Linking Primary Care to Oral Health

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Who is Martin Lieberman and why is he talking to me about linking primary care to oral health?

- University of Minnesota Dental School
- Private Practice 18 years in Chicago
- Dental Director at Neighborcare Health
- Participated in the IHI IMPACT breakthrough series
- Member of NNOHA Board of Directors
- Faculty member process improvement collaboratives
Neighborcare Health

- Seattle, WA
- FQHC
- 18 sites
- 48,611 patients
- 195,000 visits
Today’s Focus

• Explore the concept of medical and dental programs integrating care for the optimal health of their patients
• Linkages between oral and systemic health
• Evidence based approaches to integrate oral health with primary care in a community health setting
Patient Centered Health Home: One Definition

• Patient Centered: Care that is respectful of and responsive to individual patient preferences, needs and values.

• Health Home: An approach to providing primary care where individuals receive integrated, comprehensive medical, dental and mental health care that is focused on prevention and early intervention.
What is Medical Dental Integration?

- Communication between providers
- Architecture
- Education
- A process
- An outcome
- A benefit
- All of the above
While offering medical coverage to prospective and current employees is an important attraction and retention tool for employers, it is far from the only health-related benefit that employees are looking for. After medical coverage, dental coverage is always cited as one of the most sought-after employee benefits.

For employers looking to offer both of these benefits to employees, but are also looking to manage the costs, there is an innovative new approach that can both provide improved benefits for employees — keeping them healthier and more productive — and also cut medical costs for the employer.

Bill Berenson, vice president of sales and service for Small & Middle Market Business in the North Central Region.
How would a DMI program help improve employee health?
There is a strong connection between oral health and overall well-being. By having a DMI program, employers are recognizing this connection, which is likely to result in more well-rounded treatment for the employee population.

Which employees would benefit most from an integrated plan like this?
Our research has shown that individuals with certain conditions — such as diabetes, coronary artery disease, cerebrovascular disease (stroke) and even pregnant women — may see the most significant benefit from earlier dental and periodontal care, which is more likely in an integrated program.
A recent study showed that individuals with these conditions who accessed dental care earlier lowered the risk or severity of their respective conditions, and subsequently lowered their overall medical costs.

How would an employer see cost savings from a program like this?
The improved health of employees, especially those with certain chronic conditions, can also create savings in health care costs.
Overall Desired Outcomes
The “Triple Aim”

• Improve health outcomes
• Lower health care costs
• Improve health care quality
• Better Health, Better Care, More Cost Effective
Tooth decay
Periodontal Disease
Oral health means more than healthy teeth

- Periodontal diseases have been linked to a variety of conditions with systemic implications.
- Likewise, systemic diseases can have an impact on oral health.
- Studies have demonstrated an association between periodontal disease and cardiovascular disease, stroke, respiratory infections, diabetes, HIV, and adverse pregnancy outcomes.
Children

- Tooth decay is the single most common chronic disease in children, five times more common than asthma and seven times more common than hay fever.
- Left untreated, tooth decay can lead to health problems including difficulty speaking, chewing, and swallowing; increased cost of care; loss of self-esteem; needless pain; and lost work and school days.
- Dental problems may also affect children’s ability to concentrate at school.
Pregnancy

• Periodontal disease has been linked to premature births and under-weight babies.
• Researchers estimate that as many as 18 percent of the 250,000 premature low-weight infants born in the United States each year may be attributed to infectious oral disease.
• Additionally, elevated levels of hormones in expectant mothers may cause the gums to react differently to the bacteria found in plaque, increasing susceptibility to gum inflammation and disease during pregnancy.
Diabetes

• The association between diabetes and periodontal disease is well documented.
• Diabetic patients have a compromised ability to respond to infections, they are at greater risk for periodontal disease.
• Periodontal disease appears to make it more difficult for diabetics to stabilize their blood glucose levels.
• For these reasons, good daily oral hygiene and early detection of gum disease are essential for the diabetic patient.
Cardiovascular Disease and Stroke

- Bone loss in the portion of the jaw containing tooth sockets (a measure of periodontal disease) is a predictor of chronic heart disease.
- Bacteria found in periodontal disease can also lead to blood clots, increasing the risk for heart attacks or stroke.
- According to the National Institute of Dental and Craniofacial Research, people with periodontal disease may be more likely to develop cardiovascular disease.
• The notion that problems in the mouth cause diseases elsewhere in the body makes sense but has been difficult to prove, explains the *Harvard Heart Letter*. Scientists are exploring several mechanisms that may connect the two processes. In people with periodontitis (erosion of tissue and bone that support the teeth), chewing and tooth brushing release bacteria into the bloodstream. Several species of bacteria that cause periodontitis have been found in the atherosclerotic plaque in arteries in the heart and elsewhere. This plaque can lead to heart attack.

• Oral bacteria could also harm blood vessels or cause blood clots by releasing toxins that resemble proteins found in artery walls or the bloodstream. The immune system's response to these toxins could harm vessel walls or make blood clot more easily. It is also possible that inflammation in the mouth revs up inflammation throughout the body, including in the arteries, where it can lead to heart attack and stroke.
HIV/AIDS

• A disease which often manifests itself first in the mouth is HIV/AIDS
• Inflammation of the gums and lesions are often present
• Spontaneous bleeding is a frequent finding in the HIV positive patient, as is Candidiasis, an infection associated with impaired immune function
Medical/Dental Integration at Neighborcare

• Access Issue. We cannot provide dental care to all of our medical patients
• If we have to ration care, who should get it?
• State budget cuts
• Populations of focus
• Children, pregnant women, diabetics, cardiovascular disease, HIV.
• Model for Improvement
PDSA Cycles

What are we trying to accomplish?

How will we know that a change is an improvement?

What change can we make that will result in improvement?
Using the Cycle to Improve

Ideas

Very Small Scale Test

Follow-up Tests

Wide-Scale Tests of Change

Implementation of Change

Spread

Data

Improvement
Quality Improvement (QI)

• QI processes use baselines established by Quality Assurance
• Assess where you are
• Find ways to improve your program
• QI processes aim to improve the quality of the health care system and the health status of the target population
0-5 year olds

- Dental decay, most common chronic disease in children
- AAP-1st visit by age 1
- Fluoride varnish-arrest decay, remineralize
- Disease management approach to oral health (CAMBRA risk assessment tool)
- Prevent the vertical transmission of dental caries
- We were getting our patients too late
Quality Improvement Approach

• Educated entire medical staff
• Knee to knee exams- taught providers what to look for
• Strategized flow from medical to dental and vice versa
• Worked with all team members
• Immunizations
• Results
Perinatal Oral Health

• Used a collaborative approach between medical and dental teams to increase the percentage of OB patients getting dental care
• New York Guidelines
• Education, joint meetings, joint PDSA planning, teams
• Shared results: daily, weekly, monthly monitoring
• Eliminate decay before colonization can occur
• 6 month review
Diabetes

• Neighborcare Goal: Increase the percentage of diabetics with HA1C >8 that receive dental care
• Same collaborative model
• Greatest Barrier: Financial
• If A=B and B=C, then A=C
• If improving oral health improves diabetic health, and if improving diabetic health improves overall health, then improving oral health improves overall health
2009-2011 Ha1c Averages by Quarter

With a Dental Visit
Without a Dental Visit
Cardiovascular Disease

• Next population of focus
• “Tooth brushing, inflammation and risk of cardiovascular: Results from Scottish Health Survey”
• Poor oral hygiene is associated with higher levels of risk of cardiovascular disease and low grade inflammation, though the causal nature is yet to be determined
• Medical Director “similar effect on a population as use of aspirin, statins”
• Tooth brushing campaign
• Will it work?
NNOHA’s Health Center Home Assessment

• Online assessment of 77/270 HC dental directors
  – Level of medical-dental integration
  – Perceived barriers
• Follow-up guided interviews with 9 high performing dental programs
  – Seven key program characteristics
• Best practices
Seven Key Characteristics
Leadership Vision & Support

• Starts with ED/CEO
• Ensure same message throughout organization
• “Treating the patient as a whole is part of the mission and culture of the Health Center”
Dental Integrated into HC Executive Team

- Not based on personal relationships - part of organizational structure
- Included in all operations team meetings, committees and communications
- Present when planning and clinical policy and protocol decisions made to advocate for oral health to and give dental input and perspective
Co-Location

• Staff from any Health Center department could bring a client directly to dental
• Bi-directional with dental staff able to send patients directly to medical department for same day assessment
• Positive attributes of having multiple services (e.g. nutrition, behavioral, social workers etc.) in one location
Organizational Culture of Quality Improvement

• In-depth user’s knowledge of the terminology and methodology of quality improvement

• Culture permeated all levels of the Health Center part of how the dental program conducted its daily functions

• Focus on outcomes - of using outcome measures to drive change, of improving from a baseline, and using these concepts for all aspects of clinic operations
Dental Staff Buy-in: Understanding the “Why”

- Progress the result of a continuous process
- Resistance to change from staff addressed not by telling staff “what” to do, but rather explaining the "why"
  - Changes achieve good patient outcomes
  - Generate revenues and maintain sustainability
  - Triple Aim
Patient Support Services

- Patient navigators, family support workers, health coaches
- Assist in making appointments, engaging patients, motivational interviewing, goal setting
- Looking at the “whole” patient
Dental Director Leadership

• Proactive, sure of the importance of oral health in improving the health status of the patients they serve
• Confidence to advocate for oral health
• Long-term vision, taking time to develop influence, relationships and grow credibility
• “Remember the reason for doing this is not for a piece of paper of recognition, but to better serve our patients and improve their quality of life.”
Barriers to Integration

Lack of necessary infrastructure, especially IT systems, to facilitate integration of oral health with other health center services

– Dental capacity smaller than medical capacity
– Lack of EMR/EDR interoperability
Best Practices
Clinical Information Systems

• Generate lists of children, perinatal, diabetic, and HIV patients that have not been seen in dental for follow-up
• Track number of referrals from medical that are seen in dental
• Utilize IT system to identify and alert medical providers about special populations that need a dental referral through ICD-9 code
EMR/EDR Challenges
Oral Health Anticipatory Guidance

Check off boxes in the Electronic Medical Record
Communication Challenges

• The patient is on warfarin, aspirin, plavix or other anti-platelet or anti-coagulant drug
• The patient has a medication allergy
• The patient has uncontrolled
  – Diabetes
  – Hypertension
• The patient is pregnant
• The oral health provider or medical provider or both just want to know what’s going on
• A million other other things
Decision Support

• Standardized curriculums used for training of medical and dental staff (i.e. Society of Teachers for Family Medicine (STFM) Smiles for Life)
• Specific HC procedures and protocols support integration
• Minimum bureaucracy - ability to get a form or protocol approved and implemented in a few days - why delay an improvement?
Delivery System Design

• Family Support Workers/Patient Navigators/Health Coaches make appointments for clients

• "Open access" - referring same-day pediatric patients to dental department for same day visit

• "Max-packed visits" – immunizations in medical and exam with dentist in one visit
Self-Management Support

- Focus on patient literacy
- Patient Self-management goal setting
- Dental education brochures in medical clinic waiting rooms
- Patients access health records over the internet/phone
- Communicate the relationship between lifestyle and results
Health System
Organization of Health Care

• Dental staff located in WIC, pediatrics, primary care
• Develop quality improvement measures related to integration
• HC staff compensated based on patient outcomes
Community Resources and Policies

- Bilingual dental outreach worker- self-supporting by generating new clients and acting as an advertising arm of the clinic
- Dental staff outreaches at county social services office/department of public health, local dental hygiene schools and dental society components
- Statewide PCA Learning Collaboratives
The Future

• There are probably more systemic linkages
• How do we use our limited resources to improve the health of the population we serve?
• What does a medical (health care) home that includes dental look like?
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• NNOHA.org
• HRSA
• Dentaquest Institute
• AAOSH
• NIIOH.org (annotated bibliography)
Is there a room for dental?