

Pharmacoeconomic Outcomes of a Pharmacist-Led Medication Review Program

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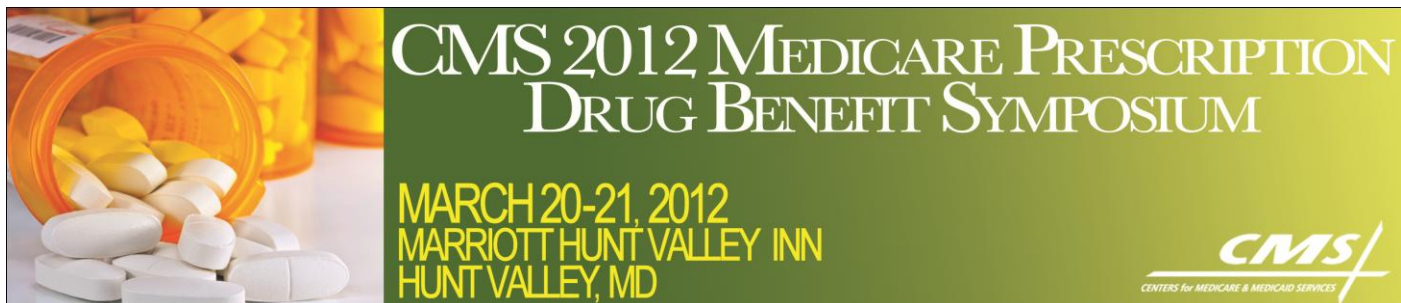
We all know that the intention of the Medicare cost share model as it relates to Part D, you know the standard benefit and the coverage gap, were meant to help control the program costs. And they were also meant to encourage physician and patients to communicate to make good choices for their drug therapy and be a little bit proactive in their approach to treatment, right. That was the plan in the beginning. Unfortunately, the reality is a little bit different than that. In 2007, an interview survey reported that only an estimated 40 percent of patients knew that their plan included a coverage gap at all. And only 75 percent of the patients that actually fell into the gap knew that there was a gap. So that was part of the problem.

A 2006 survey of California physicians shows that, while almost all physicians feel like it's important to manage the drug costs for their patients, only 65 percent of them felt that it was important to discuss those costs with their patients. And less than half of them felt it was their responsibility to help their patients manage those costs. Only 15 percent report actually having discussions with their patients about drug costs, and the number drops to less than five percent when the discussion is about total drugs costs, which is what puts members in the gap to begin with.

So the program that I'm presenting to you today is an effort to effect change in these areas. The gap is closing, but it's not closing immediately, as we all know. And as the benefits of the CMR and MTMP programs are shown over and over, we all know how important those things are. So let's get started looking at this program.

Before we get too much further, I want to share with you a little bit about the demographics of our health plan and the area where we had this program run this year. I'm the Director of Pharmacy for GEMCare Health Plan in Bakersfield, California, which is in Kern County. Kern County is third-largest county in the United States. It spans over 8,000 square miles. We have about 8,000 Medicare members in our plan. On average, the State of California has 262 physicians per 100,000. In our county, that shrinks to 132 per 100,000. We're a designated health professional shortage area for the state. Our number of geriatric specialists is also pretty limited, despite the fact that our 65 and up population has increased 21 percent since 2000.

We also have a high unemployment rate of 15.8 percent, and a number of other health challenges. So out of 58 counties in California, if we look at mortality rate per 100,000 by population, Kern county is 58th in heart disease, 56th in diabetes, 57th in influenza and pneumonia, 56th in Alzheimer's, 55th in chronic respiratory disease, 49th in chronic liver disease and 47th in stroke. So we have a long way to go to help our population get a little bit better.



So let's get back to the program a little bit. On initiation of this program, the goals were extremely simple, very straightforward: reduce the number of members that fall into the gap, reduce the overall cost to the plan and to the member, and improve utilization overall. The program was created by a team of consultant clinical pharmacists. You'll hear from them shortly. It's Dr. Gates and Dr. Dehner sitting here next to me. We took a list of about 30 medications, all of which had low-cost, clinically appropriate alternatives. And from that list, we targeted members and invited them to participate in this program.

So from July 1st - excuse me, I was just making sure I'm on the right slide. I am, okay. So from July 1st, 2009 to June 30th, 2010, 319 patients were seen in the program. And the data was collected on their pharmacy and medical claims before they were part of the program and after they were part of the program. For our results, we're presenting the data from 305 of those patients. 14 were excluded because they had non-continuous involvement in the plan so we didn't have complete data on them.

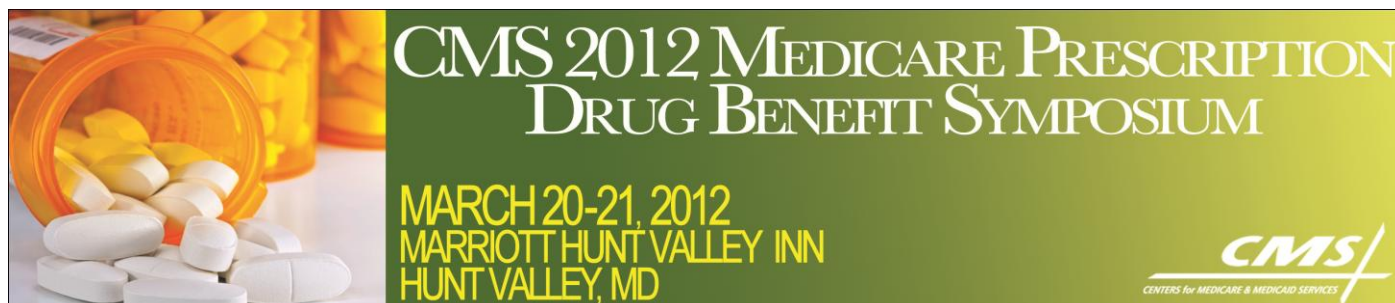
So I'm going to let Dr. Gates and Dr. Dehner tell you about the logistics of the program, but I just wanted to give you a quick overview so you kind of have an idea of where we were coming from before we look at the outcomes. When members agreed to participate in the program and schedule an appointment, they were asked to bring all of their medications with them, over-the-counters and everything else.

Prior to the visit, a note was started - based on their demographics - were put into the note. Their pharmacy claims history was looked up and their medications were listed as we could tell what they were from their claims reporting. When they arrived to the appointment, a comprehensive medication review was completed. The clinical pharmacist took their complete medical history and did a full medication review. They also took time to do disease state and individual medication education for each patient. Members were counseled that the pharmacist would be sending their recommendations of the physician, and the members were encouraged to follow up with their physician regarding those recommendations after the appointment.

After the interview was completed, a comprehensive letter was drafted to the primary care physician, giving them all recommendations for changes based on any area that needed attention. So lower-cost alternatives certainly, but also potentially inappropriate medications, drug interactions, disease state indications and any other issue that we found.

The pharmacists also wrote a detailed clinical rationale for each of those recommendations. And the physicians were invited to either make the changes themselves or to fax back an authorization of the pharmacist to make those changes on their behalf.

So for our 305 patients, here are the statistics that we found. Overall, 1,174 interventions were recommended to physicians, 726 of them were implemented, 666 were sustained meaning that to date based on pharmacy claims the patient continued with the medication that was changed. That represents a nearly 62 percent conversation rate and a 92 percent retention rate.



If we look at the clinical rationale behind the 1,174 interventions, you can see that 23 percent of the time the recommendation that a drug be discontinued. And eight percent of the time though, the recommendation was to add something on, something that was missing. The vast majority though, 56 percent, were simply a therapeutic interchange from one drug to another.

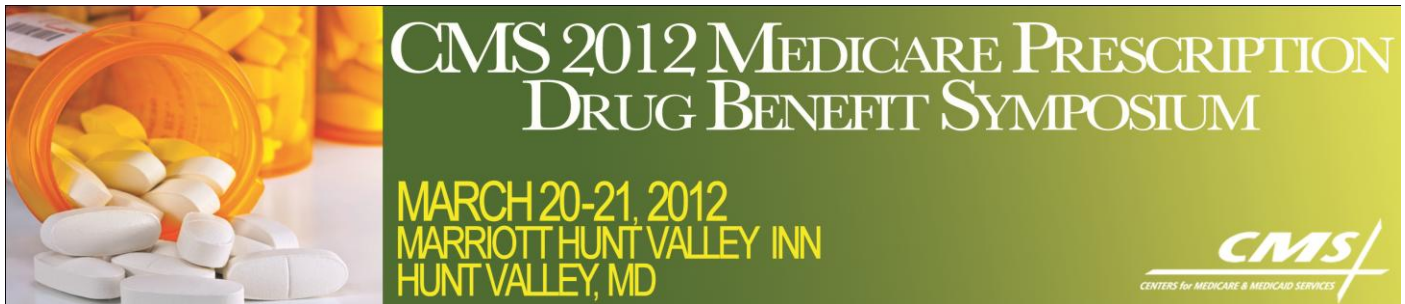
And if we look at that a little bit more closely, you can see that 71 percent of the time, the recommendations were for reason of cost. So, for example, we're changing Lipitor to Simvastatin or from Diovan to Lysinopril in a patient that hadn't failed an ACE or had no history of reason to not be on an ACE inhibitor. 11 percent of the time, it was a disease state indication. So an example of that might be a patient was in hydrochlorothiazide but we changed it to an ACE in a diabetic, something like that or maybe switching Celebrex to Tylenol for a patient that had osteoarthritis and how history of rheumatoid arthritis.

Five percent of the time it was for a reason of drug-drug or drug-disease interaction: for example, a patient that was a CHF patient on Actos [sp] and we might have made a change for that reason. Four percent of the time was for a patient-reported adverse event, two percent of the time because it was a drug to avoid in the elderly. And the last eight percent were for some other therapeutic reason. So perhaps a better duration of action, more evidence to support use or just a lower-risk medication overall.

This slide, I realized later that I took the legend off, so I'll try to make it clear for you. Sorry about that. One of the interesting things that we noted was that the statistics for the drugs that we targeted and the recommendations that were made. So that when you look at the graph on the left, you can see that of the initial targeted medications, only 34 percent of the recommendations were actually on those originally targeted medications.

Overall, if you look at the chart on the right hand side, you can see that only 42 percent of the implementations were on medications that were originally targeted. So the majority of the time, it was medications that we hadn't targeted that they just found out about once the member had agreed to have their medication review. But that being said, of the drugs that we did target, the recommended changes on those drugs were implemented over 76 percent of the time.

And the final list of intervention statistics just gives a breakdown on the top converted drugs for the year. And I know this might be a little bit hard to see from where you are. Those things that have a star next to them were drugs that were targeted. Those without the star obviously were not targeted. And they give us some interesting things to consider going forward. For example, if you look at Plavix, it's an expensive drug. It's not without risk. It's often left on long after a patient doesn't need it any longer or it's not clinically indicated any longer. For 35 percent of our patients, just over ten percent of the patients that we saw, we suggested that the physician reassess the indication. Now we didn't have all of the information. We only had what the patient told us about their medical history. So we couldn't say for certain whether it belonged or didn't belong. But for those 35 patients, we thought the physician at least needed to look at it and consider if perhaps it should be stopped. For nearly half of them, it was stopped. It was not a drug that we targeted. Another drug that's very expensive, Advair, often over-prescribed, was stopped 97 percent of the time that it was recommended. It's not a targeted drug also. In the top most converted



drugs though, nine of the top 15 were targeted. They all had very high rates of conversion and retention as you can see here.

So moving onto the gap-related outcomes of all those changes, we're going to first look at how we help patients in the gap and with the co-burden a little bit. So the next two charts will show the percentage of patients that were in the gap in the quarters of the year, both before and after they met with our pharmacist. So, as you can see, prior to meeting with pharmacists, 16 percent of the patients entered the gap in three months or less. And by six months, 50 percent of those 305 patients were in the gap and paying their total drug costs every months. Of those 305 patients, 76 percent of them were going to enter the gap sometime during the year.

After they participated in the program, only three percent were in the gap at three months or less, only 17 percent at six months, and a full 58 percent of them never entered the gap at all. In addition, prior to the program 47 percent of patients were on ten or more medications, and after that number dropped to 38 percent.

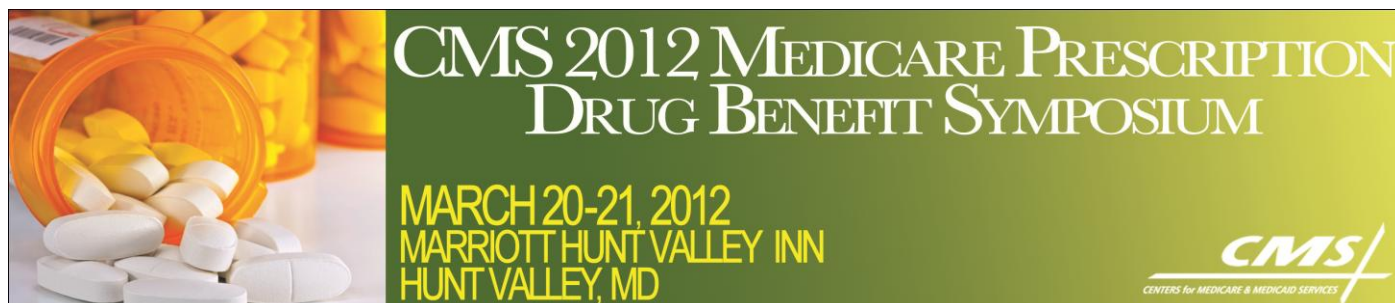
So in the beginning of this presentation, I mentioned that our second goal included reducing costs to the plan and to the member. And that was accomplished in a really big way. This is the fun part, so let's take a look at the numbers. Prior to the program in looking at only these 305 patients now, the total cost to the plan was \$102,057 a month and the cost to members was just under \$34,000 in co-pays. It amounted to a total annual drug spend to the company of about \$1.2 million. With just 62 percent of implementation, the monthly drug spend for these patients was nearly cut in half. By the end of the year, the drug costs for those patients had been reduced to 647,790, down from \$1.2 million. For the members, that 62 percent of interventions that were implemented translated to a monthly co-pay amount that dropped nearly \$14,000.

So when you do the math and you include the savings for the changes that were not sustained, the total monthly savings to the plan is nearly \$50,000 and the total annual savings you can see there \$603,580.66 in real dollars calculated out. For the members, the annual co-pay savings came out to \$165,973, which is about 545 per patient per year.

The cost of the program for two pharmacists one half day a week and an admin person in-house to do some of the scheduling of appointments and send the recommendations of the physicians, the company spent approximately \$55,000 for the year, and the return on investment for this program then was just under 1,100 percent, right.

So, just by way of perspective, the total drug spend for all patients in the same timeframe was just under nine million for every patient in the plan and the total savings of this program, minus the cost to run it, equated to 6.1 percent of our total drug spend.

And another consequence of sending thorough notes to physicians, which was pretty interesting to us, is the physician education aspect. So the increased knowledge of medication costs and available alternatives translated into better utilization by our participating physicians. We saw year-on-year increases in generic utilization across the board and decreased costs PM/PM, and per script, despite the



increase in overall script count. And when we compared the physicians whose members were participating in this review program with physicians who were less involved, we saw marked improvement month-on-month and year-on-year across the board in those participating physicians.

And finally, I just want to take a quick moment to look at some of the clinical outcomes. In general, we just wanted to make sure that our interventions were really benefiting patients and they weren't being harmed by these interventions. And what we know is this. In the six months prior to the interventions, our 305 patients had a total of 36 hospital visits. In the six months after, they only had 28. 16 of the patients who had visits before didn't have any after. Five had both and five had only visits after and none before. And when we looked at the 28 visits after, none of them were considered clinically related to the medication change that was made.

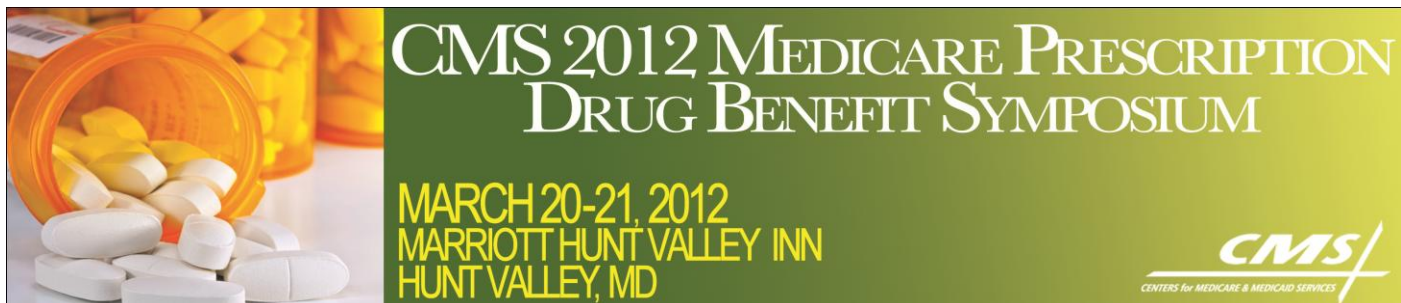
So as a quick update, this program continues to run, continues to show the same level of positive data. Over the last year, we've grown the number of clinically-trained pharmacists, as well as expanded our phone consultation programs if members prefer that to coming into the office to meet with a pharmacist. We've continued targeting members that are on high-cost medications that have appropriate substitutes for them. But we've also taken this from a pilot program to practice. And we've started converting our MTMP to use this medication consultation program for members who choose to participate in a CMR. We've also this year begun offering this service in our high-risk medical home. And by the year end, we project that all of the members in our high-risk medical home will have received this comprehensive review as part of their coordinated care.

So I'm going to turn it over to Dr. Gates right now and let him tell you about the logistics of this program, since he's the one that started it and ran it with Dr. Deener. So I'll turn it over to him. Dr. Gates?

Thank you, Dr. Steele. My name is Ryan Gates. I've kind of unpacked us a little bit, go back to about a 3,000-foot view. I was called in 2008 from the Chief Medical Officer of GEMCare Health Plan. On my day job is I'm a clinical pharmacist, actually Senior Clinical Pharmacist at a local county safety net teaching facility. I'm also the Residency Program Director for the pharmacy program there. So Dr. Deener is also a clinical pharmacist at the same facility.

The CMO, Dr. Neufeld [sp], called me because GEMCare's health benefit, their pharmacy benefit, had gone up by 19 percent in 12 months. And they were really struggling to rein in their pharmacy costs. They had their Pharmacy Director was a consultant who drove in from Los Angeles two days a month. So they just kept them in compliance, but really wasn't going aggressively after programs, initiatives to help rein in these costs.

So how it got started, the nice thing about our background is that we're practitioners. We have prescriptive authority in outpatient clinics, diabetes, hypertension, anti-coag, oncology, etc. We have great relationships with local physicians who refer their patients to us. So we have a collegial respect and understanding with our physicians in the community. So when we came in we said simply, "Let me just see your top 100 drugs by cost." And I went down that list it and seemed like 25 percent of them were very expensive brands with low-cost generic alternatives with no clinical justification between either one. So, very simply, we just said, "We need to meet with these members and talk with these docs." So we



had a roundtable discussion with seven of the largest - this is an IPA model - seven of the largest physicians in their private practices, brought them to the table, roundtable discussion. How can we help your members, right? This is what they're doing. They're hitting the gap in March, they come back to your office, and you have to sit down and change all their medications. How can we be an asset to you as a clinical pharmacist interfacing with your patients, right? So we developed the medication and consultation program. How did we target our members? Very simply, we target - now again this is an added benefit. MTM was already happening. It was delegated through the PBM at this point. So this medication review program was simply an added benefit to the plan. We targeted the patients on high-cost brands with low-cost generics and game them a call, invited them in for a medication review, sat them down. We had one hour face-to-face, one hour meeting with a clinical pharmacist, and another half an hour to an hour to draft the note that goes back to the physician. Very patient-centric: each recommendation involved clinical and subjective/objective information from the individual patient and our clinical rationale of our recommendations to the physician.

Let's see, I'm losing track of my slides. Okay, the format has been standardized. We continued to evolve as patient feedback and physician feedback comes to us. And based off the results, the plan was obviously very excited about rolling this out to all of their lines of business. And the program is scalability. It's a very time-consuming process right now, and we're trying to find a way to make it scalable and retain the quality. And we're actively doing that now.

So, how much time do I have? Do I? Oh, assessment questions. Okay doke. So we have - I know there's probably going to be a lot of questions, so I'd like to push into the assessment questions, move through that, and then we'll more time for Q&A at the end.

No, we don't have to do anything. They're going to do it all.

Oh really?

Just make sure you're on channel 51.

We don't have to do a thing. Okay, so the assessment questions, don't forget to answer them so you can get your CE credit. Economic and clinical outcomes that are affected by clinical pharmacist-led medication review include total drug cost to plan, member co-pay, hospitalizations, one and two or one, two and three. And you have time, eight seconds. Okay. Good, how did we do? Oh good. Yes, the answer was the last one, all of those things were affected.

The next question: the two most common reasons for recommending changes to medication regimens during this medication and review program were generic substitution, therapeutic interchange, generic substitution and discontinuation of unnecessary medication, therapeutic interchange and addition of an indicated medication, or therapeutic interchange and discontinuation of unnecessary meds. I wish I would have remembered the slide. I could tell you which one to go back to, sorry. Six seconds. Okay. Okay. Oh, we did okay. Well okay, we didn't do great but we did, you know, all right. It's the last one.