

CRITICAL TRENDS AFFECTING THE FUTURE OF DENTISTRY:

Assessing the Shifting Landscape

Prepared for American Dental Association

May 2013

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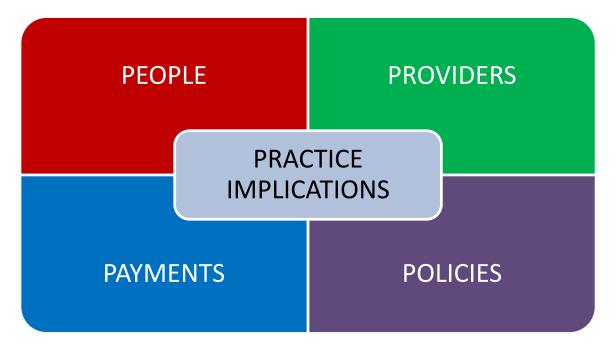
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EXECUTIVE SUMMARY

Dentistry in the United States is in a period of transformation. The population is aging and becoming more diverse. The health care delivery system is changing rapidly with the implementation of the Affordable Care Act. Consumer habits are shifting with Americans increasingly relying on technology and seeking greater value from their spending. The nature of oral disease and the financing of dental care are in a state of flux.

To assist the American Dental Association in its strategic planning, Diringer and Associates was retained in March 2013 to conduct an environmental scan of emerging trends that affect the future of dentistry. Consisting of a comprehensive literature review and key informant interviews, the scan found that:



PEOPLE

- 1. The population is getting older and more diverse, leading to different disease patterns, care-seeking behavior and ability to pay.
- 2. Consumers are becoming more astute purchasers of health care and seeking value for their spending.

PROVIDERS

3. An increasing number of dentists are being trained, but mounting debt load and changing demographics are altering the practice choices for new dentists.

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- 4. Pressures are growing for an expanded dental team to provide preventive and restorative services.
- 5. Care is being integrated within "patient centered medical homes" in medicine but there has been slow take up of dental care services.

PAYMENTS

- 6. Payment for dental services is shifting from commercial dental insurance to public coverage and personal out of pocket payments.
- 7. Commercial dental plans are increasingly using more selective networks, demanding increased accountability through data and performance measures, and pressuring providers to reduce costs.

POLICIES

- 8. The Affordable Care Act pediatric dental benefit will provide millions of additional children with dental coverage through the small group and individual markets and optional Medicaid expansions.
- 9. Public programs, with a growing number of participants, will demand increased accountability from dental providers.

PRACTICE IMPLICATIONS

- 10. With the increased demand for value in dental care spending, practices will need to become more efficient.
- 11. The trend towards larger, multi-site practices will continue driven by dental plan pressures for smaller provider networks, practice patterns of new dentists and increased competition for patients.
- 12. Health care reform and Medicaid expansions with an increasing emphasis on outcomes and cost-effectiveness will encourage alternative models of dental care.

This is a critical moment in dentistry and not a time for complacency. Understanding the key forces at work will assist the profession in defining its own destiny. Ignoring what is happening in the health and consumer environments will mean ceding the future of the profession to others.

By commissioning this report and convening key thought leaders, the ADA has taken on the challenge of facing the new reality and charting a course for the dental profession and the oral health of America.

Diringer and Associates is a California based health policy consulting firm founded in 2001. It has significant experience in oral health, public policy, evaluation and organizational development.

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CRITICAL TRENDS AFFECTING THE FUTURE OF DENTISTRY:

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INTRODUCTION

Dentistry in the United States is in a period of transformation. The population is aging and becoming more diverse. The health care delivery system is changing rapidly with the implementation of the Affordable Care Act. Consumer habits are shifting with Americans increasingly relying on technology and seeking greater value from their spending. The nature of oral disease and the financing of dental care are in a state of flux.

To assist the American Dental Association in its strategic decision making process, Diringer and Associates was retained in March 2013 to conduct an environmental scan of emerging trends that affect the future of dentistry.

This report is based on a comprehensive literature review and key informant interviews with organizations throughout the United States. It synthesizes what we have learned into 12 salient trends that affect the future of dentistry. Some of the trends are apparent, others are still emerging. Some of the implications are unknown.

The findings are organized in five key themes to capture the trends in a digestible format. The five themes, however, are interrelated and should be viewed collectively. The themes are:

- People
- Providers
- Payments
- Policies
- Practice implications

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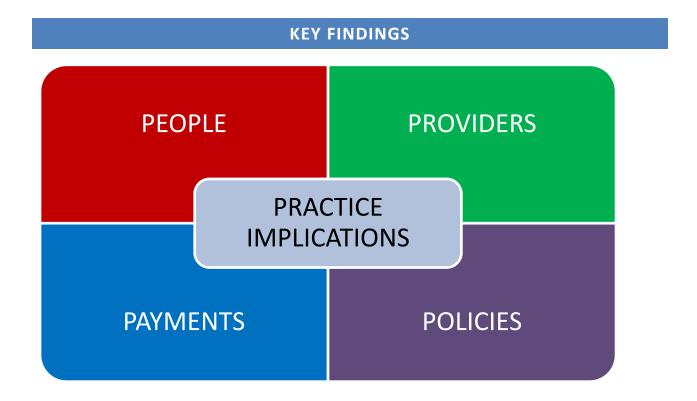
METHODS

This environmental scan consisted of two components – a literature review and key information interviews.

The literature review involved researching existing published and unpublished data, articles and reports that related to our topics of interest: demographics, health reform, consumers, dental expenditures, health innovations, public policies and dental practice. In addition, web searches were conducted to get a general understanding of trends in these areas and to seek out further documents and potential key informants. ADA staff were particularly helpful in identifying existing reports that were useful in the analysis. (A list of sources consulted is contained in the Appendix.)

Seventeen key informants were interviewed as part of the environmental scan. These individuals were from throughout the United States and represented health plans, dental plans, dental schools, private practitioners, a health information technology expert, and large dental and health practices. Interviews were primarily conducted by telephone and generally lasted from one-half to one hour. Interviewees were asked to identify key trends in their fields of expertise, as well as to assist in identifying additional documents and potential interviewees. (A list of key informants is contained in the Appendix.)

The key findings that follow are an aggregation of the data derived from the documents and the information gleaned from the interviews. The findings are the opinion of the consultants and not necessarily those of interviewees or the ADA.



I. PEOPLE

1. THE POPULATION IS GETTING OLDER AND MORE DIVERSE, LEADING TO DIFFERENT DISEASE PATTERNS, CARE-SEEKING BEHAVIOR AND ABILITY TO PAY.

AN AGING POPULATION

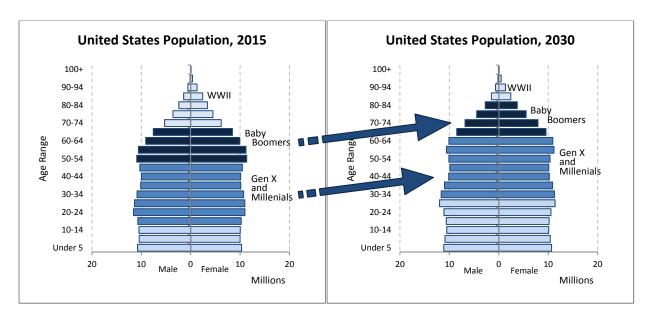
The U.S. is continuing to have an older and more diverse population. Between 2000 and 2010, the elderly grew at a rate that far exceeded the overall U.S. population (15% vs. 10%)¹ and is expected to double by 2060 to 92 million persons.² By 2030, all of the Baby Boomers (born 1946-1964) will have moved into the ranks of the older population. This will result in a shift in the age structure of the elderly ages 65 and over, from 13 percent of the population aged 65 and older in 2010 to 19 percent in 2030.³

Unlike prior elderly populations, the Baby Boomers will be more likely to retain their teeth and remain active consumers of dental care. Payments will increasingly be made out-of-pocket, since they will be less likely to have dental coverage, as Medicare does not cover most dental services.

Succeeding generations -- the Gen X'ers (born 1965-1980) and the Millennials (born 1981-2000) will have reduced dental disease and less need for restorative dental care. They are also more

technologically savvy and are more likely to seek lower costs for care. They will have higher rates of dental coverage than the older population, primarily due to employer supplied insurance.

Children born 2000 and later will have even less dental disease and less demand for restorative dental services as they age. Children are the most likely to have dental coverage, primarily due to public coverage – Medicaid and CHIP -- and the pediatric dental benefit in the Affordable Care Act. While they will have less coverage as they reach adulthood, they will probably not need as much restorative care as previous generations.



Source: U.S. Census Bureau, Population Division, Projections of the Population by Age and Sex for the United States: 2015 to 2060, December 2012

A MORE DIVERSE POPULATION

The ethnic make-up of the U.S. population will shift dramatically over the coming years changing the nature of dental consumers. The younger age groups are increasingly more diverse while the elderly will continue to be primarily non-Hispanic white.

The Hispanic population is expected to grow faster than any other ethnic group and more than double, from 53.3 million in 2012 to 128.8 million in 2060. By the end of this period, nearly one in three U.S. residents would be Hispanic, up from about one in six today.³ The estimated purchasing power of Hispanics is expected to rise to \$1.5 trillion in 2015.⁴

A recent study by the Hispanic Dental Association in partnership with Proctor and Gamble⁵ found that Hispanics are less likely to have private dental coverage (45% lack dental coverage)

and are more likely to have public coverage. They are less likely to visit a dentist (18% had not visited a dentist in past two years compared to 12% of the general population). Hispanics also have less health literacy about oral hygiene and prevention.

Hispanics also prefer Spanish-speaking dentists and are more reliant on community dental clinics. About six in 10 Hispanics feel that having Spanish-speaking and Hispanic dentists/hygienists in their community would help them "a lot" in achieving and maintaining better oral health. While 60 percent of Hispanics say they primarily use, or would use, a private dental office, they lag far behind the general population (83%).

The other major ethnic shift taking place is with Asian-Americans, who have been the largest group of newly arriving immigrants since at least 2009. They now make up nearly six percent of the U.S. population. Asian-American consumers are generally more affluent, well-educated, geographically concentrated and technologically savvy when compared with all U.S. adults. Their median annual household income is \$66,000 versus \$49,800 for the general population; and the percentage with a college degree is 49 percent versus 28 percent. Although growth is occurring throughout the nation, almost 40 percent of all Asian-Americans can be found in three areas – Los Angeles, New York and San Francisco. The overall number of Asian-Americans is not very large overall and their increase in population will not have a dramatic effect on dentistry.

A MORE URBAN POPULATION

The overall population is continuing to shift from the northern states to the Sun Belt areas of Florida, Southwest, and West; and from rural areas to more urban and suburban areas. From 2000 to 2010, regional growth was much faster for the South and West (14%) than for the Midwest (4%) and Northeast (3%). Population growth of at least twice the national rate occurred in many metro and micro areas, such as some areas in parts of California, Nevada, Arizona, Texas, Florida, and the Carolinas. This shift will have implications for the regional distribution of dentists.

CHANGING UTILIZATION OF DENTAL CARE

The utilization of dental care is changing. The percentage of adults who visit a dentist has been dropping for the past decade among all income groups, but particularly among poor adults. On the other hand, the 2000s actually saw remarkable gains in the percent of children in the United States who see a dentist, driven in a large part by expansion of public programs. ⁹

The prevalence and severity of dental decay in permanent teeth has declined over the last several decades. In the early 1970s children aged 6-18 years averaged 4 teeth with decay but by the early 2000s that had decreased to fewer than 2 teeth with decay. ^{10,11} The coming generations of children, especially higher income children, will have fewer decayed teeth and will need less complex restorative dental care as they age. With the changing patterns of dental decay, comes a shift in services from traditional restorative care to cosmetic and preventive services. Because a higher proportion of the population are keeping their teeth as they age,

there may be an increased need for periodontal care; services generally provided by dental hygienists rather than dentists.

The changing utilization patterns are predicted to drive down overall dental spending due to the divergent mix of procedures between adults and children.¹²

2. CONSUMERS ARE BECOMING MORE ASTUTE PURCHASERS OF HEALTH CARE AND SEEKING VALUE FOR THEIR SPENDING.

AN EMERGING CONSUMERISM

There is a shift among the American population from wanting to be regarded as "patients," to one in which they view themselves as health care "consumers" with differing behaviors, expectations and needs.

A 2012 Deloitte Survey of Health Care Consumers finds indications that "consumers are ready to become more active, informed decision-makers." According to the Deloitte survey, consumers are ready to customize and shop for insurance to find the best quality and price.

This emerging "consumerism" is more salient in the younger populations, who are more apt to prefer "high tech" interactions where they can comparison shop through social media. However, although social media is increasing as a source of referrals, it is not used by a significant portion of the population for that purpose. Furthermore, use of consumer health information technology (HIT) is low, and consumers' interests in using emergent HIT is also relatively low.¹⁴

Older consumers generally prefer "high touch" interactions, which include personal experiences with providers. However, Baby Boomers may become more price-conscious as they join the ranks of the elderly, with less coverage and more out of pocket costs for their care. Since 57 percent of those who have not visited a dentist in the past year cite lack of insurance and cost of care as the primary reason for not visiting a dentist, ¹⁵ the Baby Boomers may become more astute shoppers of care and demand more value for the money.

MEDICAL TOURISM

As the cost of care rises, "medical tourism" is also increasing. Medical tourism is used more often for high cost, non-reimbursed, and often elective care. Thus it is more sensitive to cost, and to a consumer's willingness to pay for elective procedures.

Consumers are choosing to go abroad to receive higher cost services at less expense in accredited facilities in Mexico, Costa Rica, Eastern Europe and Asia. Over one-third of Americans (37%) would consider traveling to another country to receive medical or dental care if the cost were significantly lower. The younger populations are more likely (45% of those

under age 35) than older populations (38% ages 35-49 and 30% ages 50-64) to travel abroad for care. The easiest access to foreign care is in Mexico, where border towns offer much less expensive dental care than in the U.S., but travel abroad for vacation and dental care is attractive to some.

II. PROVIDERS

3. AN INCREASING NUMBER OF DENTISTS ARE BEING TRAINED, BUT MOUNTING DEBT LOAD AND CHANGING DEMOGRAPHICS ARE ALTERING THE PRACTICE CHOICES FOR NEW DENTISTS.

A SUFFICIENT SUPPLY OF DENTISTS?

The current workforce of dentists is aging, with 37 percent of dentists over 55 years of age, and an additional 27 percent between 45 and 55 years. ¹⁷ As the economy improves, it is anticipated that more dentists will retire and need to be replaced by new practitioners.

The dentist workforce is increasing as dental schools graduate more students, and more foreign trained dentists are becoming licensed in the United States. In 2010, a net of 3067 new dentists entered private practice.¹⁸

The increase in dentists may meet the continued demand, and perhaps create a surplus, in the private sector. However, there are not likely to be sufficient providers to meet the demand in the growing publicly insured sectors of the population. A recent Association of State and Territorial Dental Directors survey found that in 25 of the 39 states that responded to the survey, fewer than one half of dentists treated any Medicaid recipients in the previous year.¹⁹

CHANGING DEMOGRAPHICS AND DEBT OF NEW DENTISTS

The changing demographics, growing debt and lifestyle choices of new dentists are all influencing practice choices.

New dentists are far more likely to be women, who have different practice patterns than male dentists. ¹⁷ Thirty eight percent of new professionally active dentists (graduated dental school within past 10 years) are female, compared to 22 percent of all professionally active dentists. Sixty percent of dentists ages 44 or below are women. Women are more likely to practice part-time – less than 30 hours a week (20% versus 12% for men). New female active private practitioners are also less likely to be owner dentists (36% of women; 53% of men) and more likely to be associates or employees (41% or women; 28% of men). ¹⁹

Current dental students are only slightly more likely to be from underrepresented minorities (URM) than in the prior 10 years. The percentage of URM students increased from 11 percent in

2000 to 13 percent in 2011. For Hispanic students, there was an increase from 5 percent in 2000 to 8 percent in 2011.²⁰

The debt load of new dental graduates has grown to an average of approximately \$200,000. More than four of ten (41%) of dental school seniors say that educational debt had a great influence on their professional choices after graduation. ²¹ They are more likely to forgo solo practices for joint, group, or corporate practices. Dentists who have completed their dental education within the past ten years are three times more likely to be part of a larger company than those who completed their education more than ten years ago. ²²

Interviewees also indicated additional factors influencing career choices. A growing number of couples are entering dentistry with even larger debt burdens making the purchase of a practice more difficult. On the other hand, the couples can both work part-time and still have sufficient family income. Similarly, if dental incomes remain high, new dentists may choose to work fewer hours and pursue other personal activities.

4. PRESSURES ARE GROWING FOR AN EXPANDED DENTAL TEAM TO PROVIDE PREVENTIVE AND RESTORATIVE SERVICES.

As costs rise, as access becomes more difficult for lower income patients, and as payors – individuals, governments, firms – increasingly demand value for their care dollars, pressures for less expensive delivery options are becoming more prevalent. These changes include expanding the role of mid-level practitioners and the use of tele-health technologies.

In the medical arena, consumers are becoming more receptive to expanded roles for other health practitioners as they seek greater value from care -- 47 percent are willing to see a nurse practitioner or physician assistant if a physician is not available, ¹³ perhaps indicating a similar willingness to see other members of a dental team for care. As the need for dental services shifts more towards preventive services, increasing utilization of mid-level practitioners for many procedures may be cost-effective.

Innovative models such as "telehealth" and "virtual dental homes" can provide for expanded access to care for lower income and institutionalized populations by connecting mid-level dental practitioners with dentists through electronic sharing of information. In the virtual dental home model, a mid-level practitioner in a community setting (e.g. school) performs a visual exam and takes radiographs which the remote dentist reviews and uses to develop a treatment plan.²³ The dentist may then recommend that the mid-level practitioner administer the care under his/her remote supervision. This model has the potential for being adopted by dental plans and practices that have large numbers of underserved patients, particularly as the trend in dental care is away from more complex restorations to simpler, preventive services.

Pressure is building across the U.S. to expand the roles of mid-level members of the dental team such as dental hygienists or dental therapists. Their scope of practice, supervision and compensation are being hotly debated in several state legislatures and accrediting bodies. The

evidence suggests safety is not an issue, but the economic viability is uncertain. With increasing number of children having dental coverage through Medicaid, CHIP and the Affordable Care Act, more providers will be necessary to ensure adequate access to preventive and restorative care. Policymakers are becoming more open to expanded roles for mid-level practitioners and legislation is pending in several state legislatures. It is uncertain how this will evolve.

5. CARE IS BEING INTEGRATED WITHIN "PATIENT CENTERED MEDICAL HOMES" IN MEDICINE BUT INCLUSION OF DENTAL CARE SERVICES HAS BEEN SLOW.

A persistent theme in health reform is for the "Triple Aim" of improving the experience of care, improving the health of populations, and reducing per capita costs of health care. A number of initiatives call for more integrated care through Accountable Care Organizations (ACO) and patient centered medical homes (PCMH).

ACOs are pilot projects, initially for Medicare populations, where groups of providers will be compensated on the basis of patient outcomes, rather than on the quantity of delivered services. Provider organizations are integrating care on all levels and across disciplines, using sophisticated metrics to identify effective practices and improved health outcomes. The PCMH model draws on professionals from all disciplines -- from surgeons to social workers -- to coordinate a full range of care to improve the overall patient's health.

Given the link between oral health and overall health, the ACOs and PCMH models provide much promise for integrating dental services into overall health services. However, there is little evidence to suggest that the integration of dental services is little more than a possibility at this time. The medical system is focused on issues such as reducing hospital re-admissions, high risk case management and avoiding prescription errors. While there is potential to bring dental practitioners into the health team, it will take time for the medical system to recognize the need to expand the concept of health and incorporate non-medical personnel. It will also require dental professionals to evolve from being dental practitioners to being responsible for the overall oral health of patients.

One trend in integrating oral health into medical offices is taking place in pediatric offices. Medicaid and CHIP programs are increasingly reimbursing medical providers for fluoride varnish and other preventive services. At least 35 state Medicaid programs are paying medical providers for dental services such as fluoride varnish application, oral risk assessment and exam, and caretaker education. ¹⁹

In addition, some health plans are providing additional dental coverage for high risk patients, particularly when the plan covers both medical and dental services. For example, when California eliminated the adult dental Medicaid benefit, Health Net added some dental benefits to their Medicaid health plan in the attempt to reduce their medical costs. Similarly, Aetna has a Dental-Medical Integration Program that focuses on members who have not had a recent dental visit and are pregnant or have diabetes, heart disease and/or cerebrovascular disease. It

provides outreach and enhanced dental insurance benefits to these members who are also covered by their health plan.²⁴

Community health centers have been growing their dental practices, but it is unknown how much the dental and medical practices are being integrated. In the four years prior to 2011, the number of dental patients seen in federally qualified health centers grew 44 percent to just over four million patients a year. During the same period, the number of dental visits increased by 49 percent to nearly 10 million a year, and the number of full time equivalent dentists increased by 40 percent to nearly 4000.²⁵

While there has been much discussion in recent years about medical and dental collaboration,²⁶ there is little indication that large private medical practices are adding dental practices. For example, Kaiser Permanente only has dental services in the Pacific Northwest, without plans to expand dentistry to other regions. Their dental services remain largely separate and apart from the medical services, although there is some referral from the dentists to physicians for scheduled screenings and care for medical issues.

III. PAYMENTS

6. PAYMENT FOR DENTAL SERVICES IS SHIFTING FROM COMMERCIAL DENTAL INSURANCE TO PUBLIC COVERAGE AND PERSONAL OUT OF POCKET PAYMENTS.

EMPLOYER SUPPLIED DENTAL INSURANCE IS HOLDING STEADY BUT RETIREES FACE LESS COVERAGE AND HIGHER OUT OF POCKET PAYMENTS.

Health coverage is changing as employers are becoming less likely to provide health insurance, and the public programs provide coverage to more Americans. The percentage of the U.S. nonelderly population with employer supplied insurance (ESI) declined from 70 percent in 1999/2000 to 60 percent in 2010/2011; dependent ESI coverage is also declining, dropping from 35 percent to 31 percent during the same period.²⁷

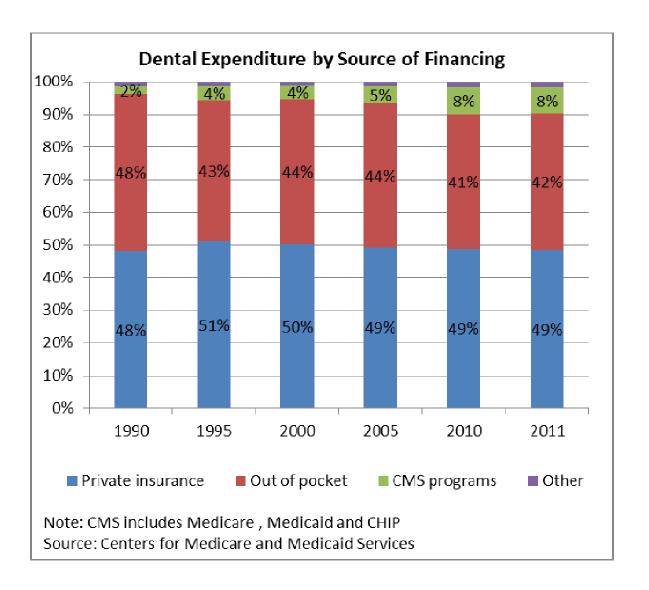
Although National Association of Dental Plans (NADP) survey data show that fully employer-funded dental benefits have increased in the past five years, other indicators show that dental ESI is declining. The 2012 NADP consumer survey shows that 28 percent of dental benefits were funded by employers in 2012, up from 22 percent in 2007. Shared funding for dental plans decreased to 40 percent in 2012, from 45 percent in 2007, but individual purchase of dental benefits increased from eight percent to 12 percent from 2007 to 2012.

However, national data from the Medical Expenditures Panel Survey show that the percentage of adults with private dental insurance dropped from 62 percent in 2001 to 56 percent in 2010.

There are significant variations among population groups. As the Baby Boomers retire, they will lose ESI and need to pay out of pocket for care or obtain alternative coverage such as through a Medicare Advantage plan. While only one-third of non-elderly adults had no dental coverage in 2010, two-thirds (66%) of adults 65 and over had no dental coverage. Eighteen percent of children less than 21 years of age percent had no dental coverage.²⁸

Out of pocket payments are a very important component of spending on dental care constituting 42 percent of dental expenditures, compared to 11 percent of health expenditures.¹²

For the population as a whole, these out of pocket costs have remained constant in national dental expenditures or are dropping slightly. However, out of pocket payments are increasing for the elderly population. From 2000 to 2010, adjusted per-patient dental expenditure increased among adults, especially among the elderly and higher income adults. The highest increase in expenditures was among the uninsured elderly. Among younger populations, ages 21-64, spending on dental care has increased much more slowly, and among children per capita spending has been flat.²⁹



➢ GOVERNMENT SPENDING ON DENTAL CARE HAS INCREASED WITH OVER FOUR IN TEN U.S. CHILDREN HAVING PUBLIC DENTAL COVERAGE.

Government spending on dental care has doubled from four percent to eight percent of total dental expenditures from 2000 to 2011. This funding is primarily for lower income populations, particularly children.

More than four in ten U.S. children (44%) are now enrolled in public coverage (Medicaid and CHIP), with 33.8 million children on Medicaid and CHIP²⁹ out of 76.7 million children.³⁰

The number of children with publicly subsidized dental coverage is expected to increase even further with the implementation of the Affordable Care Act pediatric oral health essential benefit and government subsidies for that coverage.

While public coverage for children is increasing, coverage for adults is decreasing due to the elimination of adult dental Medicaid benefits in many states. Medicare has never provided comprehensive dental benefits, and it is an optional benefit for state Medicaid plans. In 2010, 22 states provided no adult Medicaid dental benefits, and since that time additional states have severely curtailed their dental benefits. ¹⁹

As noted above, dental services provided at federally qualified health centers has increased by over 40 percent over the past four years, but private practitioners remain the dominant providers of dental care for public programs.

7. COMMERCIAL DENTAL PLANS ARE INCREASINGLY USING MORE SELECTIVE NETWORKS, DEMANDING INCREASED ACCOUNTABILITY THROUGH DATA AND PERFORMANCE MEASURES, AND PRESSURING PROVIDERS TO REDUCE COSTS.

Nearly half (49%) of the 2011 U.S. national dental expenditure of \$108 billion was from private insurance.¹² This percentage has remained relatively constant over the past decade, but the type of plans has changed.

Dental preferred provider plans (DPPP) are increasing in popularity. In the five years from 2007 to 2012, the percentage of covered individuals in preferred provider plans increased from 47 percent to 55 percent, while those in dental health maintenance plans fell by eight percent to 12 percent of covered consumers; the percentage with dental indemnity plans dropped four percent to include 11 percent of covered individuals. Consumers aged 25-64 are much more likely to have a preferred provider plan, while seniors are more likely to have indemnity, discount dental and direct reimbursement plans. ¹⁵

Interviews with dental plans showed a trend toward cost containment through smaller provider networks and diminished reimbursement with increased accountability through metrics on utilization, provider profiling and cost controls.

Dental plans lag behind medical plans in the push to focus on outcomes rather than services – moving from "volume to value." More experimentation can be expected in the public programs, which have larger populations that are stable over a longer period of time and for which there is great pressure on cost constraint.

IV. POLICIES

8. THE AFFORDABLE CARE ACT PEDIATRIC DENTAL BENEFIT WILL PROVIDE AN MILLIONS OF ADDITIONAL CHILDREN WITH DENTAL COVERAGE THROUGH THE SMALL GROUP AND INDIVIDUAL MARKETS AND OPTIONAL MEDICAID EXPANSIONS.

The Affordable Care Act established pediatric dental care as an essential health benefit in the individual and small group market, with approximately three million children possibly obtaining dental coverage through the new Marketplaces (a 5% increase) plus an unknown number in the private market. The Marketplaces in over half the states (26) will be operated by the federal government, while seven states are projected to have joint federal-state Marketplaces and 17 will have state-run Marketplaces. The scope of the pediatric dental benefits as well as the cost sharing may differ from state to state.

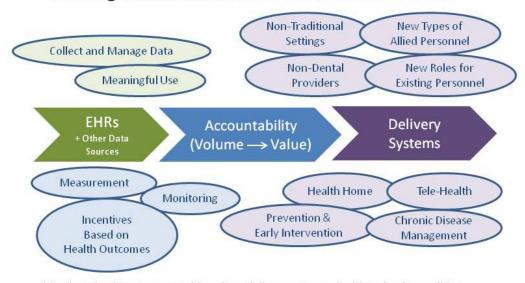
Adult dental benefits are not part of required packages, and pediatric dental benefits are not mandated in the large employer market. As the regulations are evolving, it appears that although plans must include pediatric dental benefits in the plan design, consumers will not be required to purchase them in order to obtain health coverage, although some of the state Marketplaces may make it mandatory. The "individual mandate" penalty will not be triggered by a failure to obtain pediatric dental coverage.

There are many unknowns in the effects of the ACA. It is difficult to predict how many will enroll in coverage and what their risk profile will be, what the pent-up demand will be, and what the effect on the purchase of adult dental coverage will be. The elimination of annual and lifetime coverage caps will dramatically change the nature of dental coverage in these markets. Additional requirements for consumer out of pocket caps (deductibles and co-pays) may differ from state to state.

Health plans in the small group/individual markets are slowly realizing that they will need to offer pediatric dental coverage, or ensure that it is available through a stand-alone dental plan. Although the ACA requires that health plans provide for pediatric dental care as an essential health benefit, there does not appear to be a trend to health insurers combining dental and medical services. For those health plans that do provide dental benefits, the services may be through very limited provider panels.

9. PUBLIC PROGRAMS, WITH INCREASED PARTICIPANTS, WILL DEMAND INCREASED ACCOUNTABILITY FROM DENTAL PROVIDERS.

Moving Oral Health Care from Volume to Value**



^{**} Value = health outcomes achieved per dollar spent over the lifecycle of a condition

Source: Glassman, P. Oral Health Quality Improvement in the Era of Accountability, 2011

Public programs (Medicaid and CHIP), with their increased spending on dental coverage and emphasis on cost-savings, are likely to drive the increased demand for accountability and health outcomes.

Despite low Medicaid participation rates of private practice dentists, a recent report found that over half of children with Medicaid coverage are treated by private practitioners (34% of Medicaid recipients are seen by private general dentists and 19% by private pediatric dentists). Twenty-one percent are served by dental management companies, 10 percent by safety net clinics, and four percent by dental trainees. The type of provider for the remaining 19 percent of Medicaid recipients is unknown.³¹

The use of managed care by Medicaid dental plans is predicted to grow, with at least 21 states using managed care to deliver dental services. 19

With large and more stable populations of covered patients, the state Medicaid plans are in a position to experiment with cost-control measures that focus on oral health outcomes, rather than payment for individual procedures. Some of the approaches being tried by Medicaid programs are: adjusting the scope and frequency of covered services based on individual risk, e.g. CAMBRA; reimbursement based on oral health outcomes; and additional compensation for

early preventive services. Provider profiling, which provides incentives for providers who emphasize preventive services is another method of promoting cost-effective care.

Oregon has developed Coordinated Care Organizations (CCO) for its Medicaid population, as part of its Integrated and Coordinated Care Health Delivery System. CCOs are required to integrate medical, mental health and dental plans by July 2017. As an interim step, CCOs are required to develop a contractual relationship with all Medicaid dental managed care plans in the region by 2014. Oregon plans to expand the CCO concept to state employees and the state Marketplace under a new federal innovation grant.

Metrics are key to implementing alternate payment structures. There will be a continued drive for dental diagnostic codes to monitor efficacy and quality of treatments and track population health and disparities. The adoption of electronic dental records will also enhance the ability to track the necessary metrics. Implementation of these processes will be more practical in larger practices that cover more consumers over a longer period of time.

While the federal government has been promoting the "meaningful use" of electronic health records, including electronic dental records, integration of dental with medical records has been limited. There are few products on the market that integrate medical and dental records, and the Federal "meaningful use" subsidies are limited to Medicare providers and larger Medicaid providers. Joining medical and dental records has the most opportunity for adoption in large systems where both dental and medical care are provided (Veteran's Administration, Indian Health Service, Kaiser), or where dental and medical plans are bundled.

V. PRACTICE IMPLICATIONS

The current state of dental practice is one in which most dentists are in private practice in their own offices. Of the approximate 190,000 practicing dentists in the United States, 92 percent are in private practice; more than 80 percent of active private practitioner dentists in the United States are practice owners. ¹⁷ In the coming years, the solo practice will become less dominant as more cost-efficient, larger practices predominate.

10. WITH THE INCREASED DEMAND FOR VALUE IN DENTAL CARE SPENDING PRACTICES WILL NEED TO BECOME MORE EFFICIENT.

The demand by purchasers to demonstrate value will increase costs of practice (e.g. upgraded technology) with decreasing reimbursements. The need for practice efficiencies and economies of scale will demand efficiencies in practices. With increased pressure from dental plans, practices will need to incorporate new data systems that can track outcome metrics as well as integrate with health records. Individual consumers with increasing out-of-pocket dental expenses will seek value and become more cost-conscious.

11. THE TREND TOWARDS LARGER, MULTI-SITE PRACTICES WILL CONTINUE, DRIVEN BY PLAN PRESSURES FOR SMALLER PROVIDER NETWORKS, PRACTICE PATTERNS OF NEW DENTISTS AND INCREASED COMPETITION FOR PATIENTS.

Third party payors are seeking to contract with a limited group of practices to reduce administrative costs and drive down reimbursements. The increased presence of government payors will further drive down reimbursements and demand efficiencies. Dental plans are trending toward increased accountability through intensive measuring of outcomes and effectiveness.

While alternate practice models such as corporate practices or dental management services organizations are growing at a slow rate, they are predicted to experience continued growth. Multi-location practices are receiving an increasing percentage of dental receipts and new dentists are more receptive to working in these practices.

The number of multi-unit dental firms with 10 or more locations grew fivefold between 1992 and 2007, as the number of dental establishments that they operate rose from 157 to 3009. They are now taking a greater percentage of total receipts -- from eight percent in 1992 to 11 percent in 2007.²² The percentage of dentists who are associated with multi-site practices increased from five percent in 2008 to six percent in 2010. These practices are primarily concentrated in the South Atlantic area, on the Pacific Coast, and in the East North Central area, with the smallest concentrations in the East South Central area and New England.

For a number of reasons new dentists are three times more likely than older dentists to be employed in a multi-site practice. ²² Mounting dental school debt makes it more difficult for new graduates to purchase practices. Lifestyle choices are also a factor in choosing to work in a large practice. As the increasing number of women entering dentistry attempt to balance family and professional lives, they will be more open to practices other than solo practice.

Competition for patients will grow as practices seek to attract and retain a higher volume of patients due to decreased demand for restorative dental care among younger populations. The increased competition (domestic and foreign) for non-reimbursable services (e.g. implants, cosmetic dentistry) will necessitate efficiencies of a larger practice.

Should the efforts to expand the scope of practice of mid-level practitioners succeed, they are more likely to be employed in a large group practice where an administrative infrastructure exists and costs and supervision can be shared among several practitioners.

12. HEALTH CARE REFORM AND MEDICAID EXPANSIONS WITH AN INCREASING EMPHASIS ON OUTCOMES AND COST-EFFECTIVENESS WILL ENCOURAGE ALTERNATIVE MODELS OF DENTAL CARE.

Public program investment in children's dental care is increasing. Not only have there been expansions through Medicaid and the Children's Health Insurance Program, but the Affordable Care Act will be providing substantial subsidies for pediatric dental coverage. Practices that concentrate on children with Medicaid coverage – both for profit and nonprofit – are growing. A number of models exist such as dental service organizations, corporate owned practices and hybrids. These models provide care for much lower costs for Medicaid patients, although there is much controversy about quality and appropriateness of care.

Dental service organizations, such as Kool Smiles, handle marketing, human resource support, accounting and billing while spreading costs across several practices. They have grown considerably and number 3,500 today.³²

Another model which operates similar to a hospital, employs non-dentists to manage the practice while employee dentists control the clinical side. The nonprofit Sarrell Dental in Alabama has 14 centers and caters to consumers through expanded office hours, acceptance of Medicaid, and child friendly centers. State laws vary on allowing these types of practices.

The larger practices handle large volumes of patients and can demonstrate efficiency and improved outcomes – metrics that are increasingly important to public payors. As Accountable Care Organizations mature under health reform they will begin to seek the inclusion of oral health and seek the same measures of outcomes, quality and efficiency. Controversy will continue about the scale of these practices, the influence of equity ownership, and the quality of care. However, the large practices are likely to grow as the demands for the Triple Aim – improved experience of care, improved population health, and reduced per capita costs – take hold on the medical side and are translated to dental care.

CONCLUSION

Many challenges are confronting dentistry and the status quo is unsustainable. The changing nature of dental consumers and their providers, along with altering patterns of demographics and government policies, will have significant effects on dental practice in the United States.

This is a critical moment for the profession. Changes in medical practice and the health coverage system are harbingers of forthcoming changes in dentistry. Since many of the changes have been slow in coming to dentistry, the profession has an opportunity to proactively chart a course to influence their directions. To ignore the shifting landscape is to lose control and allow others determine the future of dentistry.

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APPENDICES

LIST OF INTERVIEWEES

Organization	Name	Title
American Health Information Management Association (AHIMA) Foundation	William Rudman, PhD	Executive Director
2. Arizona School of Dentistry and Oral Health	Jack Dillenberg, DDS, MPH	Dean
3. Bedford HealthCare Solutions	Allen Finkelstein, DDS	Chief Executive Officer
4. Delta Dental of California, New York, Pennsylvania, and Puerto Rico	Jeff Album	Vice president of Public and Government Affairs
5. Delta Dental of Michigan, Ohio, Indiana, North Carolina	Jed Jacobson, DDS, MS, MPH	Senior Vice President and Chief Science Officer
6. Den-Mat Holding (clinical lab)	Robert Cartagena	Chief Operating Officer
7. Kaiser Permanente Northwest	Tracy N. Dannen	NW Manager Community Initiatives, KP Community Benefit
8. Liberty Dental Plan	Dave Meadows Amir Neshat, DDS	Senior Vice President, Government Health Programs President and CEO
9. McKenzie Management	Sally McKenzie	Chief Executive Officer
10. ODS Companies	William Ten Pas, DMD Teri Barichello, DMD	Sr. VP & President ODS Vice President and Chief Dental Officer
11. Office for Oregon Health Policy & Research	Lisa Angus	Policy Development Manager
12. Partners Community HealthCare, Inc.,	Thomas Lee, MD*	Chief Executive Officer
Professor of Medicine Geisinger Health System Foundation		Harvard University Public Health Board member
13. Private practice	Lindsey Robinson, DDS	Private practice pediatric dentists
14. Sarrell Dental	Jeff Parker	President and CEO
15. Temple University Kornberg School of Dentistry	Amid I. Ismail, BDS, MPH, MBA, DrPH	Dean
16. University of the Pacific Arthur A. Dugoni School of Dentistry	Paul Glassman, DDS, MA, MBA	Professor of Dental Practice Director of Community Oral Health
17. WellPoint	Mike Radke	Senior Marketing Research Analyst for Product Development

^{*}email interview

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