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Session 83PD
Actuarial Model Development for Defined Contribution Plans

Track: Health

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Summary: Panelists discuss the development of actuarial models for defined contribution (DC) health plans. Topics include building appropriate models for these plans, determining assumptions for the models and monitoring actual experience versus expected model results. Attendees learn how to develop and validate defined contribution health plan models.

MS. STACEY MULLER: We are going to talk about actuarial modeling for the development of DC plans this afternoon.

I'm an actuary with Milliman USA. I've been consulting for about 15 years. I've done both employee benefits consulting and health-plan consulting. At the moment I do a lot of work with insurers and some managed care. I've been doing a lot of work in this particular area. I've been doing medical savings accounts (MSAs) for the past five or six years with various companies.

Peter Daggett is a director of actuarial services at HealthMarket. His experience is with consulting and in health plans. He has a variety of experience.
Chris Stevens is a risk management actuary at Destiny Health. He's responsible primarily for the financial reporting for Destiny Health. They are both going to talk about their products' design details and the way they model some of the pricing aspects. My part of the presentation is going to be an overview of the consumer-directed plans versus DC. I then will talk about unique rating characteristics for these products.

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Note: The chart(s) referred to in the text can be found at the end of the manuscript.

DC in its broadest concept is a fixed employer contribution of some sort where there is employee choice that's related to that contribution. However, this concept of choice has been around for a number of years. As long as I've been consulting, I've worked on employee-choice plans. Therefore a lot of the issues related to employee choice are ones that we've talked about a lot in the past.

The focus of my presentation on the modeling part will be to look at consumer-directed plans where there are unique rating characteristics that we need to take into account. I do want to mention that from a perspective of a true DC plan where the employer makes a commitment, gives you an amount and perhaps a menu of choices and even lets you go to a market outside of the employer to buy a plan hasn't been fully implemented. Few companies truly use that strict of an approach to their flexible benefit programs. Many times they are tweaking contributions or relationships. If employers offer a new plan that they want to encourage people to join, they don't give a true actuarial difference to the prices for those plans. They adjust those plan prices to encourage those types of behavior changes.

To focus on consumer-directed plans as an overview, the common theme of these plans is consumer choice or some type of control over benefits. New models designed are usually a spending-account approach—more of a catastrophic health-care reimbursement account (HRA) combination or MSA approach.

There are other aspects, which I think you'll see in the Destiny and the HealthMarket approaches, that are more unique and use some aspects of design to address such issues as episode-of-care products or fixed reimbursement, things that create a consumer matrix for the purchase of health care.

One of the things that Peter is going to talk about within his company's product line is what is called the SMARTFUNDs. We're talking about giving consumers a fixed budget for an episode of care for a particular type of treatment or disease. It's something that says to them, "Here's your budget. Here are your alternatives." You need to decide which trade-off is best for you and go from that approach.

Some consumer-directed plans and spending-account products typically have the high deductible. They have an HRA with a balance that rolls over. The employees usually pay the difference between the HRA and the deductible. The HRA services may vary by plan—for example whether the drugs are included or excluded. Usually there's some type of Web site to track accounts and provide health-care information or various mechanisms to give consumers resources to decide what is best for them and to help them to decide what kind of purchasing decisions they have to make.

I'm going to move on to why we need some new models to look at these particular products. There are several unique rating characteristics. One is the reimbursement account itself and any fixed reimbursement that you're doing inside the plan. You have to model what these reimbursement accounts will do primarily as they are

changing utilization. How much will the behavioral change happen in the product? What aspects will it change?

What the consumer-directed plans require is a more complete look at the entire employer/employee cost basis. You're looking at a total program basis and trying to determine your impact on the total program and how that program costing is allocated to employers and employees through cost sharing, contributions or anything that's related to that so that you can get a total picture. The HRA types of approaches with the account balances, the rollovers and the other aspects related to that require you to look at the whole picture.

When I consult with employers, so many times the employers are focusing on what they have to pay. What portion will they pay and how much will it change? I see that now, as we talk about these types of plans, many employers also are interested in how much their employees are going to pay and whether they're going to be the same or better off. That's something that is an important part of looking at a new model.

Selection is always going to be a part of this regardless, but projection of the cost is another area where we felt that we needed a new model to look at these products because when you are talking about that reimbursement account, there's a change over time. You're going to have an account that rolls over and that will grow over time. Rightly so, the employers and various others, even the carrier who is trying to price this, need to know how big that account balance will grow to be. Will there be any limitations on that account balance? What should happen five years from now that might be different from the price given for the next year? Do they need to make any adjustments for that?

Regarding characteristics on the reimbursement account, the account creates a corridor. If you're looking at fixed reimbursements per episode or per service, you need to have a good definition of what that will look like. Especially in an episode of care, when does it start and when does it end?

If you're talking about a fixed reimbursement per service, you need to have a good definition. Is it a common procedural technology (CPT) code? Is it a whole hospital admission and all the ancillary services? It impacts your utilization and your price for service when you're trying to do modeling. As I said before, you need to track the account balances and episodes over time because in some cases the account balances are rolling over, and the episodes of care may go over the top of a plan. You need to decide how that will be handled, as well.

When we do our modeling for these types of products, we have found that there are several characteristics of the plan design that should differentiate what kind of utilization adjustment we're going to make. We've created a model that has a couple of items that you can check off. Who owns the account? Is it an employee account or is it an employer account? Is it funded? Is it not funded? Is it portable?

Can employees take it with them upon termination, or does it stay with the employer? What range of services is covered by the account—for example, prescription drugs or dental? All those items have to be considered before you decide what the utilization adjustment should be. As I've said, our model has been created to try to look at several of those items to give a range of those results.

Do all the account dollars credit toward the deductible? This is an issue that I always have to go over with clients. In some cases, if you are going to let them take things like LASIK surgery out of the HRA, but not count it toward the deductible, that has an impact on your effective deductible, and it could have an impact on your utilization.

The approach we've taken is to say that if we had an HRA, and we have a deductible and a corridor in between, let's call that our effective deductible and then let's model that over a five-year timeframe to see what happens as it rolls over and see what kind of impact that it could have on utilization.

Chart 1 shows an MSA versus an HRA. The effective deductibles are running across the top. Remember that the effective deductibles are the difference between an account balance and the deductible.

For a $3,000 deductible plan at the start, we think that with no account balance, the HRA and the MSA would have a similar utilization impact or a similar viewpoint from the employees' perspective. But over time, if the HRA is going to have a rollover and start to have a larger account balance, we expect that the effective deductible goes down because they have enough account balance to cover the whole deductible, if not more than that in some cases.

Some of this is related to the fact that we originally had some MSA experience and some research that we had done on MSA approaches that we had tied in from our utilization reductions. We felt that the HRA approach probably would not produce as much of a utilization change simply because it has some of those issues such as if it's not funded, the employee may not feel as much of an ownership in that account. It's not portable, where the MSAs are portable and fully funded. We think that there's a difference in how the employees will view those two different products, so while the MSA may have a balance that grows, we don't think it has as dramatic of an impact on the effective deductible as an HRA will have.

Let's take that chart and flip it to look at some illustrative utilization adjustments saying that if we had a standard plan with no other changes to it and all this being relative to one, the MSA stays under one, but it does go up over time based on the fact that the account balance goes up (Chart 2). The HRA, because of the way it's run, may go above one at some point. We can't say exactly where these go on the chart because there's not a lot of experience on it yet, so this is an estimate of where we think it might go and what kinds of ranges we might be looking at.

The other issue of the utilization adjustment is that it's one thing to say we think that it's going to have a 10- or 15-percent impact. Another issue is then how to price it for that impact. We don't expect the expensive people to have a significant change. We expect change to be in the middle buckets and the lower buckets with people either lowering their average charge or changing a treatment pattern, or going to treatment that they don't need that wasn't necessary before.

Given that, we've changed the slope of the claim probability distribution (CPD) with the adjustments to recalculate the plan costs after utilization adjustment and then we can look at account balances, the benefit leveraging and employer/employee costs off of that adjusted CPD. We don't have to try to estimate the benefit leveraging. Because we've used natural CPD, it's automatically built into the adjustment and allows us to do the things like track the account balances over time. A CPD is an average annual claim in a year for a particular member and the probability of having that particular level of claim.

Chart 3 is an illustrative example of changing the slope. Basically the first side is an unadjusted CPD, and the second side is an adjusted CPD. You can see what I'm getting at, where the lower ones are changing and the higher ones are not.

The employer-versus-employee-cost analysis is important to employers. We're looking at employer cost and then employee cost of all those different aspects. Again, the basic issue is that we wanted to look at the whole picture. The model we work with now does all the pieces, so that we always come back to a total program cost. We can always go back if the total program cost is this and doesn't change as we go through our scenarios and the different options. Then we can see where all the dollars are going, whether they go into the account, into cost sharing or from the employer.

The other part of the model that we've been using is a projection, mostly because we wanted to look at the account balances. We had a couple of clients who wanted to see what would happen over a five-year period and wanted to have a feel for how big account balances could potentially get. We wanted to do a projection on this. The issues that we had here were not only a straightforward projection of how much is rolled over each year, but keeping in mind that in year two, we now have changed the effective deductible, which means we've changed the utilization. Basically we're repricing what we think that CPD looks like in each of the subsequent years as well.

The model that we work with now does that in a process that has uncertainty distributions in it, so we wanted to make sure that we had something that indicated what was happening to the probability distributions because the claims are not going to be independent from year to year (Chart 4). The other issue was if you had no claims in one year, you'd have a stronger probability of having no claims in year two and subsequently in years three, four, and five, obviously over time that being averaged back to the mean and trying to make sure will it eventually regress

back to the mean.

We wanted to introduce the fact that not all of these are independent claims. From year to year, the claims you have in a prior year are somewhat predictive of the claims you have in the next year. This is not always true and obviously not 100 percent, but the model we designed was to take into account some part of that uncertainty.

In the projection, we have trends; we have interest on the account balance; and we don't assume any terminations. It's basically a closed projection. The group I start with is a group I'll end with in five years, and obviously turnover can have an impact, but at this point, the model was doing enough other things that we didn't want to try to take that into account as well.

The other assumption we made is that there were no employer savings for forfeited accounts. Again, there's going to be some of those. There will be forfeited accounts; there will be monies that will come back. But at this point, it's difficult to determine how much that might be and exactly what it's going to get used for. Will it go back to the employer? That is a function of how the plan is going to be designed and administered.

The final rating characteristic that we have built into our model of selection and one of the things we spent some time looking at was making an estimate of what we think the selection is worth on a total plan basis. We offer choices, so there's going to be some change in the overall program cost. However, we also wanted to be able to look at how employees would make their choice. It's difficult because you can't take into account all the issues, but we wanted to have an automated way of estimating the employee choice in a multiple-choice setting.

We assumed that the employee choice would be based on the expected cost at various claim levels. That various cost relates back to looking at a total program cost. We wanted to make sure we took into account the premium, the cost sharing and the portion of the year-end balance that was still around because that's something that makes a difference when deciding whether to stay in that plan or not.

Then we recalculated cost based on distribution of employees to produce a selection. The selection is produced by giving the model what the plans are, the model figures out what the cost sharing is, and then we'll produce for you a distribution of who will pick what and make an adjustment to their CPDs to account for that. Obviously whenever we look at the results that come out of that model, we then have to consider the softer issues, such as provider network. If the provider network for different plans is such that one is tight and one is loose, you might get a different combination of selection.

You also need to worry about the fact that employees can't or don't always

accurately predict their costs, so while the model is going to figure out which is the lowest-cost scenario for each person at a different claim level and use that as the driver, it obviously can't quite work that way because the employees are not going to be perfect predictors of their costs.

The level of education regarding consumer-directed plans makes a big difference because the extent to which they understand the plan and understand the long-term aspects of the plan can make a significant change to what their selection pattern will look like, as well as their interest in making this decision over time. All those things are in addition to anything that a model can do at this point.

The selection example in Chart 5 starts with a PPO with two HRA options alongside of it. It shows a couple of plan-design scenario pieces with an estimated plan distribution. The model we have would look at the cost and the deductible, the coinsurance and the contribution that is tied to each of these plans and then make this decision as to who would choose which plan. The idea is that once it is redistributed, we could figure out what the selection adjustments were and get an overall average cost to the plan for the selection issue.

We've also tried to look at whether it makes sense in each plan that the selection for the PPO is 36 percent over an average of one versus the HRA two, getting a selection of 0.5 percent, those being the relative morbidities of the individuals selecting each of those types of plans.

As I said, what we try to do is adjust the CPD by claim level taking a few different points—we do three or four different points along the curve—and redistribute based on where the lowest-cost plan is versus the highest-cost plan. We redistribute the people in each claim level and say that this is how many people are in each one of those options. But then each of these distributions by claim level is what's used to calculate that selection load. It goes in on a claim-level basis as opposed to an overall observation that it's 5 percent. It's not being applied just on our aggregate basis; it's being applied back at the CPD level.

Those are the details of the pricing that we do and the model that we use at the moment to do these kinds of products. Peter is going to talk about his product, some of its unique aspects, and how he's worked with that over the past few years.

MR. PETER BURT DAGGETT: I want to take a few minutes to go through the HealthMarket approach to consumer-driven health plans. We'll take some time to look at our short-term and long-term goals for this plan and dive right into what our plan design is and what we had to model. You'll find that the way we modeled most of this is basic and traditional. I'll then talk a little bit about our future and what we would like to do to continue to drive costs down.

Our most important short-term goal is to get people used to consumer-driven health plans. Using the tools, understanding the ideas and going out and finding

information are important. We also need to immediately offer a lower-cost alternative to get people to try these plans out. We target employer groups with two to 200 employees, 100 percent fully insured. Achieving stable premiums through product-design underwriting disciplines is short-term and that will transition into our long-term goals. The idea is once you get the people used to these plans, change your plans. Get the plans tighter and get the consumers more involved in the plans. That's what we're trying to do. The hope is that as we do this, it will continue to control utilization, keeping costs down and changing the way health care is provided.

The one thing I'll apologize for is all we have is an indemnity plan. We are a basic indemnity plan. You're going to see we have deductibles, coinsurance and maximum out-of-pockets. It's all about maximum allowable charge (MAC) schedules. Probably the most important part of our benefit is it's our first introduction to giving people a limit and giving them something to go shop with.

We'll talk a little bit about our spending accounts. We have two types of spending accounts. One is called our StartWell account. It's basically about preventive services. The SMARTFUNDs are about episodes to care. I don't talk about this anymore in my presentation, but HealthMarket realizes that catastrophic events happen, and no matter what we do, catastrophic events are going to be part of health care, so we cover them fully. We waive the deductible and coinsurance on catastrophic events.

Chart 6 shows our plan design. Your basic deductibles and your coinsurance were designed to compete against the PPO. Regarding maximum out-of-pockets and maximum benefits, you'll notice no differential. We are not a network plan. We use a network to do all of our work and base all of our limits, but we're not a network plan. We don't hide it from our members, but we don't tell them, "There's a network. Use the network."

We're going to talk about the StartWell plan. Usually we sell $1,000 accounts with the $2,000 family limit on services. Our SMARTFUND is an optional rider. We'll talk more about that. We have individualized spending accounts and allowances based on medical procedures and conditions. We have a drug benefit, but we haven't done much with it. The drug benefit is through Medco Health and is the 10/25/40 drug benefit.

They are before the deductible. Before we start applying any plan design, we take either the allowed amount from the contract or the billed amount from a noncontracted facility, bump it against our MAC, take the lesser of the two and then start giving you benefits. There is a great opportunity for balance billing. The deductible is not included in the maximum out-of-pocket.

Let's start with the StartWell account. This is first-dollar coverage for preventive and routine care. It's fully funded from a fully insured benefit and has no external

banking components. It's built to support wellness and preventive care. There's no real danger to the member. If you use up your entire account, we roll you into your deductible and coinsurance indemnity plan. The account balance does roll over. When we talk about what we model, it will be important for you to note some of what Stacey talked about comes into play. As I'll keep saying, MAC is our benefit. Even if you have first-dollar coverage, if you go somewhere that is charging above our MAC or has a contract above our MAC, we are not going to cover it, so it still doesn't come out of your account.

What is MAC? It's the essential theme in HealthMarket products. It is a set amount that we will pay for a covered service based on provider-contracted rates. We'll talk about how we model that. It's simple. It's specific to employees based on their home zip code, so we vary it by region, but it does not vary by provider. We'll talk in a minute about how we publish this information. Again, this is consumer-driven health care. If we're going to put a cap on a person's benefit, the key is showing them that cap and where they can go, where their safe providers are.

It's 100 percent based on CPT codes—to assign your MAC. Even though we're not a contracted plan, we use the network. We take our contracts, analyze them and try to make a benefit that is adjudicated the same way our contracts are. We want to cover 70 percent of our contracted doctors. We can use the term tiered network, but we don't use that. What we're doing is forcing you to the lowest-cost doctors.

What's good about it is on your out-of-network services, you're forcing your costs down to a lower cost level. There is no benefit differential in out-of-network. There is simply the MAC restriction. What we're trying to accomplish is taking the higher-cost providers, and we're trying not to shift the cost to consumers. We're trying to get consumers to understand that they need to shift the utilization to a lower cost provider when there's no differential in treatments.

We're not a network-based product. We try to build it so 70 percent or more of our contracted providers are at or below the MAC level. The key to consumer-driven health care is giving the consumer information. We have nurse lines and health coaches, just like the traditional PPO. On top of that we give you information.

Suppose you need to go to the doctor for a normal office visit. You want to find a good doctor who is safe in your benefit. You enter your member number and pull up normal office visit. You put in a 10-mile radius, and the system pulls all the green doctors—what we call the safe doctors—in that area. It will tell you who the not-so-safe doctors in the area are. It then gives you links on each of those doctors to information on the provider. It will give quality statistics. If it's a hospital, it will bring you all the hospital statistics.

I'm not going to pretend that this is my expertise, but we have a fantastic Web site that is going to tell you when you're going to have a MAC gap risk. It will tell you which of two doctors is rated higher. It will also give you some information on

prevailing bill level in case you want to go to an out-of-network doctor, and now you make the choice. That's the whole idea.

The other thing to note is all this information is also available on the phone. We have a full customer-support line. You can get the same information. The Web site will also steer you through specialty procedures. For example, if you're going to an inpatient hospital, what type of bed day is that? It's going to give you a lot of information.

Right now, we're filed in seven states. Let's take Texas, which is the biggest state we're selling in. We have 16 MAC regions within Texas, so this information will be different in 16 areas. How many areas we're going to build depends on the state.

The only way a facility or a physician will get a green sign is if it has a fixed benefit, not a percent-off-charges contract, and it's below the MAC. It will get a green for that. It's specific to the procedure or the types of procedures—they're groups of procedures. It'll get a yellow if we can't be sure. Yellow means we're not sure, usually for percent-off-charge contracts. A red will indicate that if you go there, you have a significant financial exposure. We're not going to say for sure. It's impossible to say for sure.

We're guiding information. We have an entire appeal process, which handles cases where someone went to the Web site, which said it was green, and went and were charged. Usually what you'll find is it's a rarity or that the customer used a certain customer service tool wrong.

We could spend a long time talking about the last piece of our benefits. This is our SMARTFUND product. It's our episodes-of-care product. It's first-dollar coverage for specific procedures and conditions. There are no deductibles and no coinsurance like the StartWell account. Let's give the example of pregnancy. If you buy our SMARTFUND and get pregnant, you're going to get an allowance. If you keep your spending within that allowance, you're not going to have any exposure deductible or coinsurance. Once that allowance exhausts in our current product design, you're going to go back to the deductible and coinsurance. The key to this is it's adjusted for geographical area, age, gender, and most importantly complications and comorbidities.

I don't want to answer any questions on that. It's complex, and right now we have developed 377 episodes. We've just sold 12. We sold what we call our 12 pack; we're going to sell more. The whole idea is to get the consumer used to thinking about the entire episode rather than the procedure-by-procedure base. That gives some opportunity to control utilization. Where our MAC controls utilization on a one-by-one code. we're looking for ways to control utilization at a much higher level. It also gives us an endless number of products. We'll talk a little bit about that in the future.

We had to model two things: benefits and pricing. We built a plan design that's basic to compete against the traditional PPO and use our consumer-directed health plan features. We talked about MAC. Again, this is a simple analytical process of taking our contracts in an area, analyzing them and coming up with an adequate benefit based on those contracts.

I keep referring to the contracts and keep saying that we're not a network-based product. I think that's important to note. It can contradict itself, but when we go out and sell this to groups, we do not sell it as a network-based product. The bottom of our ID card usually says PHCS on it. We had physicians who looked at the card and had no idea who HealthMarket was until they found that PHCS. But it's not a network product; there's no differential in and out of network.

The SMARTFUND allowances do two things. The first is to identify how to break the entire medical world into uniquely defined episodes of care. The second is to model the appropriate risk-adjusted allowances. We do that through regression, and it's a huge process. It could be an entire session on its own.

Our pricing links well to some of what Stacey has spoken about. Our base benefit is traditional pricing methodologies. We're lucky we have this thing called the MAC. It makes choosing a unit cost point easy. We either have our average network discount, or average network charge, or it's limited by this MAC amount so it makes choosing easy. We use utilization assumptions that are close to a traditional PPO product. We haven't made any assumptions that it's going to lower cost. It's more a matter of shifting the utilization to lower-cost providers.

I'm going to skip the prescription drugs. It's a basic benefit that is priced in a traditional fashion. The other two things, which are the StartWell account and the SMARTFUND account, are basically creating a unique CPD to those and modeling first-dollar costs. The point here is the more things change, the more they stay the same. You can't model these any differently. All you can do is introduce the information to the consumer. That's what we're based on.

How are we doing? We became a fully insured plan in May 2002. We just turned our first two months of renewals. That's closer to 3,200 employer groups right now and closer to 40,000 members. We're closer now to $90 million in annualized revenue. The medical-loss ratio seems to be performing as expected.

We have two great statistics. We just had our first two months of renewals. We've renewed 87 percent of our groups in the first two months, and 80 percent of our members rolled over in their StartWell savings accounts. Talking about the savings account, one of the things that's important that Stacey mentioned is that you're going to roll money over. When we went to price this, we used some of the modeling that Stacey talked about and asked what the average account is going to be over a two- or three-year period. If you buy a $1,000 account, we may model it at $1,267 because we know that we have to model it to have more money. Again,

this is a fully insured benefit. It's hard to think of as an account. That's why we don't call it an account anymore. We call it a StartWell. We don't call it a savings account. It's not your savings account; it's your StartWell account.

MAC seems to be working as expected. We're in the process of tightening up MAC because we think that we set it a little too loose as we started. I guess we were scared. You don't want to bring that benefit too low, but I think we gave up a little bit of opportunity there, and we're resetting it. For example, I think our physician MAC 85 percent of the time was at or below. We're in the process of tightening that up.

What's next? We want to continue. As I said, our long-term goal is to get more products out there, to get the consumer more into the decision-making process. We'll talk about employee-choice suites. We want to bring them into the buying decision, not just the point-of-service decision. We want lower MAC options and to keep tiering the network. I hate to use it, but it's what you're doing.

We need to do more with episodes of care. We just finished a project to take a large national database and split it up. We have identified more than 377 unique episodes of care and were able to capture 91 percent of the medical spending in that modeling. We are ready to go. I don't think we'll ever sell 377, but it gives you an endless variety of products to sell.

The employee-choice suite is a basic concept. We're going to give you three plans. The employer will fund a percentage of one of the plans, and you have an option to buy up or down. We talked a little bit about selection. Of course, there's selection there. We have set plans. We sell them together because we know there will be selection.

We want a lower MAC option. If we get the people used to using these tools and going out and finding good providers, there's no reason why we can't continue to shift costs down lower and continue to bring utilization into the lower-cost providers eventually going into our SMARTFUND.

Right now, we spend a real safe allowance that is the 70th percentile of unit cost and the 70th percentile of utilization when we set a SMARTFUND allowance. There's no reason why we can't set one that's the 50th percentile utilization, the 50th percentile of unit cost, and go out and sell it to a market where you can hit a much lower cost point. If you happen to use more than your allowance, maybe it's a much higher deductible plan. That's one of the keys to our future. We know that we're going to have keep introducing to consumers more products, which will help to control their renewal costs.

That's HealthMarket. I think Chris is now going to go through Destiny models.

MR. CHRISTOPHER STEVENS: I'm going to begin by providing a brief history of

Destiny. We wrote our first cases in August 2000, so we're just beginning our third-year renewal groups and fourth policy year. Most of our business at this point is written primarily in the State of Illinois, with a small amount of business written in Wisconsin. Our business is all fully insured with the exception of some reinsurance for the large claims. Destiny is a sister company to a company called Discovery Health, which is based in South Africa. Discovery is probably one of the key founders of the consumer-driven-health-care model. The company started in 1992 and at this point has about 1.5 million members in its several plan options.

Discovery continues to innovate even in its market. It has just introduced a product that's targeted at the majority of the population in South Africa, which I guess you would qualify as your working poor. The plan started in the past month or two, and the initial indications are that there's going to be a significant market. This is a sector of the population that has not had much, if any, interaction with what we would consider to be traditional health care. They either have done without or relied on more traditional African types of medical coverage.

In applying a Discovery model, Destiny has continued to innovate. We now offer what we consider to be the next generation of consumer-driven health care, what we call the comprehensive consumer-driven-health-care model. For a plan to be considered a comprehensive consumer-driven-health-care model, there are six conditions that we feel must be satisfied.

The first is that it has to empower members. This is going to happen when care is more affordable and more controllable. The second is that it must provide comprehensive coverage for events that are not as much in the control of the members. The third, and this is an area where criticism often is levied at consumer-driven health, is that it provides coverage that's good for both the healthy and the sick. Fourth is that it enhances wellness and promotes healthier lifestyles. Fifth is that it equips members with relevant real-time information. Sixth is that it offers flexibility and choice. The goal in these six points is that we want to make sure that members are fully engaged in every aspect of their health care, from how they manage chronic conditions to their choice of providers to determining when and how to consume health-care dollars.

I'm going to start by building the plan from the ground up. Assume that we have an infinite annual deductible, which is the equivalent of being fully self-insured. Put on top of that the insured benefit. If you take that insured benefit piece and slide it down a little bit and make that gray part a $500 deductible with a standard 90/70 coinsurance, you're dealing with something that looks a lot like an indemnity plan today.

What we've done is overlay that plan with what we call the personal medical fund (PMF), which is the account that the member controls. Some employers specifically request that there be what we refer to as a self-pay gap. Other employers will give the members the option of buying up and making that self-pay gap disappear

completely.

For us the PMF is where we believe the behavioral change that we're trying to induce on a member begins. The first and probably most important concept is that we're trying to instill into the members that this is their money. It's not the insurance company's money. It's their money, and they can choose to spend it how they want to.

One of the ways we do that is we label these funds as "use it or keep it" so that for our plan, the employees own the money. They take it with them as cash when they depart, or they can use it to pay for qualified medical expenses similar to a health reimburse account plan. The employer doesn't get to keep this.

We have several employer groups who at the end of their policy year will cash out the remaining balance in the PMF and issue it to the members who have positive balances. We were curious as to why they would do it, and the response we got was that the employers were interested and I think had a better understanding of how this plan worked than maybe a lot of the employees did.

As a way to address the skepticism that the employees may have felt about this plan, they chose to cut a check at the end of the year to the employees and say, "You were an efficient consumer of health care. Here are the savings."

It amounts to completely first-dollar coverage for all expenses with the exception of pharmacy benefits, which have a three-tier formulary, nonformulary and generic copayment. We make the full amount of the PMF available at the beginning of the policy year. There is interest that is either credited or debited depending on whether the member has a positive or negative balance.

Any network discounts that would apply to the specific service that was rendered also flow through to the PMF interest-bearing account. With the HRA regulations the employer piece is funded on a tax-preferred basis. For groups that provide the option to their employees to buy up, or if there are contributions that the employees make, the employer can elect to have that either on a cash-optimized or tax-optimized basis. If it's cash-optimized, when the employees terminate or when the group leaves, they take the cash with them. If it's on a tax-preferred basis, the remaining funds in the PMF have to be used for qualified medical expenses.

The principal reason why we think the PMF works is this true sense of ownership that the members feel. It's this true sense of ownership and how that arises out of the PMF that empowers the prudent consumption of health-care resources. To illustrate the thought process that we're trying to instill here, I'll use an analogy.

Probably a good percentage of everybody here today is staying either at this hotel or at the Fairmont, and you probably didn't give a lot of consideration to what that costs either because you're expensing it or your company is paying for it directly,

so you're not seeing it. You could just as easily have stayed a block or two down the street and probably saved 25 or 50 percent. If we change the environment a little bit and say that instead of your company expensing it in this fashion, it gives you a pot of money at the beginning of the calendar year—$2,000 or $3,000—and says that this is what you're going to use when you go to the SOA meeting. The question I would ask is whether you are going to make the same decision about which hotel you stay at or how you fly here. It's our position, and it's been borne out in both the data that we see and what we see at Discovery, that you will not make the same decision, or many of you will not. That's the thought process that we're trying to encourage here.

If you have wise and efficient consumption of health care, at the end of the day you're going to end up having a lower total costs. Here's the way that the PMF works, since it is the first-dollar plan, and we also do not require in- or out-of-network benefits. We offer in- and out-of-network plans, but the funding is the same. The PMF is not trying to control in an overt fashion which doctors you use. It's saying, "We're going to give you this pot of money and let you make the decision."

We think that when you have a sense of ownership, you're going to do that and have the relationship with the doctor that we're not going to get involved in at all. If you choose to go see a chiropractor instead of a surgeon or vice versa, we're not going to get involved in that, either. Because those dollars are coming out of this fund that you control, we're assuming you're making decisions appropriate for your own circumstances.

One of the issues I think that both Peter and Stacey mentioned is there's not a lot of data out there. Discovery has a million and a half members, and 11 or 12 years of experience, but other than some broad measures, some of their medical management practices cannot translate to the United States. It does some stuff with medical management that would never fly in this country. What we can do is look at things that have high volume, which for us at this point is restricted to the pharmacy benefit.

We've looked at the generic, formulary and nonformulary utilization rate for a fixed plan. We see it's almost a nice straight line on the generic increasing and the formulary decreasing, with nonformulary staying roughly constant. I'm not sure I would say we're going to see anything close to 25-percent drug-cost savings, but what I think we are seeing is a flattening in the trend.

Discovery also has seen a 21-40 percent reduction in the utilization of more discretionary types, such as dermatology visits or using an ear, nose and throat specialist when you could go to a primary care physician. Again, I'm not sure if we're going to be able to see that kind of reduction because of the type of medical management that they do, but the initial indication on office visits to primary care providers that we have is that we're probably coming out a little bit ahead of where

we would have expected. Given our volume of data, though, it's probably a little bit premature to say that.

At this point, 52 percent of our members are carrying over money in their PMF. This would not include those that cash out. Getting back to one of Peter's charts, I think he quoted a number somewhere in the 80s. One of the reasons I think we're lower is that the most popular plans that we offer have a much lower threshold. I think that is more a learning process in that groups will initially choose a $900 or $1000 annual deductible in their first couple of policy years, and if they are in fact a reasonably healthy group and are carrying over a good amount of money, they may step that up. As those annual deductibles increase, the percentage of members that carry over are probably going to increase as well.

Once the annual deductible and any self-pay gaps have been satisfied, members then drop into a fully insured benefit. At that point, regardless of what type of service it is, it pays for it 100 percent.

In the design we have gone through so far, all medical expenses are flowing through the PMF. It's our position that this structure is providing the level of behavioral change. What we do to increase the behavioral change that we're looking for is offer a couple of optional riders. What we're trying to do with these riders is remove less-discretionary costs from the PMF. The theory is that if members don't have much discretion, there isn't much they can do about the cost, so why penalize them by taking their PMF fund when there's not much they can do?

By stripping out some of these lower-frequency, higher-cost expenses and moving them to an insured benefit, that's going to protect the PMF, which helps keep the PMF at an optimal utilization level. The first of the two riders that we offer is the chronic medication rider. I think one of the criticisms that's often levied against consumer-driven plans is that if you have a condition such as chronic diabetes or hypertension, you're going to blow through the annual deductible almost every year, if not every year. In that circumstance, you are not changing their behavior at all. They go through their annual deductible, they have a fully insured plan, and they're not going to alter their consumption.

What we're doing with the chronic medication rider is showing that we're aware that you have to take insulin or antihypertensives. There are approximately 125 conditions that we can cover under this benefit. You fill out a form, you tell us about this condition and any drugs that are related to that condition, and we're going to cover it as an insured benefit subject only to the co-pay.

This answers a criticism that we're penalizing the sick to benefit the healthy. The hospital surgery rider is analogous in that inpatient admissions or outpatient surgical procedures are also stripped out of the PMF and covered as an insured benefit. In the case of both inpatient and outpatient admission, there may be a deductible and coinsurance depending on what plan of benefit the employer has

taken. There is a variety of options. We do sell a lot of 100 percent if you're in network when a group purchases this particular rider.

This addresses the third point in the wheel, which is that it provides comprehensive coverage for less controllable amounts.

I'm going to display it in a different way. What we're trying to do is to instill in the members that there are costs and procedures that they have discretion over, and there are procedures that they don't have a lot of discretion over. What we're modeling is where that PMF portion would be generally low-cost procedures, such as office visits or outpatient diagnostics. Where the PMF doesn't apply would be catastrophic or inpatient surgery, for example, which people aren't routinely having but which is not uncommon.

What we're showing as more controllable are selecting diagnostics, such as MRIs, outpatient and radiology; choosing whether to go to a specialist instead of your primary care provider; and selecting pharmacy benefits. The procedures less controllable are going to be surgeries or chronic illness, which may be covered with riders.

I'll describe how the riders interact with PMF. If you have a plan that has no riders, all claims are going to go through the PMF. Once the remaining deductible is satisfied, you're into an insured benefit plan. At the other end of the spectrum is a circumstance where, if you have the hospital surgery rider and chronic medication claim with the chronic medication rider, hospital surgery claims are immediately removed to the insured plan and everything else, which is what we feel the member has the most control over, then drops into the PMF. The combination of those two gives us the maximum behavioral change that we're looking for.

To summarize, we have the PMF at the bottom, which is where we think the best opportunity exists to create responsibility on the part of the member. At the top is the insured benefit where it makes the most sense. To this design we added the health and wellness incentive plan, which we call the vitality program. This addresses one of the other points on the wheel.

In the vitality program, the members receive points for engaging in healthy behaviors. Every time you exercise, you can go to the Web site and log it, and your reward is a certain number of points. If you participate in the kind of public fitness event where you fill out a form, send it in and get a T-shirt, for example, you get several points. If you maintain your proper weight, or if you're overweight and show improvement toward attaining your proper weight, you get points. If you're tobacco-free, you get points. For first-aid or CPR certification, we will reward points. We have many opportunities for granting points depending on what it is we want to stress.

Once you have these points, you can do interesting things with them. We

automatically send you a pair of movie tickets once you reach a certain threshold. If you are enrolled in a frequent flyer program, you can register that with us, and once you cross a certain vitality threshold, we will add miles to that. You can buy subsidized annual memberships to a national fitness club. You can buy some cool vacation packages at a couple of different levels. As you progress to higher levels in the vitality program, the amount of interest that we will credit your account with will rise. For members who are at the highest level, we're paying 9 or 10 percent.

The last point is premium waiver. If you are a high-level member and a subscribing member dies, the remaining members will have their premium funded for a certain number of months depending on their level. What we're trying to do with the vitality program is to take the information that's out there from our company's national media and demonstrate that, if you have a healthier lifestyle, it's going to result in a longer and hopefully more productive life. Alongside of that, you're going to have a lower total cost of insurance.

We don't have a lot of data yet on this, but we've looked at a couple of key items in a survey that we performed. We looked at behavior before and after the vitality program to determine whether the program is engaging members. Thirty-seven percent of members self-report that they've improved their preventive health-care regimen. We can go back and look at the members' data and verify that they did get their annual physical exam, mammogram or whatever the service is. Forty-one percent of members take a more active role in well-being and physical activities. We validate that by looking at whether or not members are reporting fitness activity or listing fitness events that they are participating in.

Seventy percent of the members that we had at the time of this survey had satisfied preventive care guidelines, which are age- and gender-dependent setup conditions. An example for women would be if they have an annual pap smear and, if they are over the age of 45 or 50, they have a mammogram every couple of years. An example for men would be if they're over 50 and have a regular visit with their primary care provider.

This is point four on the wheel, which is that we're trying to enhance wellness and promote an overall healthier lifestyle. In putting all this together, I can illustrate the flexibility that we have with the different options. On the left side is the basic Destiny plan with no riders, so everything points to the PMF. On the right side is the plan with both riders. Two other options are in the middle. As you move to the right, the overall level of insurance protection increases, but so does the overall level of PMF effectiveness.

For groups that are concerned with more immediate affordability issues and are on the cusp of whether or not they are even going to be in the health insurance market, they are probably going to be more interested in plans on the left. They have a much lower entry point obviously, and that's the primary consideration for these types of groups.

For groups for which immediate affordability is not an issue, plans on the right probably make more sense. In those circumstances, you're looking at groups that are probably more interested in long-term sustainability, are looking for stable renewals, and are looking for lower overall trends and lower overall long-run health-care costs. I think this is point six.

The one thing that I have not gone through in detail is point five. We also have a Web site where members can check their PMF balances, look at their explanation of benefits and log their vitality activities. One of the other tools that I think both Stacey and Peter touched on is how to help members figure out how much funding to put in their PMF. Most people probably don't think of the cost of an MRI several months ahead of time.

What we try to do is give them a tool to figure it out. Assume you're a family of five, you have three children within this age range, and you're all generally healthy. You're going to have a certain number of well-baby visits and may have a couple of illness visits to the doctor. This is what those visits typically cost. The amount that the employer's contributing is known, so the difference between the two would be the amount that the member can kick in.

MR. DAN PLANT: I have two questions. The first is for Stacey. You talked about adjusting utilization based on the effective deductible. Does that adjusted utilization vary based on where that effective deductible falls? It could be an effective $1,000 deductible, but it's on top of a $500 account versus a $1,000 on top of a $2,000 account.

MS. MULLER: It should. At the moment, the model that we are using doesn't strictly take into account where it falls. It's just looking at the differential. When you start to build the pieces of what we already have, it's three dimensional in the three-dimensional space. That would have to be a future enhancement because the other aspect that is related to that is area.

The effective deductible is also affected by which area you're in—a $1,000 deductible in a high-cost area versus a $1,000 deductible in a lower-cost area. Both of those aspects are things we haven't tried to take into account yet.

MR. PLANT: My second question goes to Peter, although it's a broader question that maybe any of you can address. Linda Ruth this morning mentioned the consumer-directed activities that Hewitt worked with in Texas. We at PWC have a lot of consumer-directed activity in Texas. Peter, you mentioned a client that you have that's in Texas. What is it about the Texan market that has attracted consumer-directed interest more so than we're seeing anywhere else in the nation?

MR. DAGGETT: I guess I'd love to know. I think the reason we're in Texas is plain and simple that we started with the network. Our market research shows that we

had a great network there. We know if your network is no good, you're not going to perform. I also think that Texas is a good fit for us from a regulatory standpoint, their underwriting guidelines and so on. It's not our only state. As I said, we're in seven states. I wasn't there at the beginning of HealthMarket, and that's when Texas was chosen. It's interesting to hear those comments. I'd like to know the answer to that question.

MS. MULLER: I think one of the issues is indeed regulatory market, especially for your product because you use a lot of smaller groups. The small-group regulations in certain states are at a point where they can be prohibitive to new markets. It's difficult to enter a market in some states.

MR. DAGGETT: Our company was a new insurance company, and you need to be careful from a regulatory standpoint of getting into a state that is not going to give you the underwriting flexibility when you're a small company that can't handle big hits from an underwriting side.

MS. MULLER: It's a matter of trying to get to critical mass, and if you are up to a critical mass, you could certainly get into other states that have stricter regulations. But when you are doing it as a startup and are evaluating markets to enter, that's a strong consideration.

MR. PLANT: Concerning small-group rate reform, it's almost like a durational adjustment to the rate for small groups.

MS. MULLER: Yes, it would be similar if you were working with a set of small-group products. It's somewhat the same idea. We're trying to price the utilization change. It almost goes in the other direction a little bit because you have the underwriting change over time. I think the underwriting change in small groups probably affects the larger claims more than it does the smaller claims, whereas we're talking about affecting the smaller claims more than the larger claims.

MR. PLANT: We're talking about pricing it for the block, so it would go into what's considered the base rate. It's not like we're doing every group on that basis.

We're looking at it from a pricing perspective to set up what the basic structure looks like, and each group comes in and is going to get a base rate with any other allowable case characteristics that state will allow. It's not that you're going to go through and look at what their rollovers are over time because you wouldn't be able to do that.

What about episodes of care funding? How much depth is that set up on?

MR. DAGGETT: It's an interesting question. The first set of episode funding was 100 percent on the procedural side. When you talk about funding a pregnancy, it's go–to-the-hospital-and-have-your-baby pregnancy. If you talk about a knee

surgery, it's go-to-the-hospital-and-have-your-knee surgery. The episodes that we have now modeled and will be coming out with have both a medical side and a procedural side in what we call a clinical pathway. There are medical episodes that can lead through all different clinical pathways. That's important to look at as you are building your product. Where do the clinical pathways go?

The big question with an episode is: When do you open it? We set them up so we can trigger them based on diagnoses. Now we can trigger the medical side based on diagnoses. We have chronic episodes, which we continually trigger. The second question is: How long do you keep them open? This again is something that we modeled. The third question is: Where do they link? If you're in a certain episode, how does it link to the procedural side?

The one thing that we haven't been able to do is the look-back. We do allow a member to call us up and open an episode by saying, "I have this. I went to the doctor and have to do this." You can open your episode. If we wait for the claim and other claims come in the meantime, you can't have a look-back. It's an unfair practice. Being a fully insured plan, it's something we can't do.

MR. DAVE PALMER: My question is mainly for Stacey. Some of the assumptions that you're using are refined as far as the specificity of them. Having been doing this for close to three years now, I have been somewhat reluctant to get too refined with the assumptions given the lack of data to validate even the higher level, the utilization change assumption, for instance trying to make a distinction between a cashout plan and a noncashout plan. I'm not convinced that there is a tremendous difference. I think it's the incentive itself that seems to operate regardless of whether people can roll it over. It's the same kind of concept. I'm wondering what kind of backup data you have to build these assumptions.

MS. MULLER: You're right. There's not a lot of experience. As I said, the MSA part of that was something that we had some experience for. A few years back, we looked at some actual experience to see the amount of utilization we're expecting. We were looking at it by deductible and by the different plan designs that were being sold in that block that we evaluated. We used that as a base because we were able to validate that one.

We then have our cost guidelines information. We looked at a lot of other traditional plan information, and by taking the assumption that the HRA is somewhere in between—the HRA has more of a fitted line at the moment based on what we think will happen—it's an educated guess with the two boundaries around it at this point. We are looking forward to having an opportunity to view that experience and try to validate it to get a feel for what that impact is over time and even for first year versus ultimate pricing.

MR. PALMER: This is to HealthMarket. Why would you not include the traditional drug card design? From our perspective, that deserves to be in the benefit design

as an integrated benefit.

MR. STEVENS: Why didn't we do it? First, we didn't because we wanted to build our base product. We wanted to introduce the concept. We have 100 percent plans probably not in-house even through Medco to introduce benefits, which are much more directed toward consumers. We understand we need to consult costs there. I think we made a decision that from an infrastructure standpoint, we weren't ready to do drugs. We know that we have to provide drug coverage. That is something we can do in the future. I see your point. We've already looked at some plans, and those will be coming soon.

MR. DAVID P. MAMUSCIA: Often when we do benefit modeling for clients, we're also asked to try to work it into the cash flow, for example something that may start the first of the year but that the client doesn't see in its claims flow until perhaps March. In the modeling you've done, have you seen what I would perceive to be a longer lag for these plans because they are a little bit more complicated?

MR. STEVENS: I guess I would say no, but that may not necessarily be a function of the design. One of the corporate goals that we have is to turn claims around pretty quickly. Right now we're averaging probably five or six days.

MR. DAGGETT: Maybe I could interject one comment. In some of the plans we've heard about this morning and now, pharmacy may be included with a deductible and coinsurance as opposed to a pharmacy card. Pharmacy is taking up a bigger share of claims, and they complete almost instantaneously now. If they were to transfer it to a more traditional deductible coinsurance environment, it would seem like they're not going to complete as quickly as they have.

Let me comment from a HealthMarket perspective. I will tell you that, if anything, it's going faster, but all we're doing is administering an indemnity plan that people have gotten good at doing at this point.

MR. STEVENS: One of the things I will say that could lead to that longer life is the understanding. When I say the understanding, as I told you from our standpoint, we have what was called a complaints and grievances committee, which is what any insurance company has. Given that, our number-one goal is getting the member to understand the consumer-driven piece and it's a hard product to understand. It leads to problems.

It can lead to some longer tails on reversals and reprocesses, which I think are what feed the end of our tail at this point. That point is well-taken. What we have found is within one year, we've tripled the membership and halved the size of our complaints and grievances. It gets smaller every month as our membership grows because our benefit has gotten a lot better. We learned. Also, the consumer and the agents (we sell through an agent force) are understanding the benefit a lot

better.

Chart 1

Unique Rating Characteristics

Utilization Adjustments – Illustrative

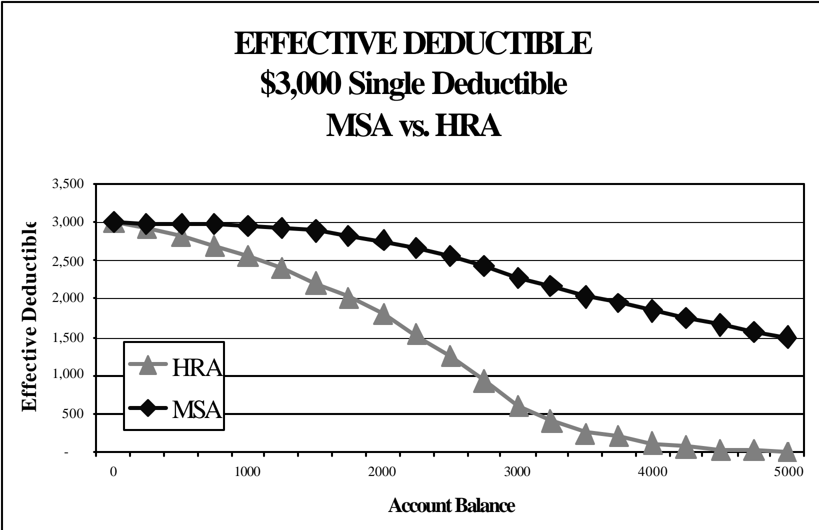

Chart 2

Unique Rating Characteristics

Utilization Adjustments – Illustrative

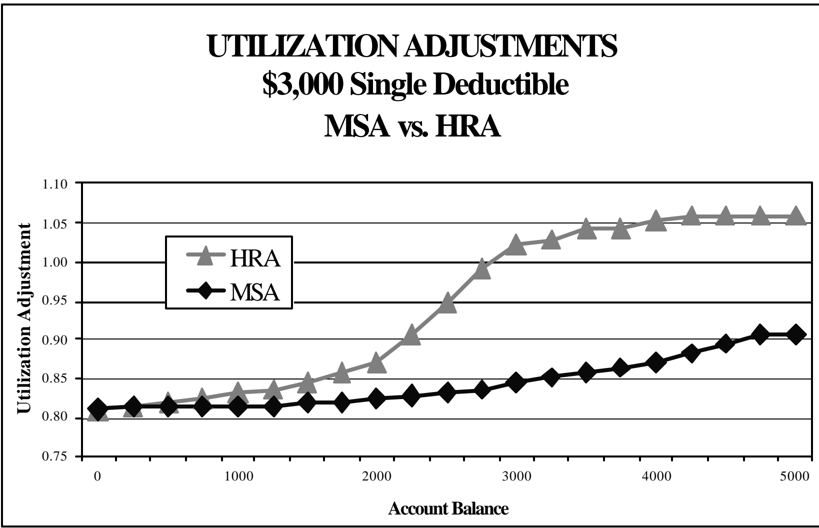

Chart 3

Utilization Adjustments – Illustrative

UNADJUSTED CPD			ADJUSTED CPD		
Average Claim	Prob	Annual Claim Cost	**Utiliz Adj**	Adjusted Prob	Annual Claim Cost
$0	0.172	$0	**2.22**	0.382	$0
298	0.285	85	**0.85**	0.242	72
1,318	0.207	272	**0.65**	0.134	177
2,426	0.091	220	**0.60**	0.055	132
3,360	0.038	128	**0.55**	0.021	71
4,267	0.038	161	**0.50**	0.019	81
6,129	0.054	329	**0.65**	0.035	214
8,457	0.016	139	**0.80**	0.013	111
11,545	0.040	467	**1.00**	0.040	468
18,375	0.031	562	**1.00**	0.031	562
32,046	0.018	563	**1.00**	0.018	563
98,675	0.011	1,040	**1.00**	0.011	1,040
	1.000	$3,966	**0.88**	1.000	$3,490

Chart 4

Unique Rating Characteristics

Projection – Modified Distributions – Illustrative

	Scenario 1: No Prior Claims	**Scenario 2: Average Prior Claims**	**Scenario 3: Large Prior Claims**	**Aggregate**
Standard Claim Probability	0.172	… 0.038	… 0.011	1.000
Prior Year Claim	$ -	$ 4,519	$ 104,513	$ 4,201
Current Year Claim	**Modified Probability**			**Aggregate**
$ -	0.254	0.101	0.011	0.172
:	:	:	:	:
$ 4,519	0.014	0.080	0.047	0.038
:	:	:	:	:
$ 104,513	0.003	0.007	0.228	0.011
Probability	1.000	1.000	1.000	1.000
Aggregate Claim	$ 1,468	$ 4,995	$36,569	$ 4,201

Chart 5

Unique Rating Characteristics

Selection - Example

Plan Design	PPO	HRA1	HRA2	Avg.
Account Contribution	NA	$495	$1,500	
Deductible	$500	$1,500	$3,000	
Coinsurance	90%	90%	80%	
OOP Maximum	$1,000	$1,000	$1,000	
Estimated Plan Distribution	***40%***	***22%***	***38%***	***100%***
Selection Adjustments	***1.36***	***1.16***	***0.50***	***1.05***

Chart 6

CDHP Plan Design

Plan Year Deductible (Per plan year)	Individual $500; Family $1,000 *or* Individual $1,000; Family $2,000
Plan Coinsurance Level	70%, 80% or 90%
Maximum Out-of-Pocket Expense	Individual $1,500; Family $3,000 *or* Individual $2,000; Family $4,000
Maximum Benefit	$2 Million Annual; Unlimited Lifetime
StartWell™ Account	Individual $500; Family $1,000 *or* Individual $1,000; Family $2,000
HealthMarket SMARTFUNDS℠ (optional)	Individualized spending accounts; Allowances based on specific medical procedures and conditions
Prescription Drug Benefit Merck-Medco (optional)	**$10 generic; $25 formulary; $40 non-formulary with Mandatory Generic Provision**

Coverage is subject to the Maximum Allowable Charge (MAC)