The Road Ahead

Data-Driven Insights on the Shifting Dental Care Landscape

Marko Vujicic, PhD
Chief Economist & Vice President
Health Policy Institute
A Very Dynamic Environment

- New Dental Schools
- Rising Student Debt
- Shifts in Source of Dental Care Financing
- The Economy
- New Dental Care Delivery Models
- Shifts in Dental Care Utilization Patterns
- Affordable Care Act
- Change in Oral Health Status
- Dentistry

**Guest Editorial**

A profession in transition

Dentistry is a profession in transition. Important economic, demographic and political forces are colliding to reshape the practice environment for America's dentists. To better understand the potential changes on the horizon, the American Dental Association (ADA) recently carried out a comprehensive, future-oriented analysis of the dental care sector as part of the 2015-2020 strategic plan development process. This first-of-its-kind analysis drew on research carried out by health care consulting firm Diringer & Associates, various external consultants and the ADA’s Health Policy Resources Center. Researchers investigated a wide variety of topics over a period of several months. To help identify the most pressing environmental factors that need to guide the ADA’s strategic plan and to assist in a “what does it all mean for dentistry” discussion, a group of external thought leaders with diverse backgrounds and perspectives were asked to share their insights at a two-day conference. The full report, A Profession in Transition, was released in August 2013. This is an executive summary of the key findings.

One of the most important findings is that utilization of dental care is declining among working age adults, particularly the young and the poor, and that this trend is unrelated to the recent economic downturn.

LOtoking Back
Several important structural changes have occurred in the dental care sector in recent years. Structural changes are those that are driven by changes in the underlying behaviors of various groups—including patients, dentists and payers—and are distinct from cyclical changes that are driven simply by economic cycles. One of the most important findings is that utilization of dental care is
The Power of Data

DATA ECONOMY | A CNBC SPECIAL REPORT

The Sexiest Job of the 21st Century: Data Analyst

Chris Morris, Special to CNBC.com
Wednesday, 5 Jun 2013 | 1:00 PM ET

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Rayid Ghani

Senior Fellow

Rayid Ghani serves as a Chicago Harris Senior Fellow and as Chief Data Scientist for the Computation Institute’s Urban Center for Computation and Data.

As Chief Data Scientist, Ghani will help analyze city data and build complex computer models that simulate the impact of policy decisions and urban development. In addition, he will work with Chicago Harris on an array of efforts, including the launch of a new masters degree program in data-driven policymaking to be offered jointly with the Department of Computer Science, and a conference on urban technology innovation in partnership with the City of Chicago.

Prior to joining UChicago, Ghani was chief scientist of the highly regarded Obama for America data analytics team. During the 2012 campaign season, Ghani’s team applied advanced data-mining and machine-learning methods to create new tools for fundraising, voter turnout, advertising and campaign strategy. Now, working with the Computation Institute and the University of Chicago Harris School of Public Policy, Ghani hopes to adapt those methods to address challenges in areas such as education, public safety and health care.

Before joining the Obama re-election campaign in July 2011, Ghani directed the analytics research group at Accenture Technology Labs, mining large datasets with computational methods to study consumer behavior. During the campaign, Ghani turned his attention to voter preferences, using data from social media, campaign surveys and other sources to develop personalized approaches to solicit donations or register voters.
How Obama's data crunchers helped him win

By Michael Scherer
updated 11:45 AM EST, Thu November 8, 2012 | Filed under: Web
What the Maple Leafs and Blackhawks tell us about advanced analytics in the NHL
The next big thing to hit medical care will be new ways of accumulating, processing, and applying data—revolutionizing medical care the same way Billy Beane and his minions turned baseball into “moneyball”.
About Me
Agenda
Part 1 – A Look Back…
Figure 2: National Per-Capita Dental Expenditure

Dentist Earnings

GP Dentist Earnings and the Economy

Source: ADA Health Policy Resources Center; Bureau of Economic Analysis; Bureau of Labor Statistics.
Note: Net income data are based on the ADA Health Policy Resources Center annual Survey of Dental Practice and are weighted to adjust for representativeness. Shaded areas denote recession years according to NBER. GDP is deflated using the GDP deflator. Net income is deflated using the all-item CPI. All values are in constant 2012 dollars.
Dentist Busyness

**Figure 2:** Percentage of Dentists “Not Busy Enough”

<table>
<thead>
<tr>
<th>Year</th>
<th>GP Dentist</th>
<th>Specialist Dentist</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>20%</td>
<td>24%</td>
</tr>
<tr>
<td>2008</td>
<td>20%</td>
<td>24%</td>
</tr>
<tr>
<td>2009</td>
<td>37%</td>
<td>36%</td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td></td>
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</tbody>
</table>

**Source:** ADA Health Policy Institute annual *Survey of Dental Practice*. **Note:** Indicates the percent of dentists reporting they are ‘not busy enough and can see more patients.’
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).
Dental Benefits

Figure 1: Source of Dental Benefits, Children Ages 2 to 18

Source: Medical Expenditure Panel Survey, AHRQ. Notes: All changes are significant at the 1% level (2000-2011).
Dental Benefits

Figure 2: Source of Dental Benefits, Adults Ages 19 to 64

Source: Medical Expenditure Panel Survey, AHRQ. Notes: Changes for private and public benefits are significant at the 1% level (2001-2011). Changes for the uninsured are significant at the 5% level (2001-2011).
Practice Patterns

% of Dentists Under 35 Who are Employees

- Male: 30%, 37%, 51% for 1998, 2005, 2012 respectively
- Female: 57% for 2012
- Total: 38%, 46% for 1998 and 2012 respectively
Part 2 – A Look Forward…
A ‘New Normal’ in Dental Spending

Historical Annual Per Capita Dental Spending Growth Rates

Source: Centers for Medicare and Medicaid Services; U.S. Bureau of Economic Analysis; U.S. Census Bureau.

Projected Future Annual Per Capita Dental Spending Growth Rates

**Figure 2:** Adult Dental Benefit Provided in State Medicaid Programs

Source: ADA Health Policy Resources Center analysis of state Medicaid policies as of December 6, 2013. Notes: Kansas’ Medicaid program officially covers emergency dental services, but all of the plans contracted with Kansas’ Medicaid program offer two routine dental check-ups (exams and cleanings) per year for adults over 21. Maryland’s Medicaid program officially covers emergency dental services, but the majority of Medicaid beneficiaries are enrolled in the Medicaid managed care program which provides limited adult dental benefits.
Medicaid Expansion

<table>
<thead>
<tr>
<th>State</th>
<th>Extensive Adult Dental Benefits</th>
<th>Limited Adult Dental Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Mexico</td>
<td>132%</td>
<td></td>
</tr>
<tr>
<td>North Dakota</td>
<td>132%</td>
<td></td>
</tr>
<tr>
<td>Oregon</td>
<td>131%</td>
<td></td>
</tr>
<tr>
<td>Washington</td>
<td>128%</td>
<td></td>
</tr>
<tr>
<td>Ohio</td>
<td>106%</td>
<td></td>
</tr>
<tr>
<td>Rhode Island</td>
<td>95%</td>
<td></td>
</tr>
<tr>
<td>Iowa</td>
<td>68%</td>
<td>35%</td>
</tr>
<tr>
<td>Connecticut</td>
<td>35%</td>
<td>33%</td>
</tr>
<tr>
<td>New York</td>
<td>33%</td>
<td></td>
</tr>
<tr>
<td>New Jersey</td>
<td>238%</td>
<td>204%</td>
</tr>
<tr>
<td>Colorado</td>
<td>219%</td>
<td>201%</td>
</tr>
<tr>
<td>Kentucky</td>
<td>201%</td>
<td></td>
</tr>
<tr>
<td>Arkansas</td>
<td>201%</td>
<td></td>
</tr>
<tr>
<td>Michigan</td>
<td>73%</td>
<td></td>
</tr>
<tr>
<td>Minnesota</td>
<td>73%</td>
<td></td>
</tr>
<tr>
<td>Maryland</td>
<td>73%</td>
<td></td>
</tr>
<tr>
<td>California</td>
<td>46%</td>
<td></td>
</tr>
<tr>
<td>District of Columbia</td>
<td>31%</td>
<td></td>
</tr>
<tr>
<td>Vermont</td>
<td>16%</td>
<td></td>
</tr>
<tr>
<td>Massachusetts</td>
<td>8%</td>
<td></td>
</tr>
</tbody>
</table>

**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.
Figure 1: 2014 Take-up Rate of Stand-Alone Dental Plans in Health Insurance Marketplaces

- **1.1 million**
- **88 thousand**

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Health Insurance Marketplaces

Figure 1: Take-Up Rate of Stand-Alone Dental Plans in Health Insurance Marketplaces by Age Group

Source: ADA Health Policy Institute analysis of HHS’s marketplace enrollment data through April 19, 2014. Notes: We calculate the number of individuals in each age group that selected a medical plan and an SADP in the 36 states currently operating through the FFM. We assume that all individuals that selected an SADP also selected a medical plan. We calculate the take-up rate for SADPs by dividing the number of individuals that selected an SADP by the number of individuals that selected a medical plan. We also include individuals aged under 18 in California that selected an SADP through February 28, 2014. In California, no adult-only or family SADPs are offered.
Preferences for Dental Plans

- Prefer a lower cost plan with a limited range of providers: 58.5%
- Prefer a higher cost plan with a broader range of providers: 41.5%

Dental plans

- Prefer a lower cost plan with a limited range of providers: 47.1%
- Prefer a higher cost plan with a broader range of providers: 52.9%

Medical plans

Source: ADA Health Policy Institute analysis of Harris Poll survey data collected April 2014. Notes: Results based on 3,007 observations. HPI combined responses from the three survey questions to understand adults’ final plan preferences. Combining response calculations are based on final preferences after adults were provided the choice to switch their initial plan preferences upon being informed of potential cost and provider choice implications. All adults were questioned about medical and dental plan preferences separately. All survey responses are weighted by general population weights provided by Harris Poll.
Preferences for Dental Plans

Figure 5: Adult Medical and Dental Plan Preferences by Age and Income

- **Medical**
  - Costs Less, Narrow Network:
    - 18-34: 58.3%
    - 35-49: 48.7%
    - 50-64: 42.8%
    - 65+: 32.9%
    - <100%: 61.8%
    - 100%-199%: 58.8%
    - 200%-399%: 50.5%
    - 400%+: 34.3%
    - 19-34: 64.6%
    - 35-49: 59.5%
    - 50-64: 56.5%
    - 65+: 50.1%
    - <100%: 68.7%
    - 100%-199%: 73.1%
    - 200%-399%: 60.4%
    - 400%+: 47.1%

- **Dental**
  - Costs More, Broad Network:
    - 18-34: 41.7%
    - 35-49: 51.3%
    - 50-64: 57.2%
    - 65+: 67.1%
    - <100%: 38.2%
    - 100%-199%: 41.2%
    - 200%-399%: 49.5%
    - 400%+: 65.7%
    - 19-34: 35.4%
    - 35-49: 40.5%
    - 50-64: 43.5%
    - 65+: 49.9%
    - <100%: 31.3%
    - 100%-199%: 26.9%
    - 200%-399%: 39.6%
    - 400%+: 52.9%
Conclusions: The dependent coverage policy was associated with an increase in private dental benefits coverage and dental care utilization, and a decrease in financial barriers to dental care among young adults aged 19–25.
### Emphasis on Value

#### A View of the Changing Landscape

<table>
<thead>
<tr>
<th>From...</th>
<th>To...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider Centric</td>
<td>Patient Centric/Consumer</td>
</tr>
<tr>
<td>Value Blind Reimbursement</td>
<td>Value-based Reimbursement &amp; Accountability</td>
</tr>
<tr>
<td>Episodic Fragmented Care</td>
<td>Continuous &amp; Coordinated</td>
</tr>
<tr>
<td>Inpatient-Focused</td>
<td>Ambulatory/Office/Home Focused</td>
</tr>
<tr>
<td>Individuals</td>
<td>Population Based</td>
</tr>
<tr>
<td>Disease and Treatment</td>
<td>Health/Wellness Prevention</td>
</tr>
</tbody>
</table>

Consumerism

Looking for value: asking about pricing, searching for quality

Which of the following, if any, have you done in the last 12 months?

- Looked at a scorecard or report card
- Asked about pricing before agreeing to treatment
- Looked online for information about the costs/prices of services

Source: Deloitte Center for Health Solutions: 2013 Survey of U.S. Health Care Consumers

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Consumerism

Dentists in **Los Angeles, CA 90024**

<table>
<thead>
<tr>
<th>Location</th>
<th>Procedure</th>
<th>Speciality</th>
<th>Insurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>90024</td>
<td>Check-up &amp; Cleaning</td>
<td>All</td>
<td>I do not have insurance</td>
</tr>
</tbody>
</table>

Sort by Rating

---

**Dr. Ebi Nikjoo**

10921 WILSHIRE BLVD, LOS ANGELES, CA 90024 | ☑ 33 Recommendations

OVERALL QUALITY | OVERALL PRICES
--- | ---
🌟🌟🌟🌟 | EXPENSIVE 🟢🌟🌟🌟

Check-up & Cleaning $35 
- General Dentist
- 6 yrs in practice

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**Dr. Ronelle Claypool**

10921 WILSHIRE BLVD, LOS ANGELES, CA 90024 | ☑ 2 Recommendations

OVERALL QUALITY | OVERALL PRICES
--- | ---
🌟🌟🌟🌟🌟 | EXPENSIVE 🟢🌟🌟🌟🌟

Check-up & Cleaning $39
- General Dentist
- 16 yrs in practice

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Increased Care Coordination

Accountable Care Organizations Present Key Opportunities for the Dental Profession

Author: Marko Vujic, Ph.D.; Kamary Nassah, Ph.D.

Key Messages
- Dental care is not generally included as a care component within today’s Accountable Care Organizations (ACOs). Where dental services are incorporated, it is mainly at the level of facilitated referral or co-location.
- One key reason is that existing ACOs focus on Medicare populations and Medicare does not include dental benefits. There is also a perception that most dental providers and plans are accustomed to providing care according to frequency and duration driven by dental insurance policies rather than a patient’s dental risk profile.
- ACOs could help bridge the gap between oral and general health care, improve coordination of care, and help reduce overall health care costs. They also provide an opportunity to reposition the role of oral care providers within the health care team.

Introduction
The health care system in the U.S. is on the verge of major reform. The Affordable Care Act (ACA) aims to improve the health of the population, enhance the patient experience of care (including quality, access, and safety), and reduce, or at least control, the cost of care. A key aspect of the reforms is a shift toward a capitated risk model of health care that is delivered and financed. Today’s system of overly-attuned health care providers exists under primarily fee-for-service (FFS) models is expected to give way to a much more coordinated delivery model that rewards providers for improvements in health outcomes and efficiencies.

Accountable Care Organizations (ACOs) are designed to align provider incentives with...
Practice Consolidation

The trend toward larger, consolidated multi-site practices is expected to continue, driven by changes in practice patterns of new dentists, a drive for efficiency, and increased competition for patients.
Part 3 – Some Opportunities…
Help Dentists Improve Efficiency

• Identify, understand, and educate dentists about the various practice models that are emerging

• Practice management support

• Help dentists treat the growing sectors: young, old, and Medicaid
#2 - Leverage the Value Agenda

**The Big Idea**

The Strategy That Will Fix Health Care

Providers must lead the way in making value the overarching goal by Michael E. Porter and Thomas H. Lee

Organizations that progress rapidly in adopting the value agenda will reap huge benefits, even if regulatory change is slow.

**The Value Agenda**

The strategic agenda for moving to a high-value health care delivery system has six components. They are interdependent and mutually reinforcing. Progress will be greatest if multiple components are advanced together.

1. Organize into Integrated Practice Units (IPUs)
2. Measure outcomes and costs for every patient
3. Move to bundled payments for care cycles
4. Integrate care delivery across separate facilities
5. Expand excellent services across geography
6. Build an enabling information technology platform
Leverage the Value Agenda

COMMENTSARY

Defining oral health
A prerequisite for any health policy

Michael Glick, DMD, Daniel M. Meyer, DDS

Oral health as a critical component of overall health was brought to the forefront by the first-ever surgeon general’s report on oral health in 2000.1 This was an important step for dentistry, but unfortunately it never achieved enough traction to be incorporated into most health policies. In 2005, the 8th World Congress on Preventive Dentistry was organized jointly by the World Health Organization, the International Association for Dental Research, the European Association of Dental Public Health and the British Association for the Study of Community Dentistry. Participants from 43 countries emphasized that oral health is an integral part of general health and well-being. More significantly, they affirmed that oral health is a basic human right.2 The congress committed to support the work carried out by national and international health authorities, research institutions, nongovernmental organizations and civil society for the promotion of health and prevention of oral diseases. Six years later, the United Nations’ recognized oral health as an integral part of other noncommunicable diseases (NCDs)—principaliy, diabetes, cardiovascular diseases,

No matter how oral health is defined, the message remains: Oral health is essential to an individual’s general health and quality of life. To that end, it should be a key element in beneficial health policies.

stroke, chronic respiratory diseases and cancers—and stimulated a renewed interest toward achieving international recognition of the burden of oral diseases.

The alignment of oral diseases with NCDs was based on common social determinants, including income and educational status, and risk factors such as unhealthy diet, tobacco use and excessive alcohol use, and not on the basis of transmission. Another step toward recognition of the importance of oral health was the FDI World Dental Federation’s call for oral health to be included within all health policies.3 Unless oral health is recognized as an integral part of overall health and well-being by all stakeholders—health professionals, third-party payers and policymakers—the profession as we know it will change dramatically in the emergent health care landscape. To provide a uniform message, an agreed-upon definition of oral health is needed.

Currently, a number of professional organizations have multiple variations of definitions and descriptions of oral health. As our knowledge about health

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Improving Oral Health Through Measurement

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#3 – Develop a Medicaid Strategy

1. Promote Solutions that Create ‘Enabling Conditions’ in Medicaid Programs
   a) Reduce administrative burdens
   b) Increase patient and provider outreach
   c) Implement appropriate provider incentive structure
   d) Promote fair and reasonable program integrity initiatives

2. Provide Practical Tools to Help Dentists Succeed
   a) Design a suite of CE products for Medicaid-interested providers
   b) Provide support services (e.g. call center, FAQs, mentors)
   c) Synthesize and disseminate ‘best practices’ for various types of dental practices participating in Medicaid
Medicaid Reimbursement

Figure 3: Adult Dental Medicaid Fee-for-Service Reimbursement as a Percentage of Commercial Dental Insurance Reimbursement, 2014

Source: Medicaid FFS reimbursement data collected from state Medicaid agencies. Commercial dental insurance reimbursement data collected from FAIR Health. Notes: 2013 commercial reimbursement rates inflated to 2014 dollars using the all-items CPI. *The following states enroll the majority of their adult Medicaid beneficiaries in managed care programs for dental services: DC, KY, MN, NM, OH, OR and VT. The relative reimbursement rates shown in this figure may not be representative of typical dentist reimbursement in Medicaid.
#4 - Increase Dental Care Use

Better Understand Behavior
What is the perceived value proposition of dental care for key segments of the population?

– “Whatever my insurance covers”
– “Dental care is part of my wellness routine”
– “I really don’t have a lot of dental care needs”
– “Every time I go I get a treatment plan for $‘000s”

Explore Ways to Influence Behavior

– Oral literacy campaign targeting Millennials
– Promote expanded dental insurance coverage
  OR
– ‘Wean’ population off of dental insurance
Getting at Perceived Value of Dental Care

Figure 8: Reasons Why Adults Do Not Plan to Visit a Dentist in the next 12 Months

Source: ADA HPI analysis of Harris Poll survey data. Notes: Results for non-Medicaid enrolled adults based on 462 observations. Results for Medicaid-enrolled adults based on 73 observations. Respondents were asked this question if they indicated that they would not visit the dentist in the next 12 months, or if they were unsure whether they would visit the dentist in the next 12 months. All survey results are weighted by general population weights provided by Harris Poll.
#5 - Rethink the Role of the Dental Practice

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.
Thank You!

For more information on the Health Policy Institute please visit:

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To inquire about speaking engagements or custom analytics please contact:

*hpi@ada.org*