Federally Qualified Health Centers, Dental Care Delivery, Access to Care, and Dental Hygiene: From Patient Care to Policy Research

Hannah Maxey, PhD(c), MPH, RDH
Twitter: @hannahmaxey1
Presentation Objectives

• Describe
  • Current Position/Role
  • Academic and Professional Background
  • Key Experiences

• Present
  • Dissertation work
  • Interest in interdisciplinary practice models

• Discuss
  • Lessons learned
Current Position.

- PhD candidate in Health Policy and Management, dental hygienists, oral health & public health advocate
- Dissertation work:
  - Understanding the Effect of State Health Workforce Policy (Dental Hygiene) on Oral Health Service Delivery by U.S. Health Centers
Getting from there to here...
Academic Experience

- Associate of Science in Dental Hygiene, 2000
- Bachelor of General Studies, 2007
- Master of Public Health, 2011
- PhD in Health Policy and Management, Expected 2014
Professional Experiences

• Clinical Dental Hygiene in private practice, 2000-2002
• Clinical Dental Hygiene in Community Health Centers and Dental Education Program Coordinator at Marion County Health Department (Indianapolis), 2002-2009
• Public Health Program Manager and Clinical Faculty at the Indiana University School of Dentistry, 2009-2011
• Doctoral Student and Associate Instructor at the Richard M. Fairbanks School of Public Health, 2011-Present
Key Experiences: Comparison of Clinical Experiences

Private Practice

Public Health
Key Experiences: Awareness of Key Issues

- Overwhelming health (general and oral) disparities
- Lack of education and resources
- Inadequate, ineffective policies
Key Experiences: Moving Beyond Patient Care
Key Experiences: Imbalance in Healthcare Need & Dental Hygiene Labor Market

Source: Indiana Commission on Higher Education, 2012
Key Experience: Policy & Research

- Observing policies and outcomes
- Developing questions
- Studying issues
- Generating information to support Data Driven Decision making
- Improving access and outcomes
strategy (strāt’ ə-jē ) n.
1. Plan of action designed to achieve a particular goal.
The Effect of State Health Workforce (Dental Hygiene) Policies on Federally Qualified Health Centers
Federally Qualified Health Centers

- The U.S. Health Center Program was established in 1964 under Section 330 of the Public Health Service Act (42 USCS § 254b) of the Social Security program.

- Allocates grants to health centers to provide comprehensive primary health care services (including dental & mental health and outreach services) in communities recognized with Medically Underserved Area/Population (MUA/P) designations.

- Offer sliding fee scale, qualify for enhanced reimbursements with Medicaid and Medicare.
Dental Services by FQHCs

• Became a requirement of U.S. Health Center Program grantees as of 2003

• Required to provide preventive dental services
  • defined by regulation (42 C.F.R. §51c.102 (h) (6)) to include “services provided by a licensed dentist or other qualified personnel, including: (i) “oral hygiene instruction; (ii) oral prophylaxis, as necessary; (iii) topical application of fluorides, and the prescription of fluorides for systemic use when not available in the community water supply”.
FQHC Data: Uniform Data System

• Data in today's presentation were obtained from the Uniform Data system and represent FQHC grantees (may operate multiple clinical sites) that received community health center funding in 2012.

• All data for today's presentation have been aggregated to the state level so specific grantees are not identifiable

• Individual grantee data are available
FQHCs: Providing Healthcare for Underserved Constituents

Average Patients Served by Grantee Per State in 2012

Source: Uniform Data System

- IL: 27,619
- IN: 14,532
- MI: 19,528
- OH: 15,727
FQHCs: Increasing Capacity

Percent of Grantees Delivering Direct Dental Services by State: 2012
Source: Uniform Data System

- IL: 80.5%
- IN: 60.0%
- MI: 93.1%
- OH: 86.7%
- Overall: 81.7%
FQHC: Reach of Dental Services

- Proportion of total FQHC patients accessing dental service
  - A measure of the reach of dental services in the community served by FQHC
- In 2012, roughly 10% of FQHC patients had dental visits

NOTE: Proportion of patients accessing dental services was calculated based on the number of unique patients receiving dental examination using appropriate ICD9 CM codes.
Proportion of FQHCs Patients Accessing Dental Services: Indiana, Illinois, Michigan, Ohio, Kentucky, and National

Source: Uniform Data System, 2004-2012
The Influence of State Policy
The DHPPI: Quantifying Professional Practice Environment

• State level variations in practice (clinical tasks & supervision requirements) and regulation (governance structure & reimbursements) were quantified in Dental Hygiene Professional Practice Index (DHPPI) of 2001

• DHPPI values have been associated with access to dental care at a state level

• Dental hygiene practice aligns with preventive service requirements of the U.S. Health Center program
• Indiana, Ohio, Illinois, Michigan and Kentucky were all in the “Limiting” category.
• Policy changes have occurred since DHPPI development
• Analyses control for these changes
Does State Policy Environment Affect FQHCs ability to deliver dental services and access to dental care?
Hypotheses

• State policy environment (quantified by DHPPI) is associated with/predictive of:
  1. Dental Service Delivery Status reported to UDS by Grantees of U.S. Health Center Program
  2. Proportion of health center patients accessing dental services
  3. Proportion of dental patients accessing certain types of dental services (preventive, restorative, emergent)
Direct Delivery Dental Services and Policy
Proportion of FQHCs Delivering Dental Services by DHPPI Rating
Source: Uniform Data System, 2004-2012
## Table 3: Results from Longitudinal Analyses: Predictors of Dental Services Status from 2004-2012

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>All Years</th>
<th>2004-2007</th>
<th>2008-2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Point Estimate</td>
<td>Lower 95% CI</td>
<td>Upper 95% CI</td>
</tr>
<tr>
<td>DHPPI Range</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 (1-30)</td>
<td>0.27</td>
<td>0.08</td>
<td>0.88</td>
</tr>
<tr>
<td>2 (31-40)</td>
<td>0.43</td>
<td>0.15</td>
<td>1.21</td>
</tr>
<tr>
<td>3 (41-49)</td>
<td>0.58</td>
<td>0.19</td>
<td>1.80</td>
</tr>
<tr>
<td>4 (50-80)</td>
<td>0.99</td>
<td>0.25</td>
<td>3.81</td>
</tr>
<tr>
<td>5 (81-100)</td>
<td>ref</td>
<td>ref</td>
<td>ref</td>
</tr>
<tr>
<td>Policy Changes Occur in State</td>
<td>0.59</td>
<td>0.26</td>
<td>1.33</td>
</tr>
<tr>
<td>Number of Clinical Sites</td>
<td>1.45</td>
<td>1.35</td>
<td>1.55</td>
</tr>
<tr>
<td>Proportion Medicaid Patients</td>
<td>18.10</td>
<td>5.89</td>
<td>55.61</td>
</tr>
<tr>
<td>Proportion at or Below 200% Poverty</td>
<td>3.94</td>
<td>2.28</td>
<td>6.81</td>
</tr>
<tr>
<td>Time</td>
<td>1.11</td>
<td>1.06</td>
<td>1.16</td>
</tr>
</tbody>
</table>

Note: Covariates were included based on results of cross-sectional regression analyses. The PROC GLIMMIX procedure was used. Adjustments were made for repeated measures of grantees and clustering of grantees at the state level.
Proportion of FQHC Patients Accessing Dental Care and Policy
Proportion of FQHCs Patients Accessing Direct Dental Care by DHPPI Rating
Source: Uniform Data System, 2004-2012
Summary

• State practice and policy environment for dental hygiene has an effect on U.S. Health Center grantees ability to deliver dental services

• Grantees located in states with restrictive policies were 0.29 times as likely (71% less likely) to deliver dental services from 2004-2012 than those in state with supportive policy

• Grantees in states where policy changes occurred were 0.49 times as likely (51% less likely) to deliver dental services in 2011 (including 2010 and 2012) than those in states without changes
Future Directions

• Integrating dental hygienists into the primary care team of Federally Qualified Health Centers as ‘Preventive Oral Health Specialists’

• Benefits
  • Move beyond co-location to true integration
  • Cost-effective means of enhancing number of patients with access and reach of preventive oral health services
  • May overcome policy barriers (supervision)
Questions/Comments?

• Contact Hannah Maxey
  • 317.702.6622
  • hlmaxey@iupui.edu