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Network Development Issues

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Summary: What are the advantages and disadvantages of a leased network versus a managed care plans' network? Are providers becoming more receptive to managed care? How should a managed care plan relate to new provider organizations such as physician hospital organizations (PHOs)? How does new legislation affect this function?

Mr. Edward C. Cymerys: I'm with Towers Perrin Integrated Health Systems Consulting in San Francisco, a provider/HMO focused consulting practice. Pennell Hamilton is the senior vice president for pricing and finance at the Celtic Health Plans in Chicago. Pennell has worked extensively in the small group medical market over the last ten years, and is now building managed care plans for small groups through leased provider networks. Pam Woodley is the chief financial officer in the Atlanta market for Aetna Health Plans, which services Georgia, Alabama, and parts of Florida. Pam is responsible for all medical product pricing and financial support to the network development area; it is an area in which she builds networks to serve their primarily large plan sponsor customers. They will hopefully bring some very different perspectives to this discussion.

Mr. Pennell W. Hamilton: As those of us who have been involved in managed care for the past ten years know, the landscape has been changing extensively, almost continually. One of the more recent phenomenons has been the proliferation,

outside of California, of integrated delivery systems, or organized delivery systems, as they are sometimes referred to.

I hope to cover four subjects. One is to discuss how to decide whether to build a network or develop an alliance with an integrated delivery system. Second, given outside of California, of integrated delivery systems, or organized delivery systems, as they are sometimes referred to.

that the decision has been made to develop an alliance, how does one chose an appropriate partner? Third, I want to talk about the tactical actuarial considerations, about how a company would set up provider reimbursement levels and contractual agreements. There are a few other considerations related to the third subject. Before I start, I want to give you some characteristics of an organized or integrated delivery system.

- A degree of physician system integration, meaning that the physicians are integrated into the management of the system.
- A high degree of clinical integration across the continuum of care, meaning that the delivery system can deliver most of the types of care that are needed.
- Generally, it's a legal entity (for example, a PHO, maybe a corporation, but some sort of legal entity binding it together).
- It's financially integrated in that the finances are shared and that the organization is responsible for reimbursing the individual providers.
- It has contracting power, and it has strategic integration, meaning that the organized delivery system can make strategic decisions for all the entities that are part of it.

To put all of the above into a sentence, an organization delivery system is a network of organizations which provide or arranges to provide a coordinated continuum of services to a defined population and is willing to be held clinically and fiscally accountable for the outcomes and health status of the population served.

TO BUILD OR LEASE A PROVIDER NETWORK

Why worry about strategy as an actuary? I think there's a couple of reasons for that. One, it's obviously critical when making the decision to build or lease a network. Second, understanding how you make these decisions lets you predict what your competitors are going to do because you can look at their situation and make some decisions about how they're going to react.

It's important to note that the decision to build or lease is not an either/or decision. However, thinking about the strategic factors that go into this kind of decision helps put it all into context and creates other options.

The first factor in making a decision between building or leasing is to examine what your company's source of competitive advantage or strategic advantage is. I always think about the current managed health care market as a commodity market, or getting close to being a commodity market. One source of strategic advantage is generally power, usually defined as having sufficient market share to be able to walk into providers and say, "Here's our contract. Take it or leave it." To do this you usually need to have more than 50,000 members, and be one of the largest players in that market. Aetna certainly is an example of a company with market power. United Health Care is another example.

Going outside of the insurance industry, Microsoft comes to mind. Power, by the way, is not a bad thing; it's sometimes a pejorative term. Everybody wants to have power, particularly those of us that don't have it. It's generally the easiest to use, and it doesn't require much subtlety. If you have sufficient market power, as when I talk about the advantages and disadvantages of building versus leasing, you want to build. You get to retain more profit that way, and you get to retain much more control.

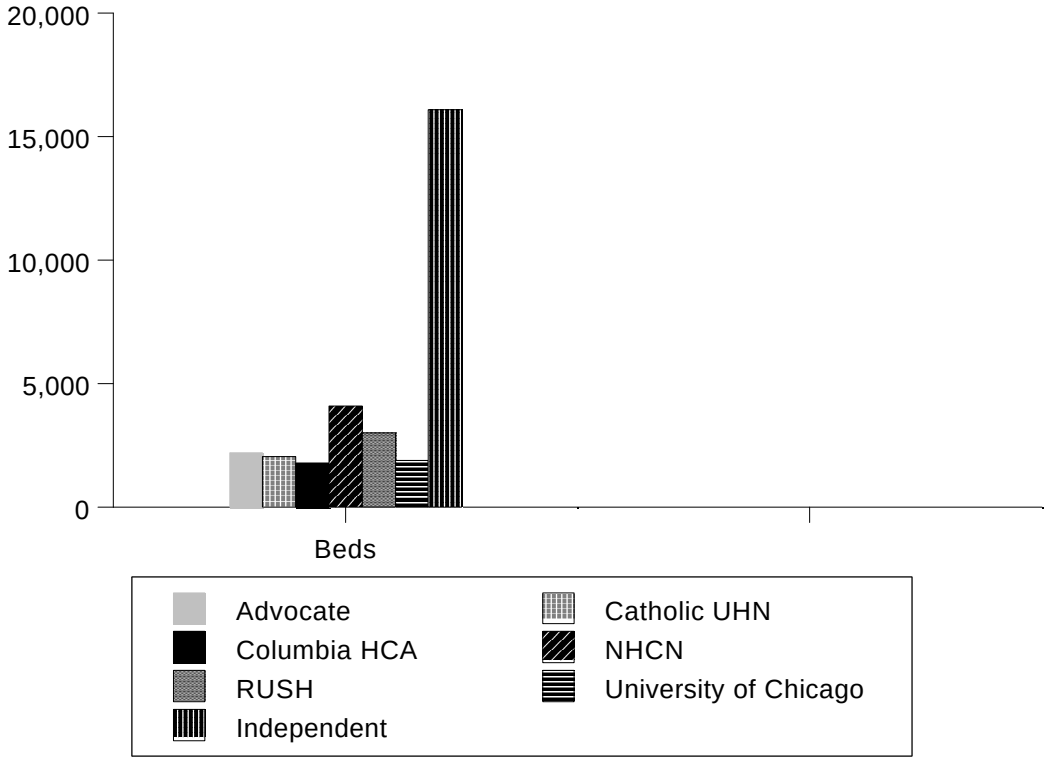
A second source of strategic advantage is the ability to continually develop new products and/or open new markets. Columbia, with the speed with which they move into new markets, comes to mind as an example of a company with advantages. For companies looking to move into markets quickly, alliances make more sense. You're not relying on having a large membership; rather you're relying on your ability to move very fast. It's very quick to set up network alliances.

Another source of advantage is differentiation (trying to be a niche player) or offering something different than the competition, maybe differentiating on quality. The discussion here is not cut, and it depends on other factors. I think it probably tilts towards an alliance, because it's much easier to develop differentiation on something like quality if you have a willing partner.

The next factor that should be looked at is the industry structure of the suppliers, which is the hospitals and physicians and provider groups. There are two factors to look at: concentration and integration of the systems. Concentration refers to the amount of market share in a few players.

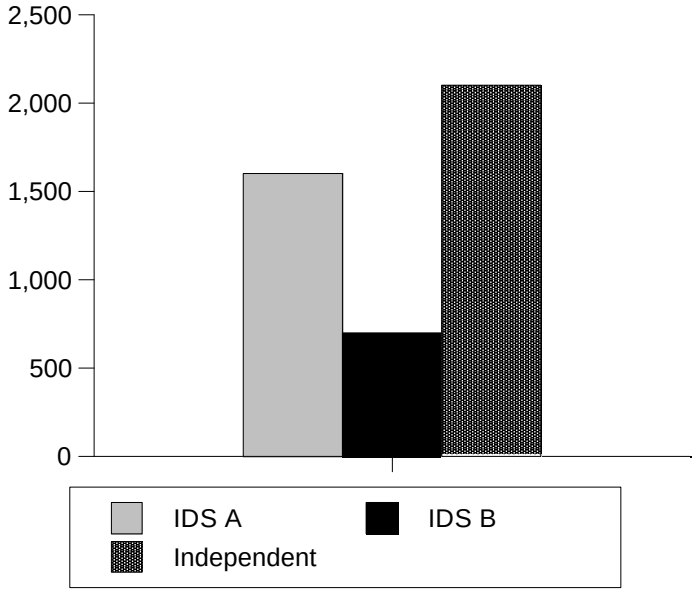
Chart 1 is an example of the hospital site concentration in Chicago based on licensed beds in the market. As you can see, Chicago is a relatively unconcentrated market. There are a few alliances, but together they don't add up to 50% of the beds in the market. An example of a concentrated market is one where there are two integrated delivery systems who together make up more than 50% of the market (Chart 2). Now contracting with one of them suddenly makes sense.

CHART 1
CHICAGO HOSPITAL NETWORKS



Source: Illinois Health Cost Containment Council

CHART 2
SAMPLE CONCENTRATED AREA



Integration, as mentioned before, refers to the interaction between providers and administration. Does the system cover the continuum of care? Do the physicians play a significant role in the management of the system? Is it organized as a single legal entity? Does it have a common information system that can provide information across all parts of the system? Does it have a strong medical management infrastructure? If the answer to most of these questions is yes, then you have a highly integrated system. The higher the concentration and the higher the integration, the more sense an alliance makes.

Managed care stage one is an indemnity market with little managed care infrastructure built. In this sense, you probably have no choice but to build.

I think Atlanta probably would qualify as a stage-two market. Largely a PPO-dominated market with the beginnings of managed care, HMO penetration below 20%, medical management infrastructure in the beginning stages.

A stage three market is similar to a California market, with a high degree of medical management infrastructure. Stage four, which is only a theoretical possibility, would be a highly-integrated system with a few integrated delivery systems dominating the stage. At stage two and stage three, it begins to tilt more towards doing an alliance, because much of the medical management infrastructure you want is now concentrated in the provider hands. There is an argument for doing these alliances at a stage-two market because you get in ahead of anybody else, and then you reap the benefits of lower utilizations. You can think about that statement.

I want to briefly talk about the advantages and disadvantages of the building versus an alliance. Building has some very strong advantages. There's only three here, but I think they're extremely strong advantages. If you can build, you ought to. Control is another advantage. If you're building from smaller units, you can control the makeup of your network, and you can reconfigure it quickly. If you have nonperforming providers, you can get rid of those providers from your network much more easily than if you have an alliance. Profit retention is the biggest reason to build. Many stage-two markets have bed days in the neighborhood of 250–300 per 1,000 and I've seen resource-based relative value schedule (RBRVS) schedules in the vicinity of 150–170%. Consider California, where bed days are 150 or so and 100% of RBRVS is fairly common. You can see the potential profit that's there. If you do an alliance, you end up sharing much of this profit. If you build a network, you end up able to retain much of it, as those bed days and utilization fall. If you need to add positions or add facilities, flexibility makes it very easy to reconfigure the network for new customers. Of course, with an alliance, you have a partner you have to deal with.

There are disadvantages to building. It's expensive to set up and maintain. I sat down and figured for a 1,000-position network, with about 20 hospitals, you'd probably need a staff of 5 provider-relations people, 10 or so medical, quality management, and credentialling positions, and 15 utilization management people. You'd spend more than $1 million dollars a year just on maintaining that network. There's also less incentive for the providers to give you their best price. Finally, it can take well over a year to negotiate and build one of these things.

I talked about the advantages to alliances briefly. It's much cheaper to set up and maintain because you're only negotiating with one entity, and you're delegating many of the functions, like medical management. My experience has been that you can actually do it cheaper by delegating it, because they're paying for part of it out of the profits they're taking elsewhere in the system. You can set up an alliance in approximately four to six months. I'd love to see it quicker than that, but I think it takes four to six months to do the negotiation and get a product out. You have a fairly good differentiation, and if you have a good partner, you have a good marketing sizzle. You have everyone concentrating, hopefully, on what they do best. My experience has been that you can achieve better pricing if you give up some of the risk. I'll talk about it when I go to the actuarial model. You can leverage the price down to a very competitive position. Finally, I think there's flexibility in an alliance. While you can't reconfigure the network, you can salvage new products very quickly, because you only have to renegotiate one contract to put a new product out on the street.

One disadvantages to alliances is the conflicting goals. You all start out sort of saying this is a great new venture, but ultimately, your goals are going to change. The provider network has goals related to community health, related to retaining profits for itself, and related to its physicians. You have goals. Continually juggling these is one of the biggest things you have to deal with in doing an alliance.

There are coordination problems. When you change rates significantly, for example, you have to go back to your integrated delivery system and discuss it. In addition, you're locked into their network, so you have a loss of flexibility. Communication can be an issue. Telephone conference calls are not the same as face-to-face contact, and so it's not the same thing as working in the same company.

Having gone through all these advantages, disadvantages, and strategic considerations, let's say you've decided to do an alliance. I'd like to talk briefly about how to choose a partner. These are the factors I think you need to look at very closely. The first is the capability of the integrated delivery system. I suggest an on-site, first-hand look at charts, or have somebody who knows what they're doing look at charts, files, and the computer system. Also, look at the level of

integration. How many layers of decision-making do they have, and how integrated are the physicians in the system? Look at risk. Do they understand the risk that they're taking when you're doing an alliance with them, and can they appropriately manage it? Do they have a medical management infrastructure that is capable of managing risk? Do they have a quality infrastructure? What we generally do is have very strong standards partially based off of the National Committee for Quality Assurance (NCQA). We go in and sit down with an integrated delivery system and question how it meets these standards. Do they have similar goals, or are they getting this partnership to leverage resources with you?

I have an example of Rush Prudential in Chicago, which was a combination of Prudential and Rush Health Systems. They came out and said, This is a grand new venture in health care, we're going to increase quality. It finally turned out that Prudential wanted market share, and Rush wanted bed days in its hospital. Bed days in its hospital were more expensive than anywhere else in Chicago, so it lost money each of the years of its alliance. I'm not going to say much about geographic coverage, but you need to make sure they all cover the geography you're going to sell in.

Financial stability is critical. Look at the financial and audited statements. I generally look at equity and cash flow, from operations, as the most important numbers. I want to see a minimum of $20–30 million of equity from a partner, and positive cash flows for the years of operation. If they go out of business, you're basically holding the bag. You're going to be leveraging off this reputation. You need to determine if they have a good reputation in the marketplace.

Now I would like to talk about the actuarial model that can be developed to establish provider reimbursements. This is, of course, just one actuarial model example, but it's the one I found to be successful. The attributes I look for are flexible, in other words, each alliance that you do or each market is going to have different requirements. You don't want to be creating a whole new actuarial model every time you do a negotiation which is understandable. You may be dealing with a chief financial officer (CFO) who knows what he or she is doing, but eventually, you're going to be dealing with physicians who, while extremely intelligent, don't know this side of the business very well.

The model needs to be administrable and not time-bound. You have to be able to handle rate changes, administration changes, and product changes, without having to go through a whole new renegotiation. This will look a lot like either a percentage of premium cap or a risk sharing model, and it is based on that. Basically the model says you take collected premiums, take out expenses, take out reinsurance costs, and develop a medical budget, which we then split up into a

hospital, physician, and insurance-carrier fund. The insurance-carrier fund has items like prescription drugs or vision benefits that are not covered by the delivery system.

There'll be a risk settlement later on, which I'll talk about. There are some basic trade-offs. Do you use collected, earned, or written premium? That's a question of who holds the credit risk, since there's no upside to credit risk, there's only downside. Generally, I think the credit risk should go with who holds the medical risk, which means use collected.

Expenses are a key negotiating point. I always try to go in with an expense number that looks reasonable, and I always end up having to detail expenses down to the last penny because they're saying, "You're detailing our expenses down to the last penny, we want to see your expenses." A link to the expense question is the question of, where does the interest go? Do you credit it to the medical funds, or do you credit investment income against the expenses. That's linked to the medical risk. I prefer to put it in with the medical risk, because if the cash flows are negative, there will be no investment income, and it's not a risk I generally like to take in this model.

With reinsurance you have to decide whether to provide it yourself or use an outside vendor, whether to do it by fund, or do it overall, by member. There's reinsurance available for all those options. Do you have one fund or multiple funds? This is a basic risk-sharing fund balance. The big question in here is, how much of the risk do you get to take? That's the risk-share portion. My goal is generally to get 50%, I think, in these types of alliances with a small company like we work with. If you get 30–40%, you're probably in good shape. You want to retain some of this risk because that's where the money is.

The other interesting point in here is on reserves. Obviously, incurred but not reported (IBNR) claims are an important reserve. The other question here is, who holds the legal risk? In other words, if you get sued, who holds that risk? I generally argue, he or she who makes the medical management decision, gets to hold the legal risk. That's generally the way we've tried to structure contracts.

Let's get to provider reimbursement. Generally the model we use is to establish a competitive market rate, through a competitive rate study. The most important thing, as actuaries, I think we can do for these systems is let them understand the link between what you can charge in the marketplace, and what their reimbursement is going to be. First you establish a market rate. Do a competitive rate study. Generally what we do is take approximately six cases representative of different types of censuses, age, and sex mix. Find a friendly broker with whom

we'll be doing business and get some quotes. Benefit-adjust them and take a look at where we fall on the spreadsheet. You try to pick a market rate that places you at the one, two, or three position on the spreadsheet. In the case shown in Table 1, (these numbers are fictitious), we would probably pick the 150 rate.

TABLE 1
IDS Z/BRAND Y RANKING OUT OF 13 CARRIERS
EXAMPLE ONLY: NUMBERS RANDOM

	50 TO 150 LIVES			10 TO 50 LIVES			
Rate Level	**A**	**B**	**C**	**A**	**B**	**C**	**Comments**
$150.00	1	2	2	2	1	3	Excellent composition position
$160.00	2	3	3	3	2	5	Good composition position
$170.00	3	4	3	5	4	7	Average Competitive position
$180.00	6	4	4	5	5	7	Poor competitive position

Once you've picked the market rate, you then get to talk about expenses, as shown in Table 2. You can see the categories that I'm going to talk about.

TABLE 2
STEP 2: EXPENSES WORKSHEET
ADMINISTRATION - RETENTION

	10–25 EMPLOYEES		25–49 EMPLOYEES		50–99 EMPLOYEES	
	$ PMPM	% PREMIUM	$ PMPM	% PREMIUM	$ PMPM	% PREMIUM
Premium Tax						
Agent Commission						
Administration • Central Services • Sales Override						
Carrier Fixed • Marketing • Return on Risk Investment						
Total Retention						
Expected Premium (PMPM)						
Medical Cost (First Year)						

Generally, we show both the per month per member (PMPM) and a percentage of premium. CFOs tend to think in percentage of premium terms only, and don't

consider fixed costs or graded premium by case size. If you do it this way, you can start talking to them about fixed costs, you can explain the numbers, either as a percentage or a PMPM cost, depending on which is more appropriate to that particular piece.

The most important source of data, though, I will say, is the organized delivery system data. If they have the data, and hopefully you've picked someone that does, that's the best data to use in setting reimbursement levels which includes setting provider reimbursement. The next step is to get your utilization, which leads to your ending number. It's great they've told you what number you need to get to, so now you just need to back out the reimbursement.

Generally, you need to have some assumptions about what the hospital is willing to take and what the physicians are willing to take. It's generally, in these discussions, more important to get the physician reimbursement at a reasonable level than the hospital reimbursement. I've discovered the hospital side is willing to take some losses, but the physicians are absolutely unwilling to take any losses, and you have to move them down the scale. You can set the hospital reimbursement lower than the physicians'.

This makes an elegant linear programming problem, by the way, but Excel has a great little thing called Solver that I tend to use, because I'm not an elegant linear programmer. The next thing you can do is check the various rate levels, integrated delivery system, and your reimbursement levels. In other words, you just vary the rate level to the market, and show them what their reimbursement levels are. You point them back to your competitive rate study, and you can get a $1,200 per diem. You just won't sell any business. Generally, this has worked very successfully. You can couple that with a display that shows them the amount of money or profit they will take in, if they get their bed days down 10% and their special utilization down 10%.

I want to briefly discuss some of the other considerations that go into this. Set standards with a standard book, and give it to administration upfront, so that things like how billing's going to work, how eligibility is going to work, and how medical management's going to work, is clear. IDSs generally do not understand the intricacies, particularly for things like small group. You have to educate them. I've just been dealing with termination provisions. What happens if one or the other party wants to terminate? Who maintains the risk? The best is to say the risk stays with whoever agreed upfront to take it through the life of a case. That's ideal. The secondary position, which I've used pretty successfully, is to say if you terminate after six months, what we'll do is have an outside actuary come in and determine the rate level that provides zero profit to us, and you'll agree to those negotiated

rates on in-force cases. That, at least, means that the rate risk doesn't go over to you. Because you've got a small-group reform problem if you've gone in with low rates based on certain negotiated arrangements; you can only adjust rates so much a year.

You must seek multiple levels of approval. Generally, you have a CFO, a president, a contracting committee, and a board of directors you have to deal with in this thing, so the first yes is not the last yes you need to get. Indemnification is fairly important, and that's the question of who holds the legal risk. I would say, make sure the person that makes the decisions holds the legal risk. Finally, you must have authority to make changes. You're going to have to give up some rating authority, because you've given up some risk and they'll want some assurance that you're not going to go overboard in terms of ratings.

Ms. Pamela S. Woodley: First, I'm going to talk about some of the issues we've encountered in building networks in some of the outlying areas in Georgia and Alabama, for example, Mobile, Alabama and Augusta, Georgia. So it's more of a PPO approach. Then I'll go into some of the more sophisticated things that we're dealing with now in Atlanta. When you're building a network, this is the order you're going to go in: first your hospitals, then your primary care, then your specialists, and then your ancillaries. When we're preparing to choose the hospitals in a town and to negotiate with them, these are some of the things we do to prepare.

At Aetna, many times, when we're building a network in one of these small towns, it is generally because one of our large national accounts has asked us to because they have a plant there. So we'll always get their input, first, as to how they view the various hospitals. We'll check out the community reputation, and various fact-gathering on the hospital, as far as their accreditation, their mortality rates, the rates of hospital-acquired infections and C-section rates. You can get Medicare cost reports that show their occupancy rates, their length of stay, and what they're paying Medicare. American Hospital Association (AHA) guides show what services are performed at that hospital. Our network people make cold visits to the hospital. They'll sit in the emergency room, they'll sit in admitting, they'll check the job posting board to see what kind of hiring is going on. This is how they get a feel for the hospital.

X-rays come in from data analysis. Aetna is fortunate to have a huge database of indemnity data. I suppose if you don't have this data, you can buy it somewhere, such as Health Insurance Association of America (HIAA). We, however, do have a huge base of indemnity data that we can generally go in and analyze. Aetna, for example, had in a hospital in a small southeastern city, or a mid-sized southeastern

city approximately 1,745 hospital admits in 1994. There are 1,745 lines, claim by claim, with data on each claim. We just take that data and summarize it into bed-day type. Then we have the number of admits, the number of days, and the total covered billed charges for that bed-day type. So we'll just trend those billed charges to the contracting period, divide it by the number of days, to get our projected indemnity billed per diem for that hospital for the contracting period. Then, what you can do is just play around with various proposals, proposals for per diems by bed-day type, and easily have what your aggregate discount will be. So we'll just play around with that to make sure we understand some of the trade-offs.

A second key consideration, though, is hospital stop-loss. Hospital stop-loss is a provision in the contract where, if billed charges on a claim exceed a certain threshold, that claim kicks out of your per diems and into a totally different arrangement, usually a percentage off billed. Depending on the hospital stop-loss provision you have, it can affect your actual ultimate discount dramatically, so it's something you really need to be careful about.

We take that same 1,745 lines of data and recalculate every single claim on various stop-loss methodologies. So, for example, the first line is without stop-loss. There's the 1,745 claims. The total claims are $6.2 million, for a total discount of about 54%. But under the minimum-maximum form of stop-loss, with a 60–90% threshold, what that means is that the hospital is never going to pay less than 60% of charges, and never more than 90%. Under that form of stop-loss, the claims would have gone up to $8.5 million, and your discount down to 37%. We'll also do a great deal of number crunching around that, so we make sure we understand those things.

Some issues have come up recently in building a hospital network. First of all, I talked about stop-loss. I've never actually seen anyone do this, but you may want to think about how you'll handle the super-catastrophic case, going in. This would be the $1–3 million claim. The reason I think about this is because we have one in our HMO. It may be worthwhile, depending on how the hospital views that kind of situation, what it will cost them, to get a second threshold in the stop-loss provision. If a claim hits a second, very high, threshold, for perhaps $0.5 million, it will kick back out, and back into a per diem. You want to make sure you understand all the forms of step-down units that hospital has and make sure you negotiate lower rates for them. It's really not appropriate to have anesthesiologists and radiologists, and the hospital-based physicians in your network, because your member just gets whoever's on duty when they need them. But, if they're billing you at billed charges, they can be very expensive.

I think our HMO, it was worth $8–9 PMPM before we contracted them. So something you'll want the hospital to help you strong-arm them into a contract. Hospital-based internists are a relatively new phenomenon in the Southeast. If the hospital has internists on-staff, and they have no patient panel of their own, they just go around and monitor the in-patient cases. Again, it's an issue of them billing us at billed, rather than at negotiated rates. You must also watch for the motives of these guys. Billing in-patient as out-patient is a new issue that has come up for us, where per diems have gotten so low that the hospitals have realized that they can get more money by billing a short stay as outpatient. That is something our claims processors discovered, and that's a point I'd like to make. Your claim processors can be worth their weight in gold.

You want to make sure you're not treating the claim processors like sweatshop workers because these are the people that are watching the dollars go out. They have caught many things like that for us. Hospitals also are becoming much more sophisticated at cost accounting, and at understanding where they're making and losing money. You will find that they will request to have certain situations broken out of the per diems, and reimbursed at a separate case rate. For outpatient surgery, we use the Medicare groupers. However, you will want to reassess those for your commercial population, there'll be procedures missing and there'll be ones you need to move from category to category. We always make sure that we get what the contract allows that we will reimburse for a primary procedure only, and we'll give up on these rates to get that. What can be more typical is that they'll get 100% for the primary, 75% for the secondary, and so on. In terms of emergency room services, we just go for a discount.

Once you have your hospital on board, you're going to go after your primary care physicians. Obviously, the first step is, you ask your hospital who has admitting privileges there. They will often recommend for you who they think you should go after. Although, you must watch out; the people on their radar screen are the highest admitters, so you want to be careful about that. You want to know who the spheres of influence or influential doctors are in the town. For them, our network people will make personal visits. They don't get a letter; they get a personal visit. You're going to want to be aware of, once you're all done, what percentage of your network is going to be board-certified, that's something that's very important to, at least, the more sophisticated customers. You want to look at how they fit into the surrounding community as far as language, ethnicity, and gender. Ask questions such as, Do you have enough female gynecologists? Again, the network people make cold calls to the office, check the appointment book, check the waiting room, check the refrigerator to see if they're keeping lunch next to the lab work, and things like that.

You're going to want to choose family practitioners over internists whenever you can; they tend to refer less. You're going to want to look at what percentage of their practice is managed care. Some physicians place limits on managed care, such as how many patients they will see per week. So you want to make sure they don't have some sort of limits like that. Then you'll need to get your specialists together. Again, you'll ask your primary care physician (PCPs) who they refer to. In these smaller towns, we just check the phone book, to see what kind of specialties there are and how many there are of each one. The thing you can tell is where there's an oversupply. Where there's an oversupply you want to contract those doctors first, because that's where you'll get your best deals due to competition. You need to be aware of selection issues. For example, Atlanta has a fairly large AIDS population. There's an infectious disease clinic in midtown that's popular with that community. If we're going to add them to our network, obviously, we may have some selection issues. You want to look at your covered population. For example, in Atlanta, there are many asthmatics and there's a great deal of pollen in the air. We make sure we have a very good allergist network.

For setting a physician fee schedule in these smaller towns, we'll take an existing fee schedule, and compare it to the existing Aetna fee schedule, and calculate a couple indexes to assess it. One is, we compare it to their average billed charges in that town to see what kind of discount we're getting. Second, compare it to Medicare. Then, basically, set the fee schedule. You will want to allow some margin; you'll want it to be lower than you actually want it to end up. That's because you're going to send these doctors a list of current procedural terminology (CPT) codes with reimbursement rates, and they're going to contact you about some of them and say, "You're way too low on this one, I can show you that your competitors are paying twice what you pay." Of course, there's revenue maintenance tactics that will take place.

Now I'm going to go into a more sophisticated market, where the medical community is a little more organized, and you can start linking them together. Probably one of the most basic things is just provider withhold, and the theory here is that since your PCPs control the referral, inpatient, and drug care that your members get, you're going to hold them accountable for the total costs of their assigned members. So one way of doing this is to calculate a budget for all members, including their age, sex, and plan-adjusted budgets. I'll go through that in a minute. But then, a provider's aggregate budget is just the sum of all their individual members' budgets, and that's what they're going to be held—that's what they're going to be measured against. So one way to calculate your budgets is to just take your total plan PMPM that you want to hit—again, based on your pricing, the market demanding, your total plan medical PMPM that you need to hit—and take out the things that are not going to be charged against the physicians. They're

not held accountable for catastrophic or for out-of-area claims. You subtract that out, and what's left is the total medical PMPM, and your aggregate budget for these physicians.

Then, it's just a pretty simple equation to solve for the individual member budgets. You just take the total distribution of your members, by age/sex-plan, multiply it by relative age/sex-plan factors, solve for the variable, and your budgets are going to be that variable times these factors. You set this whole thing equal to your aggregate budget. Then, when the year is over, you're going to measure your PCPs against their budgets. You calculate a fund status for each one. Their fund status is their total budgets, minus all the claims that have been paid on behalf of their members, less the things that we didn't charge against them, like catastrophic and out-of-area providers, minus the withhold that we have withheld from these claims that were paid. If their fund status is positive, that means they've operated below budget, they'll get all their withhold back, and we'll share the excess with them 50/50. If their fund status is negative, but we can bring it to zero just by keeping some of the withhold, we'll keep that part of the withhold and give the rest back to them. If the fund status is so negative that even if we keep all the withholds, we're still in a deficit, then they don't get any withhold back.

Some other things we're seeing in Atlanta are putting specialists at risk for inpatient days. Everything you can do here is going to depend on how the medical community is organized. In Atlanta, there are single-specialty individual practice associations (IPAs) that pretty much cover the town, that can be contracted with. We'll hold specialists at risk for inpatient and drug costs in their specialty. You can use home health care to work with your PCPs to get people out of the hospital, by letting them share in inpatient days going down. For the specialists, an example is, just calculate, for a base period in the most recently completed calendar year, what was the total inpatient and drug PMPM for their specific specialties, say cardiology. For example, from total inpatient charges, total drug, total member months, total inpatient plus drug PMPM was $1.08. Then, take that base PMPM and trend it to the end of the contract year. Looking back, if their actual PMPM was greater than that (in other words, if utilization has gone up), then the IPA will pay the HMO 50% of the difference, up to a limit. Conversely, if there's savings, the HMO will cut the IPA a check for 50% of the savings, up to a limit. You definitely want to limit on the downside, so they're not encouraged for underutilization. It really helps to be able to tell consultants that you've got that provision in there.

This is another view. Pennell talked about a capitated, integrated system—one view of the world. It lines up with Pennell's. But, the pros of that are that the incentives are all aligned. I mean, if it's well managed, the physicians, the hospital, everybody should be working toward the same common goal. You don't have to worry about

structuring that yourself. You can delegate many of your administrative functions to them. The cons are, first of all, on the delegating. In our experience, we have found that, when an HMO delegates, it's like ValuJet outsourcing. You are still responsible for those functions being performed up to NCQA standards.

We have found that very few of these systems are in a position where they would be approved by NCQA, and we end up educating them. We end up spending a great deal of resources educating them and bringing them up to speed. Regarding this last point, one disadvantage is that, we could be educating what will, a few years from now, be one of our most formidable competitors, if these guys file for their own license. Another big disadvantage is that you shift profit potential to them. Also, member movement is restricted. If your network is bigger than just this system, once a member elects a PCP in that system, they can't get out. They have to stay in that system. Your whole network isn't available to them. That can be a marketing problem. They may not be ready to handle risk. Processing claims is very complicated in managed care. They must have an idea of how to manage within a budget, how to monitor it, and tell when they're getting into trouble.

Mr. Cymerys: My part of this discussion is going to be really focused on the providers and how they feel about being leased. I'm going to talk about trends in the market, all from a provider's perspective—integration approaches, consolidation trends, the financial impact on the providers, and some regulatory issues. One of the things we were asked to comment on is the receptivity among the provider community for HMOs. I brought a definitive actuarial source, a recent copy of *Newsweek,* which talks about America's best HMOs. It really is one of the first constructive articles that has shown up. It asks, How does your HMO stack up? It talks about preventive care, and some of the things that I think are productive for the mainstream to start hearing about. There's an article about how to choose your doctor in an HMO. This article is kind of in contrast to some of the other headlines, like "The HMO Killed My Baby" that have appeared, really within the last six months. So if the doctors are still not convinced that HMOs are coming, the people in their waiting room who are reading *Newsweek* probably will be convinced. I think one of the things that is convincing is just the growth in membership in HMOs from 6.0 million members in 1976 to 53.3 million at the end of 1995. Again, this same *Newsweek* article forecasts that will double by the year 2000. So, it's growing, and it will reach far beyond the traditional hotbeds of HMOs, which are California and Minneapolis.

An area that has gotten a great deal of attention in the provider community is how a big piece of the hospital market is dependent on Medicare, so hospitals really have their focus on what's going on with Medicare. Medicare covers 33 million seniors, 4 million disabled, 200,000 kidney dialysis patients. Of Medicare members, there's

only one in ten nationwide in Medicare HMOs, but in California, the number is one in three. Some counties in California have up to 60% coverage in HMOs, and the Health Care Financing Administration (HCFA) is just completely overwhelmed with Medicare risk applications. Medicare choices are a good, interesting example. HCFA was concerned that in some rural locations, they're looking for ways to generate interest in a risk-type product, and the Medicare choices pilot program specifically targeted those areas and opened up Medicare risk-type arrangements directly with providers. I think there was something like 350 initial plans that were looked at. What were approved were nongeographic locations—25 programs. Nine of those were provider-sponsored networks. Again, this was targeted for areas with low HMO penetration, so that they don't have issues under this program that the commercial HMO population has. This allows just inclusion of the Medicare-eligible people in a risk-type product.

I'll touch conceptually on the delivery systems and pictorially on the low-integration system which is where the payor is contracting directly with the hospital, directly with physicians or groups of physicians, and there may be, really facilitated by the health plan. As the level of integration increases, you get into a situation where the payor is doing the contract directly with the integrated system, and then the integrated system is basically divvying up that pot that they're receiving from the payor. Basically, that allows the integrated system to create arrangements for risk-sharing arrangements within the parties and within the integrated delivery system.

One of the reactions to growth in managed care and also the consolidations on the payor side have been consolidations on the provider side. So, as the payors have joined together and gotten larger, the same kind of phenomenon is going on the provider side. To make an analogy, some of the payors that are building networks are actually buying a prefab house, that they're, in effect, building as the providers that they're hooking up with in their networks which are more sophisticated and more integrated. That really has, in one sense, blurred the differences between leasing a network and building one. If you're building a network, and you're going to highly integrated systems in order to build your network, how different is that from what Pennell described which was going to a network that was built around a hospital or physician organization and leasing that network. The two concepts start to move together, as opposed to apart, as the providers get more integrated and sophisticated. I'll give a specific example. I think many people have read about MedPartners/Mullikin, but for us actuarial folks, we like to look at some of the facts and see what it really means. MedPartners, based on the end of 1995 shareholder reports and financial statements, acquired managed medical clinics. At the end of 1995, they had 496 positions in 17 markets, which covered nine states, and an annual revenue of $300 million.

Mullikin Medical Enterprises has 400 affiliated physicians and 2,600 individual practice association (IPA) physicians, so the 400 are associated with true medical groups, employed physicians, and 2,600 are part of affiliated IPAs. There's annual revenue of $370 million, with 360,000 prepaid HMO members. Mullikin was, under networks, getting capitation payments on 360,000 HMO members, and they have 58 medical centers in three states. Pacific Physician Services are concentrated in southern California. Another 250 physicians, 8 outpatient facilities, an ambulatory surgery center, and a hospital are all owned by that organization. There are annual revenues of $390 million, and they are getting capitated for 313,000 members. So at the end of 1995, you have this combined entity, which is now positioned to negotiate as one entity, that covers, on salary, 1,210 physicians. They're closely affiliated and managed, in most cases. They have 400 hospital-based physicians. They cover 369 sites and 22 states, they have $1.4 billion in revenue, and they cover 680,000 prepaid employees. So again, if Pennell goes to one organization, strikes a lease deal, you can see the kind of coverage that can be provided by an organization like this.

Another quick example, again, from the San Francisco area this time, is Sutter CHS. The Sutter Hospital integrated delivery system mainly focused around Sacramento, which was identified as a highly penetrated HMO market. CHS is a group of integrated delivery systems that covers San Francisco. They just merged in a not-for-profit environment, and together, that system is getting capitated for 800,000 prepaid members in the San Francisco/San Jose/Sacramento area.

They serve 100 communities in northern California, and right now, 20–25% of their $2.4 billion in net patient revenues are under a capitated or managed care contract. So you can see the trend on the West Coast, which I'm sure is going to start showing up elsewhere, is a reaction in the provider community to the consolidation and the move to managed care. Pennell talked about the cost of an integrated delivery system doing the administration. Pam talked about the complexities of handling the claims. When you get to organizations this size, which are provider-based, they can afford to put the resources required into their system in order to do a first-class job in those areas, which really challenges the health plans, because in some cases, they're doing many of these functions better than their health plan partner.

The other thing that's changing significantly in the provider side is just the source of physician income. As the markets get more mature in their risk-sharing arrangements, a key is getting some sharing around the hospital results. What we see on the West Coast is a much bigger piece of the physicians' compensation coming from their risk pool. In most cases, the medical groups are really losing money before they get their hospital risk pool share. They've come to rely on that.

What's clouding the picture a bit is the fact that Medicare has regulations out there, and some clarifications recently really focused on limiting the percentage of the physician's income that can come directly from referrals. So, there's a number of issues around that, and using just financial measures in order to determine what these risk-sharing arrangements will be. So, again, in the more mature markets, we're seeing up to 20% of the physicians' income coming from the hospital risk share.

The other pressure that the providers are feeling, as some of these managed care arrangements are saving plan sponsors money and members, is pressure to be more efficient and cost-effective, and this is just a quick example for Medicare risk. The top line in Table 3 basically is showing 100% of Medicare allowed, and that represents, for the adjusting average per capita cost, the average Medicare Part A and Part B payments made in a particular market.

TABLE 3
MEDICARE RISK REIMBURSEMENT ANALYSIS

	PART A	PART B	TOTAL
Medicare allowed (assumes accurate AAPCC)	100%	100%	100%
Value of deductible coinsurance	x.91	x.71	x.83
Government guaranteed savings	x.95	x.95	x.95
HMO administration	x.85	x.85	x.85
Monies available to providers in proportion to Medicare allowed	.73	.57	.67
Added benefits			x.90
Monies available to providers in proportion to Medicare allowed			.60

Typically, under a Medicare risk contract, the deductibles and the coinsurance are either eliminated or are reduced, so the value that must be provided is greater, so there's a percentage that's applied there. The government has a guaranteed savings built into their formula of 5%. The health plans that are offering these Medicare risk plans are typically holding some retention back for marketing, administration, and profit. I just used 15% as a proxy for that.

Basically, when you look at the money available to providers, to provide the same benefits they had under the regular Medicare plan, you can see the percentages start to shrink. Then, to be competitive, the risk plans will add a pharmacy benefit or vision benefit, or things that aren't covered under Medicare. It's not unusual to see

the bottom line, the money available to provide the same benefits that were covered under Medicare are, order of magnitude, 60% of what people were getting under Medicare. How can the providers survive, with only 60% of what they used to get for the basic Medicare benefits? There are not many options. They can reduce procedure rates; they can reduce admissions; and they can reduce in-patient days. Since I'm coming at this from the provider perspective, I didn't consider cut fees, because that's not really a consideration. The opportunity is really in these areas.

I'll give you an example for cardiology and bypass surgery rates. The national average for bypass grafts per 1,000 commercial enrollees (and this is HMOs) is already 97.6 per 1,000 members. On the West Coast, the HMO average is 40, a 59% reduction. For Medicare enrollees, cardiology is a bigger deal, and so the numbers are bigger, and the reductions are even more significant. The 781 per 100,000, on the West Coast, compares to the 240, average, West Coast, HMO. That's not even best practice West Coast HMO. That's nearly a 70% reduction.

Cardiac catheterization is another example. For commercial enrollees, there are 245 per 100,000 enrollees; the West Coast average is 100, nearly a 60% reduction. Again, this is what is going on currently. When you look at the HMO numbers in California, we're working with some groups now that have commercial bed days down at 100 per 1,000. As you dig into the numbers, these are the kinds of things that are going on. There are larger numbers for cardiac catheterization for Medicare patients. Again, the numbers are much bigger. The 1,500 per 100,000 national average compares to 620—a 60% reduction. The national average for cardiac admissions is 6.5 per 1,000 and 4.7 for the end-state market—very significant reductions. Then the inpatient days, again, had a very significant difference between the HMO national average, and the West Coast, or end-stage market. It really cut in half the number of in-patient days for cardiac care.

The other thing we were asked to comment on are regulatory issues that affect the things we've been talking about. We've divided it into three areas. There's current regulations that affect PHOs and other integrated delivery system that are either leased or used as building blocks in a network. A number of states have white papers that are circulating around. I definitely encourage you to get your hands on those and take a look at them. The regulators are really trying to get their arms around these new integrated delivery systems. Some of these papers have progressed to where there are proposed regulations, where there may be hearings or periods to comment on the regulations.

One trend in California that has moved to the Department of Corporations, which regulates HMOs in California, is the concern about the medical groups that were looking to take on 100% of the hospital risk. They were concerned that HMOs are

not adequately capitalized to take on that risk. So they really had a position that if a provider took on risks, under a capitation arrangement, that were beyond the services that they directly provide, that was a no-no. Much of it was still going on, and so the Department of Corporations really helped. They looked to find a compromise, which is this limited service HMO license, which really regulates the provider groups that are looking to bear this risk. They have the same tangible net equity requirements, which is basically the capital required in order to take on this risk. The only difference is that they have provisions in the license that don't allow them to directly market their product to plan sponsors. There are many provisions in the HMO regulations related to marketing and sales along those lines. The first group that got approved was MedPartners/Mullikin, and there is just a slew of hospitals, physician groups, and integrated delivery systems that are in the process of putting those applications together.

In Ohio, it's the Managed Care Uniform Licensure Act I guess, that is in a proposed stage at this point. Colorado issued a letter that's titled "Concerning Provider Networks." In Kansas it's, "What is the Business of Insurance?" In Virginia it's, "Capitate Administrative Services Only (ASO) Agreements are Insurance." These are all attempts by the regulators to try to get clarification on what arrangements are going to be defined as insurance, and what entities are going to be regulated in these arrangements.

Ms. Nancy F. Nelson: I have a question primarily for Pennell, regarding what I think you generally described as a percentage of premium approach to contracting. I understand by the way you described it, that it is where you're contracting with one system, and you're a fully-insured small group business, and it's primarily a traditional HMO benefit design with copayments that works fairly well. In our market, there's a number of things that I'd call complicating factors. I'd be interested in how you would modify your approach to address these. First of all, can we assume that you can get by with one care system? There might be some cases you can, but not all. For example, in our market, the two children's hospitals in the Twin Cities area are affiliated with one PHO. So if you don't have them in your plan, you probably have missed a third of your population. So somehow you have to address the issues of the children. Second, we have, difficulty with any one system to get geographic coverage, so you have to have more than one to hit your adult population and cover them geographically. With that, the providers have a fairly high expectation or appreciation that there may be differences in the risk of their populations. So they're interested in something that's risk-adjusted.

Another question is, When you have the capitation approach, what do you do to value member cost sharing? We are moving very rapidly towards managed-care plans that are having deductible and co-insurance provisions, and there's very

clearly an expectation that these values of the co-insurance have to be based on discounted values, not on charges. Related to that, our market, in a large over-50 group, is using experience in setting rates. How do you take your experience with a specific group, under the capitated arrangement, and place a value on it so you can use it in rating, and then do that in a way that's perceived fair by the providers the next time around, in the second year of contracting? Finally, how do you take your contracting approach and roll something into it at the same time, so you're doing something effective for your self-funded groups? Are you getting some advantage or some leverage out of your contracting for that population as well?

Mr. Hamilton: I'm just going to go to the third question you asked first, which was about the value of the cost-sharing. Because one of the things I didn't mention about that model is flexible enough, we do use it for non-HMO benefit designs. You do come into some issues when you deal with the providers about out-of-network risks that you have to work through, but it can be used for that. We always insist that the value of the co-insurances be based on the discounted fee schedule that has been negotiated with the integrated delivery system. We generally make an equity argument to them, that it's only fair that this be done this way. The model is built up in that fashion.

You asked two linked questions about when you can't deal with one payor, and you don't get geographic coverage. Now, in the markets that I've dealt with, you can get away with just one payor, and there are many of those markets out there, if you look at the second-tier-type cities (not cities like Los Angeles or Chicago). As I showed in Chart 1, in Chicago, you could never get away with this approach. I suppose there's no reason this model, not that I've thought about it, couldn't be expanded to multiple payors within one city, you just have to assign the claims and the premium to the right payor based on who the member chooses as their primary care physician. With one payor, we don't have to worry, for the purposes of accounting, who the primary care physician is. It makes our data in our accounting system internally simpler, but you have to add that, and I think you could do this. I would prefer not to have to go to multiple payors, because then you get into a competition problem with your partners.

Experience for setting rates is basically a percentage of premium capitation formula. We deal in the small market, but, to some extent, we do use experience in setting rates. It affects the cap because the cap obviously moves with the premium, so it's fairly easy to do. In fact, the delivery systems we've dealt with expect us to do that. For self-funded, which is not a marketplace I deal in currently, I would probably never try to use this, although this model can be used in states that allow capitation by just paying the money out as a percentage of premium. It can be used in states that don't allow capitation by retaining the funds and doing settlements. It could

probably be used in a self-funded group situation, by another method we've used, which is basically adjusting your rates retrospectively, or prospectively, based on the experience of the group, and you adjust your reimbursement rates to the provider. That's a little more complex, but that would probably be a way to expand it to deal with the self-funded situation.

Mr. Cymerys: Also, I think in the larger, say, metropolitan markets, where people are setting up these lease arrangements, that is what has created an opportunity for, in effect, a third-party network manager to hook together the different pieces that are needed to give adequate coverage. So, I think Pennell is describing smaller markets where you have a larger geographic scope. There are organizations that put that together. Portland, Oregon might be an example of a state dominated by linked systems that are managed and then leased out to payors.

Mr. Gregory G. Fann: Ed, regarding the reduction in cardiac admissions, I was wondering, how much of that is attributable to the recent research and technology in reversing heart disease? Dr. Dean Ornish's program comes to mind, and I was wondering if there has been any extensive cost studies that show the amount saved by the reduction in admissions, versus the offset from endorsing a program such as one of these.

Mr. Cymerys: I think what's happening is because the financial incentives are set up the right way, the physician and physician organizations are really incented to stay on top of all the opportunities. When you look at some of the quality measures, although they are still in a formative stage, there sure doesn't seem to be any reduction in quality. So as some of these changes in practice are happening, taking advantage of some of the new thinking and making that happen, there are reductions. I think that is coming through in true dollar savings. The West Coast has been heavily HMO-penetrated for a while, and it's not that this was a cost that was pushed down for one year, and now it's coming back to haunt the systems because of that. It is actually building momentum because I think it is working and effective. So I think that it's hard to quantify all the pieces. You can look at what is happening or not happening in the marketplace, and I think some of that is coming from the some of the new thinking. Some of it is also coming from providers just paying much closer attention to the outcome and not doing things unless there's a good probability there'll be a good outcome from it.

Mr. Robert G. Lynch*: My question has to do with trying to measure the allocation of risk in a managed care network, and especially with risk-sharing agreements and the design in setting those up. In Wisconsin, self-funded employer groups trying to get into managed care, either HMO or point-of-service (POS) type arrangements directly with providers. The Commissioner of Insurance basically put out a finding

that self-funded groups could not contract directly with providers in such a way that there would be too much risk given to the provider, because then the provider would be engaging in insurance. When I called up the commissioner's office to ask what too much risk is, the only guidelines I could get was that the providers could never have to pay back to the plan any money, and if the providers are retaining 50% of the risk, it would be too much. I'm sure you're shocked to hear that there's a regulator out there who's vague on these things. So the suggestion given to me was, come up with a plan and give it to them, and they'll decide if they're happy with it.

It's an interesting actuarial problem. How do I hang these percentage of risk numbers on the various entities, the group, the providers, the reinsurer, or provider of excess coverage, so that I can incorporate that into some sort of plan design. It's not too surprising that nobody has ever come back to the Commissioner with a plan design to try and get approval. Basically, all the self-funded groups in Wisconsin are stuck with going through either self-funding strictly indemnity or buying through an HMO if they want managed care. My question is, how can I go about measuring that risk to satisfy the Commissioner of Insurance, the providers, and my own CEO?

Mr. Cymerys: First, I think you made a very good point. There's really an opportunity, because there is a great deal of vagueness, and the regulators are really struggling to sort this out. There's really opportunity to put some things together that make sense, that can stand up to actuarial rigor, that can quantify some of these things.

Second, in my work with the regulators, I feel they're looking for you to model or demonstrate where the risk is. I think a way to quantify it is to take an example of an arrangement that's in place, or that you plan to put in place, show what happens under a couple different scenarios, and hang some probabilities on how likely it is for that to happen, and show where the liability is going to be.

My experience has been that the regulators are very receptive to seeing some kind of well-thought-out modeling of where that risk ultimately is going to lie. That can only come from modeling out the different situations. Much of the thinking is that the regulators don't want the providers to have too much risk.

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really Sometimes the way your own organization structures things (by internally having a lower fee schedule, which really minimizes the possibility of a big deficit, and makes the same picture look as if it's a bonus-only kind of arrangement), makes the regulators much more comfortable with the situation also.

In California, these limited HMO licenses have been approved. They're actually looking for the provider organizations to meet the capital standards that they enforce for HMOs. That's the other source to look to. What are the capital standards for HMOs. What would it mean if your organization had to meet those standards, and what is a reasonable percentage of those capital standards, given your arrangement?

Mr. Samuel B. Venable: Let me focus on the fee-for-service reimbursement methodologies and negotiations on that basis. I've heard a number of arguments for using other Medicare contracting strategies, such as ambulatory patient groups (APG) for out-patient procedures, but most groups refer to percentage of RBRVS. It seems like that starts to break down when we get into categories that the RBRVS doesn't address such as pathology, anesthesiology, preventive care, J codes, HCFA codes, and so forth. Then, there is the idea of regrouping some of the APG-CPT codes into different groups. Is the standardization type of argument for going with this type of RBRVS-type contracting just a starting point? What's your view on this?

Ms. Woodley: Yes, you do need to expand it and basically set the rates that are missing, based on your own data and based on the RBRVS data you have. You can't use it just as is. You need to expand it.

Mr. Hamilton: I talked, about RBRVS, for example, which we only use as a standard because it's easily translatable from system to system, and generally understood. You generally are starting with the provider reimbursement schedule they have. What do you need to discount it. I generally compare something like McGraw Hill to RBRVS. I also compare it to an internally generated schedule. RBRVS clearly doesn't include all the codes, and you have to get them from somewhere else. It is a convenience standard to talk about.

Mr. Venable: What other sources do you look to, then, for filling in the gaps? Is it mostly McGraw Hill?

Mr. Hamilton: I use McGraw Hill, internal data, and the HCFA is a wonderful source of data. The groups always have their own opinion of where it ought to be and you can compare all those things together.

Mr. Cymerys: Yes, and that's where we've done work, filling in some of those gaps. We have a clinical staff on board to really take a look and help make sure that what we're coming up with is reasonable, and as Pennell said, the groups, have a fairly good feel for the resources required for some of these areas that are not identified.