Knowledge for Policy (K4P):
The Dental Care Sector

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Chief Economist
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Agenda

1. Knowledge for policy making

2. Examples
   a) Dental care utilization
   b) Medicaid
   c) Health insurance marketplaces
   d) Screenings in dental offices

3. Q & A and Discussion
About Me
What is K4P?

Generating, synthesizing, and contextualizing evidence so that it is useful in guiding policy making.
Dental Care Use

Figure 1: Percentage of the Population with a Dental Visit in the Year, 2000-2011

Source: Medical Expenditure Panel Survey, AHRQ. Notes: Changes are statistically significant at the 5% level for children ages 2-18 (2000-2011), at the 1% level for adults ages 19-64 (2003-2011), and at the 1% level for adults ages 65 and over (2000-2011).
A Decade in Dental Care Utilization among Adults and Children (2001–2010)

Marko Vujicic and Kamyar Nasseh

Objective. To decompose the change in pediatric and adult dental care utilization over the last decade.

Data. 2001 through 2010 Medical Expenditure Panel Survey.

Study Design. The Blinder-Oaxaca decomposition was used to explain the change in dental care utilization among adults and children. Changes in dental care utilization were attributed to changes in explained covariates and changes due to movements in estimated coefficients. Controlling for demographics, overall health status, and dental benefits variables, we estimated year-specific logistic regression models. Outputs from these models were used to compute the Blinder-Oaxaca decomposition.

Principal Findings. Dental care utilization decreased from 40.5 percent in 2001 to 37.0 percent in 2010 for adults and increased from 43.2 percent in 2001 to 46.3 percent in 2010 for children (p < .05). Among adults, changes in insurance status, race, and income contributed to a decline in adult dental care utilization (−0.018, p < .01). Among children, changes in controlled factors did not substantially change dental care utilization, which instead may be explained by changes in policy, oral health status, or preferences.

Conclusions. Dental care utilization for adults has declined, especially among the poor and uninsured. Without further policy intervention, disadvantaged adults face increasing barriers to dental care.

Key Words. Dental care utilization, decomposition, oral health, dental benefits

Figure 1: Percentage of the Population with a Dental Visit in the Year, 2000-2011

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Dental Care Use

Figure 1: Percentage of the Population Who Needed But Did Not Obtain Select Health Services during the Previous 12 Months Due to Cost as a Barrier

Source: National Health Interview Survey, National Center of Health Statistics. Notes: Changes from 2000 to 2010 for Prescription Drugs, Dental Care, Mental Health Services and Eyeglasses are statistically significant at the 1 percent level. Changes from 2010 to 2012 for Prescription Drugs, Dental Care and Eyeglasses are statistically significant at the 1 percent level. Change from 2010 to 2012 for Mental Health Services is significant at the 5% level.
**Figure 3:** Dental Emergency Department Visits as a Percent of Total Dental Visits by Age in the United States, 2000 to 2010

**Sources:** National Hospital Ambulatory Medical Care Survey, NCHS; Medical Expenditure Panel Survey, AHRQ.
Figure. Percentages of low-income children and adults with a dental visit in the past year. Low income is defined as being at less than 100 percent of the federal poverty guidelines. Children are defined as being aged 2 through 18 years; adults are defined as being aged 19 through 64 years. Changes are significant at the 1 percent level (2000-2011). Source: U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality.1-12
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Note: Data for AR, AZ, CA, CT, MD, OR, SD, TN are through 2011. Data for all other states are through 2012. Data for NE, NM, ME, KY, NY, and CA may not adequately capture dental visits within FQHCs in the calculation of the total number of children on Medicaid with a dental visit. Utilization rate for children with private dental benefits is for the U.S. and is based on most recent data available. CAGR is compound annual growth rate. FPL is federal poverty level.

Source: CMS (Medicaid 416) for state level Medicaid data; MEPS for utilization data for children with private dental benefits.
Medicaid

• **Texas, Maryland, Connecticut** made improvements to their Medicaid program in recent years and saw impressive gains in access to care

• **Adjusting provider incentives and streamlining administrative process have huge impact**
Medicaid Dental Care Reimbursement as a Percent of Commercial Fees

Note: Data are for 2012. Fee index created using a weighted average of fees for 12 common procedures. Weights are based on each procedures share of total billings and are constructed using 2012 FairHealth claims data. Medicaid fees are from state Medicaid department fee listings. Commercial fees are from FairHealth.
Source: State Medicaid department websites; FairHealth Inc.
Medicaid

Provider Payment and Utilization in Medicaid

Change in Medicaid Dental Care Utilization Rate (CAGR 2000-2011/12)

Medicaid Reimbursement as Percent of Commercial Fee

Note: Fee data are for 2012. Fee index created using a weighted average of fees for 12 common procedures. Weights are based on each procedure’s share of total billings and are constructed using 2012 FairHealth claims data. Medicaid fees are from state Medicaid department fee listings. Commercial fees are from FairHealth.
More Than 8 Million Adults Could Gain Dental Benefits Through Medicaid Expansion

15% of general dentists

50% of pediatric dentists are accepting new Medicaid patients

Estimated reduction due to the ACA in the number of low-income adults who lack dental benefits
Medicaid

Increase in Number of Adults on Medicaid due to ACA

<table>
<thead>
<tr>
<th>Extensive Adult Dental Benefits</th>
<th>Increase in %</th>
</tr>
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<tbody>
<tr>
<td>New Mexico</td>
<td>132%</td>
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<tr>
<td>North Dakota</td>
<td>132%</td>
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<tr>
<td>Oregon</td>
<td>131%</td>
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<tr>
<td>Washington</td>
<td>126%</td>
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<tr>
<td>Ohio</td>
<td>106%</td>
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<tr>
<td>Rhode Island</td>
<td>95%</td>
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<tr>
<td>Iowa</td>
<td>68%</td>
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<tr>
<td>Connecticut</td>
<td>35%</td>
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<tr>
<td>New York</td>
<td>33%</td>
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<table>
<thead>
<tr>
<th>Limited Adult Dental Benefits</th>
<th>Increase in %</th>
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</thead>
<tbody>
<tr>
<td>New Jersey</td>
<td>238%</td>
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<tr>
<td>Colorado</td>
<td>219%</td>
</tr>
<tr>
<td>Kentucky</td>
<td>204%</td>
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<tr>
<td>Arkansas</td>
<td>201%</td>
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<tr>
<td>Michigan</td>
<td>73%</td>
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<tr>
<td>Minnesota</td>
<td>73%</td>
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<tr>
<td>Maryland</td>
<td>73%</td>
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<tr>
<td>California</td>
<td>46%</td>
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<tr>
<td>District of Columbia</td>
<td>31%</td>
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<tr>
<td>Vermont</td>
<td>16%</td>
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<tr>
<td>Massachusetts</td>
<td>8%</td>
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Source: ADA Health Policy Resources Center analysis of State Medicaid Policies, Kaiser Family Foundation. Notes: We examined the Medicaid benefits offered by each state to determine the type of dental benefits provided to enrolled adults. States typically post benefits information on their state Medicaid website, or in a statement of benefits. We classified each state’s adult Medicaid dental benefits into one of four categories: extensive dental benefits, limited dental benefits, emergency dental benefits, and no dental benefits. While there is no clearly defined, well-established method for classifying adult Medicaid dental benefits, these categories are consistent with previous methodology developed by the ADA. We calculated the potential percentage change in adults eligible for Medicaid by dividing the number of adults potentially eligible for Medicaid in 2014 as determined by the Kaiser Family Foundation by the number of adults enrolled in Medicaid in 2010, by state.
### Health Insurance Marketplaces

#### Table 1: States Included in our Analysis

<table>
<thead>
<tr>
<th>Federally-Facilitated Marketplace</th>
<th>State-Based Marketplace</th>
</tr>
</thead>
<tbody>
<tr>
<td>AK, AL, AR, AZ, DE, FL, GA, IA, ID, IL, IN, KS, LA, ME, MI, MS, MO, MT, NE, NH, NJ, NM, NC, ND, OH, OK, PA, SC, SD, TN, TX, UT, VA, WI, WV, WY</td>
<td>CA, MN, NV, VT, WA</td>
</tr>
</tbody>
</table>

Source: CMS. Note: Idaho and New Mexico are temporarily running through the FFM but plan to establish their own SBM in the near future.

- 41 states
- 3,180 medical plans + 697 stand-alone dental plans
- In-depth research on random sample of 50 medical plans with embedded pediatric dental benefits and 50 stand-alone dental plans (from FFM only)
Figure 1: Dental Benefits Available within Medical and Stand-Alone Dental Plans

- **Medical Plans**:
  - None: 73%
  - Family: 26%
  - Pediatric-only: 0%
  - Adult-only: 1%

- **Stand-Alone Dental Plans**: 100%
  - Family: 58%
  - Pediatric-only: 42%

**Source**: ADA Health Policy Resources Center analysis of data from the FFM and select SBMs. **Notes**: We analyzed all medical plans and SADPs offered for 36 states operating through the FFM and 5 states operating SBMs. For FFM states, we analyzed unique plans identified by a unique Plan ID. For SBMs, we visited each state’s marketplace website and analyzed documents (CA, VT, and WA) or browsed plans (MN and NV). We then analyzed each unique medical plan and SADP for the type of dental benefits offered. Analysis is based on 3,180 medical plans and 697 SADPs.
Health Insurance Marketplaces

**Figure 3:** Average Monthly Pediatric Premium for Dental Benefits by Plan Type

<table>
<thead>
<tr>
<th></th>
<th>Embedded Within Silver Medical Plan</th>
<th>High Actuarial Value SADP</th>
<th>Low Actuarial Value SADP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Pediatric Premium</td>
<td>$5.11</td>
<td>$38.89</td>
<td>$30.98</td>
</tr>
</tbody>
</table>

**Source:** ADA Health Policy Resources Center analysis of data from the FFM. **Notes:** Each small data point represents the average premium in a state and each large data point represents the average across all states (unweighted). Premiums were analyzed separately for silver medical plans with and without embedded pediatric dental benefits, high actuarial value SADPs, and low actuarial value SADPs. States were included in the analysis only if there were silver medical plans with and without embedded pediatric dental benefits, high actuarial value SADPs, and low actuarial value SADPs available for purchase. This resulted in 25 states being included. States were excluded if all four types of plans were not available for purchase. This resulted in 11 states being excluded. To calculate the premium for pediatric dental benefits when they are embedded within a silver medical plan in a state, we first calculated the average premium for silver medical plans that have embedded pediatric dental benefits in a state. We then subtracted the average premium for silver medical plans that do not have embedded pediatric dental benefits in that state. This is a ‘shadow’ premium in the sense that it is not observed.
DO MEDICAL PLANS INCLUDE PEDIATRIC DENTAL BENEFITS?

- No medical plans include pediatric dental benefits
- Some medical plans include pediatric dental benefits
- All medical plans include pediatric dental benefits
Figure 1: Take-Up Rate of Stand-Alone Dental Plans in Health Insurance Marketplaces

Source: ADA Health Policy Resources Center analysis of HHS’s marketplace enrollment data as of February 1, 2014. Notes: We calculated the number of individuals under the age of 18 that selected a medical plan and an SADP through the FFMS (children). We also calculated the number of individuals age 18 and older that selected a medical plan and an SADP through the FFMS (adults). We assume that all individuals that selected an SADP also selected a medical plan. We calculated the take-up rate of SADPs by dividing the number of individuals that selected an SADP by the number of individuals that selected a medical plan. We also included the percentage of children in California that selected an SADP using Covered California’s published data. In California, no adult-only or family SADPs are offered.
Screenings in Dental Offices

Tomorrow’s health care environment will provide an opportunity to re-examine the role of oral care providers within the health care system.
Screenings in Dental Offices

**Figure.** Visits to dentists and physicians in the course of one year among U.S. patients. Analysis by the American Dental Association Health Policy Resources Center, based on data from 2011 (the most recent year for which data are available) from the Medical Expenditure Panel Survey of the Agency for Healthcare Research and Quality.
Screenings in Dental Offices

Screening for Chronic Diseases in the Dental Office

About 123 million Americans, or about 1 in 2 adults, have at least 1 chronic disease. Chronic conditions account for nearly 75% of health care costs and 75% of deaths each year in the United States. Chronic diseases cost the United States $3.3 trillion annually in lost productivity, and individuals who are overweight, obese, or have other chronic conditions miss an additional 430 million days from work compared with healthy workers.1 The high prevalence, associated morbidity, and economic impact of chronic diseases, particularly diabetes, hypertension, hypercholesterolemia, high blood cholesterol, and hyperlipidemia, are a serious public health issue in the United States today. According to the Medical Expenditure Panel Survey, about 40% of adults with the chronic disease in a given year, 20% to 20% of whom have not seen a physician in the preceding year,2,3 This presents an opportunity for oral health professionals to be part of an integrated health care team working to combat these chronic diseases.

SCREENING FOR CHRONIC DISEASES IN DENTAL OFFICES COULD REDUCE U.S. HEALTH CARE COSTS BY...

up to $102.6 MILLION

per year

OR

up to $32.72 per person screened

A study conducted in Sweden concluded that limiting screening to patients older than 40 years of age would increase the percentage of patients who participated in screening and who had hypertension.2,4 Another study came to a similar conclusion, and also found potential benefits for patients who had been previously diagnosed with hypertension but who did not maintain adequate blood pressure control.2,5 The utility of screening for diabetes during dental visits has also been evaluated. Among 3601 patients with no known history of diabetes who visited an outpatient periodontal clinic in Sweden, diabetes was found in 10.1% of the patients.5,6

In practice, physicians who detect an abnormal test result for the presence of chronic disease are inclined to provide medication to their patients. The tremendous effort that primary care physicians devote to diabetes treatment, particularly for diabetes and hypertension, has been lowered since the early 1990s, and newer guidelines encourage the treatment of prediabetes and hypertension.2,6,10 In the analysis, we assumed that people who had undiagnosed, undiagnosed hypercholesterolemia, or undiagnosed hypertension and were subsequently diagnosed for 1 or more of these conditions by a physician would receive prescription drug treatment per treatment guidelines.

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