Integrating Medical-Dental Care Coordination for Diabetic Patients: A Pilot Effort

AACSP Annual Symposium
April 27, 2014
- Non-Profit Organization
- 56 locations and 2 hospitals
- 3,741,308 patient encounters in 2011
- 86 different medical specialties
- 650+ physicians
- 400+ research and educational projects
- 30,000 square miles of primary service area

Marshfield Clinic
Marshfield Clinic Health Complex
Oral Health: A National Problem

- Over **108 million** Americans lack dental insurance [2.5 times the number that had no health insurance]
- Oral health burdens **53 million** children and adults across the U.S.
- The poor endure markedly higher oral disease and markedly lower access to prevention and treatment services
- CMS projects that the total national expenditures for dental care will almost triple between 2000 and 2020 (from **$62.0 billion** in 2000 to **$167.9 billion** in 2020, a **271% increase**)

References:
- CMS
Call To Action: Key Strategies

1. Create access to Dental and Oral Care
2. Integrate Medical & Dental Care
3. Focus on Population/Public Health and Prevention
4. Facilitate Oral-Systemic Research
5. Train Next Generation Dental Providers, Educators and Researchers
Health Professional Shortage Area: Dental
Family Health Center of Marshfield, Inc.
A member of the Marshfield Clinic Health System

- 9 FQHC providing dental services to people from all of Wisconsin's 72 counties
- 40 plus (FTE) dentists
- 30,680 unique dental patients [2010]
- 41,449 unique dental patients [2011]
- 46,815 unique dental patients [2012]
- 44,267 unique dental patients [2013]
Integrating Medical and Dental Care
Why? Growing Evidence for the Need to Integrate

THIRD PARTIES DRIVING IT

2009 University of Michigan study included **21,000 BCBS members** and found that with regular periodontal care, it was observed:

- **10% reduction in diabetes related medical costs**;
- **20% reduction in costs** related to the treatment of cardiovascular disease in patients with heart disease and diabetes;
- **30% reduction in costs** related to treatment of kidney disease for patients with diabetes and kidney disease;
- **40% reduction in costs** related to treating congestive heart failure for patients with diabetes.

According to researched cited by CIGNA, expecting mothers with chronic periodontal disease during the second trimester are 7 times more likely to deliver preterm (before 37th week).
More Insurance Companies Understanding the Need for Medical/Dental Integration

• Aetna Initiates Dental/Medical Integration Program Offering Free Dental Care to “At-Risk” Members Based on Research (2006)

• CIGNA Offers Extended Benefits to Expecting Mothers, Diabetics and Cardiovascular Disease Patients to Improve Health and Lower Costs (2006)

• Blue Cross Blue Shield of Michigan Commissioned Study by University of Michigan Researchers Demonstrate Link Between Good Oral Health and Lower Medical Costs for Diabetics (2009)
One quick example: United Concordia Study, Dr Marjorie Jeffcoat, 2012 -
Looked at medical & dental claims data of people with Type II diabetes
from a pool of 1.7M patients

The UCWellness Oral Health Study produced several key findings.²

Over the course of the study, each diabetic member who treated their
gum disease:¹

- Saved an average of $1,814 in medical costs annually.
- Had an average reduction of 33% in annual hospital admissions.
- Had an annual average of 13% fewer physician visits.

Treating Gum Disease in People with Diabetes Lowers Both
Medical and Pharmacy Costs

| Annual Medical Savings (starting in first year of treatment) | $1,814 |
| Annual Pharmaceutical Savings (after 7 treatments)       | $1,477 |
| Combined Annual Savings                                     | $3,291 |

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Teaching Oral Health in U.S. Medical Schools: Results of a National Survey

<table>
<thead>
<tr>
<th>Hours of Oral Health Curriculum</th>
<th>Percentage of U.S. Medical Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10.2%</td>
</tr>
<tr>
<td>0 – 2</td>
<td>38.6%</td>
</tr>
<tr>
<td>0 – 4</td>
<td>69.3%</td>
</tr>
<tr>
<td>0 – 6</td>
<td>80.7%</td>
</tr>
</tbody>
</table>

160 Students [1.3%] in the entire country felt very well trained to address oral health issues.
Background Study: Medical Providers' Dental Information Needs

• What dental information are of interest to the medical care providers that are suitable for viewing/accessing through an integrated electronic health record?*

• Survey Response Rate: 35.32% (421/1192)

• Focus Groups: 12 sites, 75 Participants, Various Roles and Specialties

Require Patient’s Dental Information to Provide Effective Medical Care
Quotes from the Providers: Family Medicine

• “Dental health has significant impact on overall health - **gingivitis** can provoke systemic inflammation, seed distal infection & impact patient quality of life. When a dental provider prescribes **medication**, this info needs to be shared with all healthcare providers to avoid drug interactions or drug-related adverse events.”

• “Patients often don't know their **diagnoses or medications** when they come to me for dental problems. This causes potential duplicate or harmful treatment. Cannot relay expected response to treatment if we don't know what's being done. These are often high, at-risk patients with psychosocial and economic problems and not versed in appropriate follow-up care. Communication between providers is essential. Seems like a no-brainer to us primary care folks.”
ER/Urgent Care

• “In the ER we see many dental complaints and we need to know what the patients have had done previously, arrange follow-up, and to notify dental clinics of what we did. Many patients seek care in the ER for the same dental complaints again and again, in drug seeking fashion.”

Ob/Gyn

• “Important for primary, preventive care. Also, for OB patient, periodontal disease is associated with an increased risk of preterm delivery.”

Neurology

• “Most often I have patients whose headaches are worsened by TMJ/bruxism/tooth pain. I have patients who present with atypical face pain and need to distinguish tooth pain from trigeminal neuralgia. During training, I saw a few patients with meningitis triggered by oral bacteria--patients with terrible dental hygiene.”
Advantages of Access to Patient’s Dental Information

- Access to more reliable dental information and history
- Better communication
- Better continuity of care
- Easy and faster access
- Reduce narcotics abuse
- Holistic care
- Better coordination of care
Below is a list of dental record information. What information would you like to access in the integrated electronic health record system (iEHR) if any?

- Oral health status: 61.6% (226)
- Treatment plan: 58.0% (213)
- Dental problem list: 56.1% (206)
- Dental diagnosis: 53.7% (197)
- Dental history: 46.0% (169)
- Dental alerts: 45.2% (166)
- Dental appointment: 30.2% (111)
- Progress notes: 28.9% (106)
- Dental radiographs: 12.8% (47)
- Tooth chart: 8.7% (32)
Why is Diabetes a Concern?

• According to National Diabetes Information Clearinghouse (NDIC) Diabetes affects **25.8 million people of all ages** that constitutes to about **8.3 percent** of US population.

• The Wisconsin Diabetes Surveillance report of 2012 states that about **346,190 were diagnosed** with diabetes and an additional **128,900 adults** are thought to have diabetes.

• The estimated total Death rates due to diabetes will double between 2005 to 2030 and will be the **7th leading cause of death in 2030**.

• The U.S. Department of Health and Human Services have listed **Dental diseases** as one of the complications of Diabetes.
County-level Estimates of Diagnosed Diabetes among Adults aged ≥ 20 years: United States 2009

Diabetes ↔ Periodontal Disease

• It is established beyond a reasonable doubt that diabetes has a deleterious effect on periodontal disease

• Evidence is mounting with respect to the impact of periodontal health on diabetic control

• Clearly, in their role as guardians of health, it is critical for dentists and physicians to work together to manage their diabetic patients
## Complications of Diabetes

### Systemic Complications
- Diabetic Neuropathy
- Diabetic Nephropathy: can lead to dialysis or kidney transplant
- Diabetic Retinopathy and blindness
- Heart attack, stroke, foot amputation
- Poor wound healing

### Oral Complications
- Aggressive form of periodontitis
- Necrotizing ulcerative gingivitis
- Tooth decay and root caries
- Dental caries
- Candidal infection
- Burning mouth syndrome
- Lichen planus
Medical-Dental Primary Care Demo Project Summary

FHC
- Dental Capacity
- Prioritize Patients
- Support Low Income Access
- Support Dental Education

MC
- Medical Services
- iEHR
- DM Care Management
- Medical Home
- 55 Clinics
- Physician Champions
- DM Educators
- RN Care Coordinators

MCRF
- Project Management
- Conducts Evaluations
- Develops CDST w/ Clinic IS
- Grants Management

MEDICAL EDUCATION
- Medical Providers
- Dental Providers
- DM Patients
- Evidence Based Education
- State of Art Techniques

SHP
- HMO
- DM Member Interventions
- Data for Cost Evaluations

WI MEDICAID
- Provide Data for Total Cost Evaluations

DM Patients and Families

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Specific Goals

1. Outreach and education to target individuals/patients from an insurer/HMO and subsequently from physician community

2. Development and implementation of an integrated medical and dental EHR with bi-directional capabilities and embedded clinical decision support tools

3. Interprofessional education and outreach to effectively and efficiently implement the EHR-based integration and promote collaboration at the individual professional level

4. Development of monitoring processes and systems to evaluate performance and identify opportunities for improvement
# SHP Intervention

<table>
<thead>
<tr>
<th>Goals, Objectives and Activities</th>
<th>Activity Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Care: Consumer focused care delivery</strong></td>
<td></td>
</tr>
<tr>
<td><strong>SHP Intervention</strong></td>
<td><strong>Goal: Educate diabetic patients regarding the role of proper oral health in managing the complexities of their diabetic condition.</strong></td>
</tr>
<tr>
<td></td>
<td>• Increase HMO member/patient awareness about impact of oral health on their diabetes outcomes from insurer</td>
</tr>
<tr>
<td></td>
<td>• Identify SHP members with DM and high HbA1c for care management and mail interventions</td>
</tr>
<tr>
<td></td>
<td>• Allocate SHP target members into intervention cohorts for staged contact over 6-8 months &amp; initiate interventions</td>
</tr>
<tr>
<td></td>
<td>• Monitor SHP care managers and customer support for member feedback regarding oral health and related issues</td>
</tr>
<tr>
<td></td>
<td>• Develop SHP member electronic tracking system for monitoring dental appoints and subsequent visits (Evaluation element)</td>
</tr>
<tr>
<td></td>
<td>✓ The data analytics group identified the accurate number of SHP members with DM and high HbA1c located in proximity of Marshfield Clinic's nine FHC Dental Centers.</td>
</tr>
<tr>
<td></td>
<td>✓ Initial draft of the SHP intervention letter and patient education material were prepared and approved by IRB.</td>
</tr>
<tr>
<td></td>
<td>✓ Finalized the intervention design consisting of two cohorts: SHP diabetic patients will receive a letter containing the importance of regular oral health and a request to follow up with their dental provider, with and without a 'regret lottery' incentive option for follow up. (see table on next page)</td>
</tr>
<tr>
<td></td>
<td>✓ As of Feb. 7th, 25 member/patients have returned their Dental Check-up Lottery Cards to be entered into a regret lottery.</td>
</tr>
<tr>
<td></td>
<td>✓ Preparing for the next mailing group to SHP DM members.</td>
</tr>
</tbody>
</table>
Provisional Prioritization of SHP DM Members by Closest Dental Center and Priority Mailing Group.

<table>
<thead>
<tr>
<th>Dental Center</th>
<th>Priority Groups</th>
<th></th>
<th></th>
<th></th>
<th>Center Total</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1st</td>
<td>2nd</td>
<td>3rd</td>
<td>4th</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black River Falls</td>
<td>9</td>
<td>11</td>
<td>8</td>
<td>4</td>
<td>32</td>
<td>0.5%</td>
</tr>
<tr>
<td>Chippewa Falls</td>
<td>81</td>
<td>150</td>
<td>185</td>
<td>41</td>
<td>457</td>
<td>6.6%</td>
</tr>
<tr>
<td>Ladysmith</td>
<td>29</td>
<td>99</td>
<td>42</td>
<td>22</td>
<td>192</td>
<td>2.8%</td>
</tr>
<tr>
<td>Marshfield</td>
<td>484</td>
<td>856</td>
<td>1431</td>
<td>379</td>
<td>3150</td>
<td>45.4%</td>
</tr>
<tr>
<td>Medford</td>
<td>138</td>
<td>221</td>
<td>464</td>
<td>68</td>
<td>891</td>
<td>12.8%</td>
</tr>
<tr>
<td>Neillsville</td>
<td>36</td>
<td>99</td>
<td>157</td>
<td>27</td>
<td>319</td>
<td>4.6%</td>
</tr>
<tr>
<td>Park Falls</td>
<td>87</td>
<td>102</td>
<td>224</td>
<td>47</td>
<td>460</td>
<td>6.6%</td>
</tr>
<tr>
<td>Rhinelander</td>
<td>187</td>
<td>255</td>
<td>414</td>
<td>102</td>
<td>958</td>
<td>13.8%</td>
</tr>
<tr>
<td>Rice Lake</td>
<td>49</td>
<td>85</td>
<td>310</td>
<td>34</td>
<td>478</td>
<td>6.9%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1100</td>
<td>1878</td>
<td>3235</td>
<td>724</td>
<td>6937</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Priority Groups:
- All Losing Medicaid and all keeping Medicaid with median HbA1c => 7.3 or that have no lab data
- All keeping Medicaid with HbA1c < 7.3 and All Advocate and Medigap with median HbA1c => 7.3
- Advocate and Medigap with no lab data
- Commercial with median HbA1c => 7.3

Not prioritized:
- 4174 Advocate with median HbA1c < 7.3
- 366 Medigap with median HbA1c < 7.3
- 2463 Commercial with median HbA1c < 7.3 or No lab data
- 1016 TPA class

Total 8019
CDS Tools Intervention

<table>
<thead>
<tr>
<th>CDS Tools Intervention</th>
<th>Goal: Provision of decision support tools for medical and dental providers to integrate oral care and coordination for diabetic patients/population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>See below.</td>
</tr>
</tbody>
</table>

Health Data Collection by the Medical Staff in Observations

- Last Dental Visit
- Last Oral Exam/Teeth Cleaning
- Did you conduct a visual oral examination today? List Oral Findings...
- Does the patient have any natural teeth present?
Display Oral Exam Due Date for All Diabetic Patients in PreServ
Display Oral Exam Information in the Dashboard

[Image of a computer screen showing a medical dashboard with various tables and information sections.]
Display Oral Exam Information in the Patient Portal
Screening for Diabetes /Pre-diabetes at the Dental Center

Journal of Dental Research, 92(10): 888-892, 2013

Dental Findings & Identification of Undiagnosed Hyperglycemia

Key finding: Dental patients who were never told they were pre-diabetic or diabetic, but had at least one self reported diabetic risk factor [had a first degree blood relative with, had hypertension, hypercholesterolemia, overweight] and had 26% or more teeth with deep pockets [5mm+] or 4 or more missing teeth were correctly identified 72% of the time as pre-diabetic or diabetic when compared with HbA1c diagnostic testing and / or fasting plasma glucose levels. N = 1097

In other words, if a patient has a risk factor, multiple deep pockets on periodontal examination and or multiple missing teeth; perform glucose testing and / or refer to medicine.
Cross-disciplinary Referrals

![Diagram showing cross-disciplinary referrals process.]

- **Dental Provider CDSS**: Patient at risk of Diabetes: Age >= 45 years and BMI >= 25
  - Perform Blood Glucose Test
  - Periodontal Care Management
    - Evaluation
    - Diagnosis
    - Treatment / Management

- **Medical Provider CDSS**: Patient diagnosed with Diabetes: Last Medical Visit > 1 Year
  - Schedule an Appointment with a Physician
  - Diabetes Care Management
    - Evaluation
    - Diagnosis
    - Treatment / Management

- **Medical Provider CDSS**: Patient diagnosed with Diabetes: Last Dental Visit > 1 Year (Edentate) or Last Dental Visit > 6 Months (Dentate)
  - Schedule an Appointment with a Dentist
### Educational Intervention

**Care: Oral health integrated into all aspects of health care**

<table>
<thead>
<tr>
<th>Interprofessional Education and Competencies</th>
<th>Goal: Educate medical &amp; dental provider communities about oral-systemic complexities associated with diabetes (Interprofessional Education and Competencies)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Increase the referral of diabetic patients to oral health providers as part of an interprofessional medical - dental (workflow design)</td>
</tr>
<tr>
<td></td>
<td>- Improve care management teams' competencies in understanding and communicating importance of oral health in patients’ management of DM.</td>
</tr>
<tr>
<td></td>
<td>- Increase oral health providers' ability to identify and co-manage diabetic patients as part of an interprofessional team</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>2013 Oral Systemic Health Conference: Successful conference held on October 4th, theme was 'Medical-Dental Interprofessional Initiatives &amp; Competencies.’</td>
</tr>
<tr>
<td>✓</td>
<td>2014 Oral Systemic Health Conference: Beginning preparations for this year’s conference, theme will be 'Diabetes and the Importance of Oral Health.’</td>
</tr>
<tr>
<td>✓</td>
<td>Grand Rounds: On October 18th, Dr. Ram Pathak and Dr. Neel Shimpi gave a talk on Oral Health and Diabetes to MC medical providers.</td>
</tr>
<tr>
<td>✓</td>
<td>In March, Dr. Ram Pathak will give a talk on Oral Health and Diabetes to all MC/FHC dental providers.</td>
</tr>
<tr>
<td>✓</td>
<td>Pre/Post Survey: Anonymous survey to be implemented system wide for medical providers to access the current knowledge and attitude regarding oral health. Conducted on a voluntary basis.</td>
</tr>
<tr>
<td>✓</td>
<td>CBTs/Smiles for Life Curriculum: Developed a separate CBT on oral health for medical and dental providers. Required education for primary care and endocrinology. Need to discuss implementation strategy with medical directors – pilot test; implement by district or specialty?</td>
</tr>
<tr>
<td>✓</td>
<td>Video Module: Developed and finalized a video module as an educational tool for the dental hygienists and diabetes nurse practitioners covering diabetes and periodontal disease. Now available on MC website. Next step: System-wide email regarding broader dissemination strategy (playing in centers throughout system).</td>
</tr>
<tr>
<td>✓</td>
<td>Educational Tools: Develop and distribute handouts, posters, etc. about oral health to be used by medical providers at the primary care level.</td>
</tr>
</tbody>
</table>
Three Target Education Groups

Physicians

Dentists

Patients
Large “N” – 300+ primary care providers

Large range of knowledge and application

- Pre-Post Survey to capture information regarding the medical providers’ knowledge, attitude and behavior regarding oral health practice
- Pre & Post Testing
- Transparency

Physicians
Diabetes and Oral Health Correlation

Ram Pathak, MD, FACP, Endocrinologist, & Neel Shimpi, B.D.S., M.M., Research Specialist

1. Identify oral disorder(s) as a complication of diabetes
2. Discuss the need for ongoing evaluation of Oral Health in all Diabetes patients
3. Describe common dental condition(s) afflicting patients with diabetes
4. Recognize conditions that require evaluation and management by Dental/Oral Surgeon
5. Explain the need for adjustment in Anti Diabetic medication for patients undergoing oral surgery
6. List diabetic medications that need adjustments for patients undergoing oral surgery
Smiles for Life Curriculum

• Relationship Between Oral & Systemic Health
• Childhood Oral Health
• Adult Oral Health
• Managing Acute Dental Problems
• Oral Health & Pregnancy
• Caries Risk Assessment
• Geriatric Oral Health
Free Content & Credit

In the coming days Marshfield Clinic providers will get notice to complete modules.

Conversations with the State medical schools to introduce curriculum and rotation components
Computer Based Education
Provider Group Selector
Each Bubble is an individual provider

Provider Group “x”

Provider Group “y”
Academic Detailing

Point of Care Training; One-on-one trainer to provider

- Dashboard Monitoring [compliance]
- Knowledge transfer in action
- IS applications
- Identification & Referral
- Reinforce need
- Monitor
Smaller “N”
Pre-Post Survey to capture information regarding the dental providers’ knowledge, attitude and behavior regarding diabetic patient management

Academic Detailing –
• Continuing Education Sessions
• Endocrinologist presentation
• Department Meeting
• Computer Based Training Modules
• Pre-Post Test Questions
Care Management Education for Dual Diagnosis Patients

Pre-Operative Considerations

1. If the patient has acute swelling or pain, check a finger stick blood glucose.

If the blood glucose level exceeds 300 mg/dl.
- If possible, draw venous sample for confirmation.
- Consider delaying dental procedure and getting patient under the care of PCP/Urgent Care/ER.

If the blood glucose level is between 200-299 mg/dl
- Have telephonic contact with Primary Care Provider.
- Under many scenarios, patient can likely be initiated on treatment and dental procedure can likely be proceeded on the same day.
- Short acting insulin such as Lispro(Humalog), Aspart (Novolog) and regular insulin can give rapid glycemic control in 2-4 hours.
- Follow PCPs advice in considering storing a few vials of insulin at dental centers.
AEGD Residency

- Medical – Dental Rotations
- Informatics Component
- Faculty Engagement
- Mentoring
- Visibility
- Interprofessional Provider [CODA competency “act as a primary care provider”]
Dental Assistants

Training in Chairside Screening & Risk Assessment

Testing Blood Glucose Level with Glucometer
Patients
Care Coordination Education

- Educating the Diabetic Educators
- Dental Assistants
- Patient Care Navigators
Patient Portal-Wellness Education

Wellness Advice

Preventing Falls Among Older Adults
To protect our older family members and help them stay safe, healthy, and independent, encourage the older adults in your life to get some exercise. Be mindful of medications, keep their shoes clean, think about their balance at home, and stay active.

Why Is Dental Health Important?
An attractive smile is only one reason for maintaining good dental health. It also means a higher quality of life and may help prevent or reduce the consequences of other diseases and conditions.

Recommended Articles
These articles were recommended to you in it.
- Sinus Throat
- Pharyngitis
- Sinus Throat
- Asthma and Pregnancy
- Asthma and Your Child
- Asthma and Your Child
- Asthma – control drugs
- Self-Care for Skin Rashes

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Patient Education Module

Why is Dental Health Important?

Practicing good dental health is important to maintaining a healthy mouth, teeth and gums. It will also help your appearance and quality of life.

Source: https://www.marshfieldclinic.org/healthy-living/dental/dental-why-important
• 51% of all patients reported (N=53) their knowledge increased from ‘no/not much knowledge’ to ‘some/lots of knowledge’ after viewing.
• 92% reported having ‘some/lots of knowledge’ following viewing, regardless of initial knowledge-level.
Patient Mailings

Did you know... you are at risk for dental issues because you have diabetes. People with diabetes are 2 times more likely to develop serious gum disease.

Taking Care of Your Mouth Can Help Control Your Diabetes

Yes, it is true, your diabetes puts you at greater risk of having problems with your teeth and gums. Gum disease and tooth problems in people with diabetes can be more severe and take longer to heal because of less ability to fight bacteria in the mouth as well as other infection.

- People with diabetes are at higher risk for tooth and gum disease, including infection.
- Gum disease may affect blood glucose control, making diabetes harder to control and may increase the progression of diabetes.

Symptoms of Mouth Problems
- Red, swollen and bleeding gums
- Gums that have pulled away from teeth
- Pain between teeth and gums
- Bad breath that won’t go away
- Permanent teeth that are loose or moving away from each other
- Changes in the way your teeth fit together when you bite
- Changes in the fit of dentures
- Sore, white or red patches on your gums, tongue, cheeks or roof of your mouth
- Patches that have turned into open sores
- Dry feeling in your mouth, dry rough tongue, cracked lips, mouth sores
- Burning feeling in mouth, bitter taste

What You Can Do to Prevent Dental Problems
- Keep your blood glucose as close to your target as possible
- Take diabetes medicines as instructed
- Eat healthy meals and follow your diabetes meal plan
- Brush your teeth at least twice a day and after meals with a soft toothbrush and fluoride toothpaste
- Floss your teeth at least once a day
- Drink water with fluoride every day

Action Steps
If you have not seen a dentist within the last six months you need to call now and schedule an appointment.
- See your dentist every 6 months
- Keep your dentist informed of any changes in diabetes conditions and medicines
- See your doctor on a regular basis
- Eat healthy meals and get plenty of exercise
- Work together with your physician and dentist to manage your diabetes

Developed by Security Health Plan.
In collaboration with Marshfield Clinic
DentaQuest

Marshfield Clinic
Don’t just live. Shine.
Develop, Train & Implement an Integrated Curriculum

<table>
<thead>
<tr>
<th>Diabetes Mellitus</th>
<th>Coronary Artery Disease</th>
<th>Hypertension</th>
<th>Prevention/Cancer Screening</th>
<th>Pregnancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>HgbA1c &gt; 9%</td>
<td>Antiplatelet Therapy</td>
<td>BP &lt; 140/90</td>
<td>Screening Mammography</td>
<td>Glucose Screening</td>
</tr>
<tr>
<td>Blood Pressure &lt; 140/90</td>
<td>Drug Therapy for LDL &gt; 130</td>
<td>Plan of Care</td>
<td>Colorectal Screening</td>
<td>Periodontal Exam</td>
</tr>
<tr>
<td>LDL &lt; 100</td>
<td>Beta Blocker if prior MI</td>
<td></td>
<td>Influenza Vaccination &gt; Age 50</td>
<td></td>
</tr>
<tr>
<td>Urine Protein Testing</td>
<td>LDL Level &lt; 100</td>
<td>Periodontal evaluation should be considered</td>
<td>Pneumococcal Vaccination &gt; Age 65</td>
<td></td>
</tr>
<tr>
<td>Dilated Eye Examination</td>
<td>ACE or ARB w/DM</td>
<td>According to the American Academy of Periodontology,</td>
<td>periodontal disease was associated with a 2.7-fold increase in pancreatic cancer</td>
<td></td>
</tr>
<tr>
<td>Foot Examination</td>
<td>Treatment of periodontitis reduces systemic markers of inflammation and endothelial dysfunction</td>
<td>People with periodontal disease are almost twice as likely to have coronary artery disease</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Periodontal Exam 12mo / 6mo* ADA guide**

*Marshfield Clinic*
Acknowledgements
## Project Team

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amit Acharya, BDS, MS, PhD</td>
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“The best scientific thought is agreed that dentistry is a field of medicine. . . . There is no logical right whatever to isolate [the oral cavity] from the rest of the body as if it were made up . . . of ivory pegs in stone sockets.”

– Dr. Alfred Owre, Dean of Dentistry
University of Minnesota, 1905-27
Columbia University, 1927-33

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