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Dental Managed Care Programs

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Summary: Managed care dental products are becoming increasingly popular. In this session panelists discuss how these programs work, the actuarial issues we face, quality issues, and the perspective of the dentist.

Ms. Leigh M. Wachenheim: The first panelist is Dr. Don Mayes, and I can tell some of you already know him. Don has his own dental benefits consulting firm, Don Mayes & Associates, located in Hershey, Pennsylvania. Before getting into consulting, he spent many years in private practice in rural Pennsylvania where his dental practice grew to the top 10% in gross income in the country. Then, while vice president at two large third party administrators (TPAs), he implemented multistate preferred provider organizations (PPOs) and dental HMO plans for some major clients.

He was also a vice president at Pennsylvania Blue Shield where he built one of the largest Blue Shield dental plans in the country. He has many well-known clients, including Hershey Foods, Hewlett-Packard, Met Life, Mutual of Omaha, the Department of Justice, and the Department of Labor (DOL). Some of you may be familiar with his book, *Managed Dental Care: A Guide to Dental HMOs*. It's now in its fourth printing and has been a best-seller for the publisher. I read it myself and it's very good. I highly recommend it. Don has been interviewed and quoted

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by some major publications, including *Money* magazine and *The Wall Street Journal*.

We also have Tim Harris with us. Tim is a principal in the St. Louis office of Milliman & Robertson where he manages a life and health practice. He has worked extensively in the dental area. Tim is going to show us a model that he has developed that can be used to perform dental capitation calculations.

Typically, when we think of managed care, we think of three components; cost, quality, and access. People are typically motivated by cost when they get into managed care programs. Quality is becoming more of an issue, especially on the medical side, but increasingly so on the dental side, too. Access is also very important.

There are some common arguments sometimes made against managed dental care, similar to the arguments that were made against managed care on the medical side for several years. One of these concerns the threat some dentists believe managed care presents to their professional autonomy. Some dentists also feel that managed care often results in unfair reimbursement arrangements.

Another argument sometimes made against managed dental care involves conflicts of interest. Some providers feel that they are put in a position of trying to cut costs for the plan, which may result in less than the highest quality of care for their patients. For example, they might feel that they're being required to substitute lesser quality materials in dentures to save money for the plan. Some dentists also say that dentistry is different because there aren't that many specialists in dentistry, and it's the specialists who really drive up the cost on the medical side.

In response, I think we can ask, if you can provide the same services at a lower cost, and you can improve quality and assure access at the same time, then why not manage dental care?

Dr. Donald S. Mayes: I want to talk a little bit about how dental is different from medical, how dentists are different from medical physicians, and a little bit about the dental market. We'll also talk a little bit about the future.

Dental really is different from medical. I often consult with companies that want to apply what they do in the medical area to the dental area. They think the two are really about the same thing. However, dentistry is not institution based, and that's critical. Hospitals have the physicians by the short hairs. Nobody has the dentists by the short hairs. Also, in dentistry, we're talking about two diseases that are not

self-limiting. Close to 90% of the dental benefits dollar is spent on the treatment or the prevention of periodontal disease and tooth decay (or carries).

Also, dentistry has only eight specialties that are recognized by the American Dental Association (ADA). As you well know, there are more than 23 specialists on the medical side. And if you look at primary care, as Leigh mentioned, dentists are already in the gatekeeper mode. Eighty percent of dentists are in primary care while only 34% of medical physicians are in primary care. Also, not too many people self-refer to oral surgeons, periodontists, or endodontists. They usually go to their primary care dentist.

You all know that dentistry has low diagnostic costs because, again, we're treating, principally, two diseases. And the cost of check ups is not nearly as expensive in dentistry as it is in medicine. Nobody has ever proven the annual physical to be cost effective. Nor have I ever heard a surgeon ask a patient before an operation, "Do you want the good, better, or best?" But you'll find dentists who will say, if you have a tooth missing or you have an abscessed tooth, "I can extract it for $25 or do a root canal and a crown for maybe $800." "Or I can put in a renewal for maybe $500 or do a fixed bridge for $1,800." Any of these could be acceptable treatment. You don't hear of that happening routinely in medicine.

Also, dental work is easy to audit, because there's an 80% correlation between looking at x-rays and looking in the mouth. It's very easy in dentistry to perform an audit by going back and looking at x-rays. For example, using x-rays, you can tell when restorations were done, what was done, and whether there has been any change. I don't have to talk to you about how dentistry differs from other insurance coverages because dental services are usually low cost, but have high frequency.

Dentists are really not the biggest supporters of managed care in the country. Thirty-three percent of dentists participate in managed care plans, according to the National Association of Dental Plans (NADP). About 19% participate in HMOs and about 33% participate in PPOs. About 88% of physicians participate in managed care plans. Physicians are really into managed care.

People are going to the dentist more frequently. The percentage of those going to the dentist at least once in a 12-month period has increased from 32% in 1950 to 57% in 1989, and that percentage is still climbing. I think much of that is age related. The baby boomers have their teeth and they want to keep them. They were brought up going to the dentist. When I went into practice in rural Pennsylvania, standard care was to have your teeth out before you retired so you wouldn't have to bother with them anymore. In a couple of cases, kids graduating from high school with very bad teeth would get dentures for graduation gifts.

A study was done by C.W. Douglas and J.W. Reinhardt from Harvard. In the 45–64-year-old age group, the number of teeth at risk increases by 575 million between 1990 and 2030. Then, let's look at our older population. For the same years, the number of teeth at risk will double. People are keeping their teeth. The baby boomers have their teeth, and they want to keep their teeth. And more people are going to the dentist. And Douglas also said that the population growth and tooth retention simply overwhelm the number of dentists available to take care of the need.

I give seminars to insurance companies where I talk about my ten commandments. The first one is, if it doesn't work for the dentist, it isn't going to work. I promise that's true. America's dental health has never been better, according to the National Institute of Dental Health. Periodontal disease has declined. Half of children up to age 19 don't have any cavities or tooth decay. So America's dental health is greater, but there are far more teeth at risk. So even though we're getting healthier dentally, we have this problem of more teeth.

Now we're going to talk a little bit about how dentists are different. The number of dental schools is diminishing. In 1978 there were 60. Now we're down to 55. Howard Bailey, who is a University of Connecticut senior vice president, wrote a seminal paper, in which he predicts medical schools are going to close because of the glut of physicians. And when medical schools close, dental schools aren't going to be kept open. So what you're going to have is even fewer graduates.

Women are also entering dentistry. However, very few of the women coming out of dental school in their late 20s or early 30s whom I speak to want to invest $150,000 to $200,000 to open a practice, especially if they want to raise a family. So many of them are looking for positions that are salaried, either on a part-time or full-time basis. Of course, there are many men who feel the same way. Many dentists are not going to be working the full 48 or 50 hours a week, and it's going to affect manpower.

Dentists are getting busier. Dr. Donald House, the ADA's chief economist and editor of *Dental Practice Outlook* studied the number of patients per private practitioner. The number of patients was declining from 1982 to 1988, but dentists started getting busier in 1989 and patients have been steadily increasing ever since 1988. He projects that by 1999 they're going to be back to where they were in about 1984. They're changing the way they practice.

Although 67% of dentists work alone, that is a decrease of 10%. The number of dentists working with one other dentist increased by 24%. The number of employed dentists is only 8%; that is a 67% increase. And they're essentially working for the two or more dentists. Group practice has increased 33%. That trend has been quite steady. And I think it will accelerate.

For those of you who consult, remember that dentistry isn't like the medical model. If there's one thing that I find amusing, it's that the only reason that I am able to consult is that I made many mistakes and have been in business a long time—since 1970. And all I do is go around talking about the mistakes I've made and telling people not to make the same ones. I'm telling you that the biggest mistake people make is to assume that medical and dental are the same.

Let's discuss the dental market. Forty-five percent of the population has some type of dental insurance—74% of those obtain it from the private market. Then we have Medicaid, military, and government programs, but nothing in Medicare at this point. Of the total dental market, PPOs account for 49% and dental HMOs account for 18%.

I classified Delta plans as PPOs. If you want to take that out, then you're talking 12% for PPOs. I worked for Pennsylvania Blue Shield a number of years ago. There the dentist signed a contract agreeing to certain conditions and stipulations; by my definition, that's a PPO.

Indemnity accounts for 32% of the market. Referral networks are the type Montgomery Ward and others have, where the dentist agrees to accept the fee that's published. Before the patients go to the dentist, they know what they're going to pay for their dental care. They usually get a free cleaning or something like that.

If we compare medical to dental, we find indemnity business makes up 31% of medical plan enrollment and 32% for dental.

HMOs make up 29% of medical enrollment and 18% for dental. The PPO enrollment is large, including the Blues. Point of service (POS) enrollment is the big difference. There is very little POS in dentistry, although it's growing. I think you're going to find it grows very rapidly, because many people are willing to pay the difference to avoid being locked into a network.

From the Floor: What is your definition of POS?

Dr. Mayes: POS, to me, means that you're in a network, and if you choose to go out of the network you're going to pay a higher portion of the bill.

From the Floor: And the PPO?

Dr. Mayes: The dentist signs a contract agreeing to certain conditions, usually a reduced fee, office reviews, quality assessments, and is reimbursed on a fee-for-service basis. POS is fee for service, also. They're my definitions. They're not the industry's standard definitions, so don't get hung up on them.

Look at the growth rate. PPOs grew 20% in 1995, according to the NADP. I believe that's where the action is going to be. That's where the action is. Dental HMOs and indemnity grew 13% and 9% respectively during 1995.

The largest players in the dental HMO market from late 1996 to early 1997. CIGNA is leading with 10.8%, Compdent 9.7%, Prudential 9.7%, DBP 8.4%, United Dent C 6.8%, United Concor 5.9%, Pacificare 4.9%, Safeguard 4%, PMI (CA Delta 3.9%, Delta Care 3.6%, Oral Health (FL) 3%, Denta Care–CA 2.2%, Wellpoint Dent 2.2%, All others 24.9%. At one time Prudential was first. Dental Benefit Providers (DBP) out of Bethesda, Maryland, is fourth with 8.4%. Private Medical Insurance (PMI) is a subsidiary, I believe, of California Delta. It has 3.9%. Am I wrong? Any Delta people here?

From the Floor: Correct.

Dr. Mayes: And they're growing quite rapidly. Unless I'm mistaken, they're doing quite well.

Let's take a look at utilization in Table 1. This includes some of my favorite information. You may be familiar with it, but I like it. I used the ADA data from 1979 to 1990. I believe I got the latest report but it jumbles things up. If we take a look at one surface amalgams (silver fillings), we see a 60% decrease. We see a 52% decrease in two surface amalgams, a 42% decrease in three surface amalgams, and for extractions there is a 41% decrease. There's a 60% increase in crowns.

Table 2 is from the National Data Base. Crowns and inlays and crown and bridge (the fixed prothesis made out of crowns) make up 32% of charges and 6% of services. But if you look at the diagnostic, preventative, basic restorative categories, you have 84% of the services and 44% of the charges. You get a much bigger bang for your buck in the basics.

The data in Table 3 is from Hewlett-Packard. It's almost identical. I did this for comparison. Crowns and crowns and bridge make up 31% of dollars and 6% of services. That's in a dental HMO.

TABLE 1
DENTAL SERVICES PER 100 PATIENTS
1979 VS. 1990

Service	1979	1990	% Increase or Decrease since 1979
Exam	116	130	12% increase
1 Amalgam	58	23	60% decrease
2 Amalgam	60	29	52% decrease
3 Amalgam	19	11	42% decrease
Crown	15	24	60% increase
Comp.	36	33	8% decrease
Extr.	34	20	41% decrease

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TABLE 2
FEE-FOR-SERVICE-1992 SERVICES VS. CHARGES

Service	Frequency	Charges
Diagnostic	41%	13%
Preventative	26	14
Fillings	17	17
Crowns & Inlays*	5	25
Root Canal	1	6
Periodontics	3	7
Removable Dentures	1	4
Crowns & Bridges	1	7
Oral Surgery	4	5
Miscellaneous	2	2

*Crowns, Inlays, and Bridges = 32% of dollars and 6% of services
Diagnostic, preventative, and fillings= 84% of services and 44% of charges
Source: National Data Base

TABLE 3
FEE-FOR-SERVICE EXPERIENCE
SERVICES VS. CHARGES

Service	Frequency	Charge
Diagnostic	35%	10%
Preventative	24	12
Restorative	15	13
Crown and Inlay	5	25
Endodontics	2	6
Periodontics	4	6
Removable Dentures	1	3
Permanent Bridge	1	6
Oral Surgery	3	5
Orthodontics	6	12
Miscellaneous	4	2

Crowns, Inlays, and Bridges = 31% of dollars and 6% of services
Diagnostic, Preventative, and Basic Restoration = 74% of services and 35% of charges
*Source: Large, multi-state group of 70,000

In Table 4 I took Hewlett-Packard's plan again, and I compared its fee-for-service experience to its dental HMO experience, and look what happens.

I simply took the dentists' usual charge—provided it doesn't exceed usual, customary, and reasonable (UCR)—and used that to place the value on the HMO experience. And look what happened. In diagnostic, preventive, and basic restorative, there are more services provided, but fewer services for crowns and inlays.

There's a big cushion in the crowns and crown and bridge. It's the way you practice dentistry. And crowns and crown and bridge, in my opinion, are the equivalent of hospitalization costs on the medical side. If you can control that cost, you've got it made.

Where are dental HMOs? As a percent of the population, Hawaii leads. California is second, and a large part of that is PMI and some other companies out there. Dental HMOs are not nearly as high a percentage as medical HMOs with Oregon leading at 44.8%.

TABLE 4
DENTAL HMO VS FEE FOR SERVICE
COST/VALUE COMPARISON

Service	HMO	Fee for Service
Diagnostic	18%	10%
Preventative	18	12
Restorative	14	13
Crowns & Inlays	16	25
Endodontics	6	6
Periodontics	7	6
Removable Dentures	1	3
Permanent Bridge	4	6
Oral Surgery	4	5
Orthodontics	11	12
Miscellaneous	1	2

Source: Large, multistate group of 70,000

How do you make money in fee for service? To me, it's really simple. If you don't do anything, you don't get paid anything. So you better do something if you want pay. And the higher the fee on the service, the more income. How do you make money in a dental HMO? There's a good way and a bad way. The bad way is don't do anything. The good way is to bring patients in for maintenance.

I've looked at plans for the DOL for years. There's a lot of bad stuff out there. Dentists are being ripped off. And dentists are a tough sell on dental HMOs. It's easier after a group is sold. If you go into, say, Colorado Springs, as I did, and say, "Hewlett-Packard is putting in a managed-care plan. Would you like to participate?" You get a far different reception than if you say only "Company X is thinking about doing something." Have clients solicit them—that's a good one. You also have to visit the dentists. Look at new graduates and dental groups.

Contract with a dental service organization (DSO). That is really a practice management company. I don't know why they call them DSOs. They'll come in and they'll build a facility and staff it if you'll give them some kind of special arrangement to take care of the patients for some company. DSOs are growing quite rapidly.

What are barriers to care? One practitioner made it his practice to give very painful injections so the patient didn't want to come back. I'm not making that up. There's a lot of funny stuff going on out there.

Deductibles and copayments keep people away. Others provide few services per appointment. Just do one thing and make them wait a long time for an appointment in between. There was one patient who wrote in and said she went to this facility (ten miles away) and first got an examination. She had to come back for X-rays and come back again for a prophylaxis and a carries check. She needed three teeth filled. They filled one at a time, about four months apart. She finally decided it wasn't worth it, and she wrote to the union and complained. She said she thought she would give it another try, and the provider wanted to go through the whole process again.

So there are many barriers you can build into dental HMOs to keep people away, including inconvenient locations. I believe a well-designed dental HMO will provide less quantity and higher quality than a well-designed pay-for-service plan. It really will if you get the right office.

But a poorly designed dental HMO discourages people from coming in. I've seen cases where less than 10% of the people who signed up with a plan really utilize it. Naturally, they have poor dental health unless they go to someone else.

I'm not an actuary. What are some of the problems I think you face? You really have to know the philosophy of the people in practice. If you get RJ Reynolds, you want to treat these people exquisitely. If you go to one of those practicioners that has less than 10% participation, it's philosophy is to discourage patients from coming in and they want to get them out of there and not take care of them. It's about integrity. I don't know how you measure that. Maybe there is some way you can.

What are the business abilities? *The Wall Street Journal* ran an article in 1996 that said only 15% of small company chief executive officers (CEOs)—and dental offices are small companies—are capable of managing their businesses. I think that's very true with dentists.

As for PPOs, dentists like fee for service. They'll sign up for plans that are nothing but an individual practice association where they're at risk and the whole group is at risk. If they run out of money, they get a lesser fee or no fee at all, but they still like that fee for service. They identify with that. They don't understand capitation. A critical mass, of course, is not as important. You can put a PPO in just about

anywhere. And the other thing the employer likes is the greater access. Also, it's not nearly as expensive to develop.

Nothing will overcome a low-fee schedule. People want it reduced to the point where you're virtually not getting any participating dentists. I've met with a number of people who said, "You can do better than that." Yes, we can do better than that, but the patient is going to have to pay and you're not going to get participating dentists. And I've got some figures to back this up. We solicited on a nationwide basis for two different clients. In one case, we took the fee schedule reduced by ten percent off year-old data. We got 18,000 dentists. In the other case we paid up to the 80%, and 45,000 participated. So the participation rate is very fee sensitive, and you have to look at that very carefully.

The most frequent question you hear when you visit a dentist and say, "Do you want to participate in my plan—we'll pay you $10 a month" is "What if I have to do a crown?" That's almost universally the first thing a dentist will ask you. Let me just ask this. What's the cost of gold in a $380 crown? Nineteen dollars. That was published in The *Journal of the American Dental Association*; the article was written by somebody from the University of Pittsburgh. That's the cost of gold. You say the cost of gold is up, and you have to increase your fee substantially. We're talking about $19 in a $380 crown. The gold is $380 per ounce, and the crown is probably about $300 or $400.

What's new? Tremendous consolidation of dental HMOs. Voluntary is growing. I can't believe this, but according to the NADP, of all the dental business out there, about one-third of it is voluntary, individual and employee paid. It makes me a little nervous because of the anti-selection factors, and many other things. I can't advise you on it. Just keep your eye on it. Don't be the last, but don't jump in with both feet if you jump in. If you get involved, watch it very carefully, and do it on a small basis before you sell it to large groups.

The venture capitalists are really throwing money at the dental service organizations—the group practices. It's my opinion that they're the same as the physician practice management organizations. I called Sheila Muldover, who's the editor of *Managed Dental Care News*, and she agrees that they are the same thing. My point is simply this: you're going to find that you can't just buy a practice and think you're going to get it very cheap, or you're going to do dentistry cheaper and be successful. It won't work. You're going to see many failures. In my opinion, what some of the venture capitalists are doing is buying these businesses, building a network, and selling it very quickly before the true facts can get in. So I'd be very careful when it comes to purchasing a DSO and contracting with those types of organizations.

I'm going to talk about selective contracting just a little bit. There's little elasticity in dental fees, as you know, but there's great elasticity in the type of services dentists can provide. Three things drive the cost of dental care: the type of service, (e.g., crowns), how often you provide it, and your fee. If a dentist doesn't do many crowns, you can pay him any fee you want. It really isn't going to cost the plan. And I think this is the big wave of the future.

For example, let's discuss some Hershey data just to give you some idea. Imagine that is overtreatment is on the far right. In between is professionally acceptable treatment. I have been in both types of dental offices. The dentist in the lower end, where we did the quality audits and then reviewed the office, had costs of $89 per patient per year—all professionally acceptable.

Let me just tell you about it. Hershey would contract with the dentist—if he or she did not exceed $125 plus 25%. The average plus 25% ($155) would exclude a dentist from being invited. The dentist also had to pass a quality audit and agree to accept the fee schedule as payment in full (but it was a generous fee schedule). If the dentist had undiagnosed carries and periodontal disease in three instances, he or she was excluded automatically. The dentist was also excluded if he or she had inadequate infection controls.

The University of Kentucky has done something similar, except it has this caveat: If you have your office reviewed and don't want to accept the fee as payment in full, but did pass the quality audit, you can still participate. There are two lists. One is for providers that agree to accept the fee as payment in full and have passed the quality audit; the other list is for those who have passed the quality audit but are going to bill amounts in addition to what is in the fee schedule. Anybody else will not be reimbursed. So it's an interesting concept. How it will work? We haven't implemented it yet; we'll let you know. There's no payments to nonparticipating dentists.

A number of companies are having dentists do self-assessments. It's far less threatening to a dentist than someone walking into his or her office with a briefcase and forms. If you go in with a self-assessment tool that the dentist has filled out ahead of time, he knows how he has evaluated this practice and what you're going to inquire about. And I think that is a very viable option.

Of course, we have cost as the key element. Here's the "all items" and "dental" components of the consumer price index (CPI).

For four out of the past six years, we've had a higher increase in CPI for dentistry than for physicians, and even a higher increase than for hospitals in 1996. So dental costs are going up faster than the "all items" index in the CPI. Plan design is the key to cost effectiveness.

Retention for HMOs is higher than in PPOs or indemnity because of the lower premiums—22.5%. Expected premium increases are indemnity—5.9% and dental HMOs—3%. The average premium for a single is $19 for indemnity, and $11 for dental HMO. Across the board, dental HMOs are far less expensive, and PPOs are less expensive than indemnity. In the future, managed care is going to increase. The growth of dental HMOs is going to slow up. PPOs are going to grow substantially. Fee for service is going to be around a long time.

Solo practice is going to diminish and solo practitioners will be harder to recruit. Group practice is going to grow significantly and be the backbone of managed care. You're going to find more entrepreneur-owned facilities, like the DSOs, but many are going to fail because of lack of experience. I know some of them. I've consulted for them. They really have no management in place. They're just building a house of cards. The dental HMOs are going to continue to be the most cost-effective method of providing dental care, and hygienists, particularly in periodontics, are going to gain a far greater role because of cost effectiveness and prevention.

Mr. Timothy F. Harris: This is from the medical area, but this is something that I like to include in many presentations. We, at Milliman & Robertson, have gotten a plug by James Michner in a book that he has recently written. We apparently have quite a reputation in the area of managed health care and I think that carries over, as well, to dental. I know Leigh does a bit, I do a bit, and we have a few other people that do a bit of work in the managed dental area. Leigh, Tom Snook and I have actually been doing a road show of presentations similar to this for some of these seminar organizations.

I'm going to cover the actuarial aspects of managed dental focusing on capitation calculations. I'm going to walk you through some of the techniques that we use. Does anybody use our *Dental Cost Guidelines*? OK. Quite a few people. So you're going to be familiar with some of the terms. This is a rating manual.

Later on we'll discuss a computer model that we use for designing dental plans and for our presentations. We also use it internally to price dental plans. It's what we call a simulation product. It takes into account many of the things we're going to be talking about—some of the cost implications and the management implications of dental.

What are you going to need for a capitation rate? You'll need some type of actuarial cost model, whether it's a piece of paper, a worksheet, a computer model, or something of that sort. We're all actuaries so we can build our own spreadsheets. You need something of that nature when you're doing a capitation calculation. Now, I know many of the dentists out there in the dental HMOs and some of the people who negotiate in this area do this a little less accurately and precisely than we would. We tend to get into the detail a bit.

What are some of the assumptions? Utilization rates, of course, and cost per service. That's basically it. How many times are the services provided in a given period of time and what do they cost per service? One of the other factors here is market forces. Even after we go through an actuarial calculation, the market may be different. The dentists may be more resistant to a capitation agreement or they may be more receptive to a capitation agreement.

This is going to vary by region. If you're in a given region, you need to have a feel for the region. If you don't know what the situation is, you need to ask somebody. If you go in there blindly with a calculated rate, it may not fly. We've seen a wide variation from one area to another. What we do in the actuarial cost model is to develop a per-member per-month (PMPM) rate, taking into account the utilization, the cost of the services, any co-payments, and any limits on the benefits.

We typically go through a calculation where we look at utilization per thousand times the cost. These are annual utilizations per thousand, times the cost, divided by 12,000. The reason we go through this gyration is that utilization, when expressed on a per-thousand basis, generally gives you a number that's a little easier to work with. There are not as many decimal places.

Table 5 is a sample cost model that shows utilizations and costs and the PMPM rate. If you went through the calculation we just looked at, you'd come up with something close to the PMPM rates that are shown. This is just a sample number. It comes out with a total PMPM of $17. You see that we break things down between Type 1, Type 2, and Type 3 services. This is from our rating structure, and I think it's fairly generic in the industry. Type 1 is preventative, Type 2 is restorative, and Type 3 is major dental services.

One thing that must be taken into account is covered benefits. You should consider the demographic composition. What's the underlying demographics of the group that you're looking at. We typically look at things by age and sex. Geographic variations can also be quite severe. Are there any limits on the benefits in the contract? Those need to be taken into account. You must also consider something

we call “richness.” If you have a fairly rich benefit plan, you're going to see increased utilization.

TABLE 5
SAMPLE COST MODEL

Benefit	Utilization	Cost/Svc	PMPM
Type 1	2,053	$27.01	$4.62
Type 2	759	99.98	6.32
Type 3	165	450.98	6.20
Total			$17.15

Another factor would be the type of employees covered and the income level of the employees. These are often taken into account simultaneously. There are certain groups of employees that are thought to be high utilizers of dental care—teachers, for example.

Another item that needs to be considered in any dental calculation includes employee turnover rates. If you are writing coverage in, say, a fast food industry, you're going to have many new people coming in who are going to need dental care. You'd rather have a population that you've maintained for a while in order to reduce the major dental services being provided.

Voluntary coverage is something that was referred to earlier. That's really a hot area right now. We've done a few projects in that area. Voluntary plans can be a little dangerous, but so far they seem to be doing OK. I think the participation in the voluntary dental programs turns out to be a little higher than people thought. And the higher participation is going to give you less antiselection in those programs.

You also need to take into account preannouncement. If you let people know in advance that you're going to have a dental program, then you're going to have more people saving up any dental work that they need until you install a program. Then they'll get the work done while it's insured. Table 6 shows some of the geographic variations that we were talking about, and you can see the area factors. This comes from our area factor research. New York is quite high, and Houston is a bit lower. One would be the national average.

Some of the utilization adjustments that get taken into account include fluoride treatment age limits. Are you limiting fluoride to kids only or is it allowed across the board to anybody? Are there any limitations on the replacement of missing teeth or existing dentures under a new contract? Also consider any annual benefit

maximum. These are all issues that need to be taken into account when you're pricing a dental program, and that applies to capitated programs as well.

TABLE 6
GEOGRAPHIC VARIATIONS

Area	Factor
New York	1.123
Los Angeles	1.031
Houston	0.899
Phoenix	0.945

We talked about the benefit richness adjustments. Those vary by the type of benefits. Some of the utilization controls that can be applied to dental programs are the ones that we're looking at right now—capitation. Capitation, from what we've seen in the data, will result in a minor increase in Type 1 services when compared to fee-for-service plans. We see very little change in Type 2 services, and major, major reductions in Type 3 services—especially for a plan that has been in place for a while. Any comments on that? Has anyone else seen anything different?

From the Floor: When you say major reductions, are you referring to dollars or services?

Mr. Harris: It would be services. Cost per service is probably reduced as well. Under a capitated program, you're probably looking at an underlying fee schedule being used that is something less than the average fee for that area. It might be 8–10% less. But not even taking that into account, we see major reductions in the utilization of Type 3 benefits under capitated programs.

We talked about the employer class and income levels earlier. Teachers and entertainers are thought to be 20% higher in utilization. Unskilled workers are thought to be 15–20% lower. So you get some fairly wide variations in utilizations for different occupations. Where you have turnover greater than 40%, don't even cover it. For turnover rates of 26–33%, you can see 8% higher utilization. Again, this is because you have new people coming in who need dental service.

For voluntary coverage expect higher utilization because you're going to have antiselection by people who need the dental work. They are going to purchase the dental coverage. The degree of adverse selection will depend on the average of the number of employees enrolled, or the percentage of employees enrolled. According to our *Dental Cost Guidelines*, less than 65% penetration presents substantial

risk. Now I know those of you who are writing in a voluntary dental market are looking at initial penetration that is considerably less than that. You're probably looking at penetrations of 30–40%. Any input, any questions, comments?

Mr. Robert M. Levitas: You are saying that very low penetration on a level benefit plan is a big problem for a voluntary product. The key is not to have a level benefit plan with no restrictions.

Mr. Harris: I agree. That's basically how we've done these when we've done them—looking at things year by year. You're talking about graded benefits. Typically these plans will have graded benefits, and initially, if you have any selection, you're dealing with it by limiting the benefits and having waiting periods.

As for cost per service, we talked about some of the discounts off average fees that are used in capitation calculations. We've seen numbers that range from just a little below the mean or the median or the average for an area to a good amount below the average for the area. Again, that's going to depend on the area. It will depend on how aggressive the dental HMOs can be in setting the capitation rate.

As for market forces, as I indicated, ultimately the rates need to be based on the current market situation. After you go through your calculation as an actuary, you must ask how your numbers stack up against what is happening in the marketplace. You may need to adjust things accordingly, or at least indicate that your numbers differ from what's happening in reality.

We've been talking, for the most part, about a commercial population, but we're also seeing some Medicare dental in connection with Medicare risk products. This is an area where it's tough to get data because people really haven't been providing dental coverage to this population. The benefits that are provided are fairly limited, but they are being provided. We have seen this done through dental HMOs, dental HMOs subsidiaries, and HMOs where the HMO writes the Medicare risk product and dumps the dental down into the dental HMO subsidiary.

Medicaid dental is a totally different environment. This is where you see more inpatient dental services. You probably don't run into that unless you're an HMO that's dealing in the Medicaid market. Of course, there are CHAMPUS and federal employee health benefit plans—I'm sure many of you run into those.

Let's go through what I was leading up to here, which is a case study on a dental HMO product. This is a situation where a dental carrier has lost an important managed care contract because of uncompetitive rates. It hired us to determine whether the rates set by its underwriters were appropriate. This is a real situation

that has been disguised to hide the identities of the players. We were brought in by the marketing department who didn't have faith in the results of the underwriting department, especially after it lost this bid.

Rates were to be effective for a coverage period from January 1997 to December 1997. We have a group of people in Philadelphia who do all of our trend research. They give us this information and we, basically, just pick it up and use it. In this case we're not applying it, but they're telling us that, over the next year, we can expect an increase of 1% in the frequency of utilization of dental services, and a 5% increase in the charge levels of dental services. The age and sex are nationwide averages. We threw out the client's data.

The area is California—a higher cost state. The underlying fee schedule in this capitation calculation that we're going to look at is 8% less than the high end which is 50%. So it's an 8% discount off the 50% rate for this area. This is a capitated plan—preauthorization doesn't apply. This is a benefit-conscious group, that comprised a large group of public employees with a moderate income level; there was 100% enrollment and no preannouncement.

You have to take into account the cost and risk margins for the dental HMO, which was 12% of gross premiums. The annual maximum was $1,500. There were $5 co-payments on amalgams and $140 copayments on complete upper dentures. Sealants and fluoride are only covered for minors. Missing teeth and existing dentures are not covered for the first five years.

The carrier had provided us with utilization for a similar plan, and also it provided us with another carrier's utilization that was used, as well. Given what we just went through, (and keep in mind this is a capitated program), what do you think the PMPM rate is for this group? Your choices are $24, $19, $14, and $9. We've got $19.

Let's go back and just change some of the demographics here. Let's change the area to Florida, and we'll look at the implications of this group in a different state. There's quite a bit of difference by switching from California to Florida. We were looking at a fee schedule that was 8% off the average for the area, and California is one of the higher cost areas. Let's look at the total U.S.—$13.52. The point I'm trying to make is it varies quite a bit by region, if you're basing it on an underlying fee schedule. If you go back and do Florida for all of Florida you get $12.39, which is still less than California.

So those are some of the factors that need to be taken into account in setting capitation rates. We kind of walked you through some of the mechanics of our rating structure, which we talked about: the coverage period, trends, level of participation, margins, underlying fee schedule, benefit structure, and demographics.

From the Floor: What did you tell the marketing people?

Mr. Harris: Actually it worked out quite well in this case for the underwriting people. We came up with a rate that was almost exactly what they had come up with. They had done theirs more or less by the seat of the pants. This was a plan that had never done a capitated program before. Based on some discussions with some other plans, they took some of their fee-for-service data and did some fudging on it, and came up with a capitated rate, and went with that in their bid.

Our analysis indicated that we came in just a little bit lower than they did, but not that much, and we feel that the other players here are trying to buy the business. Either they're trying to buy the business or they haven't looked at the results in enough detail. We also had some data from one of their competitors, which kind of backed up the adjustments that we were using in our calculations. So the underwriter was pleased with us, and the marketing people, well, we hope we still have a good relationship with them, too.

From the Floor: Do you have any recommendations on data resources besides Health Insurance Association of America (HIAA) and Medicode?

Mr. Harris: I'm not sure of any ready sources of data. We use Milliman & Robertson's data. We have a dental rating manual and it's based on HIAA data. The cost data are from HIAA. Utilization data is from our internal research, which is provided to us by different companies. Leigh is our dental data person. She probably should address this. She knows where it all comes from and what the sources are.

Ms. Wachenheim: Most of the utilization data is given to us by some major dental carriers. We also do some research regarding the number of dentists who are in various areas of the country, and we make the assumption that if there are more dentists relative to the population in an area you'll probably have more dental services in that area. So we also factor that in. But it's basically a combination of those two sources.

Mr. Karl G. Whitmarsh: First, do you have any opinions as to why the dental trend at this point is high and where it might go in the future? Second, you had mentioned one particular case you were working on with a client carrier where you

built a network of 44,000 dentists. You said that you were able to get 44,000 dentists when fees were set at the 80% level. I just wanted some clarification on that.

Mr. Harris: I can't identify the client, but it was up to the 80% level based on your usual charge.

Mr. Whitmarsh: In other words, that would be more like a UCR-based type of network.

Dr. Mayes: UCR with a lower level two, if you want to call it level two maximum.

Mr. Whitmarsh: It's not a true PPO type of network?

Dr. Mayes: I don't know what a true PPO is. What was the first question? I didn't quite understand. Trend?

Mr. Whitmarsh: Why do you think trend has been higher recently, and what is it likely to do?

Dr. Mayes: You mean overall, nationwide?

Mr. Whitmarsh: How do dental trends compare to other types of trends, such as medical trend or average trend.

Dr. Mayes: Well, maybe Leigh or Tim can address your question, too. Nationwide the trend for more care is due to a greater need, and then need feeds the demand. As I mentioned, when I went into practice, people were getting their teeth out—they really didn't care much for them. Now you're finding the boomers are highly educated, and as they get older, they're retaining their teeth. I rarely see people walking around without teeth, but I used to, many years ago, see people without teeth.

Mr. Harris: I don't have any specific details. I'd have to look at our trend research, but it's basically supply and demand, which I think has been referred to earlier.

Ms. Wachenheim: Most of our trend research involves trends in indemnity plans. Trends on utilization are running between 0% and 2%, and it's maybe a little less than zero in some cases. And, on a charge-level basis, they're running more like 5–8% depending on what types of services you're looking at. But we don't have

perfect data. The data depend a lot on what kind of plan it is. If it's a dental HMO, things could be totally different.

Ms. Janet D. McGowin: I had a question about the effect, or the results, of management firms coming in and managing practices. We've seen some interesting things happen when they come in and take over physician practices, such as changes in billing practices and behavior. I wondered if you saw that kind of thing happening when they come into dental practices?

Dr. Mayes: I have seen, in a number of those types of situations, a decrease in the level and quality of services. But then again, I have seen an instance, in a larger practice, where it dropped out of the dental HMO business because it wasn't meeting its costs. What it was doing was reimbursing its providers on a fee-for-service basis. As a consequence, the fee for service was costing them, or the cost for the insurer was less than the fee-for-service than it was for the capitation. Simply because the incentive was built into the program, it was reimbursing at a fee for service in the capitation and it was maybe getting 50% for the fee for service equivalency.

There are not many of them out there that are up and operating for a long period of time. I use Winston-Salem as an example. I think it probably has the highest quality program in the country. I think Park Dental in Minnesota is also another excellent group. It was recently sold, so you don't know what the results are going to be once there's a new management team in place.

Ms. McGowin: What we've seen was changes in billing practices and changes in the way they were practicing to generate more revenue. They were things that we didn't like, and we had concerns about that.

Dr. Mayes: Yes. With fee for service you're going to find they may start to overtreat. But what I've seen with capitation is the pressure, particularly if it's owned by an outsider, to maybe undertreat and use the tricks and traps that I explained during my presentation.

Ms. Deborah L. Allen: Dr. Mayes, do you see the possibility of capitating specialists on the dental side, or is that out of the question?

Dr. Mayes: No. I've seen it happen. I don't think it's out of the question. I think it's difficult because dental specialists, particularly endodontists, are very difficult to recruit. That's why I maintain it's going to be the multispecialty group practices that are really going to be the backbone of capitated dental care. You can also have the variation where you capitate the basic services. Many plans are doing this. Robert,

you're shaking your head, yes. I think you're doing this, and that's where you capitate the basic services, but you pay the specialists on a fee-for-service basis.

From the Floor: How do you handle participation? You were talking about how below a 65% participation you have severe antiselection. Obviously, above that, you'd probably have grades of antiselection. How do you handle, from a pricing perspective, at the point of sale, offering a different price based on how much participation you've gotten?

Mr. Harris: That's a rating question. Are you talking about voluntary programs or something that's semi-voluntary? On those plans there isn't an explicit adjustment for the penetration. You're at risk. In my case, on voluntary plans there is no explicit adjustment for the penetration. The carrier is at risk for some acceptable level of penetration on a group, and it's something that is going to be achieved over a number of years. You're hoping that gradually you'll build up an enrollment and that, as your plan reaches the level of a typical fee-for-service dental plan, you will have the level of participation that you can live with.

Up until that time, you're going to have less than that level of participation and you're going to have restrictions on the benefits, either graded benefits or some type of waiting period on the benefits, to minimize the risk of antiselection. So that's how it's done. The carrier is at risk for participation. If it turns out to be much less over time than what you anticipated or projected, then you have a problem with the program.