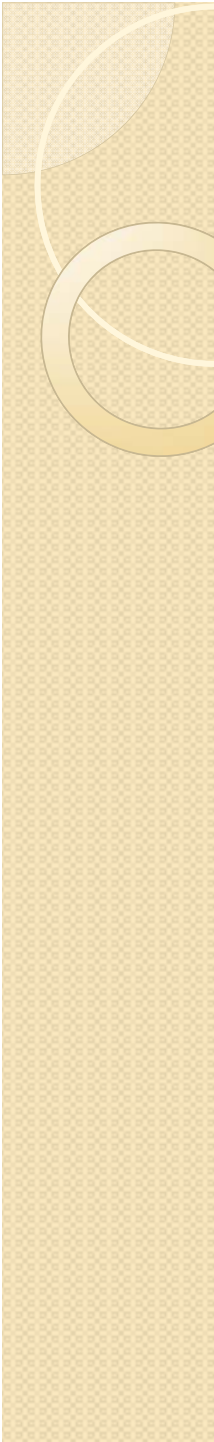


The dental office is an ideal setting for screening for diabetes.

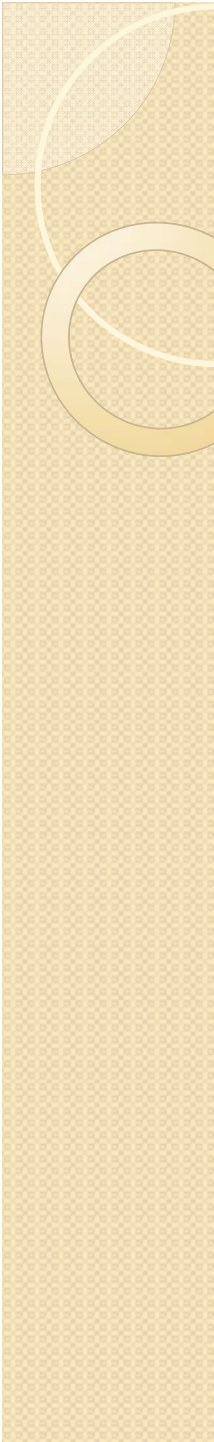
Measuring patients' blood glucose levels in the dental office will provide valuable information to both the patients and dentists, and abnormal results would lead to patients being referred to the appropriate medical services by the dental practitioner.



Additionally, BGT in the **dental office** clearly demonstrates that dentists are interested in the patient's general health, and further increases patient's confidence in the dental practice.



Most patients with diabetes tend to have poorly controlled disease, and hence benefit from frequent BGT. Elevated glucose levels in people with diabetes would trigger the dentist's referral of patients to their physicians for evaluation of their treatment, and to help determine the correct timing for these patients to undergo invasive dental procedures.



Moreover, the bidirectional relationship of diabetes with periodontal disease suggests a potential benefit of screening for diabetes for both patients and dental practitioners.

It is very important to note that we are talking about screening for diabetes, not to diagnose the disease. Patients with abnormal blood glucose levels would be referred to their physicians for further testing, diagnosis, and disease management.

Further, opportunistic BG in **dental practices** appears to have acceptance from both patients and practitioners.



Screening for diabetes in the dental office:

One of the most important reasons to do so is that about a third of diabetics do not know that they are diabetic, many diabetics who know that they are diabetic do not know how well controlled their diabetes is, and there are numerous implications for diabetes on presentation of oral disease and success of treatment.



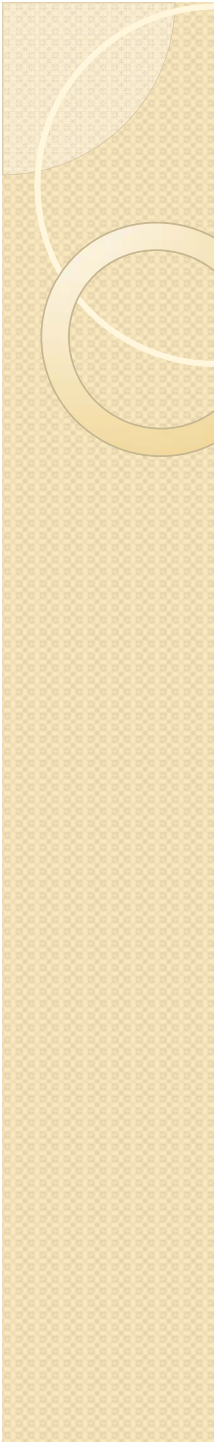
Dr. Ashraf Fouad:

“In endodontics, epidemiological studies have shown that diabetics have significantly more prevalence of periapical dental lesions and reduced prognosis of endodontic treatment of teeth with preoperative periapical lesions (not teeth with vital pulp). Research shows that persistent periapical lesions 2-4 years after treatment in diabetics and non-diabetics correlate significantly in size with the degree of glycemic control”.



Dr. Mark Reynolds:

“Periodontal disease is recognized as a complication of diabetes mellitus. Diabetics are more likely to develop periodontitis and respond more poorly to treatment. In the UMSOD postgraduate clinic, we have been ordering blood glucose tests to screen for hyperglycemia in periodontal patients at the School of Dentistry for over 20 years. This screening has allowed us to refer patients, when necessary, for appropriate follow up evaluation and medical management—a valuable service and benefit to our citizens. We also routinely assess glycemic control on our diabetic patients prior to surgical treatment”.



Many patients see their dentists more often than other healthcare providers and might benefit from screening for medical conditions such as diabetes and hypertension in dental offices, according to the results of a study [published online](#) December 15, in the *American Journal of Public Health*.



Medical Screening by Dentists Has Benefits, Study Suggests

Many patients see their dentists more often than other healthcare providers and might benefit from screening for medical conditions in dental offices, according to the results of a study

Dentists could use tools such as blood pressure cuffs or finger-stick glucose monitors to check for biomarkers for such conditions as diabetes and hypertension. Diabetic screening by dentists has already become routine in Sweden.

- Blood glucose monitors are inexpensive to purchase, and that the screening can be done in less than 60 seconds.
- "We do it as a service to our patients. I look at public health issues and I think this is a concern to dentists. People have multiple system conditions. Our students are being taught at Marquette that they are an integral part of the healthcare stream."



Effectiveness of screening for diabetes mellitus in dental health care.

2012 Sep 4. Diabetic Medicine

Conclusions: Cooperation between dental and primary care for high blood glucose screening and follow-up appears to be a feasible method for early diagnosis of diabetes.

CLIA

- Clinical Laboratory Improvement Amendments (CLIA)

*Paul Celli, Coordinator for Laboratory Licensing
and Surveying*

*Maryland Department of Health and Mental
Hygiene*

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QUESTIONS?????