Philadelphia, Pennsylvania, June 10th, 2014

Technology and Access: Serving Underserved Communities

Thank You!
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Senior Director for Educational Program Development
American Dental Education Association

Get Ready
Take 25 Seconds

Disclaimers

- I’m among some of the most knowledgeable experts in dental care and oral health in the nation.
- I’m of Norwegian heritage and live in Minnesota…
- While I am going to mention Apple and A-dec and other companies, I have no financial or other interests in them.

How is Access to Care Provided Today?

Traditional Private Practice

- A for-profit, dentist-centric model
- Mainly private fees and insurance revenues
- Minimal Medicaid participation
- A cottage industry of small clinics
- Very little integration with other health, education and social services systems

Community Health Centers

- Federally mandated nonprofit governance model
- Federal “encounter” reimbursements mixed with Medicaid and very limited private fees or insurance
- Typically large, co-located medical and dental clinics
- Limited scope of dental services and limited workforce models
Nonprofit Organizations

- Private governance and management
- Business model focused on their mission
- Flexible mix of private, public and nonprofit funding sources
- Innovative delivery system and workforce models

How Can New Technologies And Delivery Systems Help Reach Underserved Communities?

The Mouth...

is the portal to the body

A Good Place to Start?

- There are two significant mouth infections
- Both are chronic, recurring infections over the lifespan
- Prevention is very effective at all ages
- Dental treatments, unlike many medical treatments, generally produce good outcomes
- So improving the oral health delivery system might be great place to accomplish the “triple aim.”

The Cycle of Mouth Care

Education

Prevention

Diagnosis

Treatment

Mouth Infections

Diabetes Epidemic

Source: www.uhc.com/B2HDental

Individuals with Diabetes and CAD

UnitedHealthcare

Medical Dental Integration Study

March 2013

Medical and Pharmacy

Diabetes Episodes CAD Episodes Other Medical/Pharmacy Cost

$18,667

$10,316

$2,346

$7,595

$2,456

Source: www.uhc.com/B2HDental
Individuals with Diabetes and CAD

Members who received other or no dental care spent approximately $2,000 more on medical and pharmacy costs than individuals who received periodontal treatment and/or cleanings.

Conclusion

Preventing and treating mouth infections could help drive down overall healthcare costs.

1

Why is a Healthy Mouth Important Across the Lifespan?

The Age Wave is Coming...

Growth of U.S. Elderly (in millions)

“Teeth in the U.S” - Aged 65-84

Source: Reinhardt/Douglass: Future Need for Dentistry

Can The U.S. Afford Dental Care Across the Lifespan?

Average Annual Total Per-Person Health Spending, U.S. 2010

U.S. Spending by Disease, 2010

<table>
<thead>
<tr>
<th>Disease</th>
<th>Billions</th>
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<tr>
<td>Hypertension</td>
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<tr>
<td>Diabetes</td>
<td>$51</td>
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<tr>
<td>COPD/Asthma</td>
<td>$64</td>
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<tr>
<td>Cancer</td>
<td>$82</td>
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<td>Mouth Disease</td>
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<td>Heart Disease</td>
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Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey—Table of Total Expenses, 2010

Average Annual Physician Spending, 2002 to 2010

<table>
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<tr>
<th>Year</th>
<th>Children (0-18)</th>
<th>Elders (85+)</th>
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<td>2008</td>
<td>$3,871</td>
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<td>2010</td>
<td>$4,342</td>
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Average Annual Dental Spending, 2002 to 2010

<table>
<thead>
<tr>
<th>Year</th>
<th>Children (0-18)</th>
<th>Elders (85+)</th>
</tr>
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<tbody>
<tr>
<td>2002</td>
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<td>$372</td>
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<td>2010</td>
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</table>


Why are there Disparities in Dental Care spending Across the Lifespan?

- Both public and private dental benefits emphasize coverage of children and working adults.
- Dental benefits for disabled adults and the frail elderly have been a low priority, despite higher than average dental needs.
- The U.S. spends more per-capita on health care than any other nation, yet money is seemingly unavailable for essential services like dental care.

So What IS the Problem?

We need a health care system that is **accountable** for:

1. Improving health care delivery across the lifespan
2. Improving health outcomes for individuals and populations
3. Optimizing the value of health care across the lifespan

World Economic Forum, 2013

A diverse group of health system leaders across five countries was asked to describe their ideal health system in 2040.
The preferred health system of the future is strikingly different from the national healthcare systems of today, with empowered patients, more diverse delivery models, new roles and stakeholders, incentives and norms.

New oral health delivery systems will ...

- Eliminate barriers that contribute to oral health disparities;
- Prioritize disease prevention and health promotion;
- Provide oral health services in a variety of settings;

Goals include...

- Savings of $111 million to Medicaid, Medicare and commercial market
- 1.7 million Minnesotans included in the Minnesota Accountable Health Model. This would be an increase of 500,000.
- 67% of primary clinics providing patient-centered, coordinated care, health care home, behavioral health home, or similar model
Accountable Care Organizations [ACO’s]

An ACO represents the notion of a group of health care providers with collective responsibility for patient care that helps providers coordinate services – delivering high-quality care while holding down costs.

2

The Apple Tree Dental Collaborative Practice Model

Apple Tree Dental Was Inspired by The Mayo Clinic...

In Rochester, Minnesota

The Mayo Clinic

• The Mayo Clinic is the oldest and largest integrated, not-for-profit group practice in the world. It began in the mid-1800’s during the Civil War.
• In 2012, 7,650 physicians, scientists, residents and fellows and 53,600 allied staff were working at Mayo Clinics in Minnesota, Florida and Arizona.
• The Mayo Clinic is the largest private employer in Minnesota.
• Over 1.1 million individual patients are seen each year.
• The Mayo Clinic has been improving healthcare delivery, measuring and improving outcomes and driving down total healthcare costs for 150 years.

Why Not Follow?

Breaking News

...Monday, June 2nd, 2014
Apple WWDC Keynote
**Apple Tree Dental**

*In our 29th Year!*

**Apple Tree ...**

- Was inspired by the values and practices that were pioneered at the Mayo Clinic, and seeks to improve quality, access and outcomes by adapting the Mayo model to dentistry.
- So Apple Tree is structured as an independent, nonprofit, staff model, group dental practice continuously innovating in the areas of oral health care delivery, clinical education, practice based research and policy development.

**sustain·a·bil·i·ty**

<suh-stey-nuh-bil-i-tee>

Noun
1. the ability to be sustained, supported, upheld, or confirmed. How biological systems endure and remain diverse and productive.

*Oral health delivery systems should be designed for sustainability to maintain the oral health of populations across the lifespan.*

**What are some of the Keys to Sustainability?**

**Nonprofit structure**

aligns accountability with Apple Tree’s mission.

Apple Tree’s mission is to improve the oral health of people with special access needs who face barriers to care.

**Nonprofit Mission and Governance**

**Board of Directors**
The Board of Directors

- Has Interdisciplinary Expertise
- Sets the Mission and Vision
- Conducts Strategic Planning
- Creates a Culture of Innovation

A staff model builds a team with special expertise

Executive Staff

- Chief Executive Officer
- Centers for Dental Health
- Finance and Administration
- Innovations Center

Examples of Staff Expertise...

- Geriatric, pediatric, public health and special care dentistry
- IV sedation, oral medicine, hospital dentistry
- Prosthodontics, oral surgery and implantology
- Dental education, clinical student rotations
- Fundraising and nonprofit development
- Public policy leadership and advocacy

Institute of Medicine

Health Care Quality Measures

1. Safe
2. Effective
3. Patient-Centered
4. Timely
5. Efficient
6. Equitable

Safety

safety |ˈsæfti| noun
the condition of being protected from or unlikely to cause danger, risk, or injury:

Patient safety is increased when the dental team has broad expertise.

Forming Sustainable Partnerships

Staff Recruitment and Retention
Who Would Enjoy a Career at Apple Tree?

Staff Retention
- Promote creativity
- Provide career opportunities
- Design your “staff experience” just as you design your “patient’s experience.”
- Create a culture of team work that supports innovation

What’s been Accomplished?

Apple Tree Programs and Replications
- California
  - Late 2014
- North Carolina
  - 10 and 16 years
- Louisiana
  - 13 years

Minnesota Programs
- Low income children and their families
- Adults with disabilities
- Seniors and elders in long-term care
- Urban and rural communities

Age Distribution, 2012

Total of 23,068 Patients Served

Dental Care and Oral Health Value

Over $18 Million in 2013
$150 Million in Dental Services Value

Collaborative Practice

Community Collaborative Practice

Collaborating to deliver oral health services where people live, go to school, or receive other health and social services

Three-Way Organizational and Staff Partnerships

1 Center for Dental Health
2 School Group Home Nursing Facility
3 On-Site Hygienist-Dentist Teams

Proactive vs. Passive

Proactive [pro′aktiv] adjective
Creating or controlling a situation by causing something to happen rather than responding to it after it has happened:

Apple Tree is proactive in identifying and preventing mouth infections in individuals and high risk populations.

We Design Our Programs to Be...

• Proactive and patient centered
• Focused on prevention and outcomes
• Geographically distributed
• Collaborative and interdisciplinary
• Tele-health enabled

Apple Tree’s Innovations Center

• Dental Care Delivery Pilot Projects
• Clinical Dental Education Innovations
• Policy and Advocacy Programs
• Health Services Research Projects
• Marketing and New Program Development

Clinical Dental Education Innovations Projects

• National and regional conferences
• Student lectures and clinical rotations
• Our own internal staff training
• Podcast production
• Beginning to develop iBooks
**Collaborating Institutions**

- Normandale
- Minnesota State University
- Metropolitan State University
- South Central College
- ATSU
- Rochester College

**Types of Students**

- Practicing Professionals
- Dental Residents
- Dental Students
- Dental Hygiene Students
- Dental Therapy and Advanced Dental Therapy Students
- Dental Assisting Students
- Nursing Students
- Certified Nursing Assistants (CNA)
- Personal Care Assistants (PCA)

**Creating iBooks**

- Always up to date, just like smart phone apps
- I’d like to share a short video clip about them

**Creating Podcasts**

- Can be accessed anywhere on multiple devices, by staff or by student interns and externs via YouTube
- Can be watched before rotations for orientation, or during rotations
- Are easy to produce and update

**Sample Podcast Clips**

- Student research projects
- Published journal articles
- Program and project evaluations
- Barbara Smith’s PhD in Epidemiology
- More than 100,000 patients in longitudinal database
**“Hub and Spoke” Clinics**

- Clinic and Care Coordination Center is the “Hub Clinic”
- On-Site Clinics in the community are the “Spokes” at Skilled Nursing Facilities (SNF), Mental Health Campus (MH), School (K-12), Head Start (HS) etc.
- We believe this is an optimal delivery system for people facing barriers to care.

**Oral Health and Dental Care Teams**

**Oral Health Team**
- Led by the Collaborative Practice Hygienist, who uses lightweight equipment and travels in a car or minivan. It is linked to the dental care team.

**Dental Care Team**
- Led by the On-Site Dentist, it uses the Apple Tree Mobile Dental Office and includes dental therapists, hygienists, dental assistants, and others.

**Cloud-Based Electronic Health Record**

Apple Tree has entered into Phase II meaningful use with our customized EHR.

**Apple Tree Center for Dental Health**

The Twin Cities “Hub Clinic”
IV Sedation with Nurse Anesthetists

General Anesthesia

$62/Min
$22-$133/Min

$15,000

Patient-centered

A patient is a recipient of health care services: "The patient's interest is the only interest to be considered." - Dr. Mayo

Able to accept or tolerate delays, problems, or suffering without becoming annoyed or anxious: be patient, your dentist will see you soon.

Apple Tree "Multi-Site Delivery Vehicle"
How do the Mobile Offices work?

Apple Tree Rochester Program
On-Site Care in a Nursing Facility

Apple Tree Mobile Dental Office

Treatment in Wheelchairs

Patient Safe Handling

Let's Stretch for 20 Seconds....

Take Out Your False Teeth Daddy....

Margie Day
How are Services Delivered in a Nursing Facility?

New Workforce Roles

Nursing Facility Program

The Dental Director & Collaborative Practice Hygienist

Oral Health Team Roles

Dental Director’s Roles

Equity

Collaborative Practice Hygienists’ Roles

The Dental Director is a workforce role that assures equitable access to care without discrimination based on ability to pay, enrollment in Medicaid, level of disability, or advanced age.

• Based on the roles of the nursing facility’s Medical Director
• Part of the organizational structure of the facility providing oversight of oral health policies and procedures for all the facility’s residents.

• They serve as “front-line clinicians” at community sites.
• They are members of the nursing facility’s admission screening team, visiting at least monthly to complete admission or re-admission screenings.

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equity /ˈekwɪtɪ/ noun
1 the quality of being fair and impartial:
The Dental Director is a workforce role that assures equitable access to care without discrimination based on ability to pay, enrollment in Medicaid, level of disability, or advanced age.

Oral health team roles include:
- Dental Director
- On-Site Dentists
- Tele-dentists
- Advanced Dental Therapists
- Dental Therapists
- Collaborative Hygienists
- Nurse Anesthetists
- Licenced Dental Assistants
- Lab Technicians
- Dental Liaisons
- Care Coordinators
- Truckers
Community Care Coordinators

Sequence of Services

Oral Health Education

Preventive Care

Effectiveness

effectiveness |ˈɛkˈtɪvɪzn| noun
the degree to which something is successful in producing a desired result; success:
the effectiveness of on-site care is supported by scientific evidence.
**Timeliness**

Done or occurring at a favorable or useful time; opportune:

*A dental visit in time saves nine.*

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**Efficiency**

Efficiency in general, describes the extent to which time, effort or cost is well used for the intended task or purpose:

*Delivering on-site care reduces transportation costs, increasing the efficiency of dental care delivery dramatically.*

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**Conclusion**

*Apple Tree’s experience supports the conclusion that Advanced Dental Therapists are cost-effective team members, playing front-line clinical roles in a nonprofit, community-based practice.*

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**Uncompensated Charity Care**

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<tr>
<td>2015</td>
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**How is Apple Tree sustained?**
Financial Sustainability

- Controlling expenses, focusing on programs
- Maintaining a mix of public and private patients
- Serving all age groups and special needs
- Reaching urban and rural geographic locations
- Delivering a full range of services from basic to advanced

In Closing...

I believe that teaming up is critical to reforming oral health care delivery…
Because some things can only be done by a well directed team…

Thank You Again!

www.appletreedental.org
mhelgeson@appletreedental.org