Rural and Urban Dentists’ Perceptions of Dental Therapy: Is it a Solution for Rural Oral Health Access Issues?

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• Established in 1980, at The University of North Dakota (UND) School of Medicine and Health Sciences in Grand Forks, ND
• One of the country’s most experienced state rural health offices
• UND Center of Excellence in Research, Scholarship, and Creative Activity
• Home to seven national programs
• Recipient of the UND Award for Departmental Excellence in Research

Focus on
– Educating and Informing
– Policy
– Research and Evaluation
– Working with Communities
– American Indians
– Health Workforce
– Hospitals and Facilities

ruralhealth.und.edu
Background

• 17 of the 53 North Dakota counties had no practicing dentist as of March, 2016; an additional 8/53 had only one dentist

• Nearly 62% of practicing dentists were located in the four largest counties

• 16 of 53 counties in North Dakota (30%) were dental health professional shortage areas; the U.S. Census Bureau defined each county as Rural

• Nearly 51,000 people were lacking proximal access to dental care

Figure 1. North Dakota Dispersion of Oral Health Workforce, 2016

The red line (—) indicates the percent of the state population within that geographic category

Data provided by the North Dakota Board of Dental Examiners
Oral Health Access Needs

• 51% of American Indian third-graders had no toothbrush in the home compared to 4% of their White, Non-Hispanic peers; 91% had decay experience, 57% had rampant decay
• 72% of EPSDT Medicaid enrollees had no preventive visit in 2015
• 11% of eligible youth between ages 6-14 received a dental sealant in 2015
• 65% of ND Adults (18-64) and 65% of elderly (65+ years of age) visited a dentist in 2014
• Children attending lower income schools had significantly higher rates of untreated decay, prevalence of rampant decay, and need for early or urgent dental care than students attending higher income schools

Additional Resource on Oral Health Care Access & Utilization in North Dakota

• Oral Health among North Dakota Adults (18-64)
• Oral Health among North Dakota Medicaid Recipients
• Oral Health among North Dakota Elderly
• Educating the Oral Health Workforce in North Dakota
• Fluoride Varnish Application in Primary Care Settings
• Pediatric Oral Health Disparities in North Dakota
• Social Factors Affecting Pediatric Oral Health in North Dakota
• Dental Workforce in Rural and Urban North Dakota
• Oral Healthcare in North Dakota Long Term Care Facilities

All Publications: https://ruralhealth.und.edu/what-we-do/oral-health/publications
North Dakota Legislation

- 2015 – Dental Therapy bill defeated 40-6
- Senate Concurrent Resolution #4004 – Study
- 2017 – Dental Therapy bill (HB 1256)
- Funding from The Pew Charitable Trusts
- North Dakota Dental Association “Survey”

Method

- Tool – Collaboration with Southeast Center for Research to Reduce Disparities in Oral Health; Chair of Oral Health America’s Board of Directors
- Survey dentists with practice address, 2016 (North Dakota Board of Dental Examiners)
- Priority Mail December, 2016; USPS January, 2017 (included online option) – anonymous
- Limitation: Preliminary results in Legislative Testimony prior to second mailing – influence second round respondents?
Knowledge, Support, & Participation

<table>
<thead>
<tr>
<th>Workforce Model</th>
<th>Abbreviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding and implementation of case management, including as a reimbursable service</td>
<td>Case Management</td>
</tr>
<tr>
<td>Increasing opportunities for dental students to complete residencies in North Dakota</td>
<td>Residencies</td>
</tr>
<tr>
<td>Additional locations and funding for dental safety-net clinics, including mobile units</td>
<td>Safety-Nets/Mobile</td>
</tr>
<tr>
<td>Increasing Medicaid reimbursement for dental services</td>
<td>Medicaid</td>
</tr>
<tr>
<td>Expanding the service area (funding) of Seal! ND, providing sealants in a school setting</td>
<td>Seal! ND</td>
</tr>
<tr>
<td>Utilizing dental hygienists at their expanded scope of practice (once certified), including limited restoration procedures under direct supervision of a dentist</td>
<td>DH Current</td>
</tr>
<tr>
<td>Further expansion of the scope of practice for dental hygienists including expanded restorative procedures, and general or indirect supervision</td>
<td>Expand DH</td>
</tr>
<tr>
<td>Expanding the scope of practice for dental assistants including preventative and restorative services, and utilizing the workforce if certified</td>
<td>Expand DA</td>
</tr>
<tr>
<td>Develop and utilize a CODA certified dental mid-level provider (which may or may not borrow from emerging workforce models in MN and/or AK)</td>
<td>DT</td>
</tr>
</tbody>
</table>

Results

- Response rate: 44% (187/421)
- 58% of respondents served predominantly Urban communities (self-report)
- 42% provided care primarily to Rural residents
- 77% practiced general family dentistry
- Dentists predominately served in a solo private (49%) or small group (37%) practice
- Only 13% of respondents were not members of the North Dakota Dental Association
Support

There were significant differences (p < 0.05) between Rural and Urban dentists for: expanding the reach of dental safety-nets; increasing Medicaid reimbursement; and, dental therapy

Figure 2. Percent of Dentists with “No Knowledge” of Proposed Access Solutions

Figure 3. Percent of Dentists who “Support” or “Support Depends on Specifics”
Participation
Rural dentists were more willing to participate in the hire of a dental therapist than were Urban dentists (p<0.05)

Figure 4. Dentists’ Willingness to Participate in the Hire of a State Certified DT

Level of Supervision Dentists would Permit a DT to Provide Select Patient Services

<table>
<thead>
<tr>
<th>Service</th>
<th>General</th>
<th>Indirect</th>
<th>Direct</th>
<th>Would Not Permit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caries removal and placement of temporary restorations</td>
<td>Rural</td>
<td>2.6%</td>
<td>11.7%</td>
<td>23.4%</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>8.3%</td>
<td>7.4%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Caries removal and placement of definitive restoration</td>
<td>Rural</td>
<td>0.0%</td>
<td>7.8%</td>
<td>20.8%</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>2.8%</td>
<td>8.5%</td>
<td>8.5%</td>
</tr>
<tr>
<td>Extraction of primary teeth</td>
<td>Rural</td>
<td>2.6%</td>
<td>13.2%</td>
<td>17.1%</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>5.6%</td>
<td>7.4%</td>
<td>14.8%</td>
</tr>
<tr>
<td>Extraction of permanent teeth</td>
<td>Rural</td>
<td>1.3%</td>
<td>3.9%</td>
<td>5.2%</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>2.8%</td>
<td>1.9%</td>
<td>11.3%</td>
</tr>
<tr>
<td>Placement of sealants</td>
<td>Rural</td>
<td>38.2%</td>
<td>19.7%</td>
<td>21.1%</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>34.3%</td>
<td>9.3%</td>
<td>25.0%</td>
</tr>
<tr>
<td>Periodontal scaling and root planning</td>
<td>Rural</td>
<td>27.60%</td>
<td>21.10%</td>
<td>18.40%</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>25.9%</td>
<td>14.8%</td>
<td>21.3%</td>
</tr>
</tbody>
</table>
Figure 5. Dentists’ Agreement Models would Improve Access to Care

Conclusions

• Rural dentists were less likely than Urban dentists to support the expansion of dental safety-net clinics
• All Urban dentists (100%) supported increasing Medicaid or supported the increase depending on the specifics, yet only roughly one out of two would participate if reimbursement were to increase
• Rural dentists were more willing to support DT as a proposed workforce solution than were Urban dentists, were more willing to participate in the hire of a DT, and subsequently were more likely to delegate patient services to the care of DTs if State certified, trained, and CODA approved
Contact us for more information!

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