Dental Director
2015: Empowering Your Vision

May 10, 2014
Martin Lieberman, DDS

• DDS from University of Minnesota
• AGD Residency
• Private Practice 20 years in Chicago
• Dental Director Neighborcare Health 2002-2014
• Lutheran Medical Center, Graduate Dental Education
• National Network for Oral Health Access Board of Directors. Chair Practice Management Committee
• Quality Improvement Faculty
• Technical Assistance
**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
- 13 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 over 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
2015- What’s your vision?

• A team member
• A leader
• Understand finances. What’s ahead?
• A Quality Improvement Expert
• Measurement
• Oral Health and Overall Health
• Disease Management
Times Are Changing

- Accountable Care Organizations
- Coordinated Care Organizations
- Patient Centered Medical Homes
- Coordinated Care
- Outcome based reimbursement
- Reducing cost of care

How does oral health fit with this future?
Definition of an Accountable Care Organization (ACO)

ACOs are groups of doctors, hospitals, and other health care providers, who come together voluntarily to give coordinated high quality care to the Medicare patients they serve. Coordinated care helps ensure that patients, especially the chronically ill, get the right care at the right time, with the goal of avoiding unnecessary duplication of services and preventing medical errors. When an ACO succeeds in both delivering high-quality care and spending health care dollars more wisely, it will share in the savings it achieves for the Medicare program.
Definition of an ACO (HealthCare.gov)

A group of health care providers who give coordinated care, chronic disease management, and thereby improve the quality of care patients get. The organization's payment is tied to achieving health care quality goals and outcomes that result in cost savings.
Think of it as buying a television, like Sony does for TVs, an ACO would bring together the different component parts of care for the patient – primary care, specialists, hospitals, home health care, etc. – and ensure that all of the "parts work well together."

The problem with most health systems today, is that patients are getting each part of their health care separately. "People want and are buying individual circuit boards, not a whole TV,"

"If we can show people that an ACO, like the TV works better and costs less than assembling a patchwork of services themselves, they'll buy it".
Health Policy Resources Center
Research Brief

Accountable Care Organizations Present Key Opportunities for the Dental Profession

Author: Marko Vujicic, Ph.D.; Kamyar Nasseh, Ph.D.
Key Findings

• Dental care is not generally included as a core component within today’s ACOs. One key reason is that most existing ACOs focus on Medicare populations and Medicare does not include dental benefits.

• Since dental care for children is an essential health benefit under the Affordable Care Act, the most immediate opportunities are with the pediatric population.
Surgeon General's Report on Oral Health

- Dental care is the most common unmet health need
- Oral disease can severely affect systemic health
- Most oral disease is preventable
- Profound disparities in oral health and access to care exist for all ages
- Healthcare providers should be engaged to improve oral health.

“You are not healthy without good oral health…”
-David Satcher, MD, 16th Surgeon General
Linkages between oral health and respiratory disease, cardiovascular disease, and diabetes.

Because oral health is linked to overall health, the effects of poor oral health are felt far beyond the mouth.
Oral Disease ↔ Systemic Diseases

• People with serious gum disease are 40% more likely to have a chronic condition on top of it.

• Periodontal disease—correlated with a variety of conditions with systemic implications
  – Cardiovascular disease, heart disease, respiratory infections, diabetes, HIV, adverse pregnancy outcomes

• Systemic diseases can have an impact on oral health
  – Dementia
  – Chronic disease medications that cause xerostomia
The Tip of the Iceberg

- Diabetes
- Pregnancy
- Respiratory Disease
- Cardiovascular Disease
- Kidney Disease
- HIV/Auto-immune diseases
- Rheumatoid Arthritis
- Alzheimer's
- Other inflammatory response conditions
Oral-systemic Connection
Periodontal treatment reduces medical costs for people with multiple chronic conditions

Treating Periodontal Disease Equals Annual Cost Savings

- Diabetes Cost Savings: $3,291
- Heart Disease Cost Savings: $2,956
- Cerebrovascular Disease (Stroke) Cost Savings: $1,029
- Rheumatoid Arthritis Cost Savings: $3,964
- Pregnancy Cost Savings: $2,430

United Concordia Dental
Overall Desired Outcome
The "Triple Aim"

- Improved Health
- Improved Care
- Reduced Cost
NNOHA Survey

• National Network for Oral Health Access (NNOHA). Organization representing oral health providers and supporters working in HC’s/safety-net. 2,300+ 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

- Model the Way
- Inspire a Shared Vision
- Challenge the Process
- Enable Others to Act
- Encourage the Heart
Quality:
Striving to Provide the Highest Quality Care We Can to the Populations We Serve
Why Assess Quality?

- Section 330 of Public Health Service Act requires every Health Center to have an ongoing QI/QA program.
- Federal Tort Claim Act (FTCA) deeming application process requires submission of Health Center QI/QA plan and QI/QA committee minutes.
- Positive patient outcomes.
Quality

• Traditional Dentistry:
  – Procedural driven
  – Quality limited to mechanical outcomes and processes, e.g. esthetics of restorations, marginal integrity, root canal fill lengths
  – Little focus on population outcomes and impact on patient health
  – Limited to quantitative measures
What is Quality?

• “The degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.”  Institute of Medicine (IOM)
Quality Assurance (QA)

• Traditional approach
• Development of a set of standards-comparison of services with established standards
• If standards met, services are of adequate quality
• If deficient, plans of correction are developed to address the problem

(WHO, 1994; WHO, 1997)
Objective Dental Record
Peer Review

• Utilizes dental peers to examine and evaluate patient record
• Documentation against well-defined criteria
• Random selection of a sample of patient dental records for review by:
  – other staff dentists
  – contracted expert reviewers
<table>
<thead>
<tr>
<th>General Chart Information</th>
<th>Chart One</th>
<th>Chart Two</th>
<th>Chart Three</th>
<th>Chart Four</th>
<th>Chart Five</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Patient Information complete?</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>2. General Consent complete?</td>
<td></td>
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<td>3. Medical History complete?</td>
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<tr>
<td>4. Medical History update complete?</td>
<td></td>
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<tr>
<td>5. Are Allergies and Medical conditions documented?</td>
<td></td>
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<tr>
<td>6. Indicators discussed: caries risk, Diabetes, smoking, etc.?</td>
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</tr>
</tbody>
</table>

Comments:

<table>
<thead>
<tr>
<th>Clinical Exam Data</th>
<th>Chart One</th>
<th>Chart Two</th>
<th>Chart Three</th>
<th>Chart Four</th>
<th>Chart Five</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Soft Tissue findings noted?</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>2. Occlusal findings noted: caries, missing teeth, dental needs?</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3. Periodontal findings / Classification noted?</td>
<td></td>
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</tr>
</tbody>
</table>

Comments:

<table>
<thead>
<tr>
<th>Radiographs</th>
<th>Chart One</th>
<th>Chart Two</th>
<th>Chart Three</th>
<th>Chart Four</th>
<th>Chart Five</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Appropriate Survey, type of Xrays taken?</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>2. Adequate Film coverage, all apices covered?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Any image defect: cone cuts, retakes needed?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Number of Xrays taken documented?</td>
<td></td>
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</tr>
</tbody>
</table>

Comments:

<table>
<thead>
<tr>
<th>Problems / Diagnosis</th>
<th>Chart One</th>
<th>Chart Two</th>
<th>Chart Three</th>
<th>Chart Four</th>
<th>Chart Five</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Appropriate testing done:</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>2. Diagnosis documented?</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>3. Appropriate consultations made, if needed?</td>
<td></td>
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<tr>
<td>4. Referrals made if needed?</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Findings documented on treatment plan?</td>
<td></td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

Comments:

<table>
<thead>
<tr>
<th>Treatment Plan / Dental Record</th>
<th>Chart One</th>
<th>Chart Two</th>
<th>Chart Three</th>
<th>Chart Four</th>
<th>Chart Five</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Does Treatment Plan follow appropriate sequence.</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>2. Record is complete and appropriate for treatment rendered?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Follow up appointment is indicated in clinical record?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Documentation is complete, tooth area, anesthetic, procedure and/or materials, signed with Doctor's and Assistant's names, etc.?</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments:

Director's Comments

______________________________

Dental Director
Signature
Date
Service Measures

- Tracked through IT
- Electronic practice management, billing, or registry systems
- Treatment plan completion measure
Subjective Patient Outcomes

- Validated surveys
- Oral Health Impact Profile (OHIP-14)
- Consumer Assessment of Healthcare Providers and Systems (CAPHS)
Adverse Outcomes

• Every adverse outcome is an opportunity for improvement

• Clinical incidents, patient complaints & grievances, safety lapses, risk management

• System for identification, data collection review, root cause analysis, system improvement
Quality Improvement (QI)

• **An approach** to the analysis of performance and efforts to improve it
• Measuring where you are, figuring out ways to improve
• Data collected establishes “baseline” for an aspect of the dental program, and QI process develops methods to improve from the baseline
• Avoids attributing blame
• Creates systems to increase/decrease outcome
## Assurance versus Improvement

<table>
<thead>
<tr>
<th>Quality Assurance</th>
<th>Quality Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delegated to a few</td>
<td>Embraced by all – everyone’s job</td>
</tr>
<tr>
<td>Focused on individuals, outliers</td>
<td>Focuses on processes</td>
</tr>
<tr>
<td>Works toward endpoints</td>
<td>Has no endpoints [continuous]</td>
</tr>
<tr>
<td>Retrospective, detection</td>
<td>Proactive, preventive</td>
</tr>
<tr>
<td>Function/Provider focused</td>
<td>Customer/Population focused</td>
</tr>
<tr>
<td>Punishes &amp; sanctions, finds blame</td>
<td>Rewards innovation, permits failure</td>
</tr>
</tbody>
</table>
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
- Prepared, Proactive Practice Team
- Productive Interactions

Developed by The MacColl Institute
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Model for Improvement

• The Model for Improvement enables an organization to approach quality improvement through rapid cycles of change and continual feedback on the effectiveness of those changes.

• When used in conjunction with the Chronic Care Model, the Model for Improvement can lead to positive, sustainable changes in the quality of health care.
Plan-Do-Study-Act Cycle

Ideas ➔ Action ➔ Learning ➔ Improvement

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

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

- Complete the data analysis
- Compare data to predictions
- Summarize what was learned
- Demonstrate improvement
- What changes are to be made?
- What is the next cycle?
Using the Cycle to Improve

- Very Small Scale Test
- Follow-up Tests
- Wide-Scale Tests of Change
- Implementation of Change
- Spread
- Improvement

Data

Ideas
Opportunity for Improvement

The Gap

- Access to care (visit)
- Type of service (sealant)
- Cost (lower)
- Adverse patient event (latex allergy)
- Oral health outcomes (BP)
An Effective QI Plan

• Directly aligns services to program goals
• Provides specific measurable milestones or targets
• Identifies timelines
• Improvement decisions influenced by numerous variables including population needs, resources, motivation, Board priorities
QI the Process

• Identify a program or facility problem
  - Continuity of care
  - Access to Care (TPCR)
  - Emergency care
  - Adverse patient events
  - Medical/dental integration

• Conduct a study

• Develop and implement a plan

• Monitor and track results

• Demonstrate improvement and restudy the problem [continuously]
Don’t Assume!

• First PDSAs should be small.
• There are no bad ideas!
• All improvement ideas should be able to stand up to the PDSA test.
• Always ask, “What are you trying to accomplish? How will we know the change is an improvement? How are you going to measure it?”
Case Study

• Production was low.
• No-show rates were high.
• Quality Assurance chart audit revealed that Treatment Plan Completion Rate (TPCR) was 26%.
• By the time most patients were due for their recall appts, phase I treatment had not been completed.
HRSA Quality Measure (proposed)

Percentage of all dental patients for whom the Phase I treatment plan is completed within a 12 month period.
Sample of a Project Specific QI Plan

- Project Goal: To increase the number of patients that complete phase 1 treatment in 12 months to 50%
- Project Team Leader: Dr. X
- Project Team: DA, Hygienist, Front Desk
- Baseline: 26%
- Timeline: one year
- Meeting Time: Weekly
What They Knew

What They Found Out

• Pt. satisfaction scores were low
• No-show phone survey
• Supply did not match demand
Do the Math

• 3 new patients a day per provider
• Average of 5.3 restorative appts each new patient needed to complete phase 1 treatment
• \( (3 \text{ new patients}) \times (5.3 \text{ appts}) = 15.9 \text{ appts} \)
• Recall appts were generating restorative appts
• There were only 8 restorative provider slots per day.
• Access capacity did not equal appointment demand
New Scheduling Model

• Increase the number of restorative appointments
• Decrease the number of initial exam appointments
• PDSAs – designed and implemented by the QI team
• No “bad ideas”
PDSAs

• Dentist to assistant ratio
• Chairs per provider
• Patient Education by DA
• Optimized their scheduling system
• Each new patient scheduled with only one new patient each day
• Scheduling out times
• 3rd available appointment tool
• Staff satisfaction
Results

• Increase in overall production
• Decrease in no-shows
• Increase in TPCR to 67% has stayed there for over three years
• Increase in patient satisfaction
• Increase in staff satisfaction
Measures are the Key

• Allow you to collect data to show delivery of proven interventions
• Enable you to show improved health care outcomes
• Working towards improvement in the measures is what drives system change!
Sample Outcome Measures

- Percentage who have new decay at recall
- Percentage of caries free
- Percentage of patients that have moved from high to medium risk
Measure, Measure, Measure

- Treatment Plan Completion Rates
- RVUs/visit
- Risk Assessment
- Self Management Goal Setting
- Timely Recalls
- 3rd available appointments
- New Caries Rates
NNOHA’s Resources

• **Quality Chapter**- NNOHA *Operations Manual for Health Center Oral Health Programs*

• Other Quality Improvement tools available at: [http://www.nnoha.org/practicemgmt.html](http://www.nnoha.org/practicemgmt.html)
A Quality Improvement Approach to Medical and Dental Integration
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

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- Organization of Health Care
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Developed by The MacColl Institute
Using the Cycle to Improve

Very Small Scale Test

Follow-up Tests

Wide-Scale Tests of Change

Implementation of Change

Spread

Data

Improvement

Ideas
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!
Pediatrics

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

Factors putting child at higher risk for tooth decay

<table>
<thead>
<tr>
<th>Sibling(s)</th>
<th>• Ever had decay, cavities, fillings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother/primary caregiver</td>
<td>• Had decay, cavities, fillings in past year</td>
</tr>
<tr>
<td>Child</td>
<td>• White spots or current/previous caries</td>
</tr>
<tr>
<td></td>
<td>• Frequent sugar/carbohydrate snacks and/or bottle/sippy cup with liquids other than water</td>
</tr>
<tr>
<td></td>
<td>• Does not brush 2 times a day with fluoridated toothpaste</td>
</tr>
<tr>
<td></td>
<td>• Does not drink fluoridated water regularly</td>
</tr>
<tr>
<td></td>
<td>• Special healthcare needs</td>
</tr>
</tbody>
</table>
Self Management Goal Setting

You have been assessed to have the following risk for caries (cavities):

- High
- Moderate
- Low

The pictures checked are the areas you should focus on between today and your next visit.

- Brush twice a day with toothpaste
- Use fluoride toothpaste; do not rinse mouth after brushing
- Daily flossing
- Drink tap water
- 5 or less "snack moments" a day
- Less or no soda or energy drinks
- Healthy snacks; 1-2 snacks per day
- Less or no candy and junk food
- Wean off bottle (no bottle with milk for sleeping)
- Only water in sippy cup

IMPORTANT: The last thing that touches your child’s teeth before bedtime is the toothbrush with fluoride toothpaste.

How likely is it that you think you can meet these goals?

Scale: 0 1 2 3 4 5 6 7 8 9 10

Recall Due: Jan Feb March April May June July Aug Sept Oct Nov Dec 20
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
Periodontal Disease
Periodontal Disease & Diabetes

A vicious cycle:

- Periodontal disease increases the risk of Type 2 diabetes and the risk of diabetic complications.

![Diagram showing the vicious cycle between periodontal disease and poor glycemic control leading to diabetes.](image)
Diabetics

• Initially targeted patients with A1Cs >8
• Expanded to all diabetic patients
• Barriers: finances, access, patient understanding
2010-2011 Ha1c Averages by Quarter
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
Conclusion

• **Always changing:** Environment in which health care/oral health care exists

• **Never changes:** Our mission to strive to provide the highest quality care we can to the populations we serve
Questions?