RECORD, Volume 25, No. 3*

San Francisco Annual Meeting
October 17-20, 1999

Session 111OF
Technology and the Delivery of Health Care

Track: Health
Key Words: Health Care Plans, Health Insurance

Moderator: MARK F. OLSON
Panelists: MARK F. OLSON
ALAN H. SPIRO, M.D.†
VIC TURVEY‡
Recorder: MARK F. OLSON

Summary: This session covers the new medical technologies and how they affect:

- *The price of medicine*
- *The delivery of health care*
- *The cost of care*
- *Claims handling*
- *Utilization*
- *Cost management*

Mr. Mark F. Olson: I'll be your moderator and guide through this tour of technology. We're going to talk about technology from two points of view. One is kind a retrospective and a prospective viewpoint. Where have we been and where are things going? We will give the point of view of an actuary, a health plan executive, and a physician.

Vic Turvey is the CEO and president of United Health Care (UHC) of the Midwest, which is located in St. Louis. It's one of United's flagship networks in the country for growth and profitability.

Dr. Alan Spiro is a consultant with Towers Perrin in the New England area, working out of Boston, New York, and Portland, Maine. Alan Spiro's extensive experience includes being a medical director of a national health plan. He has also been part of a management team that operated a large hospital system. He was a practicing

†Mr. Spiro, M.D., not a member of the sponsoring organizations, is a Consultant at Towers Perrin in New York, N.Y.

‡Mr. Turvey, not a member of the sponsoring organizations, is President and CEO at United Health Care of the Midwest in Maryland Heights, MO.

Note: The table referred to in the text can be found at the end of the manuscript.

gastroenterologist and, also, has had held faculty positions at the University of Chicago Medical Center and at the University of Connecticut Medical School.

We want talk a little bit about technologies more from an actuarial perspective. Traditionally and historically, experimental technologies have been excluded, partly due to cost, litigation, and the desire that health plans, insurers, and employers did not want to necessarily finance medical education or research more specifically. I think experimental technologies of the past have been more clearly distinguishable than they are today. Things are changing pretty rapidly therefore it's more difficult to draw a clear delineation.

Now that the Internet has provided a lot more information to patients and employees who participate in health plans, a number of things are being challenged. It's not uncommon now for a patient or an employee to look up on the Internet what common practices are for particular procedures and take that information into doctors' offices and into health plans and actually challenge standard practices that have been utilized. It's pretty easy for them to access Web sites like DrKoop.com or WebMD.com. There's much more information available. Employees and patients are a lot more astute than they've been in the past and will ask physicians fairly challenging questions.

We're starting to see drugs that have been approved by the Food and Drug Administration being used for different uses and not necessarily what they were intended for, so there are issues with approval. There is also the entitlement mentality where patients feel that they have a right to get whatever procedures are being used, regardless of whether or not there might be something explicitly defined in the policy.

Let's take a look at a large health care provider and what they did to try to clearly define what would be an experimental technology and what would be covered. They required that processes and procedures be approved by a recognized federal agency or governing agency. This is partly to say we don't want to be covering everything, we want to be covering procedures that are recognized as standard medical practice. There must be some positive outcomes demonstrated by whatever clinical trials have gone on. The idea here is that if you're going to provide coverage for some of these experimental therapies, you want to make sure that it's going to provide at least as good or better an outcome than what some of the standard accepted practices might provide.

Health plans and insurers are starting to look at what they're covering and change their philosophy on what's acceptable. One of the things that we're starting to see more interest in is coverage of clinical trials. This may be altruistic from the point of view of the health plans in covering some clinical trials in that if they don't cover them, they might have to go through the appeals process and the administrative expenses that are incurred as part as that process. Sometimes it's easier just to allow somebody to go through the clinical trial. I think most of the employers, health plans, and insurers have started looking at this and saying, "Maybe this isn't so bad if patients participate in a clinical trial that we think might be worthwhile or acceptable."

I wanted to talk briefly about an example. A large employer in the late 1980s and early 1990s actually set up an employee pay-all plan to provide coverage primarily for transplants and high-cost procedures. This was set up because it had more than one incidence of cases where their current health plan did not provide coverage for some specific procedures.

Health plans and insurers said, "Let's provide coverage, and we'll set up an employee pay-all plan." In pricing it out, it ended up being relatively low-cost. There was high participation in this. It provided an opportunity for employees to participate in the plan and have coverage for autologous and allogeneic bone marrow transplants, kidney transplants, and heart/lung transplants that, at the time, were not accepted in common practice and not covered under the regular health plan.

In setting up the criteria for this, there are a number of things that providers and plans looked at. One is that they looked at it as it must be some type of lifesaving procedure or have the opportunity to provide that to an employee. When I say lifesaving, a lot of times employees get very frustrated. There's a huge emotional toll that is taken on the family when they've gone through all the alternative-care procedures and processes and they come to the last resort. This provided a way for employees to get coverage for those procedures.

It's primarily for high-cost procedures. I think the lowest cost procedure that they had or that they covered was a kidney transplant for around $50,000, and it went up from there. Plans and providers also required that there be some evidence supporting positive health outcomes and evidence that these procedures were being provided by a teaching or an educational institution. They actually contracted with some of the educational and teaching facilities or the facilities that were considered to be centers of excellence for these specific procedures.

If we look at some of the results over the eight-year period, we'd see that there are about 86 cases processed, and 45 are receiving benefits. Most of the cases were for bone marrow transplants.

Some of the limitations, with respect to the program, were the absence of the necessary clinical outcomes data. It was easy to track people and identify them when they filed a claim or entered the program. It was easy to monitor what was going on while they were receiving care. Once they left the program or returned to work, it was somewhat difficult to track data and that created some issues. Only lifesaving technologies were covered. This was the intent, but it didn't necessarily expand to include other things. One unintended outcome of this is that employees or patients may have been exposed to possible harmful procedures or treatments. Not all the outcomes are necessarily positive.

Some of the disadvantages far outweighed the advantages. It allowed access to potentially new treatments or promising treatments and helped support technological innovation in terms of the care that was provided. It produces relatively valuable information with respect to not only frequency and amount of

claims but also the efficacy of the treatments. It also avoided some of the lengthy appeals costs associated with those appeal procedures.

In looking at the challenges for the future, we face a limited amount of data, and specifically a limited amount of frequency and cost data. It's not uncommon for somebody to call up and say, "I need to price out such and such. It's an alternative care benefit." There just isn't a whole lot of data available. You end up using whatever you can get your hands on, whether it is general population statistics or information that's available on the Web. Utilization is especially difficult to predict. Utilization of some procedures even varies across the country, so it will depend on how accepted some of the practices are across the country.

There are future pricing challenges with the genetic experiments that are going on now. You have this possibility that we may actually be looking at capturing and tracking data in different ways than what we've done in the past. International Classification of Diseases-9th Revision-Clinical Modification (ICD-9-CM) codes may not work the way that they did in the past and they may have to be expanded.

Mr. Vic Turvey: My topic is technology. At UHC we have a suite of technologies. They are three related, but distinctly different technologies. I want to give you a little overview and show how we use them to be change agents in the world of managed health care today. The interesting thing about them is the data have been out there pretty much all along to do this sort of thing. What we're doing is simply mining our pay-claims database more extensively and differently than what we have done in the past. I'll give you some examples of how we use that.

First, you start with UHC's philosophy: that is, when you give good doctors good information, they'll make good decisions. If you give them good information, you can expect to see change in some treatment patterns where the quality of care will improve. Of course, we all know when quality of care improves and you see a reduction in re-admissions and duplications of tests, that costs are going to go down as well.

There are three different kinds in our portfolio of profiling. First, is our pharmacy profile. Second, is our clinical profile, which is another way of saying this is where a managed company says, "Go spend some money, doctor." The third is physician pathways, which is profiling for utilization and unit cost. Let's touch on the pharmacy profiling first.

This is a little dated. We talked to probably over 800 physicians by now, but what we've done is peer-to-peer presentations and that doesn't mean me as a CEO or my CFO meeting with doctors. It means a clinical pharmacist or another medical director meeting with physicians on a one-to-one basis and privately sharing their data with only them, and going over their pharmacy profile. We use this approach with our other profiling methodologies for both clinical and pathways.

Their feedback is very predictable. It's always positive, but here's how it always starts. They will begrudgingly give you 15 minutes. That's even to another doctor. I didn't think they'd let me in the door, but they give 15 minutes to the doctor. You

get in there and you start drilling down into their profile. You hardly ever get out in less than 45 minutes. They're a little reluctant going in, but they almost always like what they see.

Here's some of the elements of our reporting packet. First, we'll show them utilization and prescription drugs on a per-member basis. We'll show them cost per member and cost per prescription. We'll go over their panel size with them. Then some discussion points will generally turn on their use of generics, other cost-effective alternatives, and maybe, depending upon the drugs they're using, some adverse effects or specific cautions they may not be aware of. Because we will run a profile on a doctor before we ever leave the office, and we know the talking points we'll want to hit, the medical director will usually bring medical literature to support the points they want to highlight.

Table 1 shows a pharmacy utilization profile. This was for an internist who has filled 6,000 scripts for us and has about 555 members. You'll see that this physician is pretty much in line in terms of formulary compliance. He is three or four points off, but still fine. The percentage of dispenses-as-written scripts is better than the average. The use of generic drugs is a few points higher, too. The cost per member is pretty close. Their average cost per prescription is a little lower than the average. The only thing we find that really stands out with this doctor is that while the average number of scripts written is 7.6, this doctor is at 8.96.

That's typical of Missouri. In St. Louis, we prescribe like there's no tomorrow, and it's not a particular class of drugs that we prescribe. When we compared St. Louis prescription patterns to any of the other 40 markets UHC is in, we found we were at the top. This physician is on the high side of even the St. Louis average.

Since their variance is in utilization, we probably wouldn't spend much time looking over the most costly drugs. What's interesting is how this physician ranks versus his peers. We'd spend time looking at the most frequently prescribed drugs and some interesting things appear.

What is number one for this physician, Naproxen, is number 60 for his peers. That makes for a good discussion point. What you'd want to look for is where this physician is really out of line versus his peers and then you consider the frequency with which that occurs, and discuss the reasons for it.

The second technology is a clinical profile. This is a newer technology than the pharmacy profiling. We have a pretty complete packet that includes question-and-answer documents covering commonly asked questions about clinical profiles. We'll give the clinical profile results to a doctor with an explanation of the report and do an overview of their practice. Generally, we'll have either a medical or pharmaceutical director from our office do the presentation.

In phase one of our clinical profiling the first six measures are for family practice, internal medicine, and cardiology. Most recently, we developed five more measures for pediatricians. Additional measures are coming out this year for obstetrics and gynecology.

Here is an example of a clinical profile. It shows the use of mammography in a peer population. The use of mammograms for patients between 52 and 64 years, as part of a biennial exam, is 74% for peers. That is just too low. This particular physician was at 94%, so we can say, "Good job, you're right where you ought to be. You're ahead of your peers."

If you find an area where a physician is particularly low, then the question is, why, and what can I do about it? This report then drills down a little further. The procedure with this profiling is to drill down from the general to the specific until you get to something detailed and actionable. For each of the six clinical measures, we'll create a list of patients that haven't, for example, gotten their mammogram. Then a doctor knows what to do to improve performance and medical outcomes.

The third profiling technology is physician pathways. Some of you may have seen an earlier version developed by O'pin Systems in Minneapolis, and they were the company that originally developed utilization and unit-cost profiling. A couple of years ago, O'pin Systems was purchased by UHC, and we've put many enhancements into this technology. We now call it Pathways, but, essentially, it's a more advanced version of utilization and unit cost profiling. It gives insight into how physicians manage or fail to manage their patients' medical expense, access to health systems, referrals to specialists, home health, lab, radiology, and the emergency room, as well as admissions to hospitals.

I won't spend much time on this, but we use case mix adjustments of a few different types. An episode treatment group (ETG) is one of them. Let's discuss a sample profile. This doctor happens to be in family practice and has a cost ratio (that is, actual expenditures and dollars versus expected.) The expected cost isn't budget, but it's what would be expected by an average doctor with this patient population demographics. What we find is that this doctor's ratio is 1.36 or about 36% higher than we would expect. Given the fact that this doctor has 5,673 member months, that's going to translate into quite a few dollars. In this case, it's $146,000 in excess of what you'd expect.

The challenge is find out what's driving that variance. Let's move with the same doctor into a more detailed profile. There are a couple of things that develop. I find primary care visits particularly interesting. The dollar cost is significantly below average. What you might find here is a doctor with an access problem. He may be handling too much over the phone and not spending much money for primary care services. The referral visits are through the roof as are referral dollars and hospital admissions. These are items you'd want to drill down and look at closer.

We can also profile specialists. A specialist in orthopedics has a cost variance of $41,000, and it's about 23% higher than you'd expect. We should drill down to try to find out where that $41,000 is spent. One of the things you'd look at is the code, 732. There is degenerative joint disease, localized, without co-morbidity. He's running three-and-a-half times the volume that you would expect. When you drill down, you find some interesting things; there might not be so much overutilization, but there may be even billing accuracy issues.

What you find displayed is actual units versus what you would expect. The first six or so actual units are significantly higher than we'd expect. One thing to look at would be home services. That really stands out and there's some dollars attached to that, but some other common procedural terminology might be just billing flukes. In any event, you've got something significant to talk to the doctor about to perhaps bring him a little bit more in line with their peers.

You've seen examples of how we use all three of these technologies. It's a comprehensive reporting package and the importance of the package is that each of the three supports the others.

When we leave a physician, we like to leave with four to six actionable items. We try to tie the profiles together with a map that allows them to concentrate on an area where they're standing out in all three profiles. Perhaps they are cardiac patients or diabetics. If it's diabetics, you might say, "Let's look at your pharmacy results with respect to diabetic drugs." From the clinical profile look at glycolated hemoglobin, and under Pathways look at your diabetic costs, your re-admissions, or whatever it might be that stands out.

For physicians that are high or low versus their peers, we'll usually have a quarterly meeting with them. We will meet with other physicians that are more within the norm in six months. We will have an annual meeting with them or just make a phone call. The whole idea is to be educational. It's not intended to have an overly heavy financial tone, nor do we tie financial incentives to profiles. And it's not punitive; at least not for the first couple of years that they are available to physicians.

Let's say you have a doctor who consistently profiles way outside the norm, and the medical directors are absolutely satisfied that this physician's practices are abberrant. If there has been no attempt to move towards the norm even after consulting with specialists outside the health plan, it may be time to say, "For quality and cost reasons we're just not going to keep you in the network." However, that's a move of last resort. The purpose of the profiles is to show where those cost and quality opportunities are.

The future of medical management initiatives in a health plan is to achieve the best outcome and the most reasonable cost. That's what drives my staff, and that's why we have seven physicians as medical directors. One of them is dedicated solely to profiling. We have a number of analysts in our accounting department that put together the first cuts at the profiling to kind of lighten the workload on that medical director.

They're pretty excited about it. They're very enthused about being change agents for the better and the reception they've gotten from the doctors has been positive. I tell them not to get too cocky. Remember, your team is just taking the field. Let your results speak for you. They sent back this quote from Muhammad Ali, which is probably appropriate for where we are in terms of the evolution of profiling. He said, with respect to playing golf, "I'm the greatest, I just haven't played yet."

That's kind of where we are with this technology. It's very new, but it is the greatest.

Dr. Alan H. Spiro: Thus far, the panelists have discussed experimental procedures, medical procedures, and the cost implications, or at least how you judge the cost implications. You heard about technology used to profile physicians by UHC. I'm going to take a little bit of a different approach and speak about a number of different issues, the first one is technology as it's used in what I'll call *the democratization of information*. I just stole that term, by the way, I'm in the middle of reading a book, *The Lexus and the Olive Tree* by Thomas L. Friedman, which I would highly recommend. In the book he talks about democratization of technology, finance, and information. I think that democratization is what we're dealing with on a lot of the issues I'm going to discuss.

At Towers Perrin, in the consulting practice, we are dealing with a lot companies that are looking at e-benefits for their employees. It is a way of creating that democratization, creating a self-service milieu for employees when it comes to choosing their benefits. Obviously, all of you have been involved in that traditionally as retirement plans have moved from defined benefit to defined contribution. You've put dollars in people's hands that they can move around in terms of investment vehicles on their own in a way that they couldn't in the past. The information highway makes it possible for them to do it in a real time mode, in a simple mode, and in a way that is administratively easy.

If you take that simplification and apply it to health care in the area of benefits, it's very straightforward, and you can make those same types of decisions in health care. There's a whole other side when you get past the benefits administration and go into health care. There's the issue of what true e-health is as it emerges. I want to make that distinction between e-benefits and e-health.

Right now, e-health, for the most part, is a source of health education for healthy people. I think Mark spoke a little bit about the idea of people coming in with Internet data on a health problem they may have, presenting that to their doctors, and somehow driving health care costs. It is a true factor. With respect to the United Program and physician profiling, which I think is very impressive, I believe, after trying to manage physicians for 15 years, and being one, that the best way to manage physicians is through the inpatients. E-health is an opportunity to manage doctors through their patients. It's also a threat in terms of cost when that information flow is totally uncontrolled and totally nondirected, if I can put it that way. The information is just a source of increased demand.

E-health has another side to it, though. Ultimately, it can become a technique through which physicians and other providers provide medicine from afar and the methods through which patients expand their choices in obtaining care. One of our large employer groups is now putting together a benefit program that our actuaries are trying to price. It would involve a network of physicians who are required to be on the Web as part of participating in the network, and will get paid for e-mail consultations with their patients. It creates a new dynamic.

What does that mean for the physicians and for the patients? It means increased convenience. It also means that the average of two hours a day that most physicians spend on the phone, some with no reimbursement, can now be redirected into an e-mail or a chat room type of relationship that will be paid for. There are positive aspects to that for the physician and patient. What does that mean in terms of overall health care costs? That remains to be seen. It certainly can increase costs, but it also has the potential to decrease cost.

There's a wonderful cultural problem that physicians face when a patient comes into their office. From the physician's point of view, he or she is selling knowledge. From the patient's point of view, if they're not given something, like a test, they feel like they haven't gotten anything. An e-mail relationship actually eliminates that dynamic of having to have something like a shot, a pill, a test, or whatever, because it is from afar.

Now, the use of the cyber citizen, if I could put it that way in terms of health care, is a very real, very immediate phenomenon. Fifty percent of Internet users search for health information. Of those, 70% of those that access the net for health information believe it empowers them. That is increasing dramatically. You have 60+ million online health users by 2004 if you follow current trends.

What we are seeing is this democratization of health information. When I went through medical school and then in practice, there was still the era of the doctor on a pedestal. It was very pleasant. That pedestal is already being knocked down, and will continue to be knocked down as more information is available directly to people through this channel.

When you look at e-health, what I've talked about so far is information, which is where we are now. It is somewhat interactive in terms of asking a question and getting an answer. In some ways, you can talk about it being transactional once we start paying for those e-mail questions. It's transactional when people are going to Drug Store.com to purchase their drugs or when they get their durable medical equipment through the Internet.

We now have the capable technology to have virtual house calls. Any information that can be digitized can be sent over a wire. That means if I have a diabetic patient at home who is using a glucometer to test their glucose, there is no reason in the world that the glucometer can't be hooked into a telephone wire. The doctor can get the blood glucose along with their blood pressure, which is from a blood pressure cup hooked up to the wire, and the doctor can speak to the patient at the same time. Put in video capability and you're looking at each other as well.

We have the technology today. What does that mean? It means if I'm living in my house in Maine, and I want to see a specialist at UCLA, I dial him up. It means my wife, who's a specialist in genetic diseases, who's in Maine, can see people in the rural parts of that state. The implications here are dramatic, and there is nothing technologically holding it back.

Cultural issues are holding it back. There are clearly financial and reimbursement issues that all of you will be called on to address. There's also regulatory and legal issues, because, obviously, things like state licensures for physicians just don't cut it in an Internet world.

The other thing about virtual house calls that I just want to mention is that it goes even further. Technology is there to have virtual hospital beds. You can be in a bed in your home, hooked up to a monitor, and have your blood pressure checked. Unless it's an intensive care type of setting, these types of procedures can be done at home.

Let's go back to e-benefits for a minute and the e-benefit type of arrangement for employees. If you take all that health care information and interaction, put it together with the other benefit areas, bringing in other types of benefits, such as helping an employee with a mortgage, a car loan, all of this can be in a mall that's on the Internet. It can all be customized by employee number, so that when I bring up my employee mall, it has everything that is of interest to me, including things related to my health care. A lot of employer groups are looking at this kind of concept in order to give more responsibility and choice to their employees.

What does this mean? For the payers this allows them to direct their employees to the places they want the employees to go. One of the things about the Internet is there's so much out there it's hard to choose and to filter. An employee mall for any kind of payer is a chance to direct employees and make it easy for them to get information from one central source.

What does that mean when it comes to pricing plans, which is part of the actuarial business? You can now get, in a sense, a virtual health plan. You may have a certain employee who has a chronic disease that's best treated by physicians in one place. Through electronic media, you can communicate and have contracts with that one place that is right for the employee.

When you think about the rider on experimental therapies and the fact that it's already being done in a paper-type system, where they're going out and getting contracts, you can make that into customized plans for employees. That may include specialty PPOs and centers of excellence. It includes broad program choice, which is very much in keeping with that democratization that I started talking about. It's a consumerism. At Tower Perrin, we've been talking a lot about the fact that what we started out in managed care really was an age of idealism, and we moved into an age of entrepreneurism. We're not really moving into an age of consumerism, where the consumer is going to drive the equation to a much greater degree than ever before.

Let's talk about the potential difficulties with all this. One is we already saw what I'll call state-of-the-art physician profiling like UHC. It's not the physician who's central to all this; it's the patient, employee, and the person. Is that information that the person is interested in? I submit it probably isn't. They don't want to know which doctor costs less in the aggregate or which costs more. They don't even want to know who has a better track record on ordering mammography. What they

want to know is when they go to that doctor, will they get better. That's what they want to know. I mean, it might sound simplistic, but that's what people are searching out on the Internet.

How do we get at that information? One of the problems is that we get at it through the aggregation of data. That requires a common medical nomenclature, which we really don't have. The ICD-9-CM and CPT codes are designed for financial reasons and they don't have some of the detail. They also don't have some of the accuracy that we need to give the consumer what they want in terms of information and what they need for that informed decision making.

When it comes to trying to aggregate medical language, we don't really have a common platform. Every health system and insurance carrier has their own computer system; everybody has different systems out there. Right now we're getting closer to the Internet as a common platform, but we're not there yet. Intel just came out with a press release about a new technique for confidentiality that will, hopefully, bring us closer, but we're not quite there yet. The whole issue of privacy is another major factor. No matter how good technology is to create a private interaction, there will always be that nagging doubt that it's not perfect and it's probably true that it will never be perfect. Then the individual has to decide how badly he or she wants that privacy.

There's a new and potential difficulty coming about. If you wanted to really be on the cutting edge, you wouldn't be here; you'd be at the annual meeting of the American Society of Human Genetics. That's where the real action is taking place. We are at the very beginning of a revolution—and I know that's an overused word—in genetic knowledge.

This summer I went to a briefing of the Human Genome Project. The head of research from Merck, the head of research from SmithKline, and the head of research from all the major drug companies were there. I was just there as a spouse, so for me it was just a free ride. What was interesting was that, with the mapping of the human genome, we are now at the beginning of being able to diagnose what I'll call presymptomatic disease and that was a term used at this meeting.

What do I mean by that? What I mean is that right now we might be able to test for risk for breast cancer with a certain gene. But what if at age 10 we could do a genetic analysis on you and say at age 55 you will get a heart attack? The other side of that coin is a drug company can develop a new drug and say, "If you have this genetic profile that says you're going to get a heart attack, we can give you this drug, which, for just $300 a month until you're age 55, will prevent that from happening."

In a sense, it's laughable, but in another sense it's reality. It is happening and, that means you're going to be sitting here at a meeting one day predicting the financial implications of getting this genetic analysis. It will predict the costs involved in treating this person for the next 40 years for this presymptomatic disease." Now, we don't even have a coding system for this. We don't have an

ICD-9 coding for presymptomatic disease, and I'm not sure that it's going to be that easy to agree on one, but the cost implications of that are dramatic. We also don't know what the effects will be of taking a medication for the next 40 years. This creates some scenarios of uncertainty. All of you are the people who are supposed to be able to predict that financial uncertainty, so you have your job cut out for you.

From the Floor: I had a question for Vic. One of the things that we're very interested in is *Financial Accounting Standard (FAS) 106* liability, which is this retiree liability carried by a lot of our corporate employer clients. Despite the Muhammad Ali quote, it seems to me that you're on the verge of a wonderful thing. You might be able to take a generation of baby boomers and through physician profiling and ETG grouping, you might be able to deliver into the retiree population a healthier group of people. That has some significant implications for your employer customers. I guess I was just very curious if the SOA or actuaries, in general, are willing to assign some discounts. Can we get them to assign some discounts for bringing in new technology and thus discounting the *FAS 106* liability?

Mr. Turvey: Can I speak on behalf of the industry?

Dr. Spiro: The accounting industry.

Mr. Turvey: I was never in public accounting, but I'll say a few things with respect to the impact of profiling on public health. Number one, we don't know the end result. When we profile these doctors, we profile them against UHC members, which are people that might not be UHC members a few years from now, and who knows if another company will profile them.

Second, we can safely assume that when we change a physician's practice pattern through this profiling that they're probably going to do the same thing for other non-UHC members as well, because doctors aren't going to practice differently just because they're UHC members. There will be some spillover effect for some length of time. I think actuaries are cautious people.

From the Floor: I thought that was a very good answer. It was very well said. One of the companies that we represent is a congestive heart failure (CHF) disease management company. It has this track record of reliably lowering admissions for CHF. They can actually get reinsurers to come in and say we'll guarantee savings on CHF if you hire such and such disease management companies. I guess Avondale is here. I'm not working with them.

Let's say one of the arms of your management profile was to get patients with CHF on ACE inhibitors and do mammograms and so forth. Those have quantifiable financial benefits. I guess it's just a follow-up comment. It's not really a question, but I applaud what you're doing and I think it will raise the quality of medicine, in addition to probably saving us some money, which would be nice if the lawyers don't all sue us in the interim.

Dr. Spiro: That's our more current problem in our industry along with the stock price. Take those CHF patients, as an example. There are some disease management companies that are doing wonderful things. If you take that savings and apply it over a large population it becomes a spit in the bucket. It actually ends up making very little material difference.

Ms. Lori Weyuker: I have a question for Vic. I noticed you have ambulatory care groups (ACGs), age-sex, and something called ETG. I've never heard of ETG, and I was wondering if you can explain what that is.

Mr. Turvey: I think there's probably about 80 people in the room who could explain it a whole lot better than I can. Anybody want to take a shot at that?

From the Floor: ETGs are episode treatment groups. They're a Delphi company called Symmetry in Boulder, Colorado. Symmetry has self-licensed that software. Basically what it does is it pinpoints events, such as the admission of asthmatics in emergency departments for asthmatics. Then it looks back in time, and then forward in time, and it groups all the charges of that person that are asthmatic-specific.

My experience with using the software and using ETGs and what's probably relevant to an actuarial conference is that it's very good at getting a qualitative handle on what's going on in your population to pinpoint diseases to manage. In working and creating these groups, our experience is it drops about 10-15% of the aggregate medical liabilities. So the aggregate claims and the ETG claims rarely flow appropriately.

Mr. Turvey: You can pick ACGs, ETGs, or age-sex? A medical director will just toggle back from one or the other and see what pops out of it. With the technology of ten years ago, all we had was age-sex adjustments, and you weren't going to get more than 30% predictive value out of that. We would exclude the noncontrollables like maternity rates, mental health, and substance abuse that were handled by somebody other than the primary care doctor. Then we'd take catastrophic claims and set them at $20,000 per year, per patient. Excluding these things, just about everything else is somewhat controllable by a primary care physician. Then we'd run our profiles.

From the Floor: I was also wondering how you chose those three particular models. For example, did you consider HCCs, or Pit model, or some other? Are there some other models that are available by 3M that do predictives?

Mr. Turvey: Through 3M?

From the Floor: Yeah, 3M has a product or a model I should say.

Mr. Turvey: I'm not familiar with it.

Dr. Spiro: There are so many grouper systems out there, and the perfect system just doesn't exist.

Mr. John W. C. Stark: We've talked a lot about profiling different kinds of models and ETGs. All of these can be used for physician incentive plans; they can shift the risks of physicians. I didn't hear much talk about that and I was just curious as to several things. What does the panel think the effectiveness of these types of arrangements are? What is the longevity of these arrangements? Are they a short-term thing or are they going to be around for a while?

Dr. Spiro: One of the dirty secrets of medicine is that physicians are people, so they respond to financial incentives and that's very well-known. I'd venture to say that they respond to financial incentives even better than to data. Having said that, a lot of the data that you saw from the reports are actually financial data. There's also more backlash to that. We clearly are seeing a consumer revolt against physician incentives. They perceive it to be incenting physicians to do less. Because of that, we're seeing legislation that limits incentives, certainly, in the Medicare regulations.

There's a limit to the kind of incentives you can use with physicians. I think that there is the potential to use those kind of groupers for incentives, but how they're used still is going to need a little bit more innovation. Let me put it that way: tie incentives much more to quality indices rather than to indices of saving dollars or saving days.

Mr. Turvey: I think you're absolutely right. I think the length of time that this profiling technology is going to be around is going to be a function of the utility of it. Is it well supported by the physicians? Is it telling them things about themselves they didn't know before? Our answers to that are, yes, absolutely.

In terms of economic incentives or disclosure, we've made it very clear we're not going say, "Here are the 200 best docs in St. Louis," like the reporters would love us to do. We've already been asked. Employers have asked us, and we're saying, "No, that's not the business we're in."

Second, we're not going to use financial incentives behind it. I'm pausing here a second because I'm thinking what can I say about our thinking that will not preempt an imminent announcement about UHC. UHC is shifting its whole basis of medical management from what you've seen up to now to a whole new theory, a whole new set of practices called Care Coordination. It is much more a matter of coordinating the delivery of health care than relying on such things as capitation and related incentive mechanisms like withholds, or our being in the business of precertifying and preauthorizing referrals and hospital admissions, except for a very limited few.

What we've found is a lot of these past practices, which have been common in almost every health plan in the nation, at one time had some usefulness. They truly did. There's a reason why days per thousand ran at 450 in Chicago in 1984. Anybody would be crazy to budget that now. Nobody in St. Louis is budgeting over 220. In southern California, days per thousand are in the 170s. A lot of these practices have certainly had their impact, but the curve has flattened. What we're saying is, when you have a 97–98% approval rate on referral authorizations, get

out of that business. You're just hassling people. You're creating back-end problems for your member services folks, and you're hassling doctors when only 3% is denied and two of that 3% is overturned on review.

We will soon be coming out with a nationwide announcement of the way we're going. It is truly just sort of an accident of timing that the tobacco attorneys are threatening to sue the industry out of existence. Because Care Coordination at UHC has been under development for about 18 months and this thing two weeks ago hit us all like a brick wall. I think the industry is moving toward retrospective profiling and quality outcomes as the incentive, and Care Coordination is the day-to-day mechanism. We're gradually getting out of the capitation business.

From the Floor: Can you say how much of your reaction to the precertification is a result of all the anti-precertification legislation coming out?

Mr. Turvey: There has been some unfriendly legislation. Missouri was one state, with House Bill 335, which was very antimanaged care. While I can't speak for the industry, I can tell you from our perspective as a big health plan, all we had to do was a simple cost-benefit analysis. If I put my accountant hat on, I'd say it makes no sense to be tying up this many full-time employees doing this kind of work. They're nurses, which are relatively expensive people, or they're medical directors. We said, "Why do it?" It really came out of a budget review process rather than legislative pressure.

We weren't having bad outcomes; we weren't getting sued, and we weren't having people take things to appeal at the state. We had some pretty happy members. We just unintentionally hassled them on occasion.

From the Floor: I have two questions. The first one is for Vic. What percentage of a physician's population or market share must you, as a health plan, be before profiling is effective down to the individual physician level?

Mr. Turvey: What percentage would we have?

From the Floor: If you're 20% of a physician's practice.

Mr. Turvey: You mean in terms of member months cut off?

From the Floor: Yeah.

Mr. Turvey: We're thinking, if you don't have 2,400 member months or 200 members during the course of the year, the data are not all that credible. You can still find quirky practices out there regardless of volume, but some of your trends aren't going to make a lot of sense with fewer member months than 2,400.

From the Floor: Assume you are able to find a physician who practices outside the norm and you decided it's not good. How much concern is there from the health plan standpoint of being sued by the physician for unfairly eliminating him from practice?

Mr. Turvey: The approach we take in reviewing somebody that was clearly outside the norm is to not only have them reviewed by our medical directors, but then go external. In St. Louis, we have a lot of specialists from Washington University. Some are respected academic types and we would take selected profiles to them and say, "Talk to this doctor (your peer) about it." They study the outcomes and the evidence for best practices. They use supporting medical literature. When it's clear to these outside physicians that a doctor just doesn't get it; for whatever reason, they refuse to change. I think you're pretty safe in releasing that doctor from the network.

I'll give you an example. There's a pretty high correlation between utilization in radiology if a primary care doctor has an x-ray machine in his office. I can prove that. I saw that in Grand Rapids, Michigan, in a health plan I ran 10 years ago. We did that in the first two years we did profiling.

Dr. Spiro: One comment about that. I agree with you completely. If you don't have enough numbers, you can't do a successful profile and that's a potential problem. I also think that you can get around the legal problems if your goal is to make it public information and then let people choose who they want based on that information. You're not taking away a contract, so you don't get into those legal issues. The issues in terms of things like radiology, where a machine is in the doctor's office, are actually a lot more complex. Doctors are always careful and have their own methods to treat their own sense of uncertainty. If you have a machine in your office, it's sometimes not the financial incentive that drives you to do more x-rays. Sometimes the incentive is just to be sure.

From the Floor: If you do make it public and then you acknowledge that you know the person practices outside the norms and those norms lead to maybe a bad outcome, I wonder if that creates more liability that United Health Care might be looking to get away from.

The last question is you mentioned presymptomatic identification or testing. How soon do you think we are likely to be able to do that, and how realistic is that concern for us?

Mr. Turvey: Soon.

Dr. Spiro: It's totally realistic. National Cancer Institute is predicting that it will be within the next three to five years.

Mr. Robert C. Benedict: We're a fairly significant HMO in New Mexico. I was just wondering about Medicare risk adjusters. As you probably are aware, effective January 1, 2000, payments from Medicare through the Health Care Financing Administration (HCFA) will be based on the personal injury protection (PIP) diagnostic cost group (DCG) model that was developed up in the Boston area. I don't know why it was isolated to that area of the country, but I hope there's no geographical prejudice there. Ultimately, it is evolving into something like the hierarchical cost models, which take not only inpatient, but ambulatory diagnosis

codes into account. Any comments on technological applications to Medicare risk adjusters?

Dr. Spiro: Can you clarify what you mean by implications?

Mr. Benedict: We want to maximize our payback from HCFA and Medicare. Do you have any tips?

From the Floor: What do you think about how to handle this technologically? What do you think about the evolution from PIP DCGs to HCCs? Has anybody had any success with their provider groups in getting all the information necessary to get their proper payment? According to our data, there is a minimum of a 6% decrease in their payments? Help us cope.

Mr. Turvey: Bring us in as consultants. We'll help you. I have just a quick comment on HCFA. Look at the disparity in Medicare reimbursement from one market to another. I think HCFA could solve an awful lot of its problems without any further technology. Look at Dade County or Ann Arbor, Michigan and their reimbursement rates. They are so generous. In Ann Arbor, you have to really try to not make money in a Medicare risk program. There are so many other counties in so many other states where you can't find a way to reach break-even. It takes years and years to slowly modify reimbursement in those markets. I think it is ridiculous because people are making a killing in some markets and could never avoid a loss with a similar program in so many others.

From the Floor: So the advice is to expand our marketing territory to Ann Arbor, Michigan?

Dr. Spiro: It is not a bad place.

From The Floor: My question is about diagnosing presymptomatic disease. Many diseases are believed to be caused by lifestyle and habits. We can look at genes and say that a certain individual will develop a certain disease down the line. Is it strictly determined by genes or is lifestyle a factor? How do you reconcile that?

Dr. Spiro: It's just a matter of putting you at risk. In other words, you all know people who eat whatever they want and stay thin and have low cholesterol. They have a genetic predisposition for that, so it ends up being both.

Mr. Roy Goldman: I agree with most of what you said. While you wouldn't give out the 200 top physicians in St. Louis, I guess somebody could ask about the bottom 200 physicians in St. Louis?

There was a seminar earlier this year sponsored by the SOA on managed care effectiveness. One of the sessions dealt with statistics that had come out on health care plans and whether they influence the way individuals choose health-care plans. There was one session, in particular, which profiled a very controlled experiment in a very large company. We found that, if anything, the statistics on which health plans had the most days per thousand were specialists that had the most services.

Those are the ones that the members wanted to choose and so did the employers. What we think is the bottom 200, our members think is the top 200.

Dr. Spiro: The fact is that the amount of money spent on alternative medicine is massive. The reason for that is that the medical profession has failed in many ways in communicating with people and patients. Those hospitals with the highest utilization might reflect that they are just spending more time with people. That has been a real problem for medicine.

Mr. Turvey: It seems like most of the HMO performance measures we see these days use faulty measures of customer satisfaction. I think they're worthless. They're usually too outdated. I don't think they're all that useful because of the way the questions are put together. What does somewhat satisfied mean? These plan-to-plan comparisons are awful. People aren't going to get anything useful or accurate from them.

You raised a point about profiling. We give information out, and I don't think I would ever give out the unit cost utilization information from Pathways. There are some measures that we may want to go public on, like saying here are the best doctors in terms of the clinical profiling measures. In clinical profiling, we're saying to a doctor, "Go find the members that fell through the cracks and treat them. After some grace period get your act together, we'll start producing mammography rates and publishing them."

Another thing that's interesting is the differences from one city to another. I was amazed at how large they can be. I mentioned prescribing patterns, but look at mammography rates as an example. There are differences from city to city that probably don't astound you guys as actuaries. You live in that world, but it amazed me. There are newspapers like the *Post Dispatch* in St. Louis that are anxious to publish that information. They come to us asking, "Can you just aggregate it by city, so we can publish how far we have to go to catch up to Denver or wherever?" That kind of release, on an aggregated basis, will happen earlier.

Mr. Goldman: You also didn't mention the Gateway Purchasers for Health and other employer groups that are putting together those kinds of statistics as well.

Mr. Turvey: Right, coalitions like to do it.

Mr. John G. Finley: Physicians have a very rigorous training and they also join professional societies to try to keep a certain quality of care. It occurred to me just now that insurance companies, governmental agencies, and the public at-large are forcing a higher standard of quality upon physicians and hospitals. There's something happening between all of the different physician practices and all of the different hospitals that demand a higher level of self-policing, a higher level of internal qualities in health. What do you think about that, Alan?

Dr. Spiro: As a physician I'll say, "Thank you." Of course, I don't believe it, but I will thank you anyway. One of the things about the medical profession is that, for the most part, it has been very autonomous. There has not been any kind of

policing or review on an on-going basis. One of the sad facts is that when you look at just a claims database of how people practice medicine, you find that they're practicing the way they learned when they were trained and they haven't changed and they haven't kept up-to-date in their practice, unfortunately.

We did a study years ago of the way people treat ulcer disease. When I trained, ulcer disease was considered an acid disease. Now it's considered an infectious disease. If you look at a pharmacy claims database, you'll find that the majority of physicians are still treating it as an acid disease, despite the evidence to the contrary. Medicine, as a business, is related to volume and productivity. Unfortunately, it does not allow time to think. I mean that might sound awful, but that's the truth.

I've often said that the goal of medical management was to turn reflexive behavior into cognitive behavior to remind people who know how to think to think again. That is the goal of medical management and that's, in some ways, a sad commentary, but it's a very human trait. In many ways, it's not surprising. It's the same problem that airline pilots have. They're intelligent people, but they get into routines. How do you take people away from the routine and get them to think? That's a real challenge.

From the Floor: I just wanted to piggyback on that question's last comment. The *Philadelphia Enquirer* did a five-part study on drug companies and how they interact with doctors. There are two things that they found out that have always stood out to me. One is that 60% of doctors determined which drugs they would dispense based on drug company literature or paraphernalia and not through research studies. I think this study was presented in the *New England Journal of Medicine.* There is a drug marketer for every 12 doctors in the U.S. Imagine if we had that for used car salesmen. There is one other story that has not changed in the last five years. The doctor who used to run Quamedis is well-known. He said the revolution in health care is about research that already exists that is not actually being filtered down into medical practice.

Dr. Spiro: I'll give you one other statistic. Seventy-five percent of the time a patient asks for a specific drug from a doctor, he or she gets it. That goes back to my initial point, that the best way to manage physicians is through their patients. I'll give you one other example of that.

There was an article in the *Journal of the American Medical Association* about three or four years ago that looked at mastectomy rates. It appeared after Nancy Reagan had a mastectomy. The article said that rates went through the roof. The striking thing about that is, at that time, state-of-the-art therapy for breast cancer was lumpectomy, radiation, and chemotherapy. Physicians supposedly knew that, so we're not talking about just pharmacy medication. They were talking about major surgery. When a woman went up into the surgeon and said, "I want the same thing that Nancy Reagan had," they said, "Okay," and did it. It's very striking to me.

Mr. Turvey: You must get the member's head in the game to keep costs in line. Most of the time they are going to make the decision. The doctor feels like they're in the middle. You might be working off of a pharmacy formulary. The member says that he wants Claritin and doesn't want to pay more than a $5 copayment. That's why UHC and a lot of other plans have come out with the three-tier copayment.

In the case of the three-tier copayment, the drug is now going to cost $25. That sets up this great conversation about value. I had my internist tell me the three-tier program is the greatest thing we ever came up with because now he can have a balanced conversation with the patient and say, "I can get you one drug for $5, or, if you want to pay more, I'll write you a different prescription, but it's going to cost you $25. Therapeutically, they are the same." He said it changes the whole dynamic of conversation.

But we can't go forever without having the economic incentive in there to get the members ahead in the game. Just telling the physician to say, "No, I'm not going to write this prescription," is nuts, because half of them will say, "I'd really like to, but the HMO won't let me." They really should not say that, but that's what happens.

TABLE 1

United HealthCare of the Midwest, Inc.

Pharmacy Utilization

Fill Date : Between '1998-01-01' and '1998-06-30'
Paid Date : Between '1998-01-01' and '1998-06-30'

Product: COMMERCIAL
Specialty: 00 Internal Medicine
Provider #:
Address:

Average patient age: 45.9
Percent Males: 53.6%

Rankings:			
Number of Members	4	of	1596
Expense per Member	548	of	1596
Nbr of Rxs per Member	380	of	1596
Total Rx Cost	7	of	1596
Total Rxs	2	of	1596

	Nbr of Members	Scripts Filled	Avg # of Rx/Member	Ingredient Cost	Avg Rx Cost	Avg Cost/ Member	Generic Drugs	Dispense as Written	Formulary Compliance
Total for Physician:	670	6000	8.96	$172,961.44	$28.83	$258.15	81.7%	2.4%	87.3%
Avg for providers:	73	555	7.62	$18,336.78	$33.03	$251.72	75.2%	3.0%	91.3%

MOST COSTLY DRUGS

Provider: **AD12345 Doe, M.D., John**

Specialty: Internal Medicine

Rank	Drug Name	% of Total	Avg Cost per Rx	Rank	% of Total	Avg Cost per Rx
1	PROZAC	6.9	100.54	**4**	4.0	83.81
2	PRAVACHOL	5.5	65.27	**2**	4.5	65.17
3	ZOCOR	3.9	77.66	**12**	1.4	79.09
4	ZOLOFT	2.6	62.45	**18**	1.0	56.09
5	PEPCID	2.3	73.79	**39**	0.5	81.92
6	ACCUPRIL	2.0	27.50	**20**	1.0	28.85
7	CLARITIN	2.0	55.95	**5**	2.9	53.77
8	VASERETIC	1.9	49.73	**231**	0.1	37.11
9	LIPITOR	1.8	49.59	**3**	4.0	59.00
10	PREVACID	1.8	101.62	**1**	5.1	95.51
11	NADOLOL	1.8	25.48	**109**	0.2	23.85
12	VIAGRA	1.8	56.13	**55**	0.4	54.62
13	BIAXIN	1.7	61.48	**14**	1.2	57.79
14	IMITREX	1.7	96.06	**7**	2.2	113.49
15	PAXIL	1.7	59.88	**8**	2.1	58.87
	Totals	39.4			30.6	

MOST FREQUENTLY PRESCRIBED DRUGS

Provider: **AD12345 Doe, M.D., John**

Specialty: Internal Medicine

Rank	Drug Name	% of Total	Avg Cost per Rx	Rank	% of Total	Avg Cost per Rx
1	NAPROXEN	3.1	12.12	**60**	1.0	11.76
2	GUAIFENESIN	3.0	6.47	**236**	0.3	6.08
3	ATENOLOL	2.8	5.07	**87**	1.8	3.97
4	TRIMOX	2.7	7.4	**71**	1.5	6.42
5	PRAVACHOL	2.4	65.27	**2**	2.3	65.17
6	PREMARIN	2.2	13.39	**226**	1.8	14.61
7	ACCUPRIL	2.1	27.50	**20**	1.1	28.85
8	SULINDAC	2.1	19.20	**173**	0.2	17.68
9	NADOLOL	2.0	25.48	**109**	0.2	23.85
10	PROZAC	2.0	100.54	**4**	1.6	83.81
11	HYDROCHLOROTHIAZIDE	1.9	2.75	**190**	1.1	2.38
12	GLYBURIDE	1.7	18.16	**49**	0.8	18.46
13	ZOCOR	1.5	77.66	**12**	0.6	79.09
14	VERAPAMIL	1.4	16.78	**47**	1.0	13.65
15	CYCLOBENZAPRINE	1.3	8.86	**131**	0.5	8.26
		32.3			15.8	