A Quality Improvement Approach to Medical and Dental Integration

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• DDS from University of Minnesota
• AGD Residency
• Private Practice 20 years in Chicago
• Dental Director Neighborcare Health since 2002
• National Network for Oral Health Access Board of Directors. Chair Practice Management Committee
• Dentaquest Institute Quality Improvement Faculty
Seattle’s Leading Community Health Provider

- **Mission:** to provide comprehensive primary health care to families and individuals who would otherwise have difficulty accessing care.

- **Ultimate goal:** 100% access to care, zero health disparities
  - 7 Medical clinics
  - 5 Dental clinics
  - 6 School based health centers
  - Multiple partnership programs

- Services are provided on a sliding fee scale for the uninsured. No one is ever turned away due to inability to pay.
Caring For Our Most Vulnerable Neighbors

- Provide 200,000 visits annually to more than 50,000 low-income, uninsured and underinsured people

- 69% live below federal poverty level
- 42% have no insurance at all
- 14,000 are children
- 7,000 are homeless or transitioning into housing, including veterans, families in shelters and unaccompanied teens.

- More than 100 languages and dialects are spoken by our patients
What is Medical Dental Integration?

• Communication between providers
• Architecture
• Education
• A process
• An outcome
• A benefit
• A collaboration
• 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.
NNOHA Survey

• National Network for Oral Health Access (NNOHA). Organization representing oral health providers and supporters working in HC’s/safety-net. 1,700+ members
• HRSA cooperative agreement
• Conduct a needs assessment to identify barriers that prevent Health Centers from developing patient-centered health homes that meet oral health needs
Seven Key Characteristics

1. Leadership Vision & Support
2. Dental Integrated into Health Center Executive Team
3. Co-location
4. Organizational Culture of Quality Improvement
5. Dental Staff Buy-in: Understanding the “Why”
6. Facilitating Patient Services
7. Medical and Dental Director Leadership
Leadership Vision and Support

• ED/CEO is a prime force behind the effort to achieve medical dental integration
• The vision for incorporation of dental and other departments into the Primary Care Health Home (PCHH) cascades down from the ED/CEO
Dental Integrated into Health Center
Executive Team

• Completely integrated into the administrative structure of the Health Center
• Included in all operations team meetings, committees and communications
• Present when planning and clinical policy and protocol decisions made to advocate for oral health and give dental input and perspective
Co-Location

• Staff from any Health Center department could bring a client directly to dental
• Bi-directional referrals, 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
Staff Buy-in: Understanding the “Why”

Resistance to change from staff addressed not by telling staff *what* to do, but rather explaining the "why”

– Changes would achieve good patient outcomes, provide the best care for patients
– Generate revenues and maintain financial sustainability
Facilitating Patient Services

• Patient navigators, family support workers, health coaches
• Assist in making appointments, engaging patients, motivational interviewing, goal setting
Medical and Dental Director Leadership

• Proactive, aligned common vision 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 relationships, influence teams, and grow credibility
Oral – Systemic Connection

• Good evidence for oral/systemic link
  – Infective endocarditis, Prosthetic device infection
  – Diabetes
  – Oral cancer
  – Medications we prescribe cause dry mouth

• Emerging evidence for oral/systemic link
  – Obesity
  – Coronary artery disease
  – Lower respiratory disease
  – Adverse pregnancy outcome (PTL, LBW, preeclampsia)
Best Practices for Medical Dental Integration

- Pediatrics
- Pregnant Women
- Diabetics
- Cardiovascular Disease
- Tooth brushing/Prevention
- EHR/EDR
The Chronic Care Model

Community
- Resources and Policies
- Self-Management Support

Health Systems
- Organization of Health Care
  - Delivery System Design
  - Decision Support
  - Clinical Information Systems

Improved Outcomes
- Informed, Activated Patient
- Productive Interactions
- Prepared, Proactive Practice Team

Developed by The MacColl Institute
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Plan-Do-Study-Act Cycle

Ideas → Action → Learning → Improvement

- Demonstrate improvement
- What changes are to be made?
- What is the next cycle?

- Complete the data analysis
- Compare data to predictions
- Summarize what was learned

- Identify problems and create a plan
- Implement the plan
- Monitor and document results
- Begin analysis of the data
Using the Cycle to Improve

Ideas

Follow-up Tests

Very Small Scale Test

Wide-Scale Tests of Change

Implementation of Change

Spread

Data

Improvement
Oral Health of Children

Early Childhood Caries: ECC

• The most common chronic disease of children
  – 5 times more common than asthma
• 44% of children have cavities by age 5
• 45% of child dental claims are for baby teeth
• ECC is a public health crisis!
Science: Early Childhood Caries

• Caries is a disease, cavities and tooth loss are the consequence
• Vertically transmitted
• Preventable
• Sequelae:
  – Pain
  – Impaired chewing and nutrition
  – Infection
  – Increased caries in permanent dentition
  – School/work absences
  – Extensive and expensive dental work
  – Self Esteem, Speech
Pediatrics

- Improvement teams. Members medical, dental, process improvement.
- Senior Leadership support
- Time set aside to do the work
- PDSAs, PDSAs, PDSAs.
Pediatrics

- Emphasis on early screening and education
- Medical provider awareness of risk factors and what early caries look like
- Use periodic well child exams as an opportunity to ask about last dental checkup
- Streamline appointments when able - both medical and dental on the same day
- CAMBRA Tool, self management goal setting
- Immunizations
If you do nothing else......Do this!

• Improvement in outcomes for this population
• Better Care. Disease management approach vs. a strictly surgical intervention.
• More cost effective.
• PCMH
Overall Desired Outcome
The “Triple Aim”

- Improved Health
- Improved Care
- Reduced Cost
ECC Transmission

• *S. mutans* is vertically transmitted from the primary caregiver, often the mother

• Caregivers with high bacteria levels usually have:
  – A high frequency of sugar intake
  – Poor oral hygiene
  – High levels of decay

• Caregivers pass bacteria, dietary habits and oral care habits to the child
Obstetrics

• Emphasis on screening and treating decay and periodontal disease
• For our population, an opportunity for adults to get dental coverage during pregnancy
• Transmission of S. Mutans
• Education on infant oral health
OB Dental Report visit dates x 1 yr, EDD dates x 9 mos

45th M
GMC
HP
RB
RP
Total Ave
Goal (Co-located)
Goal (Non co-located)
Periodontal Disease
Diabetes

- Poor glycemic control is associated with a threefold increased risk of having periodontitis in diabetics vs controls
- Diabetics with good glycemic control have no significant increased risk of periodontal disease
- Chronic infection (like periodontal disease) complicates glucose control
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.
Recent study compared medical costs of diabetic patients who received periodontal treatment versus no treatment over three years. Patients covered through Highmark medical and United Concordia dental insurance. Periodontal treatment was associated with a significant decrease in hospital admissions, physician visits and overall cost of medical care in diabetics. Savings averaged $1,814 per patient in a single year independent of age and sex.
Diabetics

- Initially targeted patients with A1Cs >8
- Expanded to all diabetic patients
- Barriers: finances, access, patient understanding
2010-2011 HbA1c Averages by Quarter

With a Dental Visit
Without a Dental Visit
ASVD and Periodontal Disease

• A link between oral health and cardiovascular disease has been proposed for the greater part of the last century.

• Recently, concern about possible links between periodontal disease (PD) and atherosclerotic vascular disease (ASVD) has intensified
  – This is driving an active field of investigation into possible association and causality.
Periodontal Disease and Stroke

- Post hoc analysis of prospective longitudinal studies and smaller case control studies have reported the association between periodontal disease and stroke.
- Early studies demonstrated that periodontal disease appears to bear a stronger association with stroke than with coronary artery disease.

Periodontal Disease and Stroke

• In a combined analysis of two prospective studies, periodontal disease was found to increase the risk of incident stroke nearly three fold.

• Proposed mechanisms include inflammation mediated pro-coagulant state, atherosclerosis mediated by direct microbial invasion of blood vessel wall, and interaction with recognized vascular risk factors.

Tooth Brushing/Prevention

• Study in Scotland. Tooth brushing and cardiovascular disease
• Tooth brushing pilot at our Pike Market Clinic.
• Improving the oral health of our medical population when we cannot provide access in a dental setting
EHR/EDR

- Most systems don’t “talk” to each other
- No diagnostic codes in dental
- “Dummy Codes”
- Self Management Goals
- Patient Safety. Medications, RXs, allergies, medical histories.
- Immunizations, HBP, Smoking Cessation
- Population of focus management
Primary Care Providers Can ...

• Assess risk for oral disease as they do for other conditions in the Medical Home
• Provide prevention through anticipatory guidance and health behavior change counseling:
  – Diet
  – Oral hygiene – brush when teeth erupt and help till age 6
• ARREST and REVERSE early disease with fluoride varnish and behavior management
• Screen for disease that requires referral
• Encourage the age 1 dental visit
Child Oral Health Opportunity

- Most children have access to primary care
- 89% of poor children have a usual source of medical care
- Primary Care Providers have regular, consistent contact with children for checkups and immunizations
Oral Health of Adults

• The opportunity:
  – Adults with many chronic diseases see medical providers frequently
  – Principles of risk assessment, screening and behavior change counseling are fundamental to primary care clinicians

Smiles for Life is the nation’s only comprehensive oral health curriculum. Developed by the Society of Teachers of Family Medicine Group on Oral Health and now in its third edition, this curriculum is designed to enhance the role of primary care clinicians in the promotion of oral health for all age groups through the development and dissemination of high-quality educational resources.

For Individual Clinicians

We’ve made it easy for individual physicians, physician assistants, nurse practitioners, students, and other clinicians to access the curriculum and learn on their own time and at their own pace. Each of the courses is available online. Free CME credit is available.

For Educators

The curriculum is available in a presentation format easily implemented in an academic setting. Included is a comprehensive set of educational objectives based on the Accreditation Council for Graduate Medical Education (ACGME) competencies, test questions, resources for further learning, oral health web links, an implementation guide, and detailed outlines of the modules.
Solutions & Best Practices

- **Education:**
  - Smiles for Life national oral health curriculum
  - [http://www.smilesforlifeoralhealth.org](http://www.smilesforlifeoralhealth.org)

- **Implementation and Technical Assistance:**
  - Cavity-Free-at-Three (Colorado)
  - ABCD (Washington State)

- **Operating programs in Four Community Health Centers:**
A Statewide Medical/Dental Integration Project

A Statewide Quality Improvement Project
Washington’s Community Health Centers
Washington’s Dental Learning Network

• Washington Dental Service
• WACMHC
• “Should we do a collaborative?”
• Surveyed Washington’s Dental Directors
• Get to know each other and share best practices
Goal of Learning Network

Provide space for CHC Dental Directors to discuss together common challenges and share promising practices in order to increase the ability of CHC’s to improve the oral health of the patients they serve.
January 2009 – Quarterly mtgs began

• First Phase:
  – Facilitated by external consultant
  – all dental staff invited
  – Presentations by external experts
2nd Year – increased engagement

• Second Phase:
  – Dental Director chair
  – Planning committee
  – Dental Directors only
  – Meetings highly participatory (panels, open discussion)
The Environment

- Increased poverty
- State Budget Cuts
- Patient Centered Health Home
- ACA
- New Workforce Proposals

CHC Dental Clinics
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<td>Managing in Changing Times</td>
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 Speakers:
- Dr. Irene Hilton
- Dr. Mark Koday
- Dr. John Caron
- Dr. Marty Lieberman
- Dr. Alex Narvaez

Logo: neighborcarehealth
Plan-Do-Study-Act Cycle

I n d e a s  →  A c t i o n  →  L e a r n i n g  →  I m p r o v e m e n t

• Demonstrate improvement
• What changes are to be made?
• What is the next cycle?

• Complete the data analysis
• Compare data to predictions
• Summarize what was learned

• Implement the plan
• Monitor and document results
• Begin analysis of the data

• Identify problems and create a plan
Combined State Total for Practices Reporting
Q4 2009- Q4 2012
Moses Lake Community Health Center

Brett L Pack, DMD
Dental Director
Background

When I started at MLCHC:

• Dental providers held differing opinions about treating patients during pregnancy
• No standard for when to establish dental care to young children
  • Numerous young children being referred to OR with dental caries
• Dental and Medical Departments working completely independently
As a new Dental Director. . .

How can we integrate Dental and Medical?
How to prevent child OR visits?

How to direct a Dental Department?
How best to treat pregnant patients?
Solutions

How to integrate Dental and Medical?
How to prevent child OR visits?
How to direct a Dental Department?
How best to treat pregnant patients?

WA Dental Learning Network
Moses Lake Metrics

% of Medical patients < 2 who have had a dental exam

% kids < 2
Why Dental Directors Attend

“Contact with other dental directors is really what keeps me going”

“It’s a brain trust...I can bring my unique challenges to a select group of peers and benefit from the collective thoughts”

“Seeing a level of cooperation that I didn’t realize was there before between the CHCs”

“Less referrals for GA”
Overall Desired Outcome
The “Triple Aim”

- Improved Health
- Improved Care
- Reduced Cost
Questions?