

The Role of Defined Contributions for Dental Services

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As the debate about defined contribution continues in the realm of medical coverage, dentistry risks being overlooked. The current structure of the dental reimbursement business is more a reflection of the model constructed for medical cost management and payment than one built to meet the unique nature of the dental business, but it does not need to be that way. Indeed, the dental arena may offer an early opportunity for defined contributions to be explored.

The reasons are straightforward. First, the economics of dental cost reimbursement argue that consumers should have more responsibility for payment since they drive cost through choices about care. Secondly, consumers *are* paying more currently than they have in the past. Last, the services that consumers select to purchase are increasingly cosmetic and discretionary and thus not covered or only partially covered under a defined benefit plan. Consumer-driven health care may offer a way to deliver more value to dental consumers and cost control to plan sponsors.

Risk Element

Dental care effectively has no catastrophic cost, and thus the economic need for true defined benefit insurance is low. Average costs are quite low at \$192 per year per person,¹ and are relatively predictable.

The consumer of service is, in effect, in control of the services consumed. An individual can often plan the extent and timing of dental services. Most dental work can be postponed or accelerated to take into account maximum third-party reimbursements. The plan participant's ability to control the incurrence of claims creates an information asymmetry that impedes the functioning of a traditional insurance market.

Because costs are so predictable, the value-add of a dental insurance product is lower than that of some other benefits products. Economic logic dictates that individuals insure risk that they cannot financially bear. Paying a risk charge to an insurer to cover an event with a high degree of certainty does not make sense unless the insured, benefiting from an information asymmetry, determines that the risk charge is insufficient. If one adds the costs of administration and claims payment, the value proposition of properly priced insurance fades further.

Nevertheless, the dental group insurance market does exist, due to tax considerations, an ability to spread administrative costs, and historical reasons. This market can be divided into two—the employer-paid and the employee-paid. While in reality this is a continuum with different permutations (e.g., employer paid for the individual but employee paid for dependents if coverage is so elected, employer paid for a portion of the premiums for employee and dependent, etc.), this division is useful in analyzing how risk is calculated in the dental business.

For an insurer, the risk borne depends upon the population enrolled. In an employer-paid plan, all participants are members. Actual utilization of the plan, however, may average

about 70% of the members. For underwriters to price the risk, they must estimate how many of the given population of a particular company will actually access care.

When the dental insurance offered is contributory or voluntary, the risk is one of adverse selection: Those who plan to use the coverage will sign up and those who do not plan to, will not. This drives up the average cost per participant. As the average cost to the consumer rises over time, fewer and fewer potential participants find the financial proposition sufficiently attractive. This leaves the highest utilizers in the plan at a very high cost.

Adverse selection problem leads to two potential outcomes. First, a lower percentage of people elect to participate in the plan. Secondly, the defined benefits may be repeatedly scaled back in order to keep some semblance of control on cost. Thus, adverse selection may lead to additional out-of-pocket spending for dental services or the avoidance of treatment altogether.

Since the consumer is largely in control of the timing of dental expenditures, the risk to a third-party payer in a defined benefit product is one of predicting who will sign up and whether or not they will use the plan. The separation of payers, consumers, and decision-makers—a problem in all of health care—is especially pronounced in this largely discretionary service arena. In many respects, returning the responsibility for predicting and paying for costs of these largely discretionary services to the consumer makes economic sense.

Financing

In fact, consumers are paying more out of their own pockets. Of the \$54B spent on dental services in 1998, 45% (or \$24.4 billion) was paid by those receiving care (see Figure 1 below). This is almost as much as the estimated \$26.7 billion spent by all of private insurance.

Figure 1

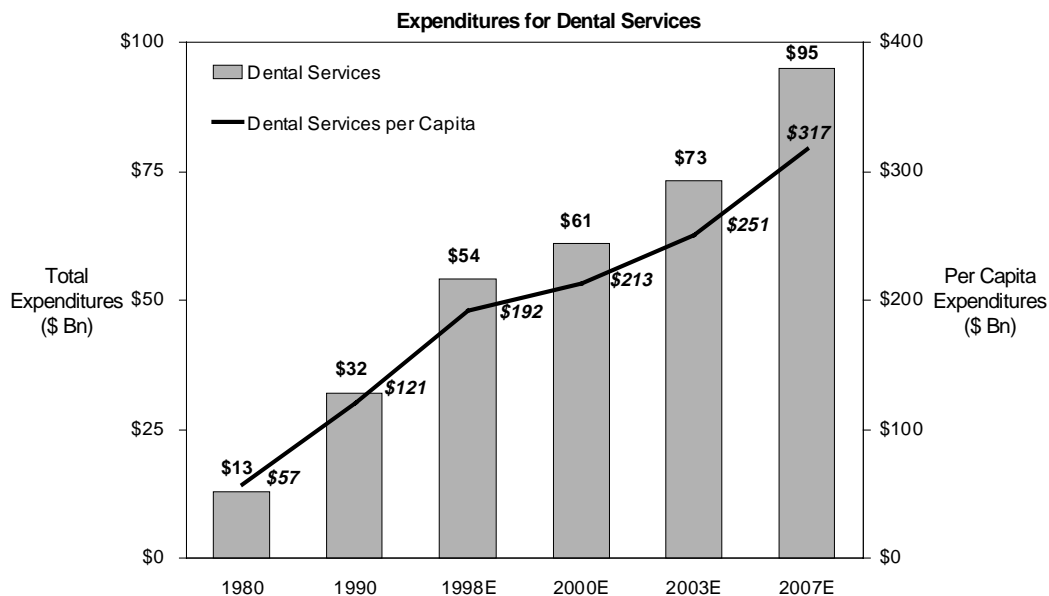
**Dental Services Expenditures, Average Annual Percent Change,
Percent Distribution and Per Capita Amounts, by Source of Funds: Selected Calendar Years 1970–2007 1/**

Year	Total	Out-of-Pocket Payments	Third-party Payments						Medicare 2/	Medicaid 3/
			Total	Private Health Insurance	Other Private Funds	Government				
						Total	Federal	State and Local		
1990	\$31.6 Bn	\$15.4 Bn	\$16.2 Bn	\$15.1 Bn	\$0.1 Bn	\$0.9 Bn	\$0.5 Bn	\$0.4 Bn	\$0.0 Bn	\$0.8 Bn
1992	\$37.0 Bn	\$17.8 Bn	\$19.2 Bn	\$17.7 Bn	\$0.1 Bn	\$1.4 Bn	\$0.8 Bn	\$0.6 Bn	\$0.0 Bn	\$1.2 Bn
1994	\$41.7 Bn	\$19.7 Bn	\$21.9 Bn	\$19.8 Bn	\$0.2 Bn	\$2.0 Bn	\$1.1 Bn	\$0.9 Bn	\$0.0 Bn	\$1.7 Bn
1996	\$47.6 Bn	\$22.1 Bn	\$25.4 Bn	\$23.2 Bn	\$0.2 Bn	\$2.1 Bn	\$1.2 Bn	\$0.9 Bn	\$0.1 Bn	\$1.8 Bn
1998E	\$53.7 Bn	\$24.4 Bn	\$29.2 Bn	\$26.7 Bn	\$0.2 Bn	\$2.3 Bn	\$1.4 Bn	\$1.0 Bn	\$0.1 Bn	\$2.0 Bn

Source: Health Care Financing Administration.

For companies providing private dental insurance, this has been a period of increasing costs. Dental expenditures have been increasing at a rate of 6.9% for the last 8 years,² or more than twice the increase in CPI of 3.1%.³ Future estimated trends do not offer much comfort.

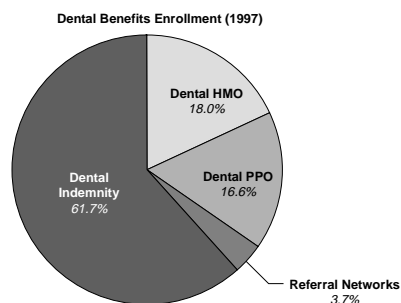
Figure 2



Source: Health Care Financing Administration, Sutro & Company, Summer 1999.

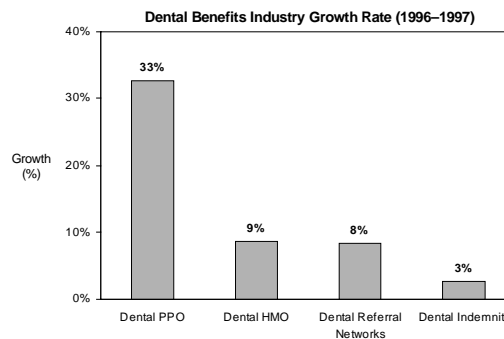
Employers have tried to control costs in several ways, including the introduction of various managed care products. See Figures 3A and 3B for the actual mix:

Figure 3A



Source: National Association of Dental Plans

Figure 3B



Source: National Association of Dental Plans

In addition, employers have been gravitating towards a model in which employees may choose a group dental plan and/or pay for it themselves.

Flexible benefits plans, in place at 27% of all large employers⁴, may offer a set dollar amount to be used for benefits election by the employee. In effect, this is a defined contribution approach to benefits provision already in use. In addition, of the 147 million Americans with dental coverage, 24 million currently have purely voluntary benefits⁵. And, according to the National Association of Dental Plans, ‘the use of employee-paid or voluntary group products in the other sectors of the dental benefits marketplace has been expanding.’⁶

Types of Dental Services Utilized

As more consumers elect to have cosmetic work such as whitening and adult orthodontia performed, they are typically moving beyond any defined benefit plan. There is discretionary spending by consumers who truly value such services.

The nature of care received has changed as population and disease patterns have changed. The current system was designed when caries and periodontia were pandemic. This is much less the case today, and will be even less so tomorrow. Society’s emphasis on prevention and cosmetics has caused the profession to switch from a ‘drill and fill’ approach to a more consumer-oriented and patient-driven one.⁷ This is illustrated below, as one can see the dramatic drop in amalgams and increase in preventative fluoride treatments, cleanings, and crowns (see Figure 4).

Figure 4

**Percentage of Patients receiving Selected Dental Services
from Private Practitioners in the United States by Type of Service**

Procedure	1959	1969	1979	1990
Oral Examination	20.1%	27.8%	30.1%	42.8%
X-Rays	18.1%	23.9%	21.0%	25.3%
Prophylaxis	19.9%	25.5%	24.9%	38.6%
Fluoride Treatment	0.9%	4.0%	6.8%	9.8%
Amalgam, One-Surface	20.1%	15.9%	8.5%	5.3%
Amalgam, Two-Surface	20.6%	16.4%	9.6%	7.2%
Crown	1.6%	2.9%	5.2%	5.3%
Root Canal	1.7%	2.9%	3.2%	2.6%
Extraction	13.0%	9.8%	5.4%	4.9%
Periodontal Treatment	3.2%	2.5%	3.3%	4.1%
Orthodontic Treatment	3.7%	6.5%	6.8%	3.6%

Note: Orthodontic treatment prior to 1990 was reported as visits and therefore included work in progress. In 1990, Orthodontic treatment was reported as starts

Source: American Dental Association: 1959 Survey of Dental Practice; and 1969, 1979 and 1990 Survey of Dental Services Rendered

These changes in the delivery of dental services highlight the perception that much of dental care, absent trauma, is a discretionary expenditure. In the view of the industry, “We compete with shopping malls.” This consumer psychology, very different from that found in medicine, indicates the control that consumers exercise in procuring dental services.

Defined Contribution

Employer perspective

The ability of employers to control defined benefit dental costs is limited. There are essentially three levers which may be pulled in a defined benefit environment: utilization of services, price per service, and services covered. The employers may also opt simply to pay for a lesser portion of the dental cost.

The ability of a plan sponsor to control utilization is limited. Because the participant has an information advantage in this elective service arena and may elect to undertake care or not, the payer is less able to control or predict service patterns.

The price per service will be also difficult to control over time. While the 69% of dentists who remain in individual practices may represent an opportunity for back office cost control and the possibility of payer leverage, neither should be taken as a given. Since the demand for dental services is expected to increase and the supply of dentists to remain flat or decrease slightly⁸, the competitive force of the market and the ability of payers to leverage the dentists and drive further discounts will likely not be particularly strong. As such, reducing the price per unit is not a viable means of cost control in the medium term.

Employers may also scale back the services provided to the employees. Generally, this could manifest itself in lowered coverage for big-ticket items like orthodontia or crowns being covered and an increased focus on the lower-cost preventative services. This could serve to increase plan participation but will further challenge the logic of insuring risk that is more of a certainty.

Last, as costs continue to rise, employers may simply pass on further cost to the employees. As these plans become more and more contributory or even voluntary, participation rates among employees should fall, cost for the remaining pool should rise, and overall out-of-pocket spending should increase.

Employee perspective

A defined contribution plan can meet the needs of employees who are required to shoulder more of the financial burden for dental costs and who are determined to spend more

of their discretionary income on cosmetic services. By allowing participants a set amount of money each year—and, ideally, allowing this to roll-over from year to year—employers would permit the employees who control utilization also to control expenditures. By receiving control for managing expenditures, the employee would determine what services are valued and would thus be more likely to value the plan itself.

Endnotes

¹ Health Care Financing Administration (HCFA), *1998 Compendium* (Washington, D.C.: HCFA, 1998).

² *Ibid.*, Table 5A

³ U.S. Department of Labor, Bureau of Labor Statistics, *CPI Detailed Report, January 1983-1986*.

⁴ Mercer/Foster Higgins, *National Survey of Employer-Sponsored Health Plans*, 1998.

⁵ National Association of Dental Plans, *1998 Dental HMO/PPO Industry Profile*.

⁶ *Ibid.*

⁷ Sutro & Co., *Dental Industry Overview*, Summer 1999

⁸ *Ibid.* (a compilation of results from the American Association of Dental Schools, the Bureau of Health Professionals, and the Bureau of Labor Statistics).