The Impact of Dental Therapists on Health Center Economics

Jane Koppelman, Research Director
Pew Children’s Dental Campaign
National Primary Oral Health Conference
August 19, 2014
Our Mission:

The Pew Children’s Dental Campaign strives for cost-effective policies that will mean millions more children get the basic dental care they need to grow, learn and lead healthy lives.
Midlevel Dental Providers in Practice: 5 Examples
Why employ midlevels?

1. **Extend reach** of dental practices to underserved people

2. **Make it economically viable** for dental practices to treat more Medicaid patients

3. **Improve efficiency** and economic bottom line
State Legislative Activity: Mid-Level Dental Providers

15 states considering new providers

4 states authorizing new providers
Five Clinical Settings
Research Areas

1. Clinical integration
2. Improving Access to Underserved
3. Financial Impact
Increased access to care? Yes

Added net revenue? Yes

Dentists performing more complex procedures? Yes
<table>
<thead>
<tr>
<th>Model (Location)</th>
<th>Supervision</th>
<th>Education</th>
<th>Allowable Procedures (not a complete list)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Therapist</td>
<td>Some procedures (preparing cavities and restoring and extracting teeth) require a dentist in the office; others (X-rays, fluoride varnish) do not.</td>
<td>Bachelor’s degree (28-month post-high-school program; requires 10 prerequisite courses)</td>
<td>• Take X-rays</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Apply fluoride varnish and sealants</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Prepare and restore decayed primary and permanent teeth</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Place temporary and preformed crowns</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Perform primary tooth pulpotomies</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Extract primary teeth</td>
</tr>
<tr>
<td>Advanced Dental Therapist</td>
<td>Can work without a dentist in the same location, performing procedures according to standing orders issued by the supervising dentist.</td>
<td>Master’s degree (26 month degree; prerequisite bachelor’s degree in dental hygiene) + 2,000 clinical practice hours</td>
<td>All dental therapy procedures, plus:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Take X-rays</td>
</tr>
<tr>
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<td></td>
<td>• Perform primary tooth pulpotomies</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Extract primary teeth, perform simple extractions of permanent teeth</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Complete an oral evaluation and create a treatment plan</td>
</tr>
</tbody>
</table>
People’s Center Health Services (Minneapolis)
Patient visits: 1756
Cost to employ: $136,000
Medicaid revenue: $167,000
Medicaid revenue exceeds costs by over $30,000
Norton Sound Health Corporation

Dental Health Aide Therapists (Alaska)
<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Patients:</td>
<td>637</td>
<td>Patients:</td>
<td>715</td>
</tr>
<tr>
<td>Procedures:</td>
<td>2622</td>
<td>Procedures:</td>
<td>4,734</td>
</tr>
</tbody>
</table>
Virtual Dental Home (California)
<table>
<thead>
<tr>
<th>RDHs at each school:</th>
<th>1-2 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students served:</td>
<td>201</td>
</tr>
<tr>
<td>Average visits per student:</td>
<td>2.2</td>
</tr>
<tr>
<td>Dentist referral rate:</td>
<td>38%</td>
</tr>
</tbody>
</table>
Virtual Dental Home (California)

Distribution of Procedures Provided: 2013

- Preventive: 55%
- Diagnostic: 44%
- Restorative: 1%
Virtual Dental Home

California vs. National average per visit

Costs: $115  $99
Revenue: $61  $112
Main Street Dental Care (Minnesota)

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<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Patients seen:</td>
<td>241</td>
</tr>
<tr>
<td>Procedure volume:</td>
<td>972</td>
</tr>
<tr>
<td>Total cost of employment:</td>
<td>$90,700</td>
</tr>
<tr>
<td>Total billings:</td>
<td>$156,000</td>
</tr>
</tbody>
</table>
Main Street Dental Care (Minnesota)

Percentage Change in Dr. Powers’s Procedures from 2011 to 2012

-60  -40  -20  0   20   40   60

<table>
<thead>
<tr>
<th>Procedure</th>
<th>2011</th>
<th>2012</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composite Restorations</td>
<td>-60</td>
<td>-40</td>
<td>20</td>
</tr>
<tr>
<td>Surgical Extractions</td>
<td>-40</td>
<td>-20</td>
<td>20</td>
</tr>
<tr>
<td>Root Canals</td>
<td>0</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Implant Procedures</td>
<td>0</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Exams</td>
<td>0</td>
<td>40</td>
<td>40</td>
</tr>
</tbody>
</table>

Main Street Dental Care (Minnesota)
Main Street Dental Care (Minnesota)

2011 (1,108 total patients)
- Medicaid: 293
- Non-Medicaid: 815

2012 (1,291 total patients)
- Medicaid: 507
- Non-Medicaid: 784
Increased access to care?  Yes

Added net revenue?  Yes

Dentists performing more complex procedures?  Yes
Want to know more?

Visit www.pewtrusts.org/dental to read our case study reports and learn about our work.
ADVANCED DENTAL THERAPIST’S WORKING IN FQHCs

Allison Dooley, ADT
People’s Center Health Services
Family Dental Care
Minneapolis, MN
Dental Therapy throughout the World

Dental therapy is not unique to the United States, and is practiced in many countries around the globe.
New Mid-Level Dental Provider

- An increased ability to meet the dental needs for the underserved populations was a driving force in MN to establish a DT/ADT
- MN’s experience should prove useful to other states with similar goals
  - To maintain high educational standards
  - To provide high quality of care and patient safety
  - To meet the oral healthcare needs of underserved populations
Advanced Dental Therapy in FQHCs

- People’s Center Family Dental Care hired the 1st dental therapist in MN
- Dual Licensure – Licensed as a RDH and DT=ADT
- 1st year completed 1,756 restorative patient visits.
- Provided basic oral health and dental services to underserved patients and communities.
- Promoted patient education and oral health awareness
- Success of having a DT encouraged the organization in hiring another DT for the dental team
Advanced Dental Therapy in FQHCs

- People’s Center Health Services
  - Serves low income and immigrant populations in South Minneapolis, MN
  - Became a Federally Qualified Health Care Center in 2003
  - In 2010, People’s Center Health Services acquired Family Dental Care
  - In 2011, People’s Center Health Services acquired Teenage Medical Services from Children’s Hospital
  - In 2012, People’s Center Health Services was certified as a Health Care Home in MN.
People’s Center Family Health Services
Practice Settings

- Critical access dental provider settings
- Dental Hygiene collaborative practice settings
- Military/veterans administration hospital, clinic, etc.
- Private residences for home-bound patients
- Oral health educational institutions
- Clinics in which at least 50% of DT patients consist of patients who:
  - Settings that serve low-income, uninsured and underserved patients
    - Are enrolled in a MN health care program
    - Have a medical disability/chronic condition that creates an access barrier
    - Have no health coverage and have gross family income < 200% federal poverty level
- Settings in a dental Health Professional Shortage Area
- A Health Professional Shortage area is defined as an area that meets criteria established by the secretary of the United States Department of Health and Human Services and is designated as such under United States code, title 42, section 254e.
PEOPLE’S CENTER FAMILY DENTAL CARE

• Located in Dental health professional shortage area
  • 25% of the clinic’s dental patients are uninsured and receive care at a sliding, discounted rate.
  • 60% of patient’s are on state programs (Medicaid)
  • 60% of patient’s are of East African descent, predominantly Somali.
• 25% of patient’s need interpreters when receiving care.
Advanced Dental Therapy in FQHCs

- Hiring an Advanced Dental Therapist
  - WHY??
  - Improve dental access to underserved communities
  - Extend hours for patient care and satisfaction
  - Educate, evaluate, assess, and provide basic dental treatment without dentist on site
  - Promote preventative dental health practices
  - Effective/quality dental treatments and cost-efficient
  - Allows dentist to focus on complex procedures
  - Patients in pain seen in a timely manner
Hiring a Dental Therapist or Advanced Dental Therapist

- Enhancing Your Oral Health Care Team
Dental Therapy in FQHCs

- Licensing and Certification
  - To be licensed as a DT
  - Graduate from a DT educational program that has been approved by the MN Board of Dentistry
  - Pass a comprehensive, competency based clinical exam (CRDTS)
  - Pass a jurisprudence exam
  - Submit an application
Advanced Dental Therapy in FQHCs

• Licensing and Certification
  • To be a certified ADT
  • Be a licensed dental therapist
  • Complete 2,000 residency hours of practice under direct or indirect supervision
  • Graduate from a master’s advanced dental therapy program
  • Pass an exam that demonstrates competency
# Dental Therapy

## Scope of Practice

<table>
<thead>
<tr>
<th>General Supervision</th>
<th>Indirect Supervision</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Restorative</strong></td>
<td></td>
</tr>
<tr>
<td>• place temporary fillings</td>
<td>• amalgam and composite restorations</td>
</tr>
<tr>
<td>• atraumatic restorative therapy</td>
<td>• stainless steel crowns</td>
</tr>
<tr>
<td>• apply desensitizing medication</td>
<td>• pulp capping and pulpotomies</td>
</tr>
<tr>
<td><strong>Miscellaneous</strong></td>
<td></td>
</tr>
<tr>
<td>• fabricate athletic mouth guards</td>
<td>• extract primary teeth</td>
</tr>
<tr>
<td>• administer LA and N2O</td>
<td>• place, remove space maintainers</td>
</tr>
<tr>
<td><strong>Diagnostic, Preventive, &amp; Problem Focused</strong></td>
<td>• brush biopsies</td>
</tr>
<tr>
<td>• radiographs</td>
<td>• palliative care for dental pain</td>
</tr>
<tr>
<td>• prevention education</td>
<td>• simple denture repairs</td>
</tr>
<tr>
<td>• apply topical preventive agents</td>
<td>• recement crowns</td>
</tr>
<tr>
<td>• mechanical polish</td>
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</tbody>
</table>
Advanced Dental Therapist Services

- All DT scope of practice, including.............
  - General Supervision authority
  - Limited, periodic oral evaluation and assessment
  - Non-surgical extraction of periodontally involved permanent teeth with Class III or IV mobility
  - Providing, administering, dispensing of prescription antibiotics and non-narcotic pain medications
  - Supervising at most 4 Dental Assistants
Advanced Dental Therapy in a FQHC

- Collaborative Management Agreement
  - Prior to performing any services, a DT and an ADT must enter into a written CMA with a licensed Dentist
  - A Dentist may have a CMA with no more than 5 DT’s or ADT’s at a given time
  - The CMA can include limitations on services provided or supervision required as determined by the collaborating Dentist
  - The collaborating dentist accepts responsibility for all services authorized and performed by the DT or ADT
Advanced Dental Therapy in FQHCs

- Collaborative Dentists
  - Written agreement with 3 Supervisory Dentists
  - Includes protocols for authorized scope and supervision requirements
  - Protocols for referral to specialist when needed
  - Dentist must provide or arrange advanced treatment for patient’s when needed
Advanced Dental Therapy in FQHCs
Advanced Dental Therapy in FQHCs

- Continue achieving Goals by:
  - Improve Access to Dental Care
  - Provide Quality Care
  - Increase Team Productivity
  - Improve Patient Satisfaction
  - Cost effective with quality dental treatments
  - Building life long relationships with patients, their families and their communities
  - Serving the dental hygiene and dental restorative needs of patients with dual licensure
Advanced Dental Therapy in FQHCs

- Lower emergency room visits related to dental pain
- Patients seen for dental treatments at initial stages of dental disease
- Building relationships with dental providers to promote professional growth
Advanced Dental Therapy in FQHCs

• An Advanced Dental Therapist’s Perspective
  • Untreated dental disease affects the ability to learn, work, and function in daily life
  • Untreated dental disease results in higher costs for extensive dental treatment, and increases ER visits due to dental pain
  • Cavities are 100% Preventable, early detection and treatment prevents tooth loss
  • Midlevel Providers improve access for underserved populations and provide safe, high quality dental care
  • Collaboration in dentistry would improve the oral health of millions of Americans who lack access to dental care.
• Any Questions?
• Contact:
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  • Family Dental Care
  • 612-728-8888
  • dooleya@peoples-center.org
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952-358-8158

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Metropolitan State University
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St. Paul, MN
651-793-1373
References

- Report to the Minnesota Legislature 2014: Early Impacts of Dental Therapists in Minnesota
- PEW Charitable Trusts: Expanding the Dental Team
- Journal of Dental Research: Dental Therapists: Evidence of Technical Competence
- W.K. Kellogg Foundation: A Review of the Global Literature on Dental Therapists
Hiring a Dental Therapist

Eric Elmquist D.D.S.
Lake Superior Community Health Center
#1 Background on Dental Therapist in MN
#2 My Process in hiring a Dental Therapist
#3 How was the Dental Therapist utilized in our clinic
#4 What worked, what didn’t
#5 Future
Changes to the Delivery of Oral Health Workforce in Minnesota

2001 - Collaborative Practice Hygienists
   - *initially a limited authorization*
   - *2005 expansion to include the full scope of dental hygiene practice*

2003 - Restorative Functions (licensed DH & DA)

2009 - Dental Therapists, Advanced DTs

2011 - First DTs completed formal training

2012 - First ADT certified by the MN BOD
Legislation Enacted 2009

- MN Created both Dental Therapists and Advanced Dental Therapists
- DTs/ADTs work under a written collaborative management agreement with a MN licensed dentist
- The purpose of this provider is to extend dental care to underserved communities
What is a dental therapist?

A mid-level dental practitioner who works under the supervision of a licensed dentist. A member of the oral health care team who is educated to provide evaluative, preventive, restorative, and minor surgical dental care within their scope of practice.
Requirements in MN

Dental Therapist:

- Graduate from an accredited program
- Pass a Clinical Examination
- Jurisprudence Examination
- CMA on file with Board of Dentistry with a collaborative dentist
Advanced Dental Therapist

ADT practices under general supervision of a dentist within the parameters of the collaborative management agreement. The dentist need not be on-site when the ADT performs dental procedures (including surgical), nor does the dentist need to personally conduct a clinical examination of the patient before that care is provided. However, the dentist must authorize the care that the ADT intends to provide each individual patient.
Requirements

Advance Dental Therapist:

- Completing 2,000 hours of dental therapy clinical practice under direct or indirect supervision
- Graduating from a master’s program in advanced dental therapy
- Passing a board-approved certification examination to demonstrate competency under the advanced scope of practice, and submitting an application for certification
Resources

**Dental Therapy Employer Guide:**
http://www.mchoralhealth.org/mn/dental-therapy/references.html

**Minnesota Board of Dentistry:**

**University of Minnesota School of Dentistry:**
http://dentistry.umn.edu/programs-admissions/dental-therapy/index.htm

**Metropolitan State University:**
http://www.metrostate.edu/msweb/explore/catalog/grad/index.cfm?lvl=G&section=1&page_name=master_science_advanced_dental_therapy.html

**Minnesota Dental Association:**
A History of Minnesota’s Dental Therapist Legislation Or...What the Heck Happened Up There?
LSCHC- Clinic Background

- FQHC
- Health Center established 1973
- Superior Site – 8 Dental Chairs, Established 2005
- Duluth Site – 11 Dental Chairs, Established 2007
- Minnesota and Wisconsin offer MA Reimbursement for Adult Preventative, Restorative and Emergency Services
- Clinic increasing depended on Oral Health Program financially
What Duluth is known for
What Duluth would like to be known for
LSCHC Changes

- Leadership Changes
- Expanding Medical Program and unionization
- Health Care Access Office expansion - ACA/MNSURE
- Started rebranding and extensive promotion campaign for first time since opening of dental clinic
- Dental Staffing Changes
- Dental Program Expansion
Care Delivery Challenges

2013 greatest number of encounters seen in our dental clinic

- Increased wait time for routine appointments
- Hard to keep both sites open 5 days a week
- Dentist seeing more ER patients Everyday
- DDS Scheduling causing FD nightmare

Were we meeting the needs of our Patient population?
Change the Program?

- Change Scope of Practice
- Emergency clinic/ Stop taking all new ER Patients
- Stop Accepting New Patients
- Limited hours at Superior Site

None of these solutions were endorsed by the LSCHC Board of Directors.
Staffing Options:

- Dentist
- Dental Students
- Temporary Dentist
- Volunteer Dentist
- Part-time Dentists
- Dental Therapist
- Restorative Functions Dental Assistant
Developing the Dental Therapist Program

- Needed to educate the dental staff about the position.
- Needed to educate patient population.
- What was the goal for the Dental Therapist?
Dental Therapist in Action

Dental Therapist Started November 2013

- 2 chairs/2 assistants
- Production expectation 1.1 patients per hour
- Quality Assurance the same as any new provider
- Majority of Patients was adult restorative
患者就诊/小时工作目标1.1

- 十一月
- 十二月
- 一月
- 二月
- 三月
- 四月
- 五月

患者/小时
Production and Scheduling Considerations

Patient Population:
- DT seeing an Adult population
- Longer appointments
- More complex procedures
- More procedures per appointment
- Decreased Production - Was this a problem?
Clinic Production 2014

**Encounters**

![Bar Chart]

- **X-axis**: Year-Month
- **Y-axis**: Encounters
- Data for each month from May 2013 to May 2014

**Notes**
- The chart shows the number of encounters in each month from May 2013 to May 2014.
- The highest number of encounters is in May 2014, with a significant drop in the subsequent months.
- The lowest number of encounters is in January 2014.

**Analysis**
- The trend suggests a decrease in encounters post-May 2014.
Clinic Production

Other things helping production:

- Hired Temporary Dentist
- Hired Permanent Dentist
- Stricter failed appointment policy
- Increased use of Restorative Functions Dental Assistants
- Staff was great
Dental Therapist Production

Changes in Program:
- DT working with one mainly Dentist
  - Standardization
  - Mentoring
  - Communication
- DT second chair became Triage chair
Other Benefits of Dental Therapist

- Improve the Morale, Communication and Collaboration. The Dental staff was working as a Team.
- Increase Patient Satisfaction - we were being responsive to their needs
- Made our Clinic more Visible
- Provided Same Quality Care to More Patients
Percentage of ER Patients Getting CC Addressed at First Visit
If I Knew Now…

- Formal Utilization and Scheduling Plan for Position
- More Education of Entire Clinic
- One Dentist as Point Person
- Used State and Community Resources
- Set Realistic Expectations
Conclusions

- Did the DT increase access?
- Was the DT position successful in our clinic?
- Did the DT solve our access needs?
The most damaging phrase in the human language may well be –
IT WAS ALWAYS DONE THAT WAY.

— Grace Hopper