Disruptive Dental Innovation

“A Change Agent for Federal Qualified Health Centers”

Allen Finkelstein DDS
Disruptive innovation is the process by which a product or service takes root initially in simple applications at the bottom of a market and then relentlessly moves up market, eventually displacing established competitors.

An innovation that is disruptive allows a whole new population of consumers at the bottom of a market access to a product or service that was historically only accessible to consumers with a lot of money or a lot of skill.

Clayton Christensen
# Disruptive Innovation

*Clayton Christensen*

<table>
<thead>
<tr>
<th>Disruptor</th>
<th>Disruptee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal computers</td>
<td>Mainframe and mini computers</td>
</tr>
<tr>
<td>Mini mills</td>
<td>Integrated steel mills</td>
</tr>
<tr>
<td>Cellular phones</td>
<td>Fixed line telephone</td>
</tr>
<tr>
<td>Community colleges</td>
<td>Four-year colleges</td>
</tr>
<tr>
<td>Discount retailers</td>
<td>Full-service department stores</td>
</tr>
<tr>
<td>Retail medical clinics</td>
<td>Traditional doctor’s offices</td>
</tr>
</tbody>
</table>
Disruptive Innovation
Disruptive Innovation
FQHC Disruptive Dental Goals

• To engage health care professionals in an effort to enhance quality and affordability objectives for integrated health care by establishing innovative resources to support solutions.

• To create a paradigm shift in health care delivery by having insurers reimburse on value rather than volume.

• To develop the Health Home by advancing a more integrated holistic approach to health care.
FQHC Care Disruption Model

- Dental Home
- FQHC Health Home
- Medical Home
- Behavioral Home
FQHC Disruptive Dental Model

Dental Home  Prospective Payment System  FQHC Health Home  Prospective Payment System  Medical Home

Value Based Reimbursement

Finkelstein 2017
FQHC Disruptive Dental Innovation Model

FQHC Health Home

Screenings ⇩
Referrals

Diagnosis ⇩
Treatment

Wellness
Prevention

2017
Fair Payment for Health Center Services

- Health Centers currently receive fair payment for Medicaid and CHIP patients, known as a prospective payment system (PPS), which reimburses FQHCs at approximately 81 percent of their cost associated with treating Medicaid patients.

- Health centers’ all-inclusive service package and unique payment methodology allows them to be a true health care home, driving systemwide savings through a coordinated care model.
Before Innovation
Are You Ready For...?
Federal Qualified Health Centers
Audit Metrics

1. Excessive visit
2. Insufficient documentation
3. Non-covered service
4. Non-eligible provider
5. Not medically necessary
Excessive Visits

To maintain quality standards of care for a patient, a treating provider shall minimize multiple visits by performing multiple procedures and/or quadrant dentistry when it is in the patient’s best interest, unless otherwise requested by the patient and documented by the treating provider.
Face to Face

FQHC visit is a medically-necessary medical or mental health visit, or a qualified preventive health visit.

The visit must be a face-to-face (one-on-one) encounter between a FQHC patient and a FQHC practitioner during which time one or more FQHC services are furnished.
## Visit Frequency/Excessive Dental Visits

<table>
<thead>
<tr>
<th>CODE</th>
<th>PROCEDURE</th>
<th>VISIT</th>
<th>TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>D0120</td>
<td>Periodic Examination</td>
<td>1</td>
<td>Periodic examination every six months</td>
</tr>
<tr>
<td>D1120</td>
<td>Dental Prophylaxis – child</td>
<td>1</td>
<td>Prophy every six months always before 04341</td>
</tr>
<tr>
<td>D1206</td>
<td>Topical application of fluoride (excl. prophy)</td>
<td>1</td>
<td>Fluoride application</td>
</tr>
<tr>
<td>D0220,D0230,D0272</td>
<td>Radiographs</td>
<td>1</td>
<td>Wellness Radiographs</td>
</tr>
<tr>
<td>D1351</td>
<td>Sealant-per tooth</td>
<td>1-2</td>
<td>Sealant</td>
</tr>
<tr>
<td>CODE</td>
<td>PROCEDURE</td>
<td>Rationale for Treatment</td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>--------------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
<td></td>
</tr>
</tbody>
</table>
| D0120  | Periodic Examination           | A. Examination was performed to evaluate the patient since the last comprehensive examination  
 |        |                                | B. Examination was performed to evaluate the patient since the last periodic examination |
| D1120  | Dental Prophylaxis – child     | Procedure was performed to remove plaque, calculus and stain from tooth structures     |
| D1206  | Topical application of fluoride (excl. prophy) | Procedure was performed based on patient’s risk assessment a preventive measure  |
## Medical Necessity

<table>
<thead>
<tr>
<th>CODE</th>
<th>PROCEDURE</th>
<th>Rationale for Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>D0220,D0230, D0272</td>
<td>Radiographs</td>
<td>A. Radiographs were taken to establish baseline health risk for treatment planing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B. Radiographs were taken to evaluate prior treatment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C. Radiographs were taken to evaluate interproximal decay</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D. Radiographs were taken to evaluate periodontal status related to bone support for existing teeth</td>
</tr>
<tr>
<td>D1351</td>
<td>Sealant-per tooth</td>
<td>A. Procedure was performed to protect the enamel surface with a preventive resin coating</td>
</tr>
<tr>
<td>Provider</td>
<td>Record Number</td>
<td>Date</td>
</tr>
<tr>
<td>----------</td>
<td>---------------</td>
<td>---------</td>
</tr>
<tr>
<td>C-1</td>
<td>250911</td>
<td>3/30/17</td>
</tr>
<tr>
<td>C-1</td>
<td></td>
<td>4/5/17</td>
</tr>
<tr>
<td>C-1</td>
<td></td>
<td>4/7/17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4/12/17</td>
</tr>
<tr>
<td>C-1</td>
<td></td>
<td>4/24/17</td>
</tr>
<tr>
<td>C-1</td>
<td></td>
<td>5/9/17</td>
</tr>
<tr>
<td>C-1</td>
<td></td>
<td>6/19/17</td>
</tr>
<tr>
<td>C-1</td>
<td></td>
<td>7/28/17</td>
</tr>
<tr>
<td>C-1</td>
<td></td>
<td>8/18/17</td>
</tr>
</tbody>
</table>
Patient Age-10
D0120-Periodic examination
D0330-Panoramic film  FAILURE
D7210-Surgical extraction tooth number T  FAILURE

MEDICAL NECESSITY?
Panorex Medical Necessity

A. Radiograph was taken to establish baseline health risk for treatment plan development
B. Radiograph was taken based on the patient's risk assessment level
C. Radiograph was taken to evaluate prior treatment
D. Radiograph was taken to evaluate tooth eruption pattern
E. Radiograph was taken to evaluate growth and development pattern
F. Radiograph was taken to evaluate possible tooth impaction
G. Radiograph was taken to evaluate caries risk findings
H. Radiograph was taken to evaluate periodontal risk findings
I. Radiograph was taken to evaluate history of oral-facial trauma
J. Radiograph was taken to evaluate possible pathology
K. Radiograph was taken to evaluate third molar eruption
Compliance-OIG Audits

• Dental practices should establish and maintain an internal compliance program to help identify and correct documentation and billing issues before submitting claims.

• According to the Office of the Inspector General (OIG), a compliance program can speed and optimize proper claims payment.

• In addition, the increased accuracy of documentation that may result from a compliance program will assist you in enhancing patient care.
Compliance In the Era of Accountability

“If you accept money from a federally funded health plan you are required by section 6401(7) to establish a compliance program that contains the core elements” prescribed by the (Federal) Office of the Inspector General, which states providers, “shall have in operation a compliance and ethics program that has been reasonable designed, implemented and enforces so that it generally will be effective in preventing and detecting criminal, civil and administrative violations AND in promoting quality of care consistent with regulations.”
Compliance In the Era of Accountability

There are core elements to lay the framework for a compliance program.

- Conducting **internal monitoring and auditing** through the performance of periodic audits.
- Implementing compliance and practice standards through the **development of written standards and procedures**.
- **Designating a compliance officer** or compliance contacts to monitor compliance efforts and enforce practice standards.
- Conducting appropriate **training and education** on practice standards and procedures.
- **Responding appropriately to detected violations** through the investigation of allegations and the disclosure of incidents to appropriate Government entities.
- Developing **open lines of communication** to keep practice employees updated regarding compliance activities.
- **Non-retaliation policy**
- **Enforcing disciplinary standards** through well-publicized guidelines.
Disrupt
Medical-Dental Disruption

remineralization
The fact that the existence of recent restorations is one of the best indicators of risk for the development of new caries lesions only proves that the act of surgically treating the caries lesions does little to reduce the risk burden of developing the next lesion.

The surgical approach yields no significant difference to bacterial loading nor on the enactment of self-promoting oral health behaviors.

(NIH Consensus Statement, 2004; Zero et al., 2001; Caufield et al., 1988; Fejerkov et al., 2004; Featherstone, 2000).
Research as a Potential Disruptor

The new CO2 - 9.3μm short-pulsed laser irradiation and additional to fluoride therapy results in changes in crystal composition and structure which increase the resistance of dental mineral to dissolution by acid and will work to better prevent dental caries in the occlusal surface of vital teeth when compared to fluoride therapy alone over 12 months.
Medical-Dental Disruption
Remineralization

Original enamel structure is made up of carbonated apatite. When acids attack and breakdown the enamel and remineralization occurs with calcium, phosphorous and fluoride ions, the larger fluorapatite crystals are more resistant to enamel breakdown.
EMBRACING A NEW PARADIGM MEANS:

• Influencing health professionals on need for Medical-Dental Intervention

• Identifying etiology and establish risk levels

• Recognizing minimally-invasive therapy

• Early intervention using remineralization technologies

• Innovative outcome reimbursement model based on Medical Necessity
Silver diamine fluoride is a topical medicament (drug) used to treat and prevent dental caries (cavities) and relieve dentinal hypersensitivity. Silver diamine fluoride has been available in many countries including China, Japan, New Zealand, Australia and other for many decades.

The product was cleared for sale in the USA in August 2014 by the FDA as a class II medical device for the treatment of dentinal hypersensitivity.
Medical Intervention-Fluoride Varnish

One of the strategies to be adopted by a Medical Intervention Program is promoting early and regular preventive dental care along with more active engagement by primary care physicians.

Physicians receive reimbursement for the application of fluoride varnish and a care management fee when the child has a dental visit.
Children birth to age 6
Review of the Data – Overall, by HMO

Children under six years of age in Medicaid Managed Care with an Annual Dental Visit, in Six Targeted New Jersey Cities - Center for Health Care Strategies
The investigation studied North Carolina children who were enrolled continuously in Medicaid from birth for a 5 year period.

Age of first preventive dental encounter had a significantly positive effect on dental-related expenditures, with the average dental-related cost being less for children who received earlier preventive care.

Average dentally related costs per child according to age at first preventive visit:

Before Age 1: $262  
Age 1-2: $339  
Age 2-3: $449  
Age 3-4: $492  
Age 4-5: $546  

(Direct citation)
Medical Intervention

- Pharmacies may be used effectively in oral health promotion by virtue of their frequent contact with members of public.
- Addition of specific oral health subjects in the pharmacy curriculum may enable pharmacists to provide better oral health advice.
- Collaboration between pharmacists and other dental professionals could offer more effective oral health promotion strategies.
- Pharmacy data is virtual and can be the vanguard for early dental referral and maintenance strategies.
A. Toothbrush
B. Toothpaste (fluoride)
C. Fluoride vitamins
D. Xylitol
E. Re-mineralization products (calcium phosphate supplements)
F. Dental floss
G. Interdental stimulants

Dispensed by pharmacists based on innovative reimbursement
Pharmacy Intervention Model

Verify Dental History

⇩

Dispense Rx

⇩

Oral

Hygiene and

Anticipatory

Guidance

⇩

Submit Encounter
# FQHC COMMUNITY BLUE PRINT

<table>
<thead>
<tr>
<th>HEALTH HOME Based on Medical Intervention</th>
<th>Providers Serving Children at Risk for Medical/Dental Disease</th>
<th>TARGETED PROVIDERS</th>
</tr>
</thead>
</table>
| **1. Identification and Prioritization**  | • High-volume, high-opportunity providers  
• High-risk children  
• Children ages 0-5.99s  
• Target racial and ethnic disparities | • General and pediatric dentists in target areas  
• High-volume pediatric primary care providers (PCPs) in target areas |
| **2. Provider Engagement**                | • Pediatric dentists  
• General dentists  
• Pediatric PCPs  
• Obstetrical providers  
• Pharmacists | • Encourage/support general dentists to see children ages 0-5.99  
• Provide back-up specialty care (i.e., pediatric dental referrals)  
• Train pediatric PCPs  
  ➢ Early screening  
  ➢ Prevention, children 0-6  
  ➢ Referrals for dental exam  
  ➢ Follow-up to treatment  
  ➢ Anticipatory guidance  
  ➢ Fluoride varnish |
| **3. Patient Self-Management and Family Education** | • Primary care and oral health interface  
• Obstetrical care and oral health interface  
• Outreach strategies for target members to include dental visits, medical well child, immunizations, and lead screenings | • Community pre-school interventions  
• Family “scan” for siblings at risk  
• Parents of newborns  
• Culturally appropriate outreach to high-risk families |
| 4. Community Engagement | • School-based programs (pre-schools)  
• Nutrition programs  
• Community public health initiatives  
• Non-Traditional Sites | • Dental provider champions for pre-schools  
• Other maternal and child health programs that target family education |
|-------------------------|---------------------------------------------------------------|
| 5. Data Exchange and Health Information Technology | • Merge of medical and dental data for creation of integrated Medical/Dental Model [Health Home] | • Dental providers with electronic health record capability  
• Real-time data exchange between dentists and PCPs |
| 6. Measurement/Accountability | • Quarterly data reporting  
• Plan networks meeting needs  
• Performance measures | • Data-driven improvements  
• Setting benchmark improvement target |
| 7. Payment and Alignment of Incentives | • Establish a reimbursement model to support the Dental Referral Early Assessment Model and prevention-wellness. | • Reimbursement of medical providers for fluoride varnish application and integrated care management |
Value Based Reimbursement

Making the move to a value-based reimbursement model requires:

- Transforming the traditional "siloed" care model into a network care model, both for increased care coordination and the ability to scale effective interventions with the patient population.
- A significant increase in the need to acquire, aggregate, and analyze data across a healthcare network.
- An integrated financial and clinical platform for a common view of the patient across care settings and over time.
- Reorganizing institutional structure to accommodate value-based payments.
- **Dental provider engagement** with common goals and an incentive structure that supports these goals based on provider metric outcome analysis.
Challenges and Opportunities for Change

Reimbursement Model and Benefit Design

Reward = Provider Production Reimbursement

• If no value is given to procedures or treatment philosophies, they will not happen.

• Rewarding for surgical intervention only will not meet oral health care needs.

• There is no good mechanism for rewarding dentists for prevention.

• The lack of an economic model for prevention is a barrier that must be addressed.
Disruptive Insurance Model
Rhode Island Case Study

Goals:
• Increase access to dental services for younger children
• Promote the development of good oral health behaviors
• Decrease the need for restorative, emergency and operating room dental care
• Decrease expenditures for oral health care

By aging children into maintained health
Rite Smiles
Rhode Island Case Study

Visits /1,000

Prevention

Treatments

Year

2002 2003 2004 2005 2006 2007 2008 2009 2010

1 2010 are provisional estimates from claims paid through December 2010
Dental visit rates in 2010

- 46 percent for children five years and younger
- 64 percent for children six to eight
- 71 percent for children ages nine and 10.
The percentage of children ages two years and younger who received any dental care increased by almost 600% from 2002 to 2010.

Significant progress was also made among preschool children three to five years with participation rates approaching 50%.

Participation among the school aged children nine to ten years increased to over 70%.
**Rlite Smiles Health Home Model**

**A disruptive approach to Children’s Dental Medicaid**

**Rlite Smiles** began in 2006 as the first statewide dental plan in the nation for young children with Medicaid coverage.

- The Goal of Rlite Smiles Program was to increase access to dental care services and promote good oral health. Improving dental health outcomes in children will result in a decrease in costly restorative procedures, emergency and operating room utilization.

- All children with Medicaid coverage who were born after May 1, 2000 are eligible for Rlite Smiles and are automatically enrolled.

- The concept of healthy children maintaining this status in a true Health Home model has permitted the program to expand its enrollment each year.
## Dental Quality Measures – Overall Utilization

<table>
<thead>
<tr>
<th>Purpose</th>
<th>• Ensure children are receiving the proper amount of preventative care based on Risk Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metric used to Monitor</td>
<td>• Preventative Procedures as a percent of total procedures</td>
</tr>
<tr>
<td>Benchmark</td>
<td>• 85%</td>
</tr>
<tr>
<td>Questionable Levels</td>
<td>• Below 65%</td>
</tr>
<tr>
<td><strong>Implications for being Below Benchmark</strong></td>
<td>• May be overtreating patients with procedures that are not medically necessary</td>
</tr>
<tr>
<td><strong>Potential Rationale for being Below Benchmark</strong></td>
<td>• Population being treated has particularly poor oral hygiene and has historically received limited or no dental care</td>
</tr>
<tr>
<td><strong>Implications of being Above Benchmark</strong></td>
<td>• None</td>
</tr>
<tr>
<td><strong>Potential Rationale for Benchmark</strong></td>
<td>• Population being treated usually has abnormally poor oral hygiene and poor diet with limited access to dental care</td>
</tr>
</tbody>
</table>
# Dental Quality Measures – Method for Treating Caries

<table>
<thead>
<tr>
<th>Purpose</th>
<th>• Ensure caries are properly treated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metric used to Monitor</td>
<td>• Ratio of multi-surface restorations to SS crowns</td>
</tr>
<tr>
<td>Benchmark</td>
<td>• TBD based on location and State Medicaid programs</td>
</tr>
<tr>
<td>Questionable Levels</td>
<td>• TBD based on caries index and risk assessment of the patient</td>
</tr>
<tr>
<td><strong>Implications for being Below Benchmark</strong></td>
<td>• Over-utilizing SS crowns, which could lead to fraud and abuse concerns given the higher reimbursement rates associated with SS crowns which is modified by the treatment venue and risk assessment</td>
</tr>
<tr>
<td><strong>Potential Rationale for being Below Benchmark</strong></td>
<td>• Population being treated has particularly poor oral hygiene and has historically received limited or no dental care</td>
</tr>
<tr>
<td><strong>Implications of being Above Benchmark</strong></td>
<td>• TBD based on patients risk assessment score</td>
</tr>
<tr>
<td><strong>Potential Rationale for being Above Benchmark</strong></td>
<td>• TBD based on patients risk assessment score</td>
</tr>
</tbody>
</table>
# Dental Quality Measures – Continuity of Care

<table>
<thead>
<tr>
<th>Purpose</th>
<th>• Demonstrate whether children are receiving preventative care each year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metric used to Monitor</td>
<td>• Ratio of wellness visits to new patient and emergency care visits</td>
</tr>
<tr>
<td>Benchmark</td>
<td>• TBD</td>
</tr>
<tr>
<td>Questionable Levels</td>
<td>• TBD</td>
</tr>
<tr>
<td>Implications for being Below Benchmark</td>
<td>• Patients are not being seen frequently enough to identify or prevent serious oral health issues</td>
</tr>
<tr>
<td>Potential Rationale for being Below Benchmark</td>
<td>• TBD by locale</td>
</tr>
<tr>
<td>Implications of being Above Benchmark</td>
<td>• Patients are being seen frequently and in-line with established guidelines</td>
</tr>
<tr>
<td>Potential Rationale for being Above Benchmark</td>
<td>• NA</td>
</tr>
</tbody>
</table>
Conclusion

– The reimbursement model must be built on better practice outcomes that are evidence-based. This model must support the use of risk-based interventions and must have the ability to reimburse for them.

– Creating a financial model that supports this philosophy and allows for changes within the current structure will be needed to achieve the desired shift in dental care to a preventive based medical intervention.

– The Prospective Payment System (PPS) has to be modified to support value based outcomes.
Conclusion

• Value-based payments reward achievements of healthcare related goals with enhanced payments.

• When Healthcare Centers are paid like private providers, value based payments are the mechanism to “earn back” a Protective Payment System (PPS) equivalency.
FQHC Disruption Innovation

• The switch to value-based reimbursement will turn the traditional model of healthcare reimbursement on its head, causing FQHCs to change the way they bill for care.

• Instead of being paid by the number of visits, payments will now be based on the value of care delivered (value-based care).

• One thing is for certain—the trend for value-based care models will continue.
“We don’t need to think more, we need to think differently”

Albert Einstein
Questions?