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Medicare Managed Care Organizations: Getting a Bigger "Bang for the Buck"

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Moderator: OSCAR M. LUCAS
Panelists: OSCAR M. LUCAS
PEGGY TYNDALL†
Recorder: OSCAR M. LUCAS

The Balanced Budget Act of 1997 will result in reduced payment levels to many Medicare managed care organizations. In addition, prospective payment systems for outpatient care, skilled nursing facilities, and home care are scheduled to be in place by 2000. These changes will result in the need for many organizations to learn how to "manage" care rather than rely on generous adjusted average per capita cost levels for their areas, in order to make a profit.

A clinician discusses the techniques that must be used in order to implement true "managed care" in Medicare managed care products. An actuary discusses the implications that these managed care techniques can have on underlying Medicare costs, as the provider moves across the spectrum from "unmanaged" (i.e., Medicare fee for service) to optimally managed.

Mr. Oscar Lucas: Since 1984 TEFRA managed care organizations have been able to contract with the Health Care Financing Administration (HCFA) to be paid a capitation rate to provide benefits or care for a Medicare population. Medicare risk contracts basically provide enhanced benefits for the recipients, relative to traditional Medicare, and in some cases even require a supplemental premium to be paid. With the advent of the Balanced Budget Act of 1997, a significant number of

†Ms. Tyndall, not a member of the sponsoring organizations, is Healthcare Management Consultant at Milliman & Robertson Inc. in Seattle, WA.

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

provisions will impact those providers—managed care organizations—who have been contracting with HCFA to provide care. There is, in effect, some trend reduction in the next three years or so. The blending of local and national rates, money that was paid directly to the managed care organization (medical education credit) now will be paid directly to the hospital.

In addition, there is a minimum increase of 2%, and a minimum adjusted average per capita cost (AAPCC) of $367. As regards to the blending of local and national rates, it is intended to be budget neutral. Also, in the year 2000 there will be risk status adjustment. All of these have some implications for managed care organizations. The 2% minimum increase will most likely apply to many urban areas. The possible implications are, first, there may be a move away from zero dollar premium plans. You may see reduced provider reimbursement. You may see some reduction in benefit-rich plans. And the one that we want to focus on this morning is that, in all likelihood, managed care organizations will have to truly manage care. In the past, making a buck as a managed care organization has not always been that difficult. With reduced payments to managed care organizations in many cases, that will change.

In terms of what we're going to look at today, my presentation will cover the financial impact of managed care. How much impact can it really have on a managed care organization? Peggy Tyndall will talk about optimal medical management. Peggy is a clinician and will give a clinician's viewpoint of that. Our third presenter, Liz Hoffman, who is not here was going to talk about her experience as a subacute health care provider and how they implemented managed care in her organization. Peggy is going to attempt to give Liz Hoffman's presentation. I have had to do that for other actuaries in our organization from time to time, and it's very hard. I think Peggy is up to it, though. Then we should have plenty of time at the end for questions and answers.

Let me give you a few definitions. An actuarial cost model is a tool that many of you are familiar with. They use utilization assumptions and cost assumptions to project health care benefit costs. We have used, in the work that I've been doing, what we refer to as a loosely managed health care system and a well-managed health care system. These are the endpoints of a spectrum of health-care-delivery systems. Loosely managed is similar to traditional fee for service, where there's very little management of utilization: no use of guidelines or any other incentives to control the use of health care resources. The well-managed delivery system, at the other end of the spectrum reflects a delivery system in which most unnecessary care has been eliminated, and care that is provided is provided in a most cost-effective setting.

We use a term degree of health care management (DOHM) to describe a specific delivery system's placement on this spectrum from loosely managed to well-managed, where a loosely managed delivery system would have a 0% DOHM and the well-managed system would have a 100% DOHM. Where the specific delivery system fits on that spectrum, the closer it gets to emulating a well-managed system, the higher its DOHM would be. So as it approached 100%, its DOHM would also approach 100% DOHM. You can measure that in a number of ways, looking at lengths of stay, admit rates, bed days per 1,000, per member per month (PMPM) costs.

Let's look at an example for the Medicare-aged population, that is the non-Medicaid, noninstitutionalized population, basically over 65. Say it's for XYZ County. The underlying plan design was a $10 office co-pay, with a $500 annual drug benefit. Providers are assumed to be paid in terms of Medicare allowed charges, and in a loosely managed model, we came up with a $534 per member per month PMPM cost of benefits; in the well managed, it was $283. The potential impact in this case of going from completely loosely managed to well managed was a $251 PMPM decrease.

If you break this down in terms of its components, you'll see that in the first column, we have the loosely managed hospital inpatient, $263 out of the $534 (see Table 1). In the well-managed system, that drops to $109. The potential for savings is $154 PMPM. The other categories are the skilled nursing facility (SNF), subacute, hospital outpatient, home health care, physician, and all other, which includes the drugs. The totals are $534, $283, and a potential savings of $251. If you look at that you'll notice that the bulk of the savings are in the hospital inpatient area.

TABLE 1
PROJECTED 1999 PMPM BENEFIT COST
XYZ COUNTY, $10 COPAY, MEDICARE ALLOWED
MEDICARE-AGED POPULATION

Category of Service	Loosely Managed	Well Managed	Potential Savings
Hospital—Inpatient	$263	$109	$154
SNF/Subacute	24	16	8
Hospital—Outpatient	54	39	15
Home Health Care	44	23	21
Physician	117	74	43
All Other (Including Rx)	32	22	10
Total PMPM	$534	$283	$251

Source: Milliman & Robertson, Inc.

Table 2 has a breakdown and provides a little more detail in terms of utilization rates, where the PMPM numbers come from. You'll notice in the top section that we have the inpatient hospital section broken down by medical stays, surgical stays, and then psychiatric, drug, and alcohol. The next line down is the subacute SNF and then home health care. If you'll look at this, you'll notice the admits per thousand in the first line. Medical stays drop from 207; admits drop by more than 50% down to 97. Also, the days per thousand drop even more significantly (by two–thirds) from almost 1,300 down to 400.

TABLE 2
ILLUSTRATIVE MEDICARE-AGED COST MODEL
ACUTE, POST-ACUTE, AND HOME HEALTH CARE,
XYZ COUNTY, JULY 1, 1999

Category of Service	Loosely Managed				Well-Managed			
	Admits per 1,000	Days per 1,000	Charge per Day	PMPM	Admits per 1,000	Days per 1,000	Charge per Day	PMPM
Inpatient Hospital								
Medical	207.3	1,272.7	$1,256.48	$133.26	97.4	404.3	$1,460.00	$49.19
Surgical	85.6	681.9	2,236.52	127.09	49.1	273.9	2,559.91	58.43
Psychiatric	2.9	29.3	819.11	2.00	1.4	13.7	814.60	0.93
Alcohol/Drugs	1.2	12.0	810.00	0.81	0.6	3.4	811.76	0.23
Total Acute	297.0	1,995.9	1,582.20	263.16	148.5	695.3	1,877.41	108.78
SNF/Subacute	34.7	914.7	316.17	24.10	70.5	619.0	313.09	16.15
	Users	Visits	Per Visit	PMPM	Users	Visits	Per Visit	PMPM
Home Health Care	103.60	7,096.0	$73.71	$43.59	241.0	3,243.7	$83.25	$22.50

Source: Milliman & Robertson, Inc.

It is interesting to note that in the loosely managed delivery system, the bed days per thousand for inpatient hospital are close to 2,000, and in the well-managed system it's just slightly under 700 bed days per thousand. Again, the greatest potential of these three for savings, of course, is on the hospital inpatient. The reason, however, that I put the other two up there, the SNF and the home health care, is that's really where the potential savings are. If you look at that in terms of hospital inpatient for the acute patient, over 60% of potential savings is related directly to the inpatient acute patient. However, when you combine the SNF and home health care you're talking about 75% of the potential savings. There once was a bank robber named Willie Sutton. He was apparently not really successful; he got caught every time he would rob a bank. Eventually a reporter asked him, "Why do you keep robbing banks?" And his answer was, "That's where the money is." The reason we're focusing on the hospital inpatient and the SNF and the home health care is that's where the money is in managed care if you want to move toward the well-managed delivery system. That's where you need to focus. You might also think of it as picking the low-hanging fruit. That's where you have to start.

One thing that's always nice to do, if you're thinking about getting into managed care and getting a Medicare risk contract, is some type of feasibility study to show if it really makes sense to get into this. I put together an illustrative feasibility study to show some of these concepts. The APR or the payment rate in this area for the counties that are included was $445 PMPM. This is in a market where supplemental premiums were not being charged, so the total available revenue for this particular provider was $445 PMPM. We made up an expense margin of 15%. I'd have to say that's probably at the low end, but that's $67 PMPM. Therefore, after expenses and margins, there's $378 PMPM to cover projected allowed charges.

In our loosely managed model, we had projected $534 PMPM; in the well-managed model, it was $283. In this particular delivery system, we estimated that it was running at a 45% degree of health care management, which translates to $420 PMPM. If you compare the $420 to the available revenue for benefits of $378, you'll see that there is a shortfall of $42 PMPM.

There are four charts. Chart 1 gives a graphical presentation of the degree of health care management. On the left-hand side is the loosely managed delivery system, and on the right-hand side is your well-managed delivery system. The line that's decreasing or descending goes from the left side, the PMPM for a loosely managed delivery system, to the right-hand side, the PMPM for a well-managed delivery system. The horizontal line in the middle shows the available revenue. In the middle is 50% degree of health care management. In this particular delivery system, the projected PMPM benefit cost was at 45% so you see that's still higher than the available revenue. They would have to move somewhat to the right before those lines intersected.

Some possible options would be to require a member premium of $42 PMPM, but as you remember, that's not likely in a market in which zero premium dollars are the standard. They might reduce benefits. Another possibility would be to increase their degree of health care management to 62%, which happens to be where those lines intersect, or possibly obtain additional provider discounts of 15% to balance that. Or they could go with some combination of the above.

Chart 2 gives you an idea of the impact of discounting charges 15%. Coincidentally, it happens to work out that that would bring the intersection of the second diagonal line at 45% where it would cost the available revenue. The other opportunity that they would have is to move their degree of health care management up to the intersection point from 45% to 62% (see Chart 3). Or you could work on some combination of those two.

What's kind of interesting is, if you start with where they currently are and move to the right, once you pass the intersection point, it's not only a break-even, but at that point you're making money. If you were able to move to 76%—which is indicated by the top diagonal line where it intersects—you'd be able to pay Medicare allowable plus rather than having to pay providers at just Medicare allowable (see Chart 4).

Even under the Balanced Budget Act, I believe that managed care organizations can succeed. We currently see few plans that are actually managing at well-managed levels. The potential to succeed is there through improved health care management. Our next speaker will tell us from a clinician's viewpoint what that requires.

Ms. Peggy Tyndall: I'm going to talk a little bit about the clinical perspective of what has to happen if you're going to be well-managed. I want to preface some of what I'm going to say to you today by saying that this is not meant to be an infomercial, and I don't want you to take it as that. I'm sensitive to the fact that there are people from all over the world and society. I'm going to talk about some of the tools that Milliman & Robertson happen to have, but there are certainly other tools out there, and I'll reference those as we go through as well. So my own perspective is to talk about the clinical piece of it.

Obviously the key to optimal performance in a Medicare risk setting is optimal medical management. I think that a lot of the clients that you all may work with and certainly a lot of the ones that I work with think that they're somewhere close to optimal medical management, but when you go in and actually do an assessment and talk about some of the things that are key to managing their patient population, particularly the Medicare risk population, they haven't quite gotten it about what they need to do to truly manage that population and manage them well, so that's what I'm going to talk a little bit about here.

One of the things we talked about is that it has to be proactive management for a long time in health care. Everything has been done on a retrospective basis including things like utilization review or what they call utilization management: 90% of that for years, maybe 100% for years. And then slowly it has evolved. It has been retrospective, which, if you want to run your business looking in a rearview mirror, is a great way to do it. Some retrospective information is good, but you have to have real-time proactive management and know ahead of time what's going to happen, plan for what happens with your patient population, and make that happen. It needs to involve all levels of care. That's the other thing we've seen as managed care has kind of evolved is that people focused, obviously on the

inpatient piece. Because that was where the most dollars are being spent, as Oscar pointed out earlier, and it still is where the most dollars are spent. But what happened is that as they were squeezing the balloon on the inpatient side, those patients, particularly the Medicare patients, had to go somewhere, and a lot of them are winding up in skilled levels of care. A lot of them are winding up out in the home health arena, totally unmanaged, so they're out there probably costing more in the long run in those levels of care than they would if they would have been managed efficiently on the hospital side.

The key to all of this is the case management piece of this, and by case management what I mean is the new kind of evolved role of the nurse managing what needs to happen to the patient through the continuum of care. It's very, very important in all areas of managed care, but particularly in your Medicare risk population where you can't expect that things are just going to happen the way they should with these patients automatically.

As Oscar mentioned, we talk about well-managed and unmanaged care. In a well-managed setting, if you were talking about the continuum of care, you would include the total number of admissions that you would have to all these different levels of care: home health, recovery facility, which includes a skilled nursing facility (SNF), subacute, and rehab levels of care. We chose to call it recovery facility versus post-acute care, which a lot of people call it, because in a managed care setting, you don't want to make people assume that they can access only these levels of care after they've been in an acute care setting. We're trying to encourage people to use these levels of care—SNF, subacute, and rehab—in lieu of acute care when they can because that's going to make the biggest impact on their hospital dollar obviously.

In the continuum they would probably start out at the ambulatory site in an office or RTS, which means rapid treatment site. RTSs are being developed pretty quickly across the country. They're similar to urgent care. They're not for observation, and they're not emergency. It's a type of emergency care for patients that would have diagnoses that would lend themselves to quick diagnosis and treatment (within about six to eight hours) and then they can be transitioned directly to another level of care, like directly to a skilled level of care or directly to a subacute level of care or maybe some home health support, so then you avoid that inpatient stay or possibly ambulatory surgery. Those represent outpatient levels of care.

Then about 48% of those would possibly go to home health out of that total population; 3.5% could possibly go directly to a recovery level of care, and again this is in a well-managed setting; and about 48% would go to acute care. Now,

going on through that continuum, obviously it doesn't stop there. From the recovery facility, we always recommend that you have at least one home health visit per patient. In a well-managed situation, a Medicare patient in particular is going to benefit significantly from having one home health follow-up to make sure that there's compliance with medication, that they understand their disease process, that they have what they need to have at home, and that sort of thing. It will avoid a whole lot of visits back to the inpatient side, back to the skilled facility, etc. So we recommend that 100% of the patients who have been in a recovery level of care get at least one home health visit.

From the acute care side there are a number of places they can go. They can go home with home health support. They may need to go to a recovery level of care, again with 100% of those patients that go to that level having a home health visit follow up, and some may need only office follow-up and that's it.

Chart 5 is a contrast between the well-managed and the loosely managed. You'll notice a significant difference in the well-managed and the unmanaged population there in the fact that, for instance, from the ambulatory site you would have only 15% being referred with some sort of home health follow-up, instead of 48% with the well-managed system. That might seem like overutilization of resources, but if you utilize a home health follow-up versus just sending them back out to their house without any home health follow-up, you risk having them back in an acute care setting or having a higher level of care required further down the line. We're talking about a measured number of visits, not just carte blanche home health until they're no longer around.

You'll notice that in an unmanaged setting you would have no patients sent directly to a recovery level of care. One of the big issues as this Medicare risk piece has evolved has been that there's still this mind-set, especially among that recovery level of care, that patients can't come directly to a skilled or to a subacute facility without that normally required mandatory three-day stay in the hospital before they go that level of care. That is not a requirement when you have a Medicare risk population, and many people do not understand that. In fact, many SNFs don't understand that either and are reluctant actually to take patients directly from a physician's office or directly from an emergency room. But in a well-managed organization, they figured that out. They contracted with skilled facilities so that the skilled facilities know that it's okay to do that. They have set up the processes to speed up what needs to happen so that it's not a red tape nightmare to get those people into those recovery levels of care. Then you'll notice many more people or 85% of them would go directly to an acute care facility versus 48% in the well-managed setting. By proactively managing what needs to happen to these patients from the front end,

you can direct the right level of care for these patients from the very beginning versus trying to manage them all on the back end. That's what I mean about that proactive case management piece. Typically what will happen is that organizations will put case managers in place, both in the ambulatory setting as well as in the emergency room where they can actually redirect care from the emergency room, and have an opportunity in working with the physicians for the plan or for the organization. So if a patient truly does not meet acute care criteria, they can set up the alternative and facilitate that happening for the patient, because it isn't going to just happen automatically. It has to be planned and orchestrated.

How do they do this? Typically, organizations will use tools such as guidelines, protocols, or criteria to proactively plan care and improve efficiency. Efficiency is the key to what needs to happen here to make things run smoothly, to standardize care. One of the biggest issues with a subacute facility is it doesn't have standardized care. They had sites in Ohio and Florida and specialized in subacute care, but there was no standardization, so if you went from one site to another, from that perspective, they had different resource costs, patient costs, etc. So we'll talk a little bit more about that later. But using protocols and guidelines helps organizations standardize what needs to happen so you can predict what your costs are going to be, predict what the resources are that you're going to be using, etc. Certainly, in using protocols you decrease variation, which is going to make a huge difference in your cost overall, and also the protocols or guidelines help with the education process of the staff and sometimes even with the patients. Patients are often given the guidelines of the protocols that are being used, so that they can kind of have expectations set for about how long they might be in a facility, when they might be transitioned some place else, who is going to be working with them, and that sort of thing.

I'm talking now about volume 6 of the M&R Guidelines. Volume 6 happens to be *Recovery Facility Care,* and it is a continuum with our volumes 1 and 4. Volume 1 is our *Inpatient Guideline,* and Volume 4 is *Home Health*. Just to give you a quick overview, volume 1 talks about patients who would do as well as you hope in an inpatient setting and recover the way they should. Volume 4 gives information about what sort of patients should be admitted with a certain diagnosis to home care, what kind of visits should take place, potentially how many visits need to happen. Volume 6 talks about patients obviously who didn't do well or have other comorbid, conditions that may lead them to need another level of care after their acute care or instead of their acute care. That is just one set of protocols that organizations may use to plan proactively for their care.

In terms of the recovery care, we feel that it should be used in these two ways primarily as an alternative to continued standard acute care. If you have, for instance, a patient who has had a total hip replacement, our guidelines happen to say that they should have a three-day length of stay in the hospital. We actually are seeing some organizations now that will keep their patients there only two days and then send them as soon as they're stable to a skilled level of care to get their rehab and then be discharged. Some are actually even sending them home at two days, but the recovery level of care can be used to shorten an acute length of stay once the patient is stabilized but is going to continue to need some care, perhaps because they have some comorbid conditions that are unstable or something like that. Or recovery care can be used as a directed admission to recovery care to actually totally miss that acute admission and bypass that so that you can decrease your number of admissions.

In terms of the recovery care length of stay, in well-managed systems the recovery care is used more frequently for shorter periods of time. What you see in a well-managed population, and Oscar had this on one of his PMPM charts earlier, is that the number of admissions in a well-managed organization almost doubles. As you move from unmanaged to well-managed, it almost doubles, but the number of days per thousand goes down because the lengths of stay are much shorter, because they're proactively being managed by a case manager, so that they don't just go there and stay.

What has happened—I have gone out and looked at a lot of skilled facilities across the country and looked at managed care patients side by side with a regular standard Medicare patient. In the standard Medicare fee-for-service scenario, what you see is typically that the Medicare patient will almost use up their whole benefit in one admission to a skilled facility. A managed care patient will move along the continuum appropriately with somebody managing that care, so that they go to the next level of care as soon as they're stable.

The majority of the lengths of stay in a well-managed organization for the recovery level of care is less than two weeks. That's not typically what you see with Medicare fee-for-service-type patients. It involves daily case management and professional caregiver oversight. Typically you will see that a physician only needs to visit a regular Medicare patient once a month. In a managed care scenario, you would see either a nurse practitioner, a physician assistant, a case manager—someone checking on that patient on a daily basis or at least knowing exactly what was happening to the patient daily in order to get them moved through there in a short period of time. And you have lower overall cost per case because of that.

In terms of the relative costs, acute rehab continues to be the most extensive, which is why our recommendation is that regular orthopedic cases not go to a rehab level of care where they have a multidisciplinary approach, which isn't required for somebody who has just had a total hip replacement unless they have four dozen other things wrong with them. Typically, acute rehab should be reserved for those sorts of things like spinal cord injuries, brain injuries, that sort of thing, or multiple trauma, not just the routine orthopedic sorts of things. In talking with organizations across the country and working with different organizations, what we see is that they are still sending people with total hips to rehab. I was working with a group in Florida that said, "Oh, yes, we get our patients out of the hospital in three days." I said, "That's good with a total hip. Then where do they go?" "Well, they go to rehab for ten days." Well, you've blown your budget right there by sending somebody to rehab for ten days even though you only kept them in the hospital for three days. Subacute rehab is about twice what skilled rehab would be. Skilled obviously is lowest in terms of cost, typically. Subacute would be the next highest, and acute rehab would be the most expensive.

In terms of the current state of recovery care—particularly subacute since it is not regulated yet—one of the things that you see is that anybody can call anything a subacute level of care, so typically people have asked for higher reimbursement because they've called it subacute, but if you actually go in and look clinically at what's happening to patients and what kind of care they're getting, it may just be a skilled level of care that they're actually getting in that site, so there is no consensus of definition. There's obviously no regulation around rehab and skilled, but there's very little around what subacute is and should be.

There's no consensus on utilization. People tend to use it when it's convenient. It tends to be more difficult to get patients in and out, so physicians, unless they have somebody like a case manager to help facilitate that, are often reluctant to send patients to the other level of care. There's major variation in scope of services, and I'm sure that you all are aware of that. Obviously there's the influence of the Medicare payment policy, and there's going to be more of an influence here shortly, as we'll talk about. There's limited physician involvement and acceptance of that level of care. There has been a very high level of misunderstanding, I think, from the physician perspective about what that level of care can actually offer, because many people still equate this level of care to long-term care, perceived as basically putting grandma in a bed and leaving her here until she dies. That's not what those levels of care are at this point in time. In fact, the acuity level in those levels of care has changed significantly over the last few years as people have started to use them, particularly in lieu of acute level.

Rapid growth in industry consolidation is certainly happening. Many of the organizations are being bought up—or many of the groups are being bought up—by larger organizations, and so you're seeing a lot of kind of churning out there in the industry, and there have not been guidelines.

Chart 6 is bed days per thousands. That top line is the acute care, and as you move from loosely managed or unmanaged down to well managed, you can see what the bed days per thousand do. This is in the Medicare population. You'll see that there's not as significant a change in the recovery level of care as far as bed days per thousand, but what you would see if you had another graph is that the admissions double, as I mentioned earlier. You're still dropping your days per thousand, but your admissions actually double. And they both come out close to 700 as far as bed days per thousand. There are some plans in southern California that are actually managing these (either well or poorly) at lower numbers.

Now, in terms of the home health guidelines, there are three principal functions of the home health guidelines. Obviously, they're a means to facilitate earlier and safer discharge; that's one reason to use home health. It's an alternative to hospitalization. That's another reason to use home health. One of the things that I talked about earlier is found in those rapid treatment sites that are beginning to develop across the country. I ran into some in Detroit that are actually called CDUs or clinical decision units. They bring patients in, with something that is fairly easy to diagnose, like a renal stone or kidney stone or something that they can diagnose quickly. They treat the patient and then perhaps send him or her home with some IV fluids and some home health care. It avoids a hospitalization in an acute care setting. Then home health is also starting to be used greatly in the disease management component by organizations, where they will actually take on a group of patients for an organization, such as those with congestive heart failure, and manage those patients exclusively or manage them collaboratively perhaps with a health plan or with an organization.

Obviously case management has expanded. It used to be that case management was just used for a catastrophic sort of thing. They used case managers to manage the high-dollar, high-utilizer type patient, the patient who had been in a car accident and had multiple injuries and was going to need care for a year and expensive care. The ventilator patients would be an example. Case management has now been expanded so that it covers managing just about every patient in your population. It would start with the Medicare risk patient. It would start with some sort of health survey when the patient actually enrolls to identify those potential patients who are maybe going to be the high utilizers or the more fragile patients. Case management is assigned to those patients as soon as they get into your plans.

The physician, though, has certainly expanded in the case management/medical management component so that the physician is greatly involved in working with the case managers to make this happen proactively. And the home health aide role has diminished somewhat in home health. They're tending to use more and more professional visits because it's typically a much higher level of care than what used to be provided.

Home healthcare was originally designed to facilitate earlier and safer hospital discharge, but currently 61% of the visits are to enrollees who receive more than six months, worth of visits. Now, someone on the East Coast—at a hospital-based home health agency—said that typically a Medicare patient, when they were signed up with a home health visit or opened as a home health case, would average between 50 and 60 visits before it was closed. As they've gotten more and more Medicare risk patients, they are down to 20 visits per patient. You can see the significant difference between the Medicare cost and the Medicare risk patient and what needs to happen. But she said she feels that their outcomes have improved significantly because they're much more focused on what needs to happen with the patient and during what period of time it needs to take place.

Four percent of the visits were for less than one month, and as you remember from earlier, we talked about the fact that in the well-managed scenario, we recommend that maybe just one home health visit is appropriate for everybody who leaves a recovery-facility-length care.

Use of home health is positively correlated with the hospital length of stay and admissions and number of days, but the one thing that home health hasn't been able to correlate is that it has not decreased the utilization of the skilled nursing facility. In fact, what they have found is that it's a weak substitution for long-term care, and that seemed to be why there were so many Medicare visits for patients in home health. What they were actually trying to do is support kind of a recovery-level type of patient in a home health setting. It just doesn't work. It turns out that it's a lot more expensive to do that as well. You're probably a lot smarter to go ahead and put a patient in a recovery level of care for a period of time and then transition them to home health.

The use of home health obviously varies from state to state, and this just gives you a little scenario. A lot of it has to do with standards of practice, what the physicians are familiar with, how easy it is to facilitate home health. But you'll see the great variation there, and it doesn't seem to relate to the burden of illness. So it just often has to do with what the standards of practice are, how available home health is,

how tuned in the physicians are to whether or not the home health visits are necessary, and that sort of thing.

Chart 7 shows moving from loosely managed to well-managed as far as home health visits are concerned. Again, the number of admissions or people new into home health would increase, and the number of visits then would decrease, so you have more people going in with the visits actually decreasing in a well-managed scenario.

Now I'm going to put on my Liz Hoffman hat and find my notes here. Liz Hoffman is a nurse who works with a subacute facility. It's an organization that has facilities in Ohio and Florida, and both of those markets were extremely different, obviously, because there was very little managed care in the Ohio market and quite a bit of managed care in the Florida market. So as those in the subacute facility started to try and figure out how they were going to work better with managed care organizations and work better with what was going to happen with the Medicare reimbursement, they started looking at what they needed to do in order to make their organizational change so that they could be efficient and work more from a different perspective that would help them survive in the industry.

As far as strategic vision, they wanted to be the premier subacute provider. I'll tell you that in the meantime what happened to this company is they were purchased by a large organization from Canada that was primarily a long-term-care organization. So they went from a subacute organization that was very tuned in to or getting to be very tuned in to managed care kind of scenarios to someone who suddenly is being run by somebody who knows very little about managed care and is more focused on long-term care versus the skill level of care or subacute level of care. So they did a lot of these changes prior to being purchased, and now they're starting these changes all over again so that they can restructure this new organization.

They wanted to focus on high acute and subacute patients, and they didn't purchase bricks and mortar: they actually built their own subacute units so that they could have exactly what they wanted in these facilities, and they were actually quite efficient. They still have these facilities.

They wanted the transition to be a margin-driven model, and they needed to design all facets of the business to support the vision. Initially what they had to do was develop what their vision really was.

From the Floor: What is a margin-driven model?

Ms. Tyndall: Looking more from a perspective of what they had to operate and how could they operate with that particular margin and do it successfully. They were trying to be more of a profit-driven organization initially, and that wasn't working either.

Now, the goals and objectives that they developed initially were to lower their operating costs, again to be within that operating margin; and their long-term cost controls were to improve operational and clinical competencies. I'll tell you about that in a minute. They did a lot of redesign with their staffing and structure, such as operational redesign. She said the challenge was to make the changes that would have lasting effects, and basically what that boiled down to was efficiency for their organization, which had a lot of inefficiency within it. Obviously one of the things that they had to maintain was good clinical outcomes in this whole process.

Now, as she explained this to me, again focusing on efficiency, she said they focus on needing to keep in the middle, not to the right or to the left, balancing cost and outcomes. And she said, having used this in training with their staff, this is one thing that they are able to focus on, rather than looking at a fee-for-service and cost-based model but more toward the managed care model and knowing where they are. I'm sure she could have done a better job of presenting this, but she was calling at 10:00 at night from Pennsylvania to give me this information.

The solution was a margin-driven model. The strategy was to use the care management model and implementation of the optimal recovery guidelines, which happen to be the M&R guidelines. They used guidelines primarily because they were a template to help them determine their patient classification system, which a lot of these levels of care have anyway in some fashion. The strategy determined the core business processes and then determined what the outcomes were going to be and how they were going to manage those.

In their classification system, they described the patients by comorbid factors: what the assessment needs were, the diagnostic and lab values, and the equipment needs. Obviously providers needed this information, to plan what their resources are, knowing what they are going to be getting for that patient and then planning for what their resource utilization is going to be and not sell themselves short or not have difficulty getting paid for what they were actually providing.

They looked at internal and external processes, and then they developed an outcome management system. They actually have an internal computerized system that they developed, which can tell you, on any given day, where they are and what variances they have, etc.

Now, the classification system relative to resource use was the nursing needs, the medical supplies and pharmaceuticals, obviously, and then the therapy needs. Having had experience with this sort of thing from a case management side in my past life, it can be a pivotal point, particularly when you look at the pharmaceutical needs. You're trying, from a case management perspective, to plan for where you're going to have a patient and how much it's going to cost the organization or the plan. You'll frequently see that you might be able to get a per diem rate with a skilled level of care, but everything else is extra (all of the supplies, the pharmaceuticals, and so on), so it could wind up costing you nearly as much as it would cost you to keep a patient in the hospital, depending on what the fixed costs are.

Obviously, they had to recognize the comorbid conditions because that's going to influence the resource use, staff use, etc. Separate the skilled nursing needs from the nonskilled needs, and then they built their standard of practice around the template of the volume 6 M&R guidelines, which is *Recovery Level of Care*.

This is its classification system, and I'm sure, as actuaries, this isn't really exciting to some of you, but from a clinical perspective, this is kind of difficult to get to, and I think they did a good job. They wanted to classify patients in a way that they could plan resources. It's not just diagnostically driven, because a diagnosis does not necessarily tell you what resources are going to be involved in taking care of a patient. You could have 14 patients with the diagnosis of total hip that could have very, very different resource utilization depending on what else is going on with them, so when they developed this classification system, they developed it so that they could look at what they call their type level of core severity zone (TLSZ) designation: the therapy resources that are going to be involved, the nursing resources, the certified nursing assistance (CNA) resources, and the respiratory resources. Now, within the nursing resources they had four levels—1, 2, 3 and 4—and with the CNA resources I believe they had A, B, C, and D. They have actually developed a crosswalk from their classification system to the RUG resource utilization groupings (RUG) system at this point in time so that they can look at how they've classified a patient and then go across to RUGs to see kind of what their resource utilization is going to be. Again, rather than being diagnostically driven, it's resource driven.

From the Floor: Can you define CNA?

Ms. Tyndall: CNA is certified nursing assistance, so it's a nonprofessional, certified nursing type of person with obviously a much lower salary and lower resource utilization.

Regarding their core business processes, they have to identify the patient pre-admission. They obviously take them directly from office rapid treatment site, acute care, other recovery facilities, or home. The treatment plan is defined in care tracks. They actually have 18 care tracks in place. Anybody who's familiar with the hospital side, knows the critical pathways are pathways that actually define day by day or in phases what needs to happen to the patient and how you get there, etc. They have 18 care tracks in place currently, and they're a mixture of rehab and medical. Because it's a subacute facility it has more complex medical cases than they do rehab cases, which would be typical, and so they have focused more on the complex medical cases because obviously those are going to cost them more resource-wise as well. Then they have admission criteria, and desired outcomes that they have identified. By using this sort of system, they have done a collaborative project, with Shands Hospital in Florida, where they work with this sort of system classifying patients and identifying early on in a hospital or sometimes even prehospitalization whether or not a patient is going to be able to access their level of care, what they're going to look like when they come, etc. The hospital has worked with them, and they have a contract with them.

Core business processes: one of the things that she talked about was that a whole lot of things need to change within a provider organization when you change your core business processes. This will happen a lot as Medicare reimbursement changes. I think there's going to be a huge wake-up call for those long-term care facilities (skilled and subacute facilities and rehab facilities) because in my experience there's an awful lot of people who are still working from that Medicare mind-set in which you have 100 days to do whatever you want to do and you can fiddle around with the reimbursement. Many people still don't get it that it's going to be very different. One of the things that she said that they recognized early on was that the infrastructure of their whole organization was going to have to change. They had to change staffing and reporting relationships. They even rewrote job descriptions and hiring criteria. It's very difficult sometimes to hire professional nursing for those levels of care because in the olden days the long-term-care facilities tended to get nurses who were burned out on hospital care, didn't like patients, and that sort of thing, and they'd wind up working in the long-term- care facilities. It was really sad because you couldn't get the truly skilled kind of energetic, knowledgeable nurses to work in that level of care. It is changing. Long-term care facilities had to change their job descriptions and their hiring criteria and their skill set requirements for the people who they were bringing on to do this kind of care.

Standards and procedures and protocols were rewritten. They used the optimal recovery guidelines, the M&R guidelines to use as a template. Obviously regulatory

and monitoring procedures had to be looked at closely. Their forms and documents changed, as did space, equipment, and supplies. She said this is one of the things that they had to focus on quickly, and if you're working with providers in this area, it's something that you might want to think about. One of the things that they did, for instance, from a supply side was look at standardizing their wound care throughout all their facilities and then say, "This is what's going to be used for wound care; this is how we're going to order our supplies; and this is what we're going to have in house to use for wound care." Wound care can be extremely expensive, and from a provider's side, if you don't have some standardization in your supplies, how you do the wound care, and what's provided, it could wind up eating up everything that you have to take care of that patient. I thought that even getting down to supplies was an interesting piece as far as having to change their infrastructure.

What they have done in their outcome management system: like I said, they actually developed their own computer on-line system so at any time from her office (which is actually in Milwaukee at her new company), she can plug into her computer system and, with the key indicators of performance, she can look at variations in any of the care tracks, in any of her facilities in Ohio or Florida or any place else they happen to be. And if there's a variance, for instance, that a patient is not on the care track because they fell, she can find out what shift they fell on, what time they fell, who was in charge of the patient, the time the patient fell, what the circumstances were, etc. So they have very good outcome tracking with what they have developed. It's a higher level of outcome tracking than I've seen in that level of care for anybody.

She said that therapy utilization has dropped by 33% since they changed this whole process that they have. That's significant because therapy is one of probably the most overutilized pieces of this level of care, and there will not be the reimbursement to support that as time goes on, so they have already dropped their therapy by 33%.

They can trend in all the financial data combined with the key indicator information monthly by center or actually they can trend it even less than monthly if they need to. They can do year to date.

She said finally that the financial and clinical analysis of the model is what they do on a regular basis so that they know exactly where they are. Then, in summary, the quality cost-effective outcomes obviously are key to the viability of this provider organization. Like I said, this is from the subacute provider perspective. They had to redefine their clinical operations and manage their cost by managing their care,

which is what Oscar mentioned earlier. One of the things that people forget is that he has a managed care piece, and again you've got to do that proactively.

Mr. Lucas: If you'd like to ask questions, now is the time to do so.

Mr. William R. Jones: I have a two-part question about recovery care, which is sort of what this whole thing seems to have centered on. I wonder if you could comment a little bit about the geographic variation of the sort of state of recovery care in the U.S. and on those areas where it's somewhat less advanced. What kind of influence do you think managed care plans can have to sort of use this well-managed model where the recovery facilities may not be operating that way?

Ms. Tyndall: I think that it varies significantly. I've worked in parts of the South where a long-term care facility is where you send grandma to die. The hospitals or the health plans will say, "There isn't a facility in this area to support what you're talking about as far as being well managed on the inpatient side because we don't have that." That's part of what we call the infrastructure to support being well managed on the inpatient side. What I've encouraged people to do, and what we've seen clients do, is actually go out to these long-term-care facilities or skilled facilities and say, "We need to be able to send a patient from the emergency room; we need you to be able to do IVs, and so on to help them." Actually in one area of the South that I was working in, the physicians at the hospital and the health plan did some in-services for the skilled facility to get them up to speed to be able to take these patients. They then had a contract with that facility. Typically, contracting with the facility will help you kind of smooth the road to getting things to where they need to be in terms of facilitating that smooth process going back and forth. There are some rural areas that probably are not going to have that capability. The progress of managed care will be kind of dependent on the managed care market. If it's a stage one market and long-term care really isn't being used because everything is fee-for-service and nobody cares, there has to be an incentive to kind of drive the development of those levels of care so I think there's going to be some rural areas that may never see a need to have that. As more managed care comes into the arena, I encourage the managed care organizations to work with those facilities and try and get them up to speed.

Mr. Lucas: Peggy, maybe you could comment on physician visits to a skilled nursing facility and how that might impact what they can actually do.

Ms. Tyndall: I think one of the things that we've seen is that physicians have been reluctant to go to a nursing home. It's a pain, a chore, etc. Liz's organization actually hired medical directors to be at their facilities so that if physicians wanted,

their physicians could take over and manage that patient while they were there. But from a health plan perspective or from a managed care organization perspective, having your physicians involved in helping manage those patients is pivotal so that you have to get them involved. Typically health plans will assign nursing home rounders, or, as I mentioned earlier, maybe nurse practitioners who are geriatric nurse practitioners hired by many health plans will actually be in charge of nursing homes, and they can write orders and manage those patients collaboratively with the case managers and be very efficient at managing those patients at that level of care, because typically you'll see physicians not wanting to take time to do a nursing home visit. But if they only go once a month, I guarantee you the nursing home will keep them for that 100 days until they've used up their benefit.

Ms. Gail Lawrence: What kind of managed care makes sense in an indemnity plan environment?

Ms. Tyndall: That's a tough one. Usually what we see is there isn't an incentive to be very managed in an indemnity-type process, and typically you can give people all the information that you want and educate them—you can lead a horse to water, but you can't make them drink. Until the incentive, particularly on either the provider's side or the physician's side—the facility provider or the physician provider side is there to make them want to change—nothing will change. If they continue to get paid for what they do, there is not going to be an incentive to change, so typically we don't see that change happen. One of the things that we say is that behavior follows reimbursement, and it's kind of crass, but it's true. That's typically what we see happening. Oscar, do you have another thought on that as far as the indemnity perspective in managed care?

Mr. Lucas: The thought came to my mind that was the same as yours, that behavior follows reimbursement and to really move anywhere you need to have some incentives. We see three things: one is provider incentives of some sort; provider reimbursement, how that is structured; and then the use of guidelines or protocols: some sort of tool for the providers to understand what can be done and compare themselves. So those are three keys that we see in provider systems that are moving. It's very difficult or it's more difficult, certainly, in an indemnity setting than it is in a managed care setting.

Ms. Leslie F. Peters: How is this system of acute recovery, home health, etc., accepted by the patients? I'm sure that everybody in this room probably cringes every time they read *The New York Times* and there's a front-page article "Joe Schmoe did not care." It sounds like it's a very logical and well-thought-out model, but how is it received by the patients in the system?

Ms. Tyndall: One of the large insurers in the U.S. that we've worked with in doing a patient satisfaction study and re-admission study actually did side-by-side studies. It found that if the case manager was actually talking to patients, talking to family, working with physicians, etc., in an involved way, readmission rates stayed exactly the same, and patient satisfaction went up 100% because patients actually felt like somebody was managing what needed to happen to them. Patients should not have a large insurer decide that day three was the day the patient needed to go home, and there shouldn't be pressure on that physician to discharge that patient without the case manager being involved or anything else. The patient may very well feel like you've abandoned them and dropped their care. Whereas, if a case manager is involved in actually speaking or communicating with the patient and the physician and the nurse on the floor, the patient has a whole different feeling about what's happening with them and they are actually being managed by somebody who knows what's happening to them. They aren't being discharged and they're actually being managed through these different levels of care. From real experience with a client, they found that patient satisfaction increased greatly. That's not to say that there aren't managed care organizations out there—and certainly it's on the front page of *The New York Times*—where patients were denied this and denied that. The physician is involved in making those medical decisions about when a patient is stable to go and that sort of thing. It can be done very appropriately and very effectively, with patients feeling like they're being supported.

Ms. Peters: As a follow-up question to the earlier one about infrastructure, if there is a location, rural or not, a well-developed managed care area, do the hospitals themselves ever consider building a skilled nursing wing?

Ms. Tyndall: Many of them do, and the only problem with that, as you're all aware, is that many hospitals have used that to maximize the DRG payment and move a patient prematurely into a SNF level of care. That's going to change because of the new regulations, but yes, they do, and that's a very viable alternative because many hospitals don't need all the beds they have. Even some of the rural hospitals are being used just for the very acute patients, and even some of the other ones are being transferred into bigger tertiary centers and that sort of thing. But it's a very viable option for hospitals if they can develop a skilled level or a subacute level of care to be able to do that and it makes sense.

Mr. Lucas: Let me give just a couple of comments from a personal standpoint. My dad, who's in his 70s, fell about nine months ago. He broke his hip, and he's covered by a managed care plan or Medicare risk contract. Of course, I advised him to do this, so I was starting to feel a little bit of responsibility. The one person

who really stood out in the delivery of care was not the doctor; it was the case manager, who called me at work to talk to me about what the treatment plan was going to be and what should be happening. My dad was pretty much out of it, so I'm not sure how much of this he picked up on, but my mom was there, and it was very interesting that my mom would say, "I've seen the doctor once since dad's been here." However, the case manager was by every day to talk to them and kind of reassure them by saying "Here's where we're at in the treatment plan." And so that, I think, is at least a good example of how it can work. I don't think it always works that way, but that was an example of how it can work, and I was very pleased with the outcome.

Mr. Kevin D. Rease: Oscar, a question about your charts. I noticed you had target revenue. Is that supposed to reflect the APR, or is that a net revenue?

Mr. Lucas: That was actually a net revenue—good catch. I saw that the other night and realized that was net of the administration.

Mr. Rease: Another question about your model on the assumptions. This plan that you're modeling here obviously can't be a first-year plan looking at the advent.

Mr. Lucas: That's right. This was a plan and they knew what their costs had been running.

Mr. Rease: Maybe a second-year or third-year plan, maybe?

Mr. Lucas: Yes, it was several years.

Mr. Rease: Also a question about your noninstitutional, non-Medicaid assumptions. We know that, say, 90–95% of your population would fall in that area, and I guess my question to you would be, do you see this changing? If you were to figure in Medicaid and the institutional membership, would your distribution of savings change at all?

Mr. Lucas: Yes, it would. I think those patients are more difficult to manage typically. They certainly have more comorbidities, so yes, it would. Hopefully, the revenue, the APR, would adequately reflect that.

Mr. Rease: Peggy, a couple of questions for you. Could you approximate, on a national level, what the appropriate staffing level might be for concurrent review nurses per member?

Ms. Tyndall: We have a ratio that we talk about. If you're doing concurrent review onsite, it should be one case manager per 5,000–7,000 lives. I don't know if your organization is able to do concurrent review: It sounds kind of high, but I will tell you, particularly with the Medicare risk population, it may need to be closer to 5,000 because you have a lot more discharge planning issues on the inpatient side than you would with the straightforward commercial patient. So 1:5,000–7,000 is typically the ratio that we give. You can manage patients marginally well doing telephonic review case management, but you're at the mercy of whomever answers the phone on the other end or whomever chooses not to answer the phone on the other end. When you're a large insurer and you can't do onsite everywhere, you're going to be less efficient just because you can't be onsite. You still need to make that daily contact and do concurrent review, even if you aren't there in person.

Mr. Rease: What about on the commercial side?

Ms. Tyndall: On the commercial side, we say the same, and like I said, you might be able even to go up to the higher part of that ratio. Again, we believe that you need to manage every single patient. So even the "routine patient" who goes in for, let's say, a hysterectomy, the length of stay should be two days. I do chart reviews all the time where it's easily three or four, because it was routine, but nobody seemed to figure out that on day two this patient was stable, ambulatory, eating, taking oral medication for pain, and ready to go. So maybe the standard of practice in that particular area is four days, and they stay four days. That's not efficient. The patient could have gone on two, but you can't assume that that's going to happen. The commercial population still needs that management, so you just might be able to go to the higher end of that ratio.

Mr. Rease: Two other questions. What role do you see disease management playing in medical management?

Ms. Tyndall: That is a big issue. The common diseases as far as disease management is concerned that are probably going to be things that are quick fixes and easy management, while you have them in real time. For instance, congestive heart failure versus diabetes or hypertension: diabetes and hypertension are those things that you might manage very well in your plan early on for ten years. If patients change plans later on, somebody else is going to reap the benefits of your having managed that patient in a disease management process early on. Most plans will go for things like congestive heart failure, chronic lung disease, asthma—things that cause the big expenses while they're with you. I think that it plays a huge role. Again, case management is of the utmost importance in that piece because that's where you're probably going to be able to manage these patients out of the hospital

more than in the hospital. If they do get in the hospital, that case manager will know what their baseline is and know at what point it's okay to transfer them back to another level of care. So I think it's hugely important. You can do it as a plan yourself, or a lot of organizations provide disease management that you can carve out or purchase separately.

Mr. Rease: Last question. In lieu of the high utilization on drugs, what do you see as the role of the utilization management of prescription drugs?

Ms. Tyndall: I think that that is a huge physician component. We happen to have volume 5, which talks about pharmacy utilization and has a formulary in it. Typically you'll see physicians using whatever the detailman dropped off for them that week, or the detailman who visits them most frequently is the one that gets the most drug use, so they'll use the high-end antibiotics versus lower cost ones that may work just as well. They are not necessarily generic, because we don't always recommend that generic drugs are the answer to everything. There might be a brand name drug that's more expensive that makes more sense to use one time versus using a generic one five times that's not going to have the same effect. I think that's all a physician education component. The very limited formularies that some companies have don't necessarily net them the savings that they think they're going to get based on maybe requiring generic-only use and that sort of thing. There may be more appropriate drugs to use one time, or maybe more expensive ones to use one time, but less expensive over the long haul in terms of recurrence of the illness and that sort of thing. So I think it's very much a physician education component. We've done chart reviews in areas where one particular teaching institution had a lot of input from a drug company and a lot of support from a drug company, and they used all of their drugs. It was a no-brainer. I think it's going to be physician driven and to a certain extent driven by some of the pharmaceutical companies as well. They're advertising, obviously, in all the magazines and everywhere else, so patients come in and ask for what they think they need.

From the Floor: From a patient's perspective, let's say with the same ICD-9 code for a hip replacement, what could they expect in terms of a flow chart in terms of services and/or resources in a loosely managed setting versus that of a well-managed setting?

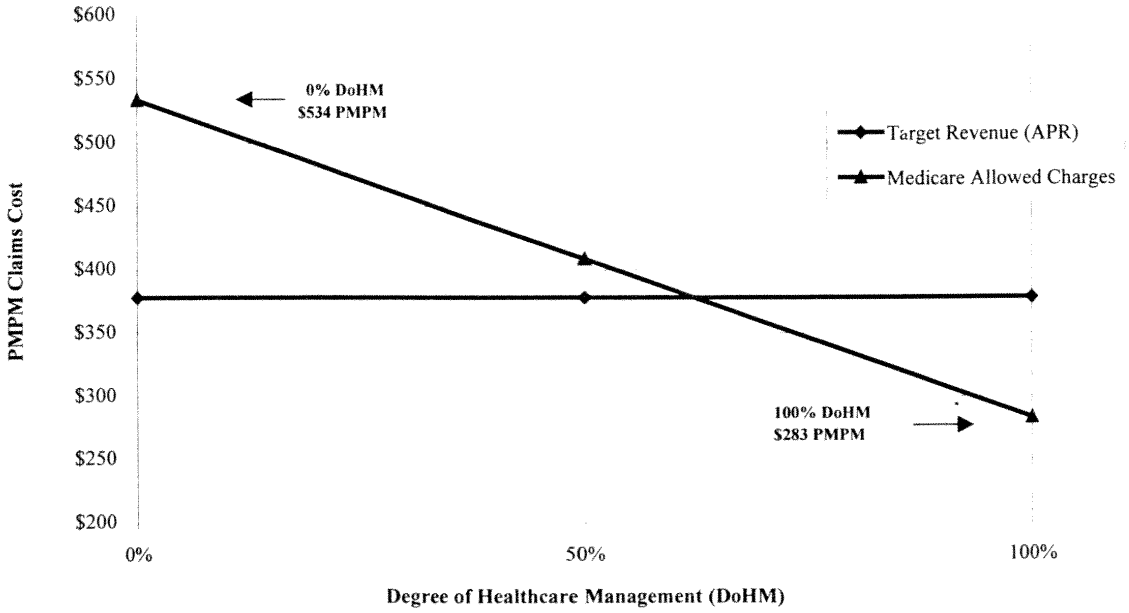
Ms. Tyndall: I was doing a project in North Carolina not too long ago, and there was definitely unmanaged/non-managed care influence in this particular part of North Carolina. We're really excited to finally get their length of stay from eight days to six days. In a well-managed organization, the patient would stay probably three days and, like I mentioned, sometimes two days, in some areas of the

Northwest and southern California, where they're actually proactively identifying issues with the patient ahead of when he or she goes into the hospital. So, if the patient has needs beyond the acute level of care, they'll know that ahead of time, and be ready to transition them to another level of care. As soon as they're stable and in the hospital and no longer need that acute level of care, they're immediately either transitioned home with home health support or transitioned to a skilled level of care for X number of days and then home with or without home health care. What happens on the unmanaged side is that patients stay there until somebody decides they don't need to be there any more. In fact, chart reviews show the patients have asked to be discharged: "Can I go home now? I really want to go home now" You'll see that note for three days in a row, and finally they send them home. In the past it hasn't been an issue because DRG-reimbursed hospitals have kept patients as long as they could with the DRG; fee-for-service kept them as long as they were getting paid: what was the incentive to move that patient on? So on the unmanaged side, you typically see hospitals keeping patients however long they think they need to stay there, or longer if the patients' families can't pick them up, they stay another night.

From the Floor: Do rehabilitative services differ though from one to the other in terms of what's done to get the patient ambulatory?

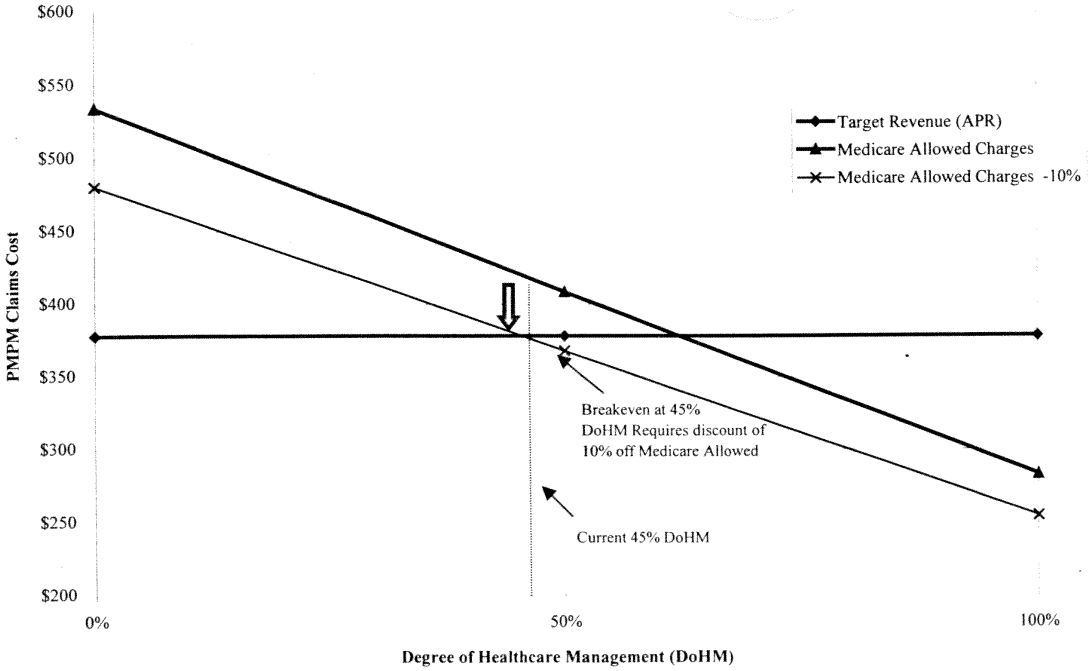
Ms. Tyndall: Definitely. I think from the unmanaged perspective you don't see much of a focus on that. You might see rehab come in on the third or fourth day. You would see in a well-managed organization that the patient to be assessed would have upper body strengthening done by physical therapy (PT) before they even go in for their surgery. They would have PT on the first day, their operative day, and PT every day after that. The case manager would have already set up what kind of therapies they need to support them once they're discharged. So again it's that proactive versus that reactive kind of focus. I've been a nurse for 100 years, and one of the things I tell people is that I remember when we didn't do anything about discharging until the doctor decided it was time for them to go home. Nobody ever mentioned discharge, so if the physician came in on day 10 and said, "The patient can go home today," you started running around trying to get all these things organized, and it didn't always happen the same day. Now people start talking about discharge the day the patient comes into the hospital; usually even before they come there, the patient will have already had some sort of idea about how long they're going to stay in a well-managed organization and where they might need to go after that.

CHART 1
ILLUSTRATIVE MEDICARE RISK, PMPM BENEFIT COST
DOHM IMPACT, JULY 1, 1999



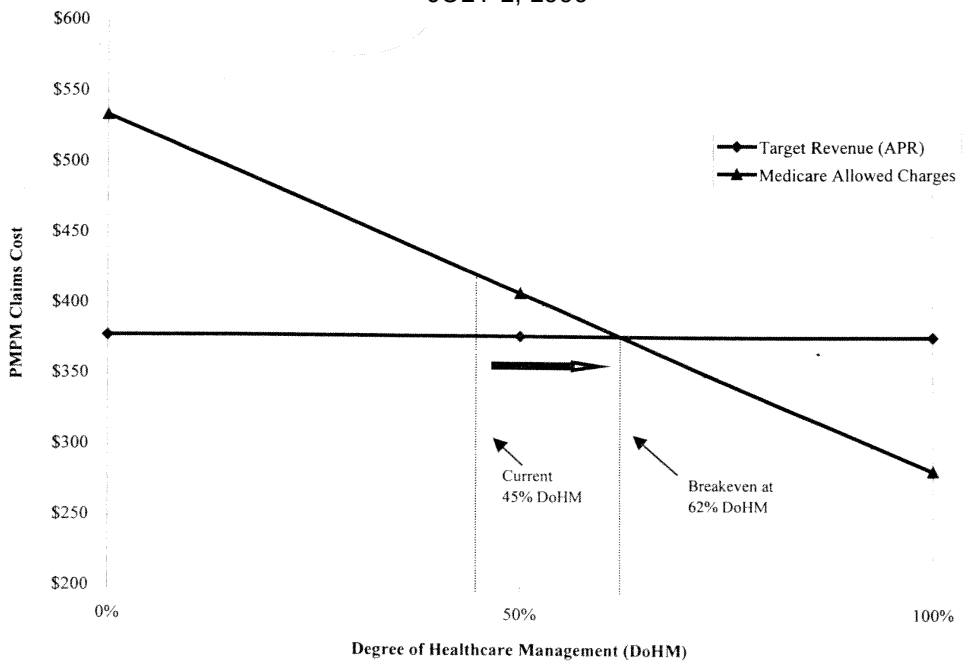
Source: Milliman & Robertson, Inc.

CHART 2
ILLUSTRATIVE MEDICARE RISK., PMPM BENEFIT COST
IMPACT OF ADDITIONAL DISCOUNTS, JULY 1, 1999



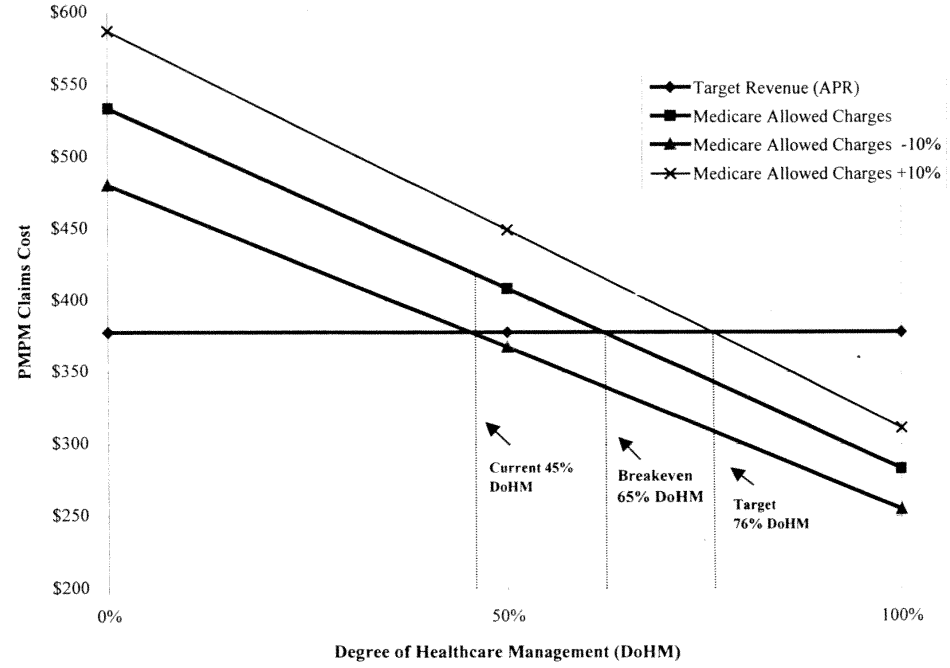
Source: Milliman & Robertson, Inc.

CHART 3
ILLUSTRATIVE MEDICARE RISK, PMPM BENEFIT COST
IMPACT OF IMPROVED DOHM
JULY 1, 1999



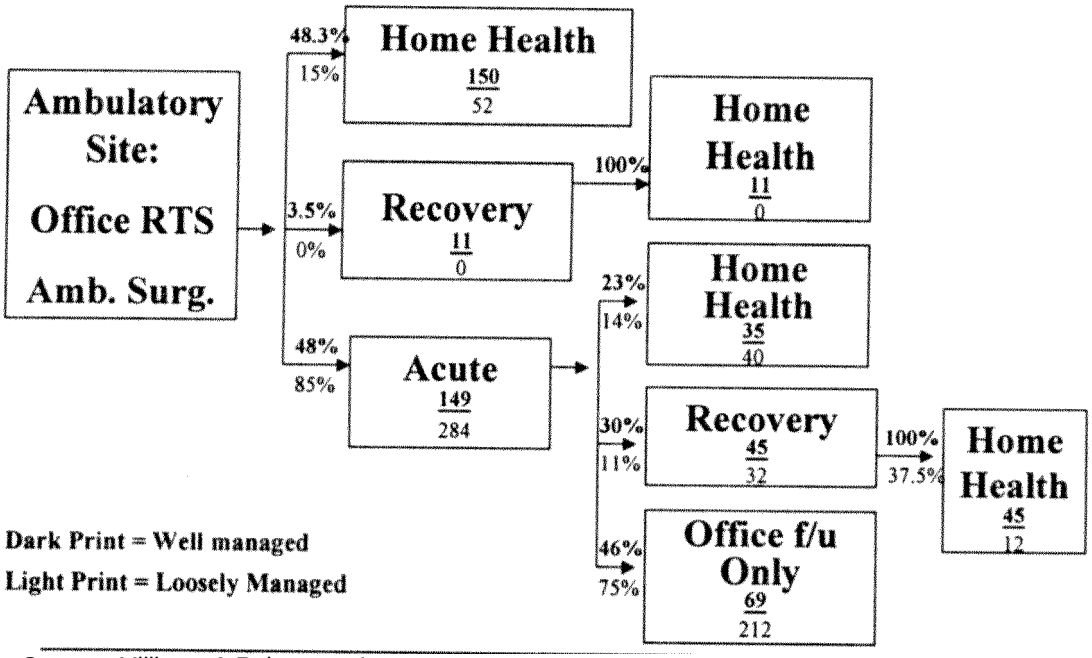
Source: Milliman & Robertson, Inc.

CHART 4
ILLUSTRATIVE MEDICARE RISK, PMPM BENEFIT COST
SURPLUS POTENTIAL
JULY 1, 1999



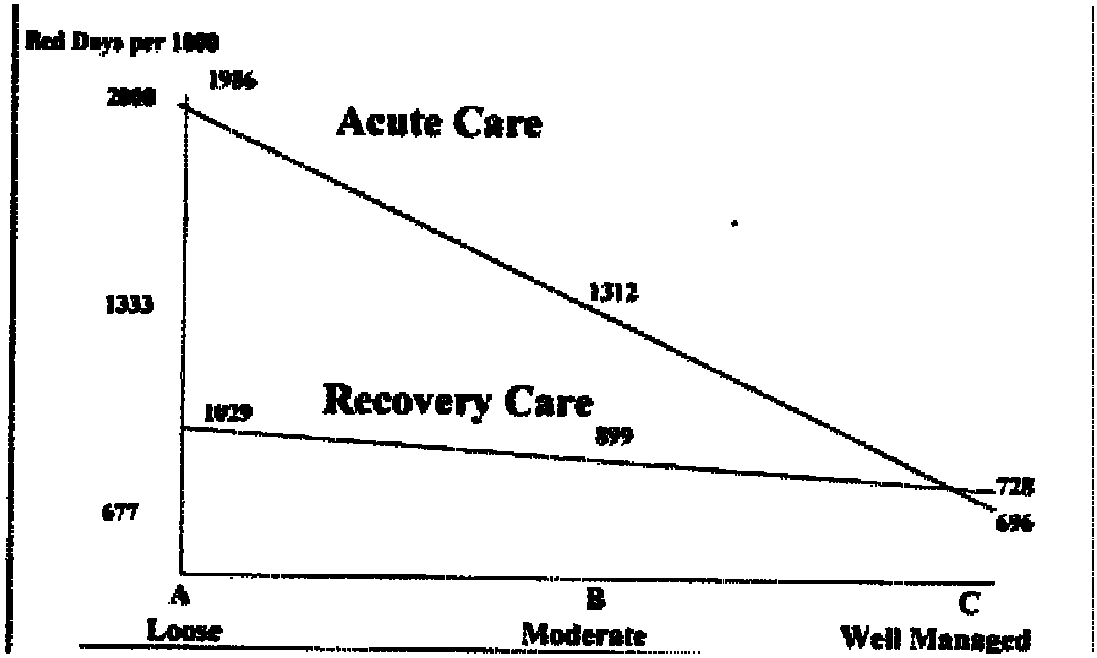
Source: Milliman & Robertson, Inc.

CHART 5
MEDICARE WELL MANAGED



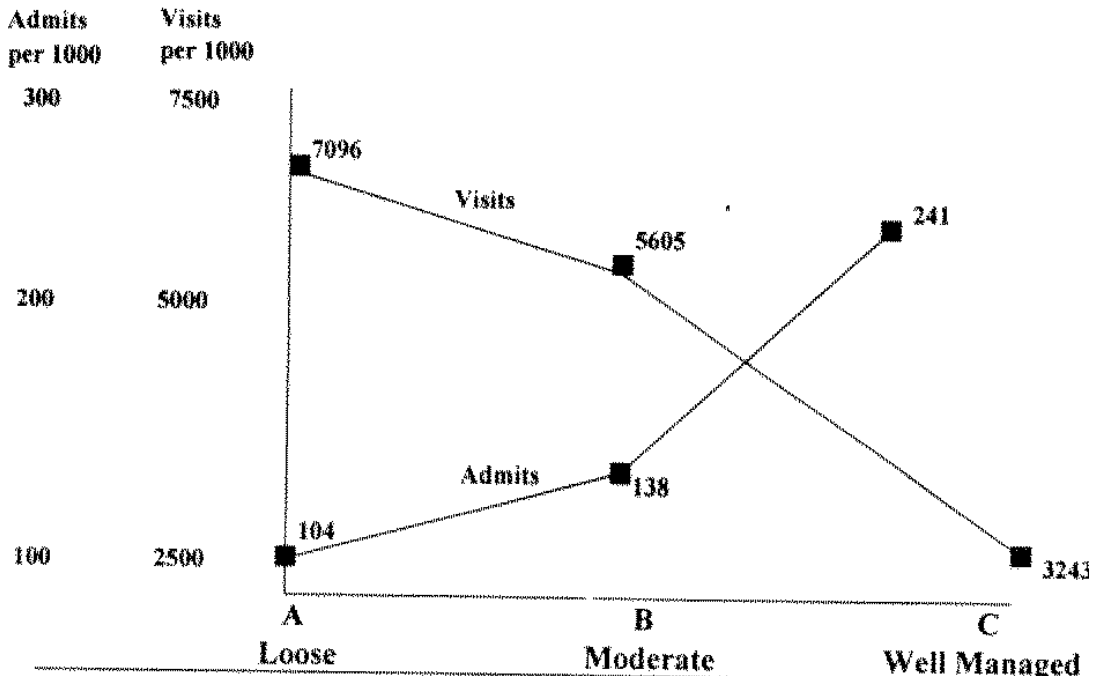
Source: Milliman & Robertson, Inc.

CHART 6
ACUTE AND RECOVERY CARE–MEDICARE



Source: Milliman & Robertson, Inc.

CHART 7
HOME HEALTH CARE–MEDICARE



Source: Milliman & Robertson, Inc.