THE BROOKINGS INSTITUTION

ENGELBERG CENTER FOR HEALTH CARE REFORM

EXPERT WORKSHOP:

THE SCIENCE OF COMMUNICATING

MEDICATION INFORMATION TO CONSUMERS

Washington, D.C.

Wednesday, July 21, 2010

ANDERSON COURT REPORTING
706 Duke Street, Suite 100
Alexandria, VA 22314
Phone (703) 519-7180 Fax (703) 519-7190

PARTICIPANTS:

Welcome, Introduction, and Meeting Objectives:

MARK McCLELLAN
Director
Engelberg Center for Health Care Reform at Brookings

FDA Opening Remarks:

RACHEL BEHRMAN
Director
Office of Medical Policy
Center for Drug Evaluation and Research (CDER)

SESSION I: PRINCIPLES AND BEST PRACTICES FOR COMMUNICATING MEDICATION INFORMATION AND UNDERSTANDING ITS EFFECT ON PATIENTS

Using CMI to Effectively Communicate Important Messages to Patients:

ANGELA FAGERLIN
Associate Professor
University of Michigan

JANN KEENAN
The Keenan Group

Metrics for Success in Communicating Prescription Information:

DOROTHY SMITH
President and Chief Executive Officer
Consumer Health Information Corporation

TERRY DAVIS
Professor of Medicine and Pediatrics
Department of Medicine and Pediatrics
Louisiana State University Health Sciences Center

PARTICIPANTS (CONT'D):

Lead Respondents:

THEO RAYNOR
Professor of Pharmacy Practice and Executive
Chairman of LUTO Research Ltd.
University of Leeds

SUE STABLEFORD
Director, Health Literacy Institute
Center for Health Policy, Planning, and Research
University of New England

SESSION II: OPTIMAL CONTENT, FORMAT, AND EVALUATION STRATEGY FOR A SINGLE, PAPER-BASED MEDICATION LEAFLET

FDA Prototype Leaflets, Study Design, and Next Steps:

JANET NORDEN
Associate Director for Regulatory Affairs
Office of Medical Policy
Center for Drug Evaluation and Research (CDER)

AMIE O'DONOGHUE
Social Scientist Analyst
Division of Drug Marketing, Advertising, and
Communication
Center for Drug Evaluation and Research (CDER)

Lead Respondents:

RUTH PARKER
Associate Professor of Medicine and Associate
Director of Faculty Development
Division of General Medicine
Emory University School of Medicine

TOM CANTU
Senior Director
U.S. Regulatory Affairs
GlaxoSmithKline

PARTICIPANTS (CONT'D):

Lunch: Multinational Report:

SESSION III: LOOKING FORWARD

MICHAEL WOLF
Research Assistant Professor
Center for Healthcare Studies
Feinberg School of Medicine
Northwestern University

KALA LAPIDUS PAUL
The Corvallis Group, LLC

BAXTER BYERLY
Senior Vice President of Research and Development
Catalina Marketing

Lead Respondents:

ART LEVIN
Director
Center for Medical Consumers

RAY BULLMAN
Executive Vice President
National Council on Patient Information and Education

Recap and Closing Remarks:

MARK McCLELLAN
Director
Engelberg Center for Health Care Reform at Brookings

PARTICIPANTS (CONT'D):

Additional Experts:

LINDA GOLONDER
Principal
Consumer Initiatives

SALLY GREENBERG
Executive Director
National Consumers League

H. SHONNA YIN
Assistant Professor of Pediatrics
Robert Wood Johnson Physician Faculty Scholar
Department of Pediatrics
NYU School of Medicine

GERRY McEVOY
Assistant Vice President, Drug Information
American Society of Health-System Pharmacists

* * * * *

P R O C E E D I N G S

DR. MCCLELLAN: I'm Mark McClellan. I'm the Director of the Engelberg Center here and we're very pleased to have you here as part of the Expert Workshop on the Science of Communicating Medication Information to Consumers. This is a terrific group of people. If you look around the room, experts from academia, people from the private sector with tremendous experience and a lot of experts from the FDA as well. So this is great opportunity to try to make some progress on these critically important issues.

To make sure that everybody knows everybody else though, I'd like to go around the table and give people a chance to introduce themselves. Everyone knows Rachel and you'll be hearing more from her in just few minutes. Rachel, maybe I can start with you.

DR. BEHRMAN: Rachel Behrman, Office of Medical Policy, CDER, FDA.

MS. NORDEN: I'm Janet Norden, from the Office of Medical Policy and CDER at FDA.

MR. ALLIS: I'm Daryl Allis from the Office of Medical Policy at CDER.

DR. UHL: Good morning. I'm Kathleen Uhl from the Office of Medical Policy at CDER.

MR. KOCOT: Good morning. I'm Larry Kocot, Deputy Director of the Engelberg Center.

MS. GOLONDER: Linda Golodner.

MR. LEVIN: Art Levin, Center for Medical Consumers, and Linda and I vie for who's been around this issue for the longest.

MR. BYERLY: I'm Baxter Byerly and I'm with Catalina Health Resources.

DR. FAGERLIN: I'm Angie Fagerlin. I'm with the University of Michigan and the Ann Arbor VA.

DR. O'DONOGHUE: Amie O'Donoghue with the Division of Drug Marketing, Advertising and Communications in CDER at FDA.

MS. HENDERSON: Marsha Henderson, Office of Women's Health at FDA.

MS. HUGHES: Nancy Hughes with the National Health Council.

MS. WOJAS: Anna Wojas with the Office of the Commissioner at the FDA.

MS. HINTON: I'm Denise Hinton and I'm also with the Office of Medical Policy at the FDA.

MR. STAFFA: Ed Staffa, CDER, Office of Communications, FDA.

MR. BOTTA: Mike BOTTA from Brookings.

MS. GRIFFITHS: LaShawn Griffiths, Office CDER, Drug Evaluation and Research. Office of Division of Risk Management.

MR. LEVY: Alan Levy, Center for Food Safety and Applied Nutrition, Consumer Studies.

DR. YIN: I'm SHONNA YIN. I'm a general pediatrician and a researcher for health literacy and medication Safety issues and I'm from NYU School of Medicine.

MS. THOMAS: Kimberly Thomas with the FDA, Office of Women's Health.

DR. PAUL: I'm Kala Paul. I'm a neurologist and I'm from the Coralis Group in Summit, New Jersey,

and my interest is in health literacy and risk communication.

DR. HORN: I'm Donna Horn with the Institute for Medication Practices.

MS. GREENBERG: I'm Sally Greenberg with the National Consumers League.

MR. CANTU: I'm Tom Cantu. I head up U.S. Labeling and Regulatory Affairs at GlaxoSmithKline.

DR. WOLF: Mike Wolf, Northwestern University.

MS. KEENAN: Good morning. I'm Jann Keenan. I'm with Keenan Group Experts in Health Literacy and I'm a founding member of the --

DR. SMITH: Good morning. I'm Dorothy Smith with the Consumer Health Information Corporation.

MR. BULLMAN: Ray BULLMAN, National Council on Patient Information Education.

MS. OGUNTIMEIN: Murewa Oguntimein, Division of -- Evaluation, also at CDER.

MS. STABLEFORD: Sue Stableford from the University of New England and the Clear Language Group.

DR. RAYNOR: Theo Raynor from the University of Leeds in the U.K. and LUTO Research Limited.

MS. CLUCHEY: Sally Cluchey from Brookings.

DR. BENNER: Josh Benner from Brookings.

DR. MCCLELLAN: Again I'm Mark McClellan. Congratulations. You've passed the first test. You figured out how to work the microphones. To make sure everybody's got it, we are recording this session to make a transcript available to use as a basis for our further work. Press the speak button for the red light to come in order to be heard, and when you're done press it again to turn off. I think there's a limit on how many microphones can be active at once.

It's very good to have the introductions and it's very good to have all of you here. We got a really important set of topics today which is all about getting information effectively that consumers can use. This is critically important for

prescription medications since as you know, safe and effective use only beings with the FDA approval process. After that, manufacturing must follow good manufacturing practices and prescribing behavior should reflect good clinical evidence and then behavior by patients in using the medications should be consistent with that evidence in order to realize the benefits and minimize the risk of adverse events associated with medications.

This last step in the process of safe use requires that the consumer, the end user of the drug, receives complete, accurate and most importantly actionable information about the medications that they're using. As you all know, recent studies have shown that the information patients currently receive about prescription medications is often insufficient or incomplete, conflicting, sometimes inaccurate, with the result that consumers often don't have a good understanding of their medication use.

As you all have read in the discussion guide, the background document that we put together

for this meeting, the consumer medication information is therefore challenged which the FDA and the boarder health care community are still looking to solve. The issues got important implications for manufacturers, it's got important implications for pharmacists and pharmacies, physicians and other health professionals, and of course most importantly, patients and consumers. A coalition of these organizations petitioned the FDA about 2 years ago to take steps toward a single document solution, a combined approach to the various and the often inconsistent forms of medication information that patients receive today. In response to that petition and to various other sources of input on this important set of issues, the FDA has developed some prototypes for this kind of solution. Today's meeting is the first in a three-part series to explore these ideas for further development, distribution and evaluation of the solution, hopefully with the goal sooner rather than later of closing this gap between where consumer

information is and consumer understanding is and where it ought to be.

We're convening this meeting today under a cooperative agreement between the FDA and the Engelberg Center. Just so everyone is clear on the plan, we expect to have a much larger public stakeholder conference on ensuring access to useful consumer medication information on October 12, so still a couple of months, almost 3 months off. The objective for that meeting is to identify key challenges facing adoption and dissemination of the new standardized document and these include issues like distribution and the technology for using it, patient access considerations, and I'm sure a whole host of other things.

The third and last meeting in this series will be a small expert workshop to consider how to design a pilot study for the implementation, distribution and evaluation of standardized consumer medication information and that one is scheduled for February 2011 after FDA and everyone else has had a

chance to digest what happened in the input at the public meeting.

That brings us back to today. Today is a foundation for these future public events in this further discussion. Today we want to talk about the scientific basis for consumer medication information and we've got four specific objectives. The first of these is to identify overarching principles for consumer medication information from past and ongoing research. Second, we want to consider ways for evaluating the effectiveness of consumer medication information and I think that one is particularly important. Third, we want to discuss the FDA three prototypes and the proposed strategy for evaluating them. Finally, four, we want to anticipate how patients will receive medication information in the future and this is a little bit of a different focus, but I think it's very relevant to these other issues because the question is do these near-term initiatives, the things that FDA is doing now toward a single-document solution, are they going to be

relevant in 3 or 5 years? Can we think about playing down the field a little bit? So those are the four broad topics for discussion today.

That brings me to the agenda which you should have in front of you as part of your packet. We're going to start off with some very insightful remarks from Rachel Behrman about consumer medication information from the FDA perspective in which she's going to talk a little bit about where the FDA has been and where they're going on this challenging set of issues. Then in Session 1 we're going to talk about guiding principles for consumer medication information based on evidence of how patients learn most effectively, and we got the experts in the room who have a tremendous amount of experience on this set of issues. We're going to discuss strategies for measuring the effectiveness of consumer medication information, that's that evaluation piece that I emphasized a minute ago.

During Session 2, FDA is then going to present their three prototypes and their proposed

evaluation strategy. Then our lead discussants and really everybody here is encouraged to provide some specific suggestions to improve the content, improve the format, do anything we can to improve, critique, make better these documents as well as the FDA's evaluation plan. What we'd like to do to keep the overall day structured is to keep the comments on the prototypes in Session 2. So the first session is really more about guiding principles for consumer medication information based on evidence and strategies for measuring effectiveness, Session 2 is the one that's about the prototypes themselves and issues that people may have with them.

Some of you asked if you could make or bring in other examples of good consumer medication information to share during this meeting. If we got a specific example and a rationale and evidence that supports it from you in writing ahead of time by email, we've made copies of those, so look in the packets, there are some good examples of that and

we're like to incorporate those in this discussion during Session 2 as well.

Then in Session 3 we're going to turn to focus on the future of consumer medical information and how to make sure again that the solutions that we're spending so much time and effort on trying to get right for today are actually going to be relevant in 2, 3 or 5 years as well. That's the overview of the plan for the day. Does that make sense to everybody? Good.

Now back to housekeeping stuff like the buttons. Everything we're going to talk about today is going to be on the record. We're going to post the presentation materials on our website and we are also recording the meeting and we're going to make a transcript from the meeting available to and that's another reason why it's important to make sure you're heard when you speak using the buttons on the microphones.

We've got a timer in the right-hand corner of the slides. This is a cool new technology for me,

so I'm looking forward to trying that out. There it is right now. Mine is not going as you can see so far, but it will be. Presenters are going to have up to 10 minutes each and then it starts flashing and you'll see the time count down up there on your slide. I hope that doesn't make anybody nervous. Then discussants are going to have 7 minutes each, the lead reactors are going to have 7 minutes each for their comments. I do want to emphasize that this is a relatively small group of really smart people so we want this as discussion oriented as possible. To help me keep track of when you have something to say and to keep this moving along efficiently, when you've got a comment after the presentations and the lead discussants, do the usual things, I will make a note and get to as many people as quickly as possible. Again, make sure you turn on the microphone when you speak.

The last thing is this is not a federal advisory committee. We are not trying to develop consensus. There are not going to be any votes here

or anything like that. This is part of a process to make sure that there's as full and broad public education and awareness and support for FDA's many input process as is possible on these issues. Our goal here is to make sure ideas get on the table and especially evidence to back up those ideas get on the table as a foundation for these future meetings and steps that I talked about earlier.

That's a bit of an overview of both the content and the process for the day today, and if that makes sense to everyone, I'd like to get us started right now by turning over to Rachel Behrman an opportunity to make some opening remarks about the day.

DR. BEHRMAN: Good morning. Thanks, Mark. First I'd like to on behalf of the agency thank Mark, Josh and Sally and Mike and their colleagues at Brookings for their tremendous support in this and other efforts. I could really just stop the timer because the first thing I wanted to talk a little bit about is why Brookings, why here, why Washington in

July for those of you not from Washington. We do apologize for the heat and humidity. It's for innovative solutions. We joke that what we need is a trap door and this seems so much more user friendly.

For about 2 years now Brookings has been supporting us on the Sentinel Initiative which probably most of heard of, the National Safety Surveillance Network. We have heard through that earlier through the Critical Path effort that Mark started when he was commissioner that nothing replaces collaboration and nothing replaces involving all stakeholders. We at FDA have a hard time reaching out. We have certain constraints and there's a lot of expertise and a lot of experience and a lot of as Mark said very smart people out there struggling with the same issues. With Brookings and -- role we are much more able to tap into that so that as we move forward we do so in a fully informed manner.

In addition, most of the problems we're trying to solve at the agency only in part are we able to solve. We have a statutory mandate and there are

pieces we can fix and there are other pieces we simply can't fix. We need to be part of the dialogue. We can inform it and we can often help get people to the table, but there are pieces we can't fix. CMI is a perfect example of the system failing the public. We all know the system is failing the public and it's gone on too long and we all know that and we know we have to make progress and we don't want to lose time and in particular as a data-driven, data-led agency, in our regulatory decisions in terms of product, we've always been very, very good about being very, very rigorous about evidence. Look at our social scientists in the communication area although there are pockets within the agency that are very rigorous, we've been doing a lot of guessing and that era is over. We don't want to guess anymore.

Being very practical and knowing that to be very explicit and I gather we're losing the word leaflet and we're going to a one-document solution and we've said that publicly. We've been petitioned. I think the whole world agrees all drugs have risks, all

drugs should have information for consumers. FDA took that position in 1996 as many recall and were rebuffed and told, no, figure out the five riskiest drugs and write med guides for them. So our position hasn't changed but the political climate or the general community climate has changed and the world of med guides and PPIs and who knows what else has to end and we need a single document for every product.

With the rate limiting step and that's going to rule making obviously, the med guide rule will have to be revoked and a new regulation will have to be put in place, a process will have to be put in place and we'll have to struggle with distribution, a lot of issues we're not going to tackle today. Why did we ask for help on the prototypes today? Because it's a rate limiting step. We have to test them, we're going to rigorous, and we have to get -- that is going to take time. So we want to make sure even though these prototypes will obviously be the subject of a lot of public debate and discussion that we test the best possible examples at this point in time. So that's

why this meeting now as opposed to perhaps a different order, because there are those of you that may feel -- allusions made to long debates and discussions, that this is either the middle of the conversation or the wrong order, but this is a pretty methodical and well-thought-out process.

There will be a lot of as Mark mentioned public discussion and public input. There will be formal outreach on the part of the agency in our formal mechanisms. Meanwhile we do want to test the prototypes. Because one thing to realize is there about 25,000, is that the number we came up with, products out there that will need a piece of paper. There is no way FDA will ever be resourced to review and approve 25,000 of these, so some other system is going to have to be put in place and that's going to probably involve or undoubtedly involve pretty rigorous content and format standards to use the word Josh used this morning and testing on the part of the manufacturers and then we get to the distribution part and other parts that we'll have to tackle down the

road. So we have to think about content and format and we have to think about a way to do that that will ensure that the leaflet as it is developed, meets the needs of the consumers. That's really our goal for today is to listen to this broad discussion of experts in terms of what these prototypes should look like in the others areas Mark outlined.

There are some things we're not going to do today. We don't have that much time. We know there will be other I don't want to call them subtleties, but issues to grapple with, low literacy, different languages, different formats. Every one of us that have kids knows that they expect it on their phone or their Blackberry. Then the elderly. They may not have cell phones as I think -- was pointing out, but they're all on cable. So there are lots of things that we're going to have to grapple with but that's not what we're here to do today. Today we're here to talk about the evidence that exists, that's very important for us to know, and the evidence that doesn't exist and then we can move forward.

Then finally, once you have a commitment from the agency, we will move forward rapidly. We know that the form of regulatory process will take some time and has to take some time, but that doesn't mean there can't be interim solutions, pilots, working both with consumers, with companies, et cetera, everyone is interested in seeing this statement change and it can only benefit the public. This is what we need to do is serve the public.

So that is why we are here today. I'm going to look at my FDA colleagues and see if there's anything I left out or anything someone else wants to mention. We look forward to a terrific meeting. Thank you.

DR. MCCLELLAN: Art?

MR. LEVIN: Just a point of clarification. For drugs of exceptional risk that have been managed with elaborate precautions in place, consents, et cetera, let's take Accutane as an example. Would a drug like that be part of the single approach and what utility would that leaflet have versus all the other

risk-management tools that are in place for a drug like that?

DR. BEHRMAN: There are many parts to your question. Our position is all drugs have risks and we have failed to define or identify a subset that's riskier. A lot of people die from Coumadin for example. Two, when we say a single page, single document, I'd just make clear we're excluding instructions for use such as putting an inhaler together. Then you're touching on REMs. Today we're talking specifically about once the prescription has been prescription has been provided to the patient and is going to be filled, the patient is going to take that medicine. What information do they need to have access to? The part you're alluding to that REM is struggling with and another piece we intend to ask for help in tackling because we know REMs is not overly successful, I think we can all call med guides as a spectacular failure and we wonder about REMs and about the wisdom and the ability and the statutory authority for the FDA to insert itself in certain parts of the

health care system where maybe other quality efforts should be taking over, but there you're talking about the counseling piece, the discussion that we should be having before the prescription is written and filled and that's not what this leaflet is supposed to do. This leaflet is to take home or look up online so that you know when you call your doctor, how often to take it, what do be worried about and what not to be worried about.

DR. MCCLELLAN: We're going to get started with the first session now since clearly there are lots to discuss today. Again there's a background document that I'm sure you already saw that's in your packet that lists some of the key questions for each of the sessions and we're getting right to Session 1, Principles and Best Practices for Communicating Medication Information and Understanding its Effects on Patients. I should have said also that there are bios for each participant in the packets as well and I'll just stipulate here that everybody here is smart and very experienced so I'm not going to go through

the details in the interests of getting us right to the discussion, but I'm very pleased to have our first speakers on this first topic of Session 1, using CMI to effectively communicate important messages to patient. Angela Fagerlin from the University of Michigan and Jann Keenan from the Keenan Group. Angela, do you want to go ahead?

DR. FAGERLIN: Good morning. As we all know, there are many challenges to communicating this information. That's why we're all in this room. The challenge that I've been focused on has been numeracy, and I'm going to start off the hardest question you're going to be asked today: What is a bigger risk of something happening, a 1-percent chance, a 5-percent chance or a 10-percent chance? Anyone who's brave enough to answer this hard question. Come on. We're all smart people as Mark said? Ten percent? Do I hear 10?

You're probably wondering why I'm wasting my valuable 10 minutes asking such an absurd question. It's because 20 percent of college-educated adults

cannot answer this question correctly. Imagine what percentage of people who have not gone to college who give this question correctly or that have not graduated from high school. I think this is a good insight of just how poorly people understand numerical information and why this is so important.

What I want to do today is talk about different evidence-based approaches for presenting numerical information in ways that people understand and can affect their decision making. The first one I want to talk about is presenting risks in terms of absolute versus relative risk presentation. Let me give you an example. What if I told you a drug could reduce your risk of breast cancer by 50 percent? It seems really exciting. Right? It's something that you're want to spend some time researching and understanding. But what if I told you the same information but in a different way which is bad drugs can reduce your 5-year risk from 2 percent to 1 percent. It seems a little different doesn't it, the attractiveness. To me that's not worth a couple of

hours on the internet researching for a 1-percent difference, but then again I'm lazy. The drug has the same effect in both cases, but it sounds much better. Can people hear me when I talk away from the mike because there is a lot of static?

What this research shows, and this is one of probably the most robust findings in the risk-communication literature, is that if you're trying to inform a patient, that is not trying to persuade them, but trying to inform about the risks and benefits of treatment, the best way to do so is with absolute risk presentation. Sometimes you want to use relative risk, but again in order to inform and not persuade, it's best to always use absolute risk information with that.

The next issue is presenting frequencies versus percentages. As I began my talk, I showed you how poorly people understand percentages. In fact, even doctors benefit by having information presented using numbers or frequencies instead of percentages. In an essay that Ellen Peters recently conducted, she

showed that people who have low numeracy skills view 10 percent very differently than 10 out of 100. Those two things don't mean the same thing probably because it is much easier to imagine 10 people out of 100 dying or 10 people out of 100 getting a negative side effect, but what is 10 percent? What does that look like? It's really hard to conjure up that image and so therefore view that very differently. Again this is a very robust finding in the literature that you should always present numbers in frequencies but if you're like our group and you just got to throw in that percentage, it's always good to present it after the frequency information.

A lot of people indicate that it would be really helpful to present information in a graphical format but there are a lot of different graphical formats, so which format do you use? We conducted a study looking at five different graphical formats, your typical bar graph, your typical pie graph or what we call USA Today graphs that people say that's the best way to do but we didn't know if patient actually

understood it, what we called the clock graph which is a cross between a bar graph and a pie graph where you have ticks to show the different points, the pictograph which is a 10 by 10 matrix of squares where you highlight the people who are affected and the gray boxes represent people who are not affected. Another version that Edward Tufte calls a spark plug which is you're doing stuff on the internet takes up less real estate on a screen and so what might be effective. What we wanted to know which of these graphs were best at communicating two different types of knowledge. The first knowledge is what Bela Bena has called just knowledge which is just the facts. This is the overall view. Which drug is most likely to cause nausea? Which drug is more likely to reduce your need for bypass surgery? I don't care about the numbers, just do you understand the message I'm trying to communicate? Then we asked four verbatim knowledge questions where we asked people to pick a number out of the graph, tell us the exact number that was

represented in the graph and then make a comparison between graph for a couple of questions.

What we found is that for just knowledge, USA Today has got it correct. Pie graph is the best way to do it. People understand it and they can get the main picture much better than bar graphs. Similarly, pictographs and pie graphs did not differ significantly, so a pictograph is also a really good way of communicating just knowledge. In terms of verbatim knowledge, pictographs this time was the best way. When people got pictographs their accuracy was much, much higher than the others and the pie graph was almost zero with people's ability to pick out the numbers from a pie graph.

What we found is that people's ability to understand just and verbatim knowledge differed based on what type of graph was used to communicate this information. Pies were great for just but not verbatim knowledge. Only pictographs were able to really do a good job of communicating both types of information and that is why we strongly recommend the

use of pictographs to communicate risks and benefits of treatment.

One of the concepts when you're trying to tell people about the risks of a drug is you want them to understand what the additional risks that they experience from taking a drug because we all have baseline risks of these types of side effects. But what is additional risk you experience because you've taken the drug? When you do what we term a total risk format, you can give on one side the actual risk without taking the drug, just your baseline risk, and then what you do on the next slide is you tell the total drug, so that's 2.9 out of 100 women who take Tamoxifen have cataracts. But for a woman to know that it's a .4-percent increased risk, they first need to know that they need to do a calculation of this minus the previous slide and now we have decimals, 2.9 minus 2.5, and as I showed you, people's numerical ability is not that great so it's very unlikely that a person getting this presentation would be able to understand that it was only a .4 risk versus a 2.9

risk. So what my colleagues Ryan Zukman Fisher, Peter Ubal and I have done is try to present this both in a pictograph again giving just the baseline risk like previously, but then in the second slide showing the additional risk caused by taking Tamoxifen. We do this in two ways. First we indicate in the legend the additional risk caused by taking Tamoxifen is that .4 more women out of 100 would now get cataracts, we highlight it in a different color, but we also allow for you to see the total risk in addition so you're getting both pieces of information. What we find is it decreases people's perception of worries, their perception of the likelihood that it experiences and some indication that it does increase comprehension of the information.

My last study I want to talk about is is less more? I think we all have a compulsion to give as much information as possible because more information is better. Right? This is a great example. This is egevir online which is used by oncologists to determine whether a woman should have

additional therapy following breast cancer diagnosis, so after her surgery and radiation if appropriate. It gives you the people who are alive in 20 years, people who die because of cancer or people who die of other causes based on whether they did no additional therapy, whether they did hormone therapy only, chemotherapy only or a combined hormone and chemo.

Four options here were shown but really only two were relevant to any single patient. So for a woman with ER-positive status it tends to be very strongly recommended that you take hormone therapy. It's almost not a choice, it is because you can always not take it, but it's very strongly recommended so her decision is between hormone therapy only and hormone therapy plus chemo, not so much adjuvant therapy or chemo therapy only and the opposite is true for those with ER-negative. So instead of giving her all four options, it might be that including less information might be helpful in terms of understanding the information. What we did instead of giving the four bar graphs, we just give them two, very simple, the

two that were relevant and in this study we focused on ER-positive as that's more common. What we found is that women who were only given the two options increased their accuracy and their understanding of the additional benefit of chemotherapy by 15 percent so that 15 percent more women were able to understand this question and they were able to do it much quicker so they spent much less time on the task.

What I've tried to do very quickly today is give you an overview of evidence-based practices that have been shown to improve people's understanding and affect their risk perceptions.

DR. MCCLELLAN: Angela, thanks very much, and 31 seconds to spare.

DR. FAGERLIN: Probably the person most relieved is Sally because she was convinced that that this was not going to happen.

DR. MCCLELLAN: Thanks very much, Angela. Jann?

MS. KEENAN: I was thinking about what to call the presentation. Of course I really appreciate

what Mark brought up that we're trying to get actionable alternative, but the subtitle, designing useful written prescription information, I'd like to change that to directly useful and meaningful to the person.

In perfect health literacy format I'm going to put it in easy, quick, conceptual themes because I've been mandated to do three different things in 10 minutes. We're going to look at the big four reasons that are really hindering it here and how we could address it in a print piece looking at the plus 2 and with the plus 2 I know I did appreciate that we're not going to directly address culture, I would like to put it on the table and especially with design and also consider a few educational theories and those theories are what we known as health literacy to move people from the thinking phase to taking action. In this afternoon's session we're going to be talking about the effective techniques, but I want to briefly touch on a couple of them.

Culture is near and dear to my heart. I come from a multicultural family. My mother is Muslim from Syria and my father is a Bohemian Catholic dude and three of my seven kids are African Americans. I've spent a lot of time in the federally funded clinics and I've spent a lot of time working with patients in comprehension and understanding so I hope to bring you a piece of that today.

We all know the information that there are between 30 and 50 percent nonadherence and we do know that it's harder to say on meds when you have a silent condition. There's a big adherence thing. If you've high blood pressure versus OB, you have to go, go, go, you're going to be more compliant -- it's harder to stay on when you feel better. We all know this. Multiple doses. We've got polypharmacy. Then we do know since this is all about patient safety and adherence, this is where the health beliefs come in. People have a negative belief about their med such as erectile dysfunction or by taking some medicines for depression, or if you have a concern about overuse

causing addiction, that is going to also play into your adherence. So these are all the things we want to consider.

But we've got to work within scopes. That's big stuff for a little piece. Right? We do know that information alone doesn't give the optimal levels of understanding, that when you get an oral consult it's much better. I want to bring those up to remind us of the task that we're mandated with. I'm going to address the big four reasons people do not generally adhere. This does not consider adult literacy, older adults, multiple medicines, teens, side effects or limited English proficiency and we will be addressing poorly designed materials or well-written materials and how they can impact adherence.

Our research shows us that the most misuses are not taking the right dose, but 1 in 5 sharing meds and the results of sharing meds in patient includes a lot of allergic reactions so that there is a big safety component here. Forgetting to take the doses at the right time, not taking a dose and stopping meds

too soon. I would like to see on some level these four deterrents addressed in a piece because only when you address what is hindering people can you move people from taking action.

Then I call it the four plus two. Very briefly, health beliefs, people's cultural beliefs and a little bit about adult learning theory that prompts you from moving to thinking of taking action. What I'd love to see is that we know the factual information, and Michael has been working on that, you have factual information that people can read two times a day but may not understand it. So I'd like to explain us what that would be. Correct time may be used as sun and the moon or fill in the blanks. We've done that very effectively with HIV meds. Remembering to take those meds, giving directives on the actions, setting a watch or a cell phone, putting a note on a fridge, using a pillbox. And if people are thinking about stopping, a call to action to talk to their doctor first.

The clear direction thing is very interesting. I'd like to take a minute to discuss that. I've pulled out a couple of meds, NRTIs, and here we've got Videx which says take once a day on an empty stomach, but what does that mean? Does it mean wait 1 hour before you eat or wait 2 hours after you eat? Pretty easy. Here's another one. Take once a day on an empty stomach or with a light low-fat snack? What would that be, a light low-fat snack? Another one is to take with a high-fat meal. Remember that if you're on multiple HIV meds you're taking light snacks, high-fat meals. This is very complex. So we came up with for Glaxo. It was Tom's tip for making meals high in fat. Eat a creamy soup. Drink some whole milk, creamy dressing, put butter. It's high fat. But unless we delineate this, and I know we're not going to get to the nitty-gritty but if we don't get to the nitty-gritty on clear directions we can't have useful and actionable alternatives.

Also food choices. You've got to be really careful who's Jewish to take it with a light snack

that could be a turkey sandwich with milk because you'd mix meat and milk or pork for someone who's Muslim. So just briefly, that leads me right into the health beliefs, that some people believe that they need to take rest from long-term therapy, that it's more beneficial so they not mention that. They maybe that it's dangerous to take a daily med because it could lead to addiction to that medicine so maybe I'll become addicted to depression drugs. I just heard Dr. Clancy from AARP who pulled this research out again and she mentioned her own personal experience within her family of 20 percent of people sharing meds, 1 in 5, and that be cultural. When I worked with WIC we saw that people shared food, that it's a very cultural thing. But also how many people here in this room cannot finish that antibiotic when you got feeling better and then got one of those seven kids going my kid is kind of scratchy and go there you go. But I have never done that. I'm the only one.

With cultural beliefs to making the document appropriate, traditional medicines, when I worked on a

big project for Delmarva we worked with migrant workers and realized that people who had these teeth abscesses were not getting better and they were taking antibiotics because they were taking herbs that had zinc in it that was binding the antibiotic's use. So if we don't ask, people won't tell.

Briefly look at the U.S. These are just a few. Without cultural bias, all aspirin are not alike. Believe it or not people who are black or white do not prefer kente print, even folks from Ghana. So without a cultural bias, we've got folks from Latin America, the Indies, the West Indies. I've lived in rural Appalachia in western Maryland. So there are all these traditional beliefs and complementary medicines that it would be good if somewhere on page 2 of this piece, I understand we're giving folks directives, I'll mention, if you're taking herbs or home remedies, be sure to tell your doctor because it can make the medicines not work as well. It's practical. I'm just a practical gal. And add these to the standard of order. I worked on the

OTC drug labeling for 6 years on those packages and it's a thrill sometimes when you go to CVS or wherever and see people do the comparison and that it's easy, not so easy, but we were able to get 27 -- consult the physician immediately, call your doctor right away instead of persistent cough, cough that lasts too long.

So we know that almost 45 million Americans are using herbs. So for theory, and I'm not going into at all the other pieces, but for theory I'd like to see some self-efficacy. I saw a really great pictograph that showed a hand on the side of how well you think you can take this med. Thumbs on the side, thumb on the top and thumb on the right-hand side, thumb down. You got to remember in some cultures like Muslims thumbs may not mean cool that you get it. So include a bigger call to action beyond the FDA information and the manufacturer. Share this information with your doctor. Thinking of getting off your meds, talk to your doctor first.

The good news I wanted to go over, when I looked at -- there was a lot of things that were done very well on the prototypes and so these are just -- I don't have my pointer, but limiting line length and these are the health literacy plain language principles, heads and subheads, other things that we may want to look at is avoiding a telex or using a call-up box with a 5-percent screen. Didn't see that done. We'll be talking about those this afternoon. But Brookings asked me to just touch a tad on the components of the culture, health beliefs, what hinders adherence and also what is doing well.

The last thought I'd like to leave you with, we're designing these and we want to leave some white space of course. But if you're going to have any translations into Spanish you have to have that 20-percent white space on the bottom and that's something that we want to be aware of. I would like us to look at the great debate of san serif versus serif. My final thought is maybe we need two pages or more. That's it.

DR. MCCLELLAN: Thank you very much, Jann. Let me ask before we go on to the next two presentations where we're going to be moving more into evaluation metrics, are there any factual or technical questions about the first two presentations? We're going to have a lot of time of discussion a little bit later. Art?

MR. LEVIN: In my experience at USP when they were still in the information game, there were some surprising results with pictograms and maybe it was the design, but there was a great deal of enthusiasm and then when they went out and evaluated it there were some surprises. The outline of a woman who was pregnant with a line through it was interpreted by some out there as you took this drug to get pregnant. There's an art to pictograms and they may not be at least from our past experience the salvation work-around in terms of language issues. I don't know. Is there more recent evidence as to what is a good understandable pictogram and what isn't?

SPEAKER: Just a question on that because to me that's a symbol and as we discovered when we did the content and format rule, symbol, no, right, black triangle means, so I wonder if Angela could comment on a pictogram versus a symbol if I'm making it correct.

DR. FAGERLIN: I'm using the term pictograph to describe ways to present numerical information. I think Jann was talking more about using pictures.

SPEAKER: Pictograms and only for self-efficacy to raise patient --

DR. MCCLELLAN: Tom?

MR. CANTU: I think one of the points of discussion may be about the length of this document. I know the FDA has come out with the one page and then we've already heard about two pages. I'm wondering from other experts in the room is there any evidence? At what point is too much? Obviously a 10-page doc people are not going to read. One page, may be two. I'm just wondering if there's any evidence base to direct us as to whether two pages is too much.

SPEAKER: Absolutely evidence based. We know that by many studies on if you have good headers and clear direction in a conversational tone and boxes and bullets and things that lead people through a document literacy, we just did a huge study for NCI and the booklet was 16 pages but was easy to navigate because you used navigational tools that we know that are effective with plain language.

SPEAKER: Jann has practically said what I was going to say. Long documents sometimes are good documents, short documents are sometimes bad documents. So long isn't necessarily bad.

DR. MCCLELLAN: Michael?

SPEAKER: Before I jump to the pictogram, I'd say that I don't think there's actually though any hard evidence as to what the threshold for the length of a document should be getting at your question. I think exactly to Theo's point, it's about that each document depends.

On the pictogram issue brought up by Art, we have a study in the "Archives of Internal Medicine."

The theme that I think you're going to hear about a lot about today is patient-centeredness so if icons are developed with patients in mind as far as to mental representations, we found that it improved comprehension. There's a colleague of ours that's working with the International Federation of Pharmacies. Rajiv EYINcore in Ottawa has done great work in like 83 countries I think. They just did a survey of 1,000 health professionals and consumers. The message is you cannot find one single icon without educating people first. It's a new vocabulary for people what it means. So if you want to go to the extent that over the long term it might work, I think there are benefits but not without that.

DR. MCCLELLAN: Thanks, Michael. Rachel, did you have a comment before we move on?

DR. BEHRMAN: Yes, in terms of the long versus short, 1 versus 2 page, just a word of warning that you're going to have a lot of trouble convincing the agency we should go beyond a page. First of all, you're looking at the team that's written many, many

highlights fictitious and real. We've been able to do it in a half-page. We've learned that neither the FDA nor industry can control themselves and contain themselves and stay on that half-page even though it's a regulation. Finally, we all know that med guides without a page limit are turning into useless tomes of information. So someone is going to have battering ram to us with some evidence that we can't tell the consumer what they need to know, putting inside instructions for use, how to assemble in a page is going to be really hard because we think we've done that experiment in other settings and we think that we as a community have failed and I'll echo that less is often more plain.

DR. MCCLELLAN: Art?

MR. LEVIN: On the same issue but another tack, is there a production issue in length?

SPEAKER: No. This is a control yourself issue because paper is going to go away. We're going to write in paper and then paper will never completely go away. This has nothing to do with production.

This has to do with completeness getting in the way of comprehensibility, it's let me just stick in that one little fine point, but those of us and there are some in the room who helped us with this pilot. If we step back and put our eagerness aside and say what are the absolutely crucial points, we have proven to ourselves and I think to the world one can do that in a half-page and then so if you can translate those pieces that a consumer needs to know into more white space, a bigger font and the extra pieces they need you're at a page.

SPEAKER: A tool for agency self-control.

SPEAKER: Agency, industry and everyone else. But, yes, the problem starts at home.

DR. MCCLELLAN: We're obviously going to come back to this further and this is a good transition to the next set of presentations on metrics for success in communicating prescription information. Dorothy Smith from Consumer Health Information Corporation and Terry Davis from LSU will be presenting starting with Dorothy.

DR. SMITH: Thank you very much for inviting me this morning and to share some of my comments. I'm going to be basing my comments on my experience in counseling patients as a clinical pharmacist over the years, and then later as my career progressed into developing patient medication instructions and patient education programs.

The success of the CMI has to be based on the goal of FDA which is in order to make informed decisions about health care and to use their medications correctly, consumers need easy access for up-to-date and accurate information about the risks, the benefits and safe use of their prescription drugs.

I have to start by making just one basic assumption because in order to evaluate CMIs is that we have to assume that the CMI contains all the information a patient needs at each decision-making stage to risk against the benefits and to use the medication correctly and safely. My recommendation in the evaluation is that all metrics need to be patient centered. This is because the patient is the end user

and also that patient feedback is going to be critical in the final evaluation.

Patients are making decisions at every stage of the timeline of the prescription drug, but what's happening is in the doctor's office 10 to 20 percent are not convinced they need the medicine. They don't know why they need the medicine. Fifty percent don't take the medicine correctly after the pharmacist has dispensed it for a lot of reasons. Then up to 75 percent of people for example on statins are dropping out of therapy by the end of the first year. What we have to do in evaluating whether a CMI is effective is evaluate at what stages in informed decision making the CMI is most effective.

When you're looking at risk information, I'm just going to throw this out, but should informing patients about risks start in the doctor's office before the drug is prescribed? Because if the risk information is given by the pharmacist, the patient has already probably purchased the drug. If they get home and read about the risk information, they can't

return the drug to the pharmacy and get their money back if they shouldn't be taking the drug. Or just throwing this out, what is the timing for the best distribution of how to use the information? Should the physician give the risk information and should the pharmacist the giving the patient the how to use information?

When we're evaluating, and I want to look at risk information separately from how to use, at how to evaluate the CMI risk information, we have to determine how much the CMI helps patient weigh the risks against the benefits so they can come to an informed decision with their doctor. Secondly, then we have to determine if the CMI provides patients with practical information on how to manage minor side effects. To give you an example. By telling patients to brush their gums with a soft toothbrush every day can help prevent gingival hyperplasia that you see in this picture which needs surgery to correct. Very, very simple.

When we're looking at how to evaluate the how to use information, we have to determine if the CMI provides patient with practical information on how to use the drug, and then if there's a device that adds an additional load to the patient, we have to evaluate whether they know how to use the device correctly, so you've got two components there to evaluate.

When we've evaluating how to use information, we need to use questions that will indicate patient comprehension. Some of these are show me how you use this medicine. Show me the steps you would take to set up the -- for the first time. When did you -- in the pen? How long do you press down on the pen to inject if a drug if it's through an autoinjector? The keys to success when we're conducting research on CMIs is to look at the impact of the CMI on patient comprehension. They have to understand it. They have to remember it so you have to look at patient recall. And then patient adherence which is the ultimate key to success.

The bad news for FDA is there no survey out there, there is no standard method that I know of to measure patient comprehension. The questions when you are measuring patient comprehension you have to design your test questions carefully so they're specific and understandable. You even have to make sure that when you're designing the questions you have to use patient education principles to develop the questions so people understand your questions let alone the information you've given them. Is the patient comprehension influenced by the order? Is the information in a logical order for patients to understand? Evaluate whether patients need description of the medical condition or just the name of it. People might need reasons why. If you tell them to do something, they might do it, but if you give them a simple explanation of why that makes sense to them then they'll be motivated to make that change. And patients are more likely to read and understand the CMI that contains simple illustrations tied to

simple and understand words and there's research to document that.

The second part is patient recall. You have to evaluate patient recall and we need realistic expectations of patients. By reading it once they're not going to remember it. We've all studied the prototypes, but I'll bet you there's nobody around the table that can tell you everything that it's saying. So we have to reinforce the information and integrate content and design to help make it easier for people to remember it. Illustrations can help increase patient recall. There's one study 3 days after a doctor's visit, if people got a sheet of instructions that had no illustrations their recall is 6 percent, but the people that got one with illustrations, their recall improved to 46 percent.

The big key, the final key to success is how well has CMI increased patient adherence. By itself the CMI is a piece of paper. It needs to be combined with verbal counseling by the health professionals. And it's very complex to measure patient adherence.

To be honest, we really don't know how to measure patient adherence today. The literature is a disaster. If you look at the studies carefully, people are having differing definitions of patient adherence when they're measuring it. It's not even being tied to a clinical outcome. You can't just say it's okay to take 80 percent of the drug. It really has to be tied to how many doses of a drug can a person miss before there's a clinical impact. So those are some of the variables.

When you're evaluating patient adherence, one of the problems is pill counts are inaccurate. It only tells you how many pills are in the bottle. It doesn't tell you whether the person got the medicine into their body at the right time and in the right way. Refill prescription data is just showing that somebody picked up their refill. It doesn't show that the schizophrenic patient is putting the pills under the rug. It doesn't show that the people actually took the drug correctly. The third bullet is an area that needs a lot of further research, but patient

feedback and patient reporting when you're measuring patient adherence and patient comprehension could be very, very valuable as long as the patient understands it's okay to tell you that they've missed the drug or had a problem taking it.

When you're evaluating patient adherence we need to look at reasons for patient's decisions. Why didn't they do something? Patients can tell us their opinions. We need to find out their opinions on the usefulness of the CMIs. We need to find out the reasons patients did not refill their prescriptions. For example, did a patient not refill their prescription because they had a good reason, they developed the early signs of a side effect that they didn't know to manage? Did the physician tell them to stop taking the medication because of a side effect or some problem? Did the patient decide to stop taking it because they couldn't see that the drug was helping them. That's the key. Patient adherence will be increased if patients can see that the drug is helping them and they're taught now to monitor their progress

and recognize the signs of progress, and cost might have been a problem.

In conclusion, patients try to make wise decisions because they have to live with the consequences if there is an adverse drug reaction. And risk is the number-one concern of patients. If patient's needs are met at each stage of this timeline, the patient is going to understand the information, they're going to be motivated to take the correction action, they will take the medication correctly and safely manage side effects, patient adherence will increase, treatment outcomes will improve, hospital admissions due to patient nonappearance and preventable ADRs will decrease and this might be a place where Sentinel and REM will fit in. I don't know yet how it will work but it would seem to me that that might help get in there. And overall health care costs will decrease and employee productivity will increase.

My final summary recommendations are all metrics need to be patient centered. We need to seek

feedback from patients for their opinions on the usefulness of CMIs. We have to conduct research on CMIs to determine the impact of content and graphic design, blending the art with the science on patient comprehension, recall and adherence. We have to evaluate when a CMI is most effective, the timing of patient decision making. My last comment, I'll leave, I'm tying it back to the assumption that the CMI contains all the information that a patient needs to weigh the risks versus the benefits and to use the drug correctly. We have to determine the risks if the CMI does not provide patients with all the information they need on risks and benefits.

DR. MCCLELLAN: Thanks, Dorothy, and thanks for keeping to 10 minutes even without the timer working. That was great. Terry can't be here right now so Mike Wolf is going to do the presentation for her.

DR. WOLF: I get to pinch hit with the less-attractive Midwestern version of Terry Davis. So

those of you know her, I apologize. I'll try to channel her the best I can.

Our group has worked together for about a decade. I'm going to go through some of her slides first. Terry and I have worked together for quite some time. I'm going to focus the conversation a bit more on the metric question which is what I think Terry was brought in on.

The first slide I think she has set the pace for the value of this activity, that we really are here to deal with developing accurate, accessible and actionable health information and I think that does set the tone for what should ultimately the metric be when you're trying to get information that's actionable. It's also something where we need to have a word of caution when we think of the continuum of outcomes that we could be measuring these tools for, but it gets also to where we want to inform patients but how much can we expect this information that would be distributed or overseen by the FDA to have and what kind of patients. I'm going to move past this but

thinking about how ultimately what we want to be able to do is guide industry into developing very clear guidelines for how they can test the usability of the materials.

A lot of the work that our group has done and others as well in the context of health literacy over far more than a decade where it's really been kicking in has been trying to deconstruct the task of taking medication and thinking about everything from the drug container label aspect to the materials like what we're talking about, a unified document which could be the CMI, consumer medication information, the package insert, the med guide. But at the very beginning being able to navigate the label and handouts, to read and understand the use instructions, to dose this medication out properly, and inside that task alone is to know what is it for, the indication, when to take, how many pills to take at a time to deal with the frequency, how long to space the medications out and then to ultimately problem solve. So when we think about comprehension it's not just about can you

retrieve the information from the document and spit it back out and read it, but can you make inference from it, can you apply that information to situations that even a two-dimensional document, a very basic document can't really predict every situation that you're going to be in. And ultimately integrate and synthesize this information to in some ways turn out other sources of information that you'll be getting a medication especially when we think about how we're going to deliver it in the afternoon.

I think Terry's main issue here is how do we involve consumers in understanding their perspective in the way they want information and how we communicate the most important messages to patients about the medications they've been prescribed. So what specific elements of current labels and handouts are problematic? What's wrong with the current documents? Do they understand the basic information? What information don't they understand? What distracting content are we including right now that might represent the legalese that isn't from the

patient's perspective so we know what to remove? When we think about the length of the document we have to mindful of first not taking away something that they might find incredibly valuable, storage information that we may think or obviously most people would say that was there, but making sure that we know most importantly in the sequence of information what they need. Are key points easy to pick out and understand? What words help consumers understand the information the most? What should those headings be? Directions for us or instructions, side effects. Some data that we've had on a project with AHRQ, we've realized that people don't differentiate side effects from risks and warnings and often times those are separate bins. Risks and contraindications. Do icons help consumers pick out or take out key messages? A point that Art brought up earlier. What placement of warning and use instructions and icons help consumers navigate the label, and font size is often times a common complaint. So there are a lot of these issues that are on the table.

Our group has been thinking about this for quite a long time because we've been hearing at these different versus what is the metric we should be looking for? People often times seem to be overreaching. So at the very most proximal outcome the way we can expect industry, especially at the very beginning I think Rachel framed it very clearly that with 25,000 products the FDA cannot be responsible for looking at every single document and ensuring that it's been improving this process to make sure that industry has followed any steps and guidelines that we've given them. Readability, suitability of the material, we've long known how to do that and there are lots of ways to get at it. So maybe narrowing the field as to what reading formula do you use that apply to a document because even within a flesh kincade is well known for giving you an incredibly conservative estimate. It will make something look better than it is. Other more quantitative measures like elexile analysis or gunning smog will actually give you higher readings of the same document, but that's an easy one.

Suitability takes a little bit more time. You can't just put something into a Word document and expect to get a readability definition out of it. With suitability you require some oversight as to examining the quality of the tool at least in most cases.

This is when we get to comprehension and I think a in lot of our assessments I agree with what Dorothy said, it does require some tailoring of the document since each drug has different side effects and risks, different pieces of information you have to get at, although you can come up with some simple assessments that try to get patients not to just passively recite back the content of the information to determine that they can read, that's more of a reading fluency assessment, but to get at them do they really get it? Can they retrieve essential information, getting information again about the bins that's most important. The indication, instructions for use, any information about side effects or risks or warnings. What information you want to get them to understand that you think is most important on a med

guide or CMI you should be able to reverse engineer the assessment for that.

It also requires I think different tasks. Again as I said earlier you want people to be able to retrieve that information because that's the purpose of the document, to be a reference, but it's also something does it help them problem solve? Can you see that they can integrate pieces of information and come up with can you take this medicine? If you skip a dose what should you do next if it's not implicitly implied? Can the material do that?

Demonstration is what we've been getting into more where we've recognized that people can comprehend a document but not demonstrate their learning of it. A very basic instruction like take two tablets by mouth twice daily, we've shown in studies that there is a very big disparity in asking them a second question, How many pills would you take in a day? Get at very functional understanding questions to have them demonstrate that they have grasped the content.

Then we start getting into outcomes that I would probably say we have to be very, very careful about what we're asking of the document, adherence and actual use materials. So when we start looking at adherence are we trying to make the connection that any CMI that we develop can improve adherence? That information alone is a strong enough lever to expect somebody to all of a sudden now take the medication? It may address unintentional nonadherence. Patients who want to do the right thing, the barrier is simply a health literacy one that they didn't understand how to take it effectively and they could be underdosing or overdosing or just completely taking the medication ineffectively. But for many, many other people, I think adherence has been studied for an incredibly long period of time, there are many systematic reviews and knowledge alone is a part of the puzzle but definitely not the main driver.

And then beyond that, the more distal -- comes that we also have to be careful about now setting up too high of a bar to pass for proving a

document is worthy is dealing with things like linking it to a education in medication errors or trying to address issues of adverse drug events. Can we expect the document to reduce those things? We'd like to but, one, how are you going to measure that even though we've already recognized that it's a very, very tough call to make that association? But we don't have good supporting systems as is right now to even identify adverse drug events let alone medication errors. Then clearly getting anything beyond that like linking to health outcomes, reduction in hospitalizations, I think we get ourselves into a very, very sticky place. So it might be that one, two and three are the metrics that we have to be focusing on for these materials, that we want them to be readable, suitable for the patient populations that we're targeting and that we address very, very objective and rigorous ways at guiding the industry toward good comprehension testing.

These are supports for what I was just talking about. Here is an example of one way we've

had people dose out pills based on looking at a medication, but clearly that only gets at issues around how do you follow the instructions for use. But we also have a study right now that Terry, Ruth and I are working on with Abbott Labs to redesign med guides in which we've developed an assessment protocol right now that does this exactly, coming up with 10 to 12 items per med guide review that would get at how well they can demonstrate their ability to retrieve information, how quickly can they retrieve information as information processing is a measure of comprehension of how well a document is efficient in delivering information. As well as again beyond information retrieval, problem-solving tasks. I'll end it there.

DR. MCCLELLAN: Thanks very much for the channeling. A nice presentation. Before we go to the lead respondents I again want to ask if there are any specific technical or factual questions about the last two presentations. I'm going to lead to our lead respondents then starting with Theo.

DR. RAYNOR: Thank you. This session I think one of the main points was to focus on the principles, so I'm going to briefly talk about six principles that came out of the systematic review of the research we did at the U.K. Department of Health. Then I'm going to pick up on particular points from each of the four presentations.

The systematic review we did looked at research into CMI across the English-speaking world and picked up six particular principles that came out of the research. The first is spoken information from health professionals remains patients' priority. So whenever we're talking about CMI we must remember that we're not looking at it in isolation, we've got to think about the patient's priority, is it spoke information and this is supporting that. Second point. People want different information at different times depending on their progress through an illness. Three. Most people appear to want access to all the information about their medicine, all the side effects. So that begs the question about what is

critical information? Do we know what people want if we're going to give them selective information? I think here I fundamentally disagree with Rachel. I think in the next session I might have to get my battery -- as you said.

Four. People want information for two reasons. Firstly, is the medicine right for them? Secondly, if it is, information to help them take it safely and effectively and that's crucial. Five. People want a balance of harm and benefit information, and benefit information is clearly largely lacking in the prototypes. Six finally. Patients absolutely don't see CMI as a means to increase their adherence so that there's a disconnect, if we're looking at CMI as a method for increasing patient adherence that's now how they see it.

That leads me on to Jann's presentation talking about adherence, and I absolutely agree with her and it came up later on that it's a tall order for a little piece to think that we're going to affect adherence. There's little evidence at all that giving

people a piece of paper is going to make that difference and I think our focus today needs to be on increasing patients' understanding. I think Michael picked up on that.

Then going on to Michael's presentation of Terry's slides, there was an important part I think at the beginning there where the phrase was accurate, accessible and actionable information and I think those are three words that we need to keep in mind through the day. I wonder whether selective information is accurate information, and I think that's a point we may come back to.

Michael talked about consumer testing for usability and we've got huge experience in Europe now of consumer testing of CMI. You may know it's a legal requirement that pharma companies test their patient leaflets on real people and unless they do that they don't get a license for their medicine. So we alone have done 15,000 or more participant interviews to test consumer medicine information so that you might want to look at the experience of Europe. Is anybody

is interested in the systematic review that I've mentioned, I've got a copy of the executive summary here, but I can point to the internet where you can find the full report.

Finally, I would suggest to you that the three most important questions we should ask when developing CMI are what does the research say works for patients; what does the research say works for patients; and what does the research say works for patients? Thank you.

DR. MCCLELLAN: Thanks very much, Theo. Sue?

MS. STABLEFORD: I don't think there's a whole lot left to say. We've had some fabulous presentation here so I'm not going to take my full 7 minutes I don't think. But I want to come back and stress just a couple of points and bring up one or two things that I haven't heard.

One point again I want to pick up on has been mentioned by both Michael and Theo and that is what's the link here? How are we going to prove that

it works? People ask. I do a lot of training in health literacy and plain language and the main question they want to know is what the outcome going to be? They want to link an improved piece of information however it's delivered to a phenomenally increased patient benefit or upgraded outcome of some kind, and Michael and Theo have both just warned us and I want to that warning that I don't that's fair, that as we're measuring the accomplishment that we restrict what we think is possible. I also say to people that's not really realistic to think that a piece of information or piece of information or pieces of information however well crafted and however multimodal they become and how many modes of delivery are used, that we're going to be able to link just this to a direct outcome without a whole lot of other intervening factors. But that said, I think it's the critical first step, so I also want to keep that in mind that I think this is a very critical effort and not lose the importance of the effort because without it we will never to the outcomes no matter what else

has to take place. So I'd like to keep that juxtaposition in mind that they're both important. This is the beginning of a way to solve a huge, huge problem.

I might also like to remind us that we haven't talked too much about the situation that actual users are in when they need the kind of information that we're talking about and often it's a situation of great anxiety and stress for a whole lot of reasons. So that leads me to remind us all that this is not just for people with limited literacy skills, this is for all of us. When people get stressed and anxious you all know they don't think well, they don't process well, and in fact the adrenalin gets going, the flight or fight response often, and it actually physiologically blocks people from learning and understanding. So this is for everybody here given the frequent situations that we're in when we need to get and use medications either because the diagnosis is somewhat overwhelming or because it's just one more thing.

The other piece of us remembering the people involved that need to use it is that they're leading their lives. They're not just taking medications. In fact, most people want to manage their health not because they necessarily want good health in and of itself, that's a nice goal, but many people want to have good health or adequate health because they want to get on with their life. They have other things they want to do. They have families to raise. They have pleasures they enjoy. They have sports they want to participate in. Whatever. So this is one component of very complex, very busy lives for most people in our country.

So finally I also want to reemphasize one last thing that has been mentioned here repeatedly in that this piece of information, CMIs, necessarily need to be part of a very large system of improvement. Many consumers are on multiple medications and when we think about them receiving multiple pieces of information, who is going to help them integrate this and take a look at the bigger picture? How will this

work again no matter what format is used to deliver it? Where are they going to keep these pieces of paper so they can go back and look at them? Or how are they going to remember how to get into that patient portal on their insurance website so they can go and look again at their different medications that are up there electronically, but they've got to remember their password, they've got to remember how to get in there, et cetera. So there's a whole lot of steps in not just acquiring the information for the first time, but hanging on to it, remembering how to use it and again particularly if it's a whole series of pieces of information that may or may not work together effectively. And this again leads me to comment one last time on the complexity of the whole system here of getting the prescription in the first place, going to the pharmacy and filling it out, going through the insurance hassles, no, we can't give it to you today. You might need it today but we have to have a specific written order from your physician. This is not an automatically approved medicine on the

insurance plan that you're on, et cetera. So by the time they finally get the prescription and the information, it's the end of a huge process. Again just to remind us that this is really a huge issue and I'm really glad we're tackling this piece of it and I think it's critical. Thanks.

DR. MCCLELLAN: Thanks very much, Sue. At this point we'd like to open the session up to more general discussion and I'd like to remind you all of the key questions that we had posed in the background document. I have to say not being nearly as much as an expert on these issues as all of you, I feel like I've gotten a good sense on all of these questions, but much more so on the first than the second and the third, that there's a specific path forward. I think a lot of the comments and a lot of the discussion so far seemed to go to some of the unique challenges that come up for particular medications and particular types of patients even to get to a good understanding. So I'd really like to hear some further views on these questions based on the discussion that we've had do

far with an eye toward helping FDA think about how can we develop performance measures that could be used to determine if we're getting to the goals of CMI.

MS. GOLLADNER: I apologize for being late. It was a CMI issue actually that delayed me and Terry this morning. But we're here. We're glad to be here.

DR. MCCLELLAN: It's good to have you.

MS. GOLLADNER: Thanks. I guess my question relates to what I heard and believe very strongly about, the system of information from a patient-centered standpoint being the vision and the CMI being a piece of a larger system of information that meets where they are and addresses their needs. I think most of us are aware that we've got a complex system, we do have a system, it's complicated and it's complex and at its inception it was not created to be patient centered. The history and how we ended up where we are was not necessarily purely in its intent to create something that always meets patients where they are. There are a lot of other things that are met by the volumes of information that come from different

directions and having this one-page approach I think is a great idea and will help but it's still a piece of a larger system that hopefully can help patients be able to take medicines safely and effectively which we're all interested in.

It gets very complicated when we look at the genesis of what it is the way it is, product liability, learned intermediary, the role of providing information to providers and what that does and manufacturers and all that are part of that. So as we step back from it I think we will hear, have heard and will hear repeatedly this idea of having a system that's patient centered and looking for whatever we create to fit within that.

So I sort of call that out because I heard it from each of the presentations that I heard but I think thinking very broadly about what that means is incredibly important up front and realizing that we're now realizing how important that is. So I just kind of highlight that, this thing about patient centered and the complexities of what that means. I think it

has to be thought of, the product liability and the learned intermediary and all the information that goes out and the idea of meeting all the goals that have to be met in order to make it all work and looking at this content which I think really is for patients and what we do with those issues of liability. I just throw it out there because I think it's big and I think it drives a lot of content.

DR. MCCLELLAN: Thanks, Linda.

SPEAKER: One thing that Michael said and also Theo mentioned, Michael used the word suitable as it has to be suitable for the individual patient. And then you said the information has to indicate that it's right for them. My question is off-label use. My husband recently received a prescription medicine and it said it was for another condition that he had. He got all upset. He had to call his doctor. He didn't understand off-label use. Should there be something there to indicate that the doctor might prescribe something that isn't usually prescribed for a condition that he or she has?

DR. WOLF: Should I respond?

DR. MCCLELLAN: Go ahead, Mike.

DR. WOLF: I don't want to go out of turn, but I think clearly that's a real sticky point because I think legally you're conveying information for an off-label product or for use that's off label, and I think later in the afternoon we'll be talking about different channels of getting information to patients and how do you support providers. I loved Dorothy's point which I think really needs to be reiterated and at least on the call before this meeting it was mentioned that at the point of care how do you support communication between providers, that all this stuff is just a safety net for spoken communication about the medications, but how does this information get delivered through maybe nonformal means that can be tangible? Can you have it called it up in an electronic health record? Can there be supports for guiding use? Can you develop and send messages through a patient portal? Can you provide other ways in which the information can be personalized? For the

most part it should be. A lot of this content that we develop really needs to be discrete, and when I say discrete I mean that you chunk it up in content so that instead of having one and thinking about it in pages you think of it as in digestible units that can be pulled together, deconstructed and brought together into a document into a dynamic tool if it needs to be a text message, if it needs to go into an iPhone application or if it needs to be pulled together and tailored to the patient, there's a lot of personalization that can happen with that content that might support off-label use or at least how you the physician is envisioning the use of the medication for the patient and that's the way we should be thinking about it rather than page limits, but how do you tailor that content. It can be done pretty well with the new resources that we have. We're already doing it, Kaiser is doing it, there are places that are using electronic health or other health technologies that content. But I don't see how you can ever at least in the near 3 to 5 year vision of what this

meeting is about take a tool unless the pharmaceutical company, and maybe Rachel you can comment on this more, but how would you go about that if it were not approved for that use? Do you have to come up with other alternatives?

DR. BEHRMAN: Yes, the regulations governing labeling expressly require the company to put in warnings about off-label use if there are known risks, but the company would not be able to discuss off-label use in any official document. That is correct.

If I could put Tom on the spot, I'm just curious, because we know there's a lot of in terms of professional labeling the complete document, there is a lot of discussion and we're going to have some of that later on this year about the impact of it being used as a legal document. If you're comfortable commenting, do you feel that companies feel the same pressures on the consumer end because that's a post-prescription tool? In other words, certainly the materials that we see in the papers, the ones that are

done well seem to have less of that in it at least to me.

SPEAKER: That's hard to respond to, to be honest. We all know however that unlike CMI that's available in Europe, what we do in the U.S. doesn't have all the interactions, all of the side effects and so on. So clearly there's somewhat of a comfort level there that that's kind of the standard of practice within the United States and so at least to that extent.

SPEAKER: That helps. Thank you.

DR. MCCLELLAN: On this point? He did a great job, by the way.

SPEAKER: What I wanted to do was underline. I don't know what he emphasized. I didn't hear the oral. You saw the written so I'm going to give you the oral now. I think that's key with the doctor or whatever that it's a system. But here was one of the problems I had with what you sent out. What is the purpose? Is it a decision aid or a use aid? There are so many people in this room who know limit

information. That's cool. To what you need to know and what you need to do and why that's in your best interest. But what is the critical information? That's the hard question. Right now it's all about warnings and contraindications and use is sort of buried in there.

Then my other point that I would have emphasized if I had given it myself is who's going to be in charge of this and where's the quality control? Who's doing the research on this? Is it industry? Then what's the quality control there? Is it market research on this deal? Those are my two bottom lines.

SPEAKER: I can speak to that a little bit. Obviously we are going to have a formal process where we seek public opinion formally and where we then there is rule making, but again from the fact that there are 25,000 of these out there, they will not all be reviewed and approved by the Food and Drug Administration. Therefore the burden is likely to be shifted to the manufacturer in terms of developing

standards which they must meet and then there would be an enforcement component.

I think you brought up a really crucial point that we at the agency feel very strongly about, the system has been talked about and the many steps in the system was elegantly displayed, and we believe this is a use tool. We talked a little bit before about there's counseling and the oral communication has to go on and we hope that it's a quality measure, as a quality measure to be reinforced or maybe primarily at the pharmacy level there are two opportunities, the prescriber and then the dispenser. But this is a post, yes, I'm getting this drug for this reason piece of information that I can use for my reference.

Then the chunking idea is very attractive as we think about the complex system, but there you can start to see third parties coming in and creating decisions in that tool such as Kaiser is using and others are doing that might patients. But I agree

it's a very complex system that is not working in the patient's best interest at the moment.

DR. MCCLELLAN: Rachel, if the reality is what you just described, then it seems likely there are some key issues about what are the standards. You made the point about one page pretty clearly. But beyond that is there formatting, are there some other general standards on content?

DR. BEHRMAN: Our rule making is going to have to be crystal clear and then, again, this is thinking out loud and the agency is going to formally seek comment on that, but one would imagine that we would require testing and that the company would come to us and say we can assure that it's readable, that it's comprehensible, that these are the messages that got across. And very important to us if we're not to be reviewing and approving them, that the overall meaning, not every piece, but remember there is a vetted document that is the professional labeling with complete information to which it can always be linked. So somehow that the overall meaning is the same

because there's going to be a concern, this drug is approved for X. You don't want it to get translated in the consumer information as this drug is going to save your life when that's not what's the approved message. So we're going to need something we can hang out hat on from the company in the application that we can look at and say, yes, the overall message comports with the overall message.

DR. MCCLELLAN: So that means the metrics are really important.

DR. BEHRMAN: Crucial.

DR. MCCLELLAN: Crucial and we still have some work to do that. I have Art down next.

MR. LEVIN: Again with the benefit of a long history with it, the issue of off-label use was a very contentious one in the Keystone process. From the advocate's standpoint, I think we were thinking how do we alert people to the fact that they're getting a drug for an off-label use? From the standpoint of others in the room, the argument was we don't want to stifle innovation that occurs in the use of drugs off

label and we never reached consensus on how to alert the patient that they were getting a drug for an off-label use nor to satisfy the very real concern about being wary of stifling the innovation that can occur with off-label use. Rachel?

DR. BEHRMAN: I don't think it's the words so much, but it's the practice of medicine. If a prescriber makes decisions in the patient's best interests after discussion, let's presume that the system is working. I think we still have to think about some of the content of this document, this post-decision document, is applicable. In other words, if this drug causes nausea and vomiting for the on-label use, chances are it may cause nausea and vomiting for the off-label use and that's going to be very important. If it causes something special for the off-label use and it's known and documented in the professional labeling, that should be documented as well. So we're getting back to the decision piece. The decision has been made that they're taking this drug, the instructions for use whether it's used with

food and so forth, those are all applicable so I think that part of our discussion should be how much emphasis should there be on that decision piece -- is not quite as confused as to why he was given this.

MR. LEVIN: I understand this is post-decision and I think that again historically we got into this because of the failure frankly of the prescribers to do the right thing by patients and have a real engagement about what they were prescribing. There were lots of literature about how little time was spent in general in conversation and how little of that was spent talking about a prescription drug with the patient. So the default was that we needed something sort of as a safety net so we couldn't reach consensus.

I think the concern was around do we include indications and then how does that work when I look at that and say I have none of these but I got the drug. What do I do with that information at that point. So there are unintended consequences to every decision we make as to what we put in here and what we don't here.

It leads me back to thinking that I don't think we're clear year and least I'm not clear yet on absolutely what it is that we think is the most critical? How do we define criticality here? If we said you get one shot at this, you get one thing that you can convey to patients, the critical thing, what would it be? If they get nothing else, if nobody talks to them in the office and nobody talks to them at the pharmacy, if they don't go online, what is that thing that you really want them to have in their possession in terms of information above all else? I don't know how to answer it, but I think that's what we're really dealing with.

DR. MCCLELLAN: Well stated, Art. Thank you.

SPEAKER: In terms of guiding principles, I think that from my perspective a key one, and I'll tie it into what Ruth and others have said, that this needs to be two things, patient centered and it needs to be based on evidence surrounding the patient. Not evidence surrounding the opinion of us as experts, but

true evidence that involves testing with patients. I'm going to tie this back to what Rachel said, that the agency has already apparently made the decision that the prototype will be limited to one page. What's the evidence from the patient's perspective to support that agency decision? And I'm hoping that in the next session they'll give us that evidence because now I'm not convinced of it.

And I really do believe that unless we focus with evidence and patient, we're going to end up right back where we started before in terms of having very unclear guidance as to what should be in the documents. If you look at what FDA's guidance to manufacturers were on how to decide what to put in the highlight section with an arbitrary half-page limit, you'll find they really didn't give clear advice. They said that it's got to be judgment. You really can't work from a judgment perspective when you're trying to educate patients clearly and consistently. So I'm not sure that we are doing this process correctly. I'm not sure that we should be starting by

looking at three predetermined prototypes that are to be tested because from what I've just heard, many in this group don't believe we've established what needs to be in the document and what its clear intent is from the patient's perspective.

DR. MCCLELLAN: Thanks, Gerald. Next I have Mike.

SPEAKER: That's a tough follow-up there. I completely support the idea that I'm not really sure how the FDA has proven that they can do this in one page when again those questions that you've outlined are very, very significant. What is that content? I was talking to Theo about this that it has to be as long as it needs to be but it may not be that long because once we figure out what that triage content is, and I think was talked about in the September FDA meeting where these prototypes were originally discussed, whether it has to be a tear-away tool. If we didn't think we could get rid of all that material, there are a lot of these debates going on still never really hitting the exact question of what needs to go

in the tool, what does that information have to be from a patient's perspective? How do you sequence it? How do you chunk it so they know exactly where to go? There may be a lot of ways we'd like to improve drug facts on the nonprescription side, but at least there is maybe some semblance of an order or at least where you can navigate information if it's not in the prioritization that you'd expect.

But I think also that when we talk about innovation and how you can get information to patients down the road, there are a lot of lessons learned from risk communication. I'm thinking about some great stuff in the west Nile virus in New York and how public health has responded where you limit and layer the content. What is the need to know? It doesn't mean that we're not going to tell you or make available all of the other important information. There are so many opportunities in front of us but if you can at least come up with the triage information and then have ways to direct them to more content, that could be the CDER website, that could be other

resources and not just one. And we should start thinking now about leveraging these other ways, these other channels of information so we can let them become the world's greatest expert on Accutane or another medication that has a med guide or so forth.

The one last point I want to make is thinking about the direction of the tool since we're trying to talk about a single document where if you look at a pill1 the first thing you may learn about is the drug's name and its common indications versus the med guide which starts telling people about the most important thing you need to know about this medicine is the side effect where the documents clearly have different purposes. Are we talking about med guides, there's a single document, those 233 drugs now that have med guides, it will fit in there but you'll just have to better emphasize that med guide content. Is that the way we're talking it? It's not going to be a different format from med guides?

SPEAKER: Right. A single document solution, all drugs have risks and the same look and

feel, a different emphasis depending on the product and what we collectively decide needs to be communicated about that product.

DR. MCCLELLAN: Kala?

DR. PAUL: One of the things that occurred to me when I was looking at the questions is the third question here is, How do we find out if CMI is effective? I think that in order to do that we have to define as has been talked about what does having CMI be effective mean? That of course depends on how patients use it and whether we're going to show how they use it or whether we're just going to show how they understand. So I don't think you can test any of these documents unless you understand what it is you're trying to see that they do.

And from the presentations, actually from Dorothy's, I was surprised at the extent of beyond just a piece of paper or a screen that was being understood or possible someone could fill pills out in a pillbox, I was surprised to consider that we would even look at CMI as doing what was proposed in terms

of all the health outcomes. Also CMI is not the only thing that patient's get. There are tons of websites out there whether they're correct or not. There are disease websites. There are patient communities. To find out how it's effective from a single testing is virtually impossible I would think, so that's something else.

I think that the issue in watching patients read these documents particularly low-literacy patients, but almost any patient whether they're low-literacy, or low-health literacy or even well educated, is that they do need to have the information clearly put in front of them and it has to be something that they obviously are going to use. So the distinction again here is when it's going at the point of dispensing, how are they going to be able to say I should have told my doctor that I had a smallpox injection when already have got that medication in hand? I don't think one document as Michael was saying could be everything to everybody and in layered approach the idea is to define what is effective for

this document and go for that and then again it has to fit in the context of the system. But that third question, how do we find out if it's effective, until we know what effective means we're not going to get anywhere closer.

DR. MCCLELLAN: Are you suggesting a narrower definition of effective in the context of CMI, a narrower metric to go along with that?

DR. PAUL: I was thinking more in terms of some of the things that Terry was talking about and that Michael was talking about, the first three points. You can show that people can read it, they can understand it and they may act on it in a particular situation, but you're not going to show unless you're going to go out and do behavioral testing or behavioral follow-up, just like when we do KAB surveys for REMS, essentially what they have become is we have knowledge. We have knowledge of information, we have knowledge of behaviors, we don't really show attitude because when we start asking attitude questions they got cut out because it's such

soft information. And we can't show behaviors unless we do things like chart review or actually get hard data that says, yes, we told them they had to each get a PPD before they gave this medication and we went in and only 20 percent of patients had it and then you can show you haven't affected behavior or maybe you do, you have to before and after.

I think the question is when you ask as you did in the first part here is it effective, the question is what effect are you expecting to be able to test and show from this document, be it one piece of paper or 16 video screens.

DR. MCCLELLAN: Thank you. Dorothy, I had you down next which is a probably a good time for your comment on this.

DR. SMITH: I wanted to respond to your comments and maybe it got lost in the speed of my presentation, but the CMI is only a piece of paper. What I was saying, to make it really useful it has to be used with effective counseling by a health professional. When you have safe use as one of the

objectives of the CMI in the FDA goal that does imply more than just comprehension. It means that patients will be able to modify their behavior and use the drug safely. You can include behavior modification techniques in the development of the written CMI, but to really measure adherence and behavior change, I totally agree with you that you need to have the health professional counsel the patient.

But my question and it's really sincere, I need to find out from FDA or Rachel why was the usage information condensed in the prototype? It said in the prototype to not use Rheutopia until you've been shown how to give a shot.

DR. MCCLELLAN: We are going to come to this in Session 2. Do we want to deal with it then?

SPEAKER: Quickly, instructions for use remember would be elsewhere. How to use it would be in an appendix if you will.

DR. SMITH: That to me would be something you'd want to evaluate.

DR. MCCLELLAN: We're going to discuss all of the prototypes and I think all of these issues in the next session, so I'd prefer to hold it until then. Josh, you had a comment on related issues?

DR. BENNER: Yes. The discussion so far around how we know it's effective reminds me of the distinction between efficacy and effectiveness. Right? There are some number of measures maybe looking at Terry's list, maybe these first three, readability, suitability, comprehension, that get to is the CMI capable of communicating the right information to the patient. Then these more distal things like demonstrating that they understood it and actually observing appropriate use get to more of the effectiveness, like does the evidence in the real world suggest that the CMI was effective? And there are a lot of other levers as people have pointed out that could influence does safe use happen in the real world. It might be helpful to keep that distinction between whether we want to efficacy as the standard or

whether we want to see real effectiveness in the real world as the standard.

My question along those lines maybe to Terry and to Michael and your collaborators on your research is just focusing on those first three, readability, suitability, comprehension maybe as efficacy measures, you lay out in your slides a number of measures how we might measure readability, measure suitability, measure comprehension, but do we have a standard yet? Do we know what's good enough in those categories from the research?

SPEAKER: I love this effectiveness talk. Those were just give methods of measuring things. If you're doing research, not the FDA or industry, but you're doing research to try to get at things, I think we're beyond readability now, but that is a clear first step. We're using Lexile which is not only the length of the sentence and the length of the number of syllables in a word, but how common the words are in the English language. Some of these words aren't terribly common in everyday conversations. But still

readability and suitability will not tell you if patients can understand it. The question is, I love this, even if we get a gold-standard consensus in here about comprehension, what's the level of effectiveness we're shooting for? Is it 80 percent? I guess the health policy research guys can say what that is. But, yes, there are certain things that people think are better than others now with readability and suitability and comprehension.

SPEAKER: If I can just add, most directly to your question, the most frustrating thing on dealing with readability within the Department of Health and Human Services, alone you have institutes and agencies that vary in the target goal. I've seen fourth grade, but good luck trying to get a fourth-grade reading document from med guide, all the way to tenth grade. In fact, we have a study with a colleague in Boston that just showed one great way medical schools have gotten around trying to reduce the readability of their HIPAA and consent forms for research has been to if I set a tenth-grade barrier

it's a lot easier to be compliant with my own guidelines. So there is no challenge. In my day there are only one or two studies one being ours that have actually shown in research that you see a diminishing return around below seventh grade where you really see a high risk of poor comprehension so more evidence is needed as to what that threshold reading level is and also getting it uniform across all the agencies that are providing any consumer information.

SPEAKER: I was going to add right on top of that that I think the other big lesson from the work that we've done in the field is the readability and the suitability as KALA pointed out and this idea about layering, there are all these other places you can get content and sometimes the content that is useful becomes less useful because it's presented in so many different ways and it's very easy for all of us to say what does it actually mean and why is it not saying it the same way. Let me use the analogy that I use. There is nothing intuitively obvious about a

stoplight, red, yellow, green, but they all look the same and you can govern traffic because they look the same. This standardization is so important in a systematic approach to improving comprehension. I don't want us to undervalue how important it is to get to the what. What is the content from an evidence base that's really needed from a patient perspective for safe and effective use? And is it always the same as the content that a prescriber needs who takes on the role of the learned intermediary for product liability that is the target of professional labeling? These are different target audiences. Is there a way to make all of that content standardized and accessible through layering in a system approach so that product liability is still addressed, it's still available, it's still accessible but the product liability issues that are central to professional labeling and need to be there for the system in the way it exists, is that the most essential evidence for a patient for their useful use? Particularly when we're distilling it down to the stoplight so it's a

recognizable form, standardized and you know how to access it, how do we make sure that we're accessing from the patient standpoint the information that's most important for their safe and effective use and these other components still addressed somewhere else but target it so that it's accessible and right there for them? I think the big vision is really important as we take a look at this piece of it.

DR. MCCLELLAN: Thanks. I have Theo down next. He may want to comment on this too.

DR. RAYNOR: What I wanted to say relates to a lot of the comments that have just been made. I thought it would be useful for those of you who don't know to know what testing actually happens now in Europe in just very detail because all big pharma are very familiar with that process because it's required by legislation across the European Union. The legislation talks about consultation with target-to-patient groups to make sure that the leaflet is understandable and the guidance that's come out subsequent to that puts the emphasis on people being

able to find and then understand the information that they need.

The process that's been used almost exclusively is a process called very unhelpfully user testing which was developed in Australia in the 1990s by Professor David Slass. Briefly, it involves potential users of a medicine, somebody who might be prescribed that medicine but hasn't been prescribed it, and so they broadly represent the target group and in individual interviews they're asked 12 to 15 questions to determine whether they can find and then whether they can understand the point of information and so they might asked a what-should-you-do-if type of a question to try and demonstrate their understanding. It's supposed to be an iterative process so you test the leaflet with 20 participants and then from their responses you can see where the problems lie, you revise the leaflet and then you test it again with 20. David Slass actually suggested 10 participants is sufficient to get a reasonable standard of information.

Unfortunately, the guidance has put a standard in, so 90 percent of the participants are supposed to be able to find each piece of information and then 90 percent of those are supposed to be able to understand it. That applies to a leaflet for acetaminophen as it does to HIV products. Of course, 90 percent of 90 percent isn't a very good way of doing things, but that's how it's judged.

Just one more point. There's legislation going through in Europe at the moment which is likely to mean that leaflets will in fact have what's called a key information section which we've previously called a headline section that will be between five and nine bullet points at the beginning leaflet which are the most important things that somebody should know and then the leaflet itself follows on. They're not just the negative points. They're the important points about what the medicine is for and what benefits it can have.

I think the issue about this 90 percent of 90 percent is problematic and I think the headline

information is going to be a problem for us because our leaflets are delivered as package inserts and so space is an issue so that having more information is going to be a problem. Anyway, I thought that might be useful.

SPEAKER: Very practically, when does this testing occur in relation to the actual release on the marketplace?

DR. RAYNOR: It occurs before and a license can't be granted until -- has been documented and submitted.

DR. MCCLELLAN: Ray?

MR. BULLMAN: The American public now has through FDA's work the food label and nutrition label, the OTC drug facts label and it sounds like we're in the beginning of a process of developing a prescription drug information prescription facts information label which would be part of the official labeling or the PI. That being the case or if that's the case, we want to not miss an opportunity to tie in how that information in such a consumer label, a

prescription drug label as it were, can effectively be tied to and tested and engaged in the prescriber's counseling highlights. I think there's an opportunity to ensure that in the counseling highlights what is used to convey information or perhaps to enforce information at the point of prescribing bears some semblance of relationship to what the consumer would then conceivably receive at some point in time and how it's delivered is to be determined with this prescription drug label. I think when we're talking about testing I think we ought to think about the prescriber's side as well.

MS. KEENAN: That's a very good point and in informal conversation with Tom he reminded us of Section 17 of the professional labeling which is the patient counseling information which is definitely not being optimally utilized and that's the information the prescriber is supposed to be reviewing and we agree that that companion effort is indicated.

DR. MCCLELLAN: Thanks, Jann.

SPEAKER: I had some real struggles when I was working with the group on OTC labeling because with slack bill laws we had like a three point on some of the -- like we were talking this morning on Chapstick and at that time it was like 20 or 15, 16 years and I had like 20 or 15 -- not so bad. So now I can hardly see my way across the room. So I understand that there will have to be some compromises. I felt it was my duty as a practitioner all these many years to show the optimal and what would be great. I do understand that because also in the very end came down to because of slack bill if we have a bottle -- then it would have to be this big to have the 12 point type. I fully get this.

I also get that I would to in some way keep some call to action, some actionable alternative, or else in my humble opinion we have to take it off the table that we're trying to attempt to do that and not call it an action oriented piece but, rather, a good use piece. If we get on that mindset I could hop on that bandwagon, but if we're calling for action then

we have to have some actionable alternatives to let people know, even some self-efficacy type statements or help belief type statements like you can do this, if you're thinking of getting off this medicine, talk to somebody, some actionable alternative, even using action terms to start off sentences. So I can switch gears and I do appreciate where we need to go with the limitations, but then we should in my opinion call it what it is, a good, great first start. And in terms of layering I also express my concerns with the gap between the haves and the have-nots that continue with the gap growing wider. But that said, I can hop on it knowing that what we're doing is a great first step and this afternoon I'm there will come some good ideas on layout and design that can advance what we call organizational management and navigation.

DR. MCCLELLAN: Thanks. SHONNA?

DR. YIN: I wanted to also piggyback on what other people were saying about having a standardized system of information that's out there. I know it's going to be really hard for us to try to all the

information we want within one page or a two-page limit and so I agree about trying to limit and layer this information, trying to have a direct people to more content if they want that other information and to have that information be standardized in nature.

I really liked a lot of what Angela presented this morning about the risk-benefits, the pictographs and all that. It would be great to have everybody be able to access that as another layer. I can't imagine trying to incorporate that into a one-pager but to have that information accessible to both patients as well as providers as they're counseling would be great.

DR. MCCLELLAN: Thank you. Sue?

MS. STABLEFORD: I don't want to go into depth here because it's almost time for a break, but I want us to be really cautious if we're going to set standards for these materials about what readability formulas or methods of calculating readability we're going to recommend. Lots of organizations and companies have set standards that say we're going to

write everything to the sixth-grade level. I think that would be a big mistake. I think if we're going to set standards we'd better discussion this really thoroughly and at a minimum allow a range and perhaps several ways of calculating a readability formula to see if patient have met the range. Maybe we have a range of does this material fall within approximately within a fifth- to eighth-grade level as measured by and then some choice.

Most folks don't know exactly what those formulas measure or they have no idea what they are or where they came from or the fact that most of them are fairly old except for Lexile and that there are serious limitations with them. Again I'll stop there.

SPEAKER: Just a clarifying question. Is your concern that for different products the readability level however we define it is likely to need to be different?

MS. STABLEFORD: It's not just the products. It's even the names of the products. Diabetes itself has four syllables. Most of the formulas, not all of

them, most of them deal with the length of the words in syllables and then the length of the sentences. If we follow our own guidelines, we're not going to have a whole lot of sentences, we're going to use a lot of bullets and for most of the formulas, again not all, there are some that you can measure it with bullets, but in many of the formulas you have to cross off the bullets before you run them through a computer system. It's tricky.

SPEAKER: One more clarifying question. In the European system where it's tested in the intended patient population for comprehensibility and readability would answer your concern then, if that in some sense was the standard?

MS. STABLEFORD: Yes. When I use the word readability, I heard readability formulas mentioned here several times, so I'm specifically referring to if we're going to get into grade levels and formulas that we really be careful with how we do that.

SPEAKER: I think all of this fifth-grade, eighth-grade was just arbitrary as hell. It was

amazing how it got like the gold standard and you begin to see things. It must be below eighth-grade, it must be below fifth-grade. I don't know what the evidence was for that. We know the average education level, we know we can estimate the average reading level, but it's amazing how that got codified without a whole lot of evidence.

DR. MCCLELLAN: Nancy?

MS. HUGHES: Following-up on Sue's comment, if this is a use document and most of the drug names are four, five, six, seven, 10 syllables long, then having a picture of the pill on the use document is going to be very important particularly for people with chronic conditions, particularly people with more than one chronic condition, that if they're going to keep the document, which document goes with which medication. I would like to support the comments earlier about if it's patient centered, what research has been done to find out what patients want? We're already trying to decide what to give them and then to test did we give them the right thing.

DR. MCCLELLAN: We are at time for a break. I just want to make sure there are no other final comments. This has been a great discussion. We're going to reconvene at 11:30 for Session 2. Thank you. (Recess) DR. MCCLELLAN: Alright and so for -- we are going to get started. Just a little logistical point, for those of you who are enjoying the break, if you look on the schedule, you see there's another break coming up real soon -- after the formal parts of these presentations, before we come back to have an open discussion over lunch. So, this next session is one that we've already talked a little bit about this morning on optimal content, format and evaluation strategy for a single, paper-based medication -- I thought we were banishing the word leaflet, but that's still in the section title so --

FEMALE VOICE: Well, Brookings has to take full responsibility.

FEMALE VOICE: Right.

DR. MCCLELLAN: Okay.

FEMALE VOICE: We were unaware of the banishing until yesterday.

DR. MCCLELLAN: Okay. So single, paper-based document and just -- so we're going to start out by going -- by reviewing the three FDA prototypes. And just a reminder that FDA put a good deal of effort into developing these, using the literature, research, input from a wide range of stakeholders and what we want to do during this session is provide some feedback and critiques and suggestions for them. Really three main topics that we're going to try to cover. One of them is format, and a second is content and a third is evaluation strategy. So this fits with the same kinds of topics that we've talked about already. I'd really like to encourage -- you know, there was recurrent theme in the first session around patient or person centric documents and around evidence-based actions. So, I'd really like to encourage the comments here to focus on evidence-based recommendations related to the prototypes. And with

that, I would like to get started with presenting them and we're going to hear first from Janet Norden.

MS. NORDEN: Hi, everyone. I'm Janet Norden from the Office of Medical Policy and I'm going to introduce Amie O'Donoghue who -- you can maybe wave, Amie. She's about half way down the table here. She's going to do the second half of this -- talk about the study design -- and I'm going to talk about the prototype development, kind of give you a history of how we got to where it is now and you do have the three prototypes in your packet. Okay, as far as the process, just kind of where we are now in this, this has gone on for a very long time as a lot of you in the room know and we are basically looking to develop prototypes that convey prescription drug information for consumers. I think we tried to make clear this morning that this is at -- after the decision has been made for the patient to get the drug. So it's not taking the place of the counseling piece with the physician. It is the piece of information that the patient gets when they pick up their prescription. So

it’s really a post-prescription information for consumers to use their drug -- help consumers use their drug safely and effectively when they get home with the prescription. Where we -- what will happen next is following the feedback from this meeting today, as well as comments that we have been receiving on the Federal Register Notice from May about the study design, we’re going to further refine these prototypes and consumer test them to determine their usefulness. What I’m going to do first is give you just a little bit of overview about this fictitious drug Rheutopia, talk about the prototype development and then Amie is going to talk about the study design. Try this one? Okay. Sorry. I’m not that good with technology. Okay the fictitious drug Rheutopia is -- was developed -- the professional labeling was developed as a teaching tool for converting the professional labeling into the PLR format. And I just want to ask does everyone know what the PLR format is? Do I have to -- okay. Well, basically it’s the new format for prescription drug labeling for

professionals. The old format was what we call the full prescribing information. It was a -- basically all the information that the prescriber would need to know to safely and effectively use the drug and it was -- started out with the description of the drug and it went through the -- you know, what the drug's indications and usage is. The new format has been restructured. So it has three parts. The top part is called the highlights of prescribing information. The second part is called the contents or the table of contents. And the third part is what was the full prescribing information in the old format. It's been reorganized. It's been numbered so that it's easier to use a table of contents and go to the numbered section. So the piece that's actually quite different is the highlights of prescribing information and that is the piece that contains a -- it's a half page in length and it contains a concise summary of the information the prescribers deem to be the most useful information about the drug. So it doesn't include all the information that's in the full prescribing

information, but really a condensation of the critical prescribing information from the full prescribing information. Okay, so as far as Rheutopia goes, we selected this labeling because it is intentionally complex. It's not the easiest drug labeling out there. So we thought if we could do it with this one, then we could do it with anything. It's got four indications for adult rheumatoid arthritis, JRA, ankylosing spondylitis and plaque psoriasis. It's associated with several very serious risks. It has a boxed warning. If it were a real drug, it would meet the criteria for a medication guide and it's administered by injection. And I'm just going to reiterate again that the piece of information -- the information about how you would mix up this drug, draw it up with a syringe and give yourself an injection and rotate the sites, that would all still be in paper, packaged with the drug in a unit to use package. That is not what we're talking about here today. That is something -- a separate piece of information. So that would not be the information

that we're talking about here. Okay, as far as what decisions we made about the content and format of these three prototypes that you have before you, they have gone through a lot of changes. I assume, based on what I've already heard this morning, there's going to be some more. But, we started out by going through the scientific literature and actually a lot of you in this room contributed to that body of literature, so thank you very much. But we were -- we actually were trying to consider those pieces of information that have been shown through research that patients wanted to receive when they get their prescription medications. And that's really what we were basing this on. We also looked at current labeling practices and guidances internationally as well as what's being done in the U.S. We have gone out to the public several times already through different meetings and dockets being open for comments and we have been considering and looking at those. I just want to -- sort of most noteworthy, just because it's been fairly recent, was the public workshop that we held in 2009.

At that workshop, which some of you were there, we had presented four prototypes on Rheutopia and effectively one of them was eliminated based on the fact that nobody liked it. That was our medication guide format. It was lengthy. It was redundant and people generally disliked it. There was really almost no votes for that format to stay in the running. So, outside of that, the other format, which is Prototype 3 that you have today, is the OTC drug facts labeling. That one seemed to be liked the best. And I will talk a little bit more about the different prototypes, but based on feedback that we got from that workshop as well as comments to the docket, a lot of folks sent in example prototypes. We are seeing a lot of examples of what people think are better. We did -- one thing we did learn through both the literature and through these workshops and comments is that there really isn't 100 percent consensus -- can I say that? That there is a lot of agreement about certain principles, but there's a lot of disagreement about others. And, you know, we made some decisions coming back from that

workshop to sort of try to the best that we could to streamline these documents. We understand that we will not have the perfect document for everybody. I don't know if anybody could ever come up with that. That would be great. But, had to make some certain decisions and some concessions that you can't have everything that everybody wants and that -- I mean I can just give you -- and the other piece that we heard was somewhat has been discussed about actionable, that certain of the headings, for example, in formats that we presented were things like, you know, important risks. And then we sort of just bulleted out the risks. And what we heard was that people want information that they can take action on. So we tried to make those changes. We're interested in hearing today from you all about, you know, the headers and whether or not these are the right -- if this is the right way to go. Other changes -- one of the things we did in trying to -- as you heard Rachel say, we're really trying to get this down to one page -- were to take out what a lot of folks, what I call the standard

statements. And I don't know -- I'll just give you some examples of what I'm talking about, but they were repeated in the MedGuide one, some of them, four times. You know, read this leaflet before you start taking this medication and every time you take it. Keep this and all medications out of reach of children. Do not share your medication with other people. I don't know if this is going to be a concern with an injection, but obviously we already heard today that this is a concern in certain cultures. We took out the statement that your doctor may prescribe this medication for uses other than those described in this leaflet. Maybe that wasn't a good idea. You know, we like to hear about that. We also heard from certain groups that felt that even in the absence or lack of evidence of any certain concern or harm, that we should always have statements in there that tell your doctor if you're breastfeeding. Tell your doctor if you're pregnant or planning to become pregnant. We made the decision to not include those kinds of statements where there was no evidence to support --

that there was, you know, no evidence that there was harm. So, these are the kinds of changes that -- the kind of feedback that we got, the kind of -- looking back at the comments that we got and the kind of decisions that we took to get to where we are now with these three prototypes. So, like I said, the next step is to further refine the prototypes and then do the testing. Prototype 1 and 2 are really similar. All three of these -- when I said they're derived from the content of the highlights of prescribing information of the professional labeling, in the -- at the workshop they were call the consumer-friendly highlights. One of them actually had a highlights and then had more information that followed and people felt like because they were only two pages in length that it really didn't help to have that points at the top. But I hear like the U.K. is talking about having the key points up at the top that maybe that's something to consider. But, with -- basically the content for all of these is really derived from what we have found in the literature to be the pieces of

information that patients want and even though the content in the prescribing information for physicians is written for a physician audience and it is not 100 percent translatable over to what should be in a consumer document, a lot of it is the same. In other words, if people want to know what the uses are, the indications and usages are in the highlights of prescribing information. Certain things like the dosage and administration is clearly written for a prescriber on how to dose the drug, but how to use the drug is similar. It's just that it's been rewritten and geared towards a consumer audience. The third prototype everybody probably is fairly familiar with if you've ever taken a nonprescription drug, but it's based on the over-the-counter drug facts labeling. The headings and the way that the information is presented -- this has all -- has been tested fairly extensively in -- with consumers in -- for nonprescription drug products, but clearly not for prescription drug products. So, what we consider to be sort of core content, which you'll find in all

three of them, are the uses, the side effects -- both serious and common -- what to do and what to avoid while taking the drug, how to take the drug and we -- those four pieces were fairly consistent in the literature. And then where to get more information -- we added that in. And that is consistent across all four. What is variable across them is Prototype 2 includes some additional context and so I just -- I'll give you an example. Under what should I tell my doctor, in the first prototype it's very, very concise -- just you lived in or traveled to other countries. In Prototype 2, there would be additional context surrounding that to explain why that's important because there's more risk for getting TB or other infections in certain countries. So that's really the difference. So, under the what should I tell my doctor and when should I call my doctor in Prototype 2, there's that additional context. Prototype 3 is really the same content, but some of the information is actually more concise than the other two prototypes. I'm going to skip this slide altogether

because your guide that was sent -- passed out -- has questions that are really very similar to this. So these were sort of some of the topics for discussion on the content. Same principles with the format. We really looked at trying to incorporate the accepted principles for communicating information in a better format than certainly the one that I picked up for my dad, which was a blob of text like this and it was completely unreadable. But using things -- bulleted with short sentences or phrases, putting together similar concepts, chunking, type size. These are all 12 point font size. Trying to use as much white spacing and using bolding appropriately for emphasis. Document lengths are all one page. I'm understanding we'll hear some more about that. As far as what's variable, the boxed warning in Prototype 3 comes after the uses and the headers are -- used a question and answer format in Prototypes 1 and 2 and much more action oriented headers in Prototype 3, but there are other kinds of headers and we'd be interested in hearing from you on that. Again, I'm going to skip

this slide and just hand this over to Amie to talk about the study design.

DR. O'DONOGHUE: Thank you, Janet. I'm going to hopefully give you just enough information today to wet your appetite so that we can have a really active discussion for the next hour and half on the study design. Our study design involves three parts and the first part really does have considerable flexibility. We have some flexibility with all of it, which is why we've convened you here today. But the first part is the most flexible. The first part involves two or three in-person pretests of 180 people each. And I say that in quotation marks because right now the pretests are designed to work out details in the questionnaire wording and administration, but we can use those pretests in other ways. We can do more qualitative analyses. We can do more focus group type studies in this to provide more information for the next study. The main study is part two and that will be administered over the Internet with a mailed prototype. And what that means is that people will

actually receive a piece of paper in the mail and they will be able to have that in their hands while they participate in the web survey. I want to mention here that the people who are conducting the study, one group is called RTI International and many of you may be familiar with them. They're very highly regarded. Some of you actually may work with them. And they are actually well versed in health literacy and they're actually currently developing a health literacy measure and they're validating it right now. And we are hoping to incorporate that in the study at this time. RTI is working with a group called Knowledge Networks, which is a group that has one of the only nationally representative web panels in the country. So if you are doing Internet research, these are the people you want to be doing Internet research with. So this main study I'm going to be getting into more detail on the next few slides. This has 900 people in it at this time. We are also suggesting a follow up study, which is basically identical to the main study except that the prototypes will be embedded within the

web survey. So we're looking to see if there are any differences in the data we get depending on whether they have the piece of paper in their hands or they are seeing it through the web survey. And I haven't received any -- okay. Thanks. The study design for the main study is experimental. That means that there will be random assignment to conditions and each participant will only see one prototype and I'm going to be going into which experimental conditions there are in a moment. And again, part one may include qualitative or quantitative parts partially based on the discussion we have today. For the main study and the follow up study, our samples will be diagnosed with rheumatoid arthritis, ankylosing spondylitis or plaque psoriasis. We're doing this primarily because when we're doing an Internet study or any large base study like this, we want to reduce noise -- thank you -- in terms of -- we don't want people who are just filling out another Internet survey to get their points and have their rewards. We want people who actually have some kind of involvement and investment

in this condition and we will be measuring those items to control for them, so experience and experience with particular prescription drugs they've had. For parts two and three and for part one if it's more quantitative, we are proposing to have at least 30 percent of the sample recruited to read at or below eighth grade. And again, this is an arbitrary -- this has already been fed. It's sort of an arbitrary level. It's a level that we've set so that we can ensure that we have some representation of people who are not necessarily going to be finding this kind of task particularly easy. Thank you. And this is the design that we have right now for the main study. We have two independent variables. And Janet talked about the three formats that we have. We've developed these formats with a few things in mind. One is that compared to the existing documents right now, we wanted to provide documents that reduce the cognitive load. So we don't want people to have so much information that they're overwhelmed. We also wanted the documents to have signals and headers that allow

people to prioritize the information and we wanted to somehow improve the self-efficacy of people who are reading through this in terms of I feel like I can read this document, which will then increase the likelihood that it will be read. We are also looking at order -- the order of the boxed warning and a paragraph about the indication of the drug. This is a direct result of the September workshop where people expressed concerns about receiving this piece of information with your medication and the first thing it says is you might die if you take this medication -- without the appropriate balance of information. So we are looking at whether providing that in a different order affects comprehension or perhaps actions that they may take. Our dependent variables -- this relates closely to some of the things that were said this morning. The first three bullets really represent issues of usability, understandability and comprehension. So when we talk about what is effective CMI -- for the purposes of this research right now, we are looking at that comprehension. And

we are also going to look at perceptions of risk and attitudes towards the medication. We're also looking at some basic behavioral intention items. So would you take this medication if you received it? And if not, why not? And also would you talk to your doctor or would you try to get more information from your pharmacist? I've provided a couple of examples here of the types of questions that are on the draft questionnaire right now. Essentially these are the examples that fit on a Power Point slide. Many of them are longer. We have some open-ended questions. We also have some yes/no questions such as the question up here -- should you tell your doctor that you recently lived in France? The answer in this case is yes, because you will note on the prototype it says if you've lived outside the country, you should let your doctor know. We also have several application questions such as Jack missed his dose of the Rheutopia. According to the information sheet, what should he do? All of the multiple choice responses for these questions have the option of not sure. So

these are not designed to be tricky questions that you had to answer in college and figure out what they were. Obviously, providing information about whether you're not sure about something is valuable for us and we want to know that. So, hopefully I've provided enough information that we can started. I'm sure that we could talk about this for three days, but we only have an hour and a half. And I want to thank you all for sending your day here to help us improve this research.

DR. MCCLELLAN: Great. Thanks very much, Amie. We have two lead respondents that we'd like to hear from now. First, Ruth Parker. And then Tom Cantu.

DR.PARKER: So if we had the time, I would ask everybody to look me in the eyes without looking down and tell me the three most important things everybody in the room should know about Rheutopia if you're going to take the drug safely and effectively and see how much consensus we could meet or reach using this group right here. And that would probably take the rest of the day. And I think therein lies the problem

with trying to figure out how to do this, but that is the essence of the task -- to actually come to an understanding of what the critical information is to know and do. I'll be glad to tell you what I think it is. And, you know, just throw it out there. You know, I think everybody who takes this ought to know that you're going to have to inject in yourself -- that it's a shot of some form -- that it has something to do with something very complicated called the immune system and that if you have an infection, it's really important to let the person who prescribed it to you know you have it so you know whether or not to take it that day and what to do about that and that it's a big risk to you if you have something like tuberculosis that you really shouldn't be taking it. And something as common as a public health thing that we advertise all the time, to take your flu shot. That it's safe and it's important for public health and for everybody around you is actually something you need to be worried about if you're taking this medicine. So then I'd ask you to go back and look and

say did you get that? And did we do the best job we could? Making that the central messages in a way that everybody who takes it -- or just about everybody understands that. So I think that's the task at hand. And I am incredibly appreciative of being asked to comment and also to, you know, be a part of the discussion to try to figure out how we do something that complicated. One of my favorite quotes is an Oliver Wendell Holmes, Jr. quote and I love to use it because he's buried here in Washington. And he said, I would not give a fig for simplicity on this side of complexity, but I would give my life for simplicity on the far side of complexity. So it's really sort of understanding, deconstructing and figuring out how you do it that's worth your life. So I think it's really important and I applaud everybody who is coming together to try to be a part of figuring out what we can do. So I was provided with a few questions. I'm going to try to answer them as directly as I can and these are my opinions. This is my n of 1. Is a proposed study appropriate to evaluate the prototypes

and will the results have practical utility? Here are my major concerns. In general, I'm delighted we're doing this and thinking about it, so I'm going to focus more on what my concerns are. I've got concerns about an Internet based study of printed CMI. Literacy assessment via the Internet is not ready for primetime. It's under development. There are some studies in the field. Literacy and health literacy continue to be considered sort of nascent fields that have a growing body of research, but primetime measurement of literacy and health literacy over the Internet is not yet ready for primetime. The validity and reliability of the dependent variables using the Internet, particularly when you get to some of the harder ones -- I'm not sure what that really means. You mail the stuff out. If you don't understand it, you can ask somebody in your house to help you. You ask people around you and to actually get reliable and valid measures of that is pretty tough. At least my own look at the studies done by the company that will do this -- I'm sure they're a great company. It's

nothing personal whatsoever. But the studies that I'm seeing are of people who have fairly sophisticated Internet skills and live on the SmartPhones and use the Internet as facile as all my teenagers do, which I am trying to keep up with. So, I have concern about that. And are the findings generalizable? So you get this. You've got that population. You know what you measured based on that population. I think this is really big deal and big time stuff. And as much money as we put into the biomedical model of creating pharmaceuticals and using them appropriately and treating things, I think the information that people need to safely and effectively use them needs to be likewise very highly prioritized. And it doesn't come cheaply. And it doesn't come with a casual approach to the research to get the outcomes that you want. I applaud the efforts that we have underway. I know the FDA is a very strained financial institution and they're doing what they can with what they have. So I would applaud a broad plug to look at how we boost the resources to get the kind of content that we all feel

really good about. Next, are the study design in the assumptions valid? My concerns -- the prototypes, as I've mentioned and as others have commented, are based on professional labeling -- FDA approved for healthcare professionals. The purpose of those really has to do with informing the people who prescribe them very appropriately. And they are provider -- they are prescriber centric. And so I think it causes us to step back and say is this also the content to use for a patient centric -- a patient centered approach. If what we're looking for is a document that meets patients where they are and through their primary needs, are we certain that the content that we're trying to give the prescriber -- where product liability, the learned intermediary road is critical. Is it the same for the person who's actually taking the medication? And the content is coming off one professional label. So how do we ensure, if we're taking from that professional label, that we're abstracting the content that truly is most patient centric. And I think we agree that we need this

patient centered system -- a medication information that is actually seamlessly engineered for safe and effective use. It sounds great. If it could be seamlessly engineered -- and there may be a way. But if we don't have a vision of what it is we want, we probably won't get there anyway. So do any of the current prototypes actually lend themselves to the true patient centered approach? And as I told you, I'm one prescriber and that would be my thoughts about the most important content in that one document. And then I look at it and I say could I find that with repeated accuracy, with the understanding that I need to have safe and effective use. So what modifications? That was the third question. Well, the patients are the experts. And this is really tough because they're not even at the table usually, you know. And this has been spoken of by some others in the room, but getting the voice and the input of patients in the actual design and looking upon the ultimate users as the real experts, we got to get the experts involved in the design from the very

beginning. We tend, in general, to have a dump down approach to information. You know, gosh, I know this. Let me see if I can fill somebody's cup half full. It must be empty. So let me dump some stuff in there and see if I can't help inform. There's a role for that. But there's also an incredible amount that can be learned from taking the ultimate users and putting them out front and saying we recognize you as the expert and we want to work with you to figure how we meet you where you are. Clarify the measurement of the dependent variables. I think it's a descent first start, but I've got a lot of questions about them. I'm not even sure what some of them mean. So rather than deconstructing that too much, I would just say make sure whoever's doing this work gives you a whole lot more clarity than you're able to bullet in the points that we have. Consumer perceptions, attitudes toward the medicine -- I'm not sure what that's really about and why it's included. The behavioral intentions -- it's all kind of interesting. It's a bit academic. But is that really getting at the

essence of the most important part of the documents that we need to create? We've talked a bit about ultimate outcomes and what we really want to measure. So I think a little more attention to that is going to be important. I would suggest that you not perform the study via the Internet. I've got concerns about that. I think it's going to limit the generalizability. Someday that may be exactly the way to go, but I don't think for a standard that we'd be looking at for the country that we're necessarily ready for that yet. I applaud the groups. I like them. I work with them. I consult with them. I'm on expert panels with them. This is not personal. I'm just not sure that we're ready for that yet for primetime. And sure the CMI prototype can actually be a part of a seamlessly engineered patient-centered system of medication information -- and this is the hard part -- one that can be standardized and regulated. And I know that's a can of worms, but I think it's a can of worms that we're going to have to enter and we probably don't want to leave out at the

end of the day. So a couple other comments I'm going to make. This is about meeting people where they are, growing health literacy in the middle, how out of line we are and how we want to focus on the demands and complexities of doing something like taking this drug. This was just one example last year of what happens when you don't have a system that reinforces this -- and may of you probably know this case. But this was a -- this is a general internist who is a full professor, someone who does patient education and health literacy, whose child was prescribed Tamiflu, which came with the dosing instructions that you will see, a dosing syringe that did not match what's on the table. Yes, the appropriately included insert because it was a unit of dose and it was inside and both panels of that didn't contain enough information nor did the Internet site, nor did two phone calls -- one including a poison control line. On and on and on it goes. And this is a physician trying to figure out how much of this -- just because this is an internist who doesn't know the little basic fact of how many mls

there are in one teaspoon, which Shonna Yin will think is funny because she's a pediatrician and those of us who trained in Peds happen to know that and use it all the time. So the need for a system for the ultimate user who is the patient, and how each piece of this needs to actually answer what it is people need to know in order to be able to safely and effectively use that and what happens on the far side. And those are the experts. They're out there all around us. And without a doubt, they're the people who can help up figure out in a formative way, you know, from the table, from the beginning -- what does this thing need to look like? What does it need to contain? What does it need to tell me in order to be able to safely do it? Here's the process that we're using with the team that I work with. We take that evidence that's hard to come up with it. What is it you really need to know and understand? I gave you my opinion. I went out on a limb. There a lot of people who'd love to argue with me and have differing opinions. But at some point, somebody's got to come up and say here are

the most essential need to know to do. Here's the evidence. And then we sit down with patients and we say we've got some content and we're convinced that you need to know this to safely and effectively use it. Can you help us figure out how we convey that? And we work with them right up front to come up with a design. They help create the design. They look at the prototypes with us. We take that. Then we cognitively test it with them. We deconstruct it. We look at the words. We look at the meanings. We ask them if it needs pictures, images. What does it need? Then we go back to the evidence contents and say did we lose anything? And we keep going around that circle 'til we all got it right. And it's amazing that we actually can do it. It's not a standardized process, but we're finding that when we put the real experts at the table, it consistently changes what we offer. And I think that's probably the most important thing. But, for those of us like me who talk in long paragraphs with a lot of words pretty quickly, we're masters at revealing volumes of content. But it's

just not all that useful. So, I see this as an issue of health literacy. I'm glad it's on the table and I think it's a part of helping us all become a more health literate America.

DR. MCCLELLAN: Great. Thanks very much, Ruth. Tom?

MR. CANTU: Thank you. What I want to do is share some observations. What we had done at GlaxoSmithKline -- some of our colleagues -- some of my colleagues sat down and we created a -- crafted a number of CMI documents on the basis of the FDA's examples and prototypes to see what learnings we derived from that. And there's a lot more information in the slides than I'm going to present, but the slides will be available later on. One of the interesting things that we found -- we really wanted to find out how well did the highlights of the Physician's Labeling Rule and section 17, the patient counseling section, how well did those two sections inform us or give us the bits of information we needed to include in the CMI. And we were pretty pleased

that they did a pretty good job of doing that. I think one of the problems that we're going to have in implementation going forward, of course, is that not all labeling is in the Physician's Labeling Rule format. A lot of them are still in that old format. And if you look at the top 200 drugs prescribed or the top 10, many of those are not in PLR format and may never be. So, this gets down to getting some consistency in authoring and some rules about how that's done. I'm not entirely convinced or sure who should be the proper authors of this, but consistency is going to be important if we're going to have a quality document at the end of the day on this. The other thing we struggled with a bit was how would you depict significant revisions in CMI. One of the things that we found in some of the REMS evaluations on MedGuides is that the vast majority of patients report seeing the medication guide which is great. A reasonable fraction -- not nearly high enough -- actually read it. But the tough part is very few looked at it ever again. So, how do you do that and

we don't have a great answer for it. We talked about bolding, underlining, lines in the margin. Nothing really seems to stand out. So I would love to hear something -- some great ideas on that. I'm going to skip through all this I think, and comment a little bit about some of the specific sections of the FDA's prototype. The section on what does the product treat covering the indications -- one of the things we struggled with is how specific should that indication be. We know in professional labeling, it can be very specific. Drug used only after failure of another treatment. A drug use approved for use only in conjunction with other drugs. We thought we might want to consider not being that specific in the CMI because physicians may prescribe in a different way and it just could cause confusion for patients. So I think that's one thing to consider. For the boxed warning information, we were wondering whether there's any information as to whether patients will understand what a box means. Will that really draw attention? Will that provide any useful information? The other

question we had is I think in the prototypes it has important warning and then a brief description about what that warning is. We were concerned that for some products, a boxed warning may have two, three or four concepts in that boxed warning. Some of them can be pretty complex. So it might be more effective simply to say important warning with an exclamation point and then cover the issues in there than to try to prescribe that or try to require that those things be in the header each and every time for patients. Another thing we wrestled with is the headers of what should I tell my doctor. And there's another one on when should I call my doctor. If patient's don't read these things in a linear fashion and just look at it, that could be confusing. What's the difference? And so, the what should I tell my doctor presumably is what should they know before they take the product to cover contraindications and what not. It might be worth considering whether it should be broader than just a contraindication. What should they tell their doctor that would affect their decision to prescribe

the drug initially or what dose to choose initially. So (inaudible) impairment and other things could be part of that as well. And then the when should I call my doctor. Presumably this is intended to capture issues that may come up during therapy that may, you know, change some of those same decisions and the dose to use and so on. For the common side effects, we generally agreed that, you know, this should cover what the most common side effects are that are listed in the highlights of the prescribing information and for the PLR labels. Again, we have the non-PLR labels. That's going to be a bit of a challenge. There was some debate even within our small team as to well what about other serious but uncommon side effects if they're not in a warning and precaution. And I think if you want consistency, you have to probably put those off the table and we have a lot of debate about that -- whether that makes sense and so on. I think I'll stop there, because the rest of this is I think is pretty straight forward and we can go to our open discussion.

DR. MCCLELLAN: Okay, Tom. Thank you very much. If there are any quick factual questions that we are going to get going on the discussion, but we're going to take a break before we do that.

FEMALE VOICE: Can I just make one clarifying point? I mean we're very conscious of the failure of the community at large to convert labeling not in the new format and we are somewhat hopeful that if this -- if there's a carrot, if there is somehow CMI is linked to having a highlights and somehow that helps you jump some regulatory hurdles, that there will be an incentive to convert all your labeling. Particularly, what? Seventy percent or eighty percent of drugs taken in this country are generics, right (inaudible)? So we are hoping by linking this that may address a problem that you appropriately have later.

MALE VOICE: A critical piece of context and it's -- even though this is a fictitious drug, it's fictitious only by its name. It belongs to a very clearly defined class of compounds that have significant class effects. So I think that it's

important that as we go through this, we understand that. And I had actually requested that we all have copies of those and that was denied. So let me give you a piece of context that I think is critical in going through the remainder of this discussion. The professional labeling, which is in smaller type font than the prototypes, is 38 pages long. So we're narrowing down content that starts at 38 pages to a single page. That's fact number one. Fact number two -- the MedGuide that's part of those 38 pages is five pages long. So FDA has already defined -- whether you agree with MedGuides and I think most of us don't agree with what's in the MedGuides -- that's five pages of that 38 pages. The highlight section, which is kind of the driving force in what we're talking about I think at this point, is a full page long without the box warning. And that despite the fact that manufacturers have a clear mandate to keep it to a half page. Okay, that's another -- they couldn't do it. And it's not just this -- you know. That's across this class. And then the final thing that I'll

mention is if you look at the highlights section, just in warnings and precautions there are about 10 class effects. Those are not all represented in the prototypes that you have. And some of the ones that are represented are not represented accurately. For example, the statement about not being vaccinated is not true. It only applies to live vaccines. It doesn't apply to inactivated vaccines and there are other examples of that. So, again, I think it's very important that we realize we're not really dealing with a fictitious drug with some exceptions like how do you administer it or are there any unique aspects of drug in terms of adverse effects.

DR. MCCLELLAN: Sure.

FEMALE VOICE: Really do. First of all, as we rolled out the new format, and you're looking at a number of the authors in this room, every fictitious drug was in fact a real drug that we did our best to blind. We couldn't completely do that because we wanted to work with real data. But I think that -- and this is going to be subject of a Brookings

convening effort in the fall. I think we as a community -- that's industry and the agency -- have failed to appropriately and optimally implement the new content and format. So to say that the labeling is 38 pages does not mean it should be 38 pages. And to say that the highlights is a full page, does not mean it should be a full page. So the point -- we all agree we're condensing. But I would not hold up the real Rheutopia as a gold standard from which we are now omitting information. As Janet mentioned, we deliberately took a messy drug in a messy -- with messy labeling.

MALE VOICE: (Inaudible) to show what the challenge is.

FEMALE VOICE: Oh, okay.

MALE VOICE: And it's right or wrong, but this is the challenge (inaudible) trying to take existing information and (inaudible).

DR. MCCLELLAN: And thanks for giving this group such a big challenge. It's good. Art?

MR. LEVIN: So just very quickly I want to get out on the limb with Ruth and I just want to put in the parking lot, maybe as our lunch discussion --

DR. MCCLELLAN: Wait, wait. Parking lot issues -- those are coming after. This is just factual --

MR. LEVIN: No, no. I'm just saying can that go in the parking lot for sort of a lunch discussion?

DR. MCCLELLAN: Sure. Good. Go ahead.

MULTIPLE VOICES: What's in the parking lot?

DR. MCCLELLAN: (Inaudible)

MR. LEVIN: What Ruth described as what her view is of --

FEMALE VOICE: Oh, okay. Ruth's whole --

DR. MCCLELLAN: The vision.

FEMALE VOICE: The whole thing.

FEMALE VOICE: Well, another parking lot that's very patient centered -- when you say tell your doctor, the timing of that is all off. You're at home when you read this. You probably don't even read it at the drug store. And so it may be eight o'clock at night. If you've been to a 24 hour pharmacy, God knows

what time it is when you say tell your doctor. Then patients have taught me call your doctor. At my hospital, you cannot get a doctor on the phone. And so -- I mean we got to be really careful about call your doctor. That doesn't solve the problem.

DR. MCCLELLAN: Okay. I do want to -- these are great comments. I would put them so far pretty much squarely in the big areas of format, content, evaluation strategy, which is the main thing we want to talk about after we have the break. So for right now, let's -- these are really important and we are going to spend a lot of time on them, but I just want any kind of factual or clarifying questions, comments. So -- Ray,. Did I scare everyone away? Okay. Kala?

DR. PAUL: This is a point of clarification. I don't know, maybe it fits in some other parking lot, but -- you mentioned that in the things that you're looking to see, whether patients can understand or use accurately. And at the risk of being a broken record, again I feel I need a definition for what that really means in terms of how are you going to know what's

accurate understanding? What's accurate use? And how are you going to know whether you've met your goal?

FEMALE VOICE: Well, I think this gets back to something that Terry said in terms of, you know, is it 80 percent comprehension or is something like that. And that's something we don't have right now and that's some input I would appreciate from all of you to help us get that.

DR. MCCLELLAN: That's certainly part of the evaluation discussion. Ray?

MR. BULLMAN: Given the requirement for -- I would assume for 508 compliance, will there be an effort made or is there an opportunity to include in the outreach for the research, design and testing inclusion of a blind and visually impaired? And the reason I ask that is if you -- I know in the FDA's own docket -- the pre-part D -- there was a requirement to submit to Congress a report on provision of useful written information for the blind and visually impaired. And subsequent to that, ASCP and the AFB, I believe it was, developed the very precise document on

developing CMI for the blind and visually impaired community. And also I think that's important because it also affects design and layout because if things are larger and, you know, moved -- made to meet that compliance or to reach that target audience, it has an effect on the overall look and feel and usability of the content.

MALE VOICE: Good question.

FEMALE VOICE: Are you referring, Farrick -- it's not of the study, but of the document itself?

MALE VOICE: The accessibility of the (inaudible).

FEMALE VOICE: Okay.

MALE VOICE: (Inaudible).

FEMALE VOICE: Yeah.

MALE VOICE: (Inaudible.)

FEMALE VOICE: As I tried to mention in my introductory remarks, there are lots of big problems we have to solve. We're here today to try and focus on the core and then keep those very much on our radar screen because we know we have to address them.

DR. MCCLELLAN: Okay. So here's the logistical plan for the next few minutes. You're going to have lunch served at your -- on the table right in front of you. We need to clear out of the way so the people who are doing that can do it. That should take 15 minutes or less. And I'm -- and then we'll reconvene and we're going to have what I think -- what looks like is shaping up to be a pretty rich discussion --

FEMALE VOICE: (Inaudible)

DR. MCCLELLAN: -- about the prototypes, particularly around these issues of format, content and evaluation strategy. So let's take a break and be -- and clear off enough space so that your lunch can be plated in front of you. And hopefully the fact that you're food is going to be right here is going to be a good incentive to get back within 15 minutes. Thank you.

(Break)

DR. MCCLELLAN: Alright, we're going to try and reconvene in just a minute. So if people could head back towards their lunches, we'll get started right

away. (Pause) Alright, I'd like to welcome everyone back and hope you're enjoying your lunch. There will be a little bit of interruption as we move from the salads to the main course, but we're going to keep on talking through that. As we discussed before the break, this is really the open debate, discussion part of Session II and we had three main topics that we were hoping to cover -- content, format and evaluation strategy. And I know some of you are already parking things in these various lots and maybe more. I don't think it makes sense to try to like divide the whole discussion up into those three boxes separately, but I am going to try as we go through the discussion to make sure that we cover all of those areas at least enough to the point where FDA is feeling like they're getting some of the airing of all three of those issues. And, again, I'm really looking for evidence based comments that can help with the prototypes. So with that as background, let me open this up to all of you and Theo, do you want to start?

DR. RAYNOR: I wanted -- I suppose this is my battering ram (inaudible). I wanted to follow up what Gerry had said. Independently of what he said, I this morning accessed the patient leaflet for Infliximab, Remicade, which is the same -- this morning I looked at the patient leaflet for Remicade, Infliximab, which is in the same class as Rheutopia and everything that's in the prototype applies to Infliximab. But there are other things which also apply. And so I'm wondering how that would be addressed? So there would need to be a section on pregnancy, issues related to Hepatitis-B and there are -- there's a section in both the Australian and the U.K. leaflets about the possibility of increased risk of cancer. And I would have thought that we would have wanted that to be in the information. So I'm just still wondering how we can keep everything to one page.

DR. MCCLELLAN: You were talking earlier about the EU approach here. The EU version of this is significantly longer than --

DR. RAYNOR: It's five pages.

FEMALE VOICE: I just want to -- I guess I probably should have said a little bit more about how Rheutopia came to be. That was actually -- we had a workshop that we were doing about the time the Physician Labeling Rule was getting ready to publish. Or maybe it was actually afterwards. We were working with folks from industry and several different companies put these fake labels together and they weren't actually based on Remicade or Humira or any one in particular. In fact, they took pieces of different ones and put them together. So certain of like the Hepatitis-B didn't end up in this label. Even though now they may be in -- as a drug class -- warning may be in all the labels. So, I guess when we were asking about content, what we were talking about maybe were the bigger buckets like the uses and the risks and the big picture risks. So we -- in the Physician Labeling Rule, we expect up in the highlight section for the warnings, for example, even though you might not put every individual warning up there, that the risk concepts would all be up there. And so, I

think that's more what we are talking about here. It's very hard without seeing the professional labeling to actually say well, you kind of missed this piece of content, because in fact this is a fake drug. It was based on, you know, several different labels and it really didn't -- there's no one label to point to to say that that's what it was.

FEMALE VOICE: And can I just add to that though the workshop -- I think it was about 100 -- half industry, half the agency -- and we took this product which was in the old format, divided it into about five working groups and at the end -- Tom, you were there. At the end of the day or two, I can't remember -- the groups came back and they had pretty close written labeling that was pretty close to the same. So it's interesting if you give people enough time and a shared goal, it can be done.

DR. MCCLELLAN: One way to -- you know, this is when we were talking about content is -- since this is a hypothetical drug, for the indications or issues that are there is the presentation right? The level

of detail right? And there's a further issue of well, other drugs may have additional or real world drugs may have additional issues to cover as well. But, based on the issues and indications in this hypothetical example, how is it -- what is the sense about how the content is presented?

FEMALE VOICE: Also, I just wanted to add one clarifying point. At the last workshop and any time FDA can, we did have --

DR. MCCLELLAN: (Inaudible), closer to the microphone.

FEMALE VOICE: -- we did have two patient representatives at the last workshop. So I know that was something that mentioned that, you know, patients are not at the table, but any time that we have an opportunity, we always bring patients to the table.

DR. MCCLELLAN: Art?

MR. LEVIN: (Inaudible)

MALE VOICE: Mic, please.

DR. MCCLELLAN: Microphone.

MR. LEVIN: -- staying out on the limb with Ruth and whoever else would like to join us, assuming the limb is strong, there are things here as already have been pointed out, which are sort of make no sense considering the timing of when this piece of paper gets into people's hands. And if we are on the limb, and we think there are a few critical issues that we would want to know ourselves, or want our family to know about if a family member was taking a drug, and we want them to be actionable when this piece of paper is in somebody's hand, then we have to deal with these things about well, what's the point of having after the fact content? So, your doctor has prescribed the drug. Is this the time when you're going to really challenge that in some way by going back and saying, ooh, you know, I have -- look at these two bullet points. You shouldn't have given me the drug. It's just a question. I don't know the answer. It's something for discussion. You know, my view has changed over the years. When I started this many decades ago, there was no information for consumers.

The PDR was not available in your local book store. And so the idea of having lots of information on a piece of paper was very appealing because, frankly, there was no place else to get it. That world has changed considerably and there's a lot of opportunity to do drill downs for anybody who wants to get lots of information. So, I've now in my head said this is really about, again, a very important function, which are what are the things that are matters of life and death or serious injury to patients that they need to be aware of or their families and caregivers need to be aware of and that they can react to in a meaningful way -- that are usable, actionable items. So that's the way I sort of view what the content should be. In terms of the sort of dichotomy between risk and benefit, I don't think there's any discussion of benefit in any of these. Merely putting the indications -- the approved indications is not talking about effectiveness or even efficacy. It just says in the approval process, somebody thought these were approvable and therefore had effectiveness or

efficacy. So to me it is all about precaution. And it is all about putting something in people's hands that enables them to recognize and act on serious threats to their wellbeing or the wellbeing of other family members or if they're caregivers to whoever they're caring for. And that we should limit it and then test it based on that. That the standard or the criteria it has to meet, it has to be able to do that and do that well for the entire population. We have a very limited focus. We have something that's testable and it's probably something we know how to do as Ruth indicates. And let's not take another decade to figure this out.

DR. MCCLELLAN: So it sounds like I don't hear any substantial criticisms at least about content in your remarks.

MR. LEVIN: I'm wondering, for example, whether we need to have ask your doctor before using if you presented in that way and whether warnings -- I would translate everything into action. I'm sort of following up on Mike's and, you know, I think people

want to know what do I do? What do I need to recognize and how do I act according -- you know, how do I act in response to that? So a warning that says, you know, important warning, serious infection, probably should be stop, don't use this drug if you have an infection. That's all it should say. It doesn't need to say warning. And then stop use and call your doctor right away. We need to deal with the issue that you can't get your doctor on the phone. If this is a serious reaction, it should say call 9-1-1 or call, you know, or call -- get help. And so it should be, again, actionable and useful in the real world as we know it. So I'm not sure I would have common side effects. I'm not sure I would have ask your doctor before using presented in that way. There may be bullets in there that are important. I would sort of, again, translate them into actionable items. And that's the only content I would look for in this piece of paper.

DR. MCCLELLAN: Thanks, Art. Kala?

FEMALE VOICE: Can I (inaudible)--

DR. MCCLELLAN: Okay. Yeah, if there's any follow up on Art's --

FEMALE VOICE: Just a clarifying -- well, you'd include how to use information like take twice a day?

MR. LEVIN: Absolutely. That's actionable.

DR. MCCLELLAN: And was this specifically on Art's comment?

FEMALE VOICE: Yes. I'm all over actionable. I think that's what people want to know what do I do with this? How do I use this? And the research I've done with Mike and Ruth says the more explicit you can be, the more likely the person is to understand it. If they have to interpret it, then you start going awry the more they have to interpret and make those little bridges. So be explicit. Be as explicit and as precise and actionable as possible.

DR. MCCLELLAN: Thanks. And Kala?

DR. PAUL: There were several things. One -- in terms of the document being recognizable as an immunosuppressant but not having all the immunosuppressant information, the only thing I can

think of that would be pertinent for -- and I'm not suggesting that I agree with that -- is that if people who are your target population would notice that make that and it would in any way effect how they read it, that's something to be considered. That's just something that came up. The other thing that I was noticing about the content -- and it's not the big buckets, it's the smaller pieces -- is to make sure that the smaller pieces don't have statements in them or information in them that would distract the reader from the larger bucket pieces. And the one that I talked to Amie about earlier that came to mind is the statement call your doctor if your skin gets pale, which is fine except that there are people who aren't pale to start with and if this is going to be done across the board, with a large group of respondents, this has to be written in such a way that it makes sense. So, for instance, we can't say flushing in many ways because people -- not everybody flushes the same way and that was one particular issue that

concerned me in how it was stated. And I had a few others, so when my brain comes back, I'll ask them.

FEMALE VOICE: I just want to check that it's okay for me to ask what the purpose of this piece is now? Am I in the right session? Okay. Good.

DR. MCCLELLAN: Yes.

FEMALE VOICE: I've got one comment and four questions. One comment is I totally agree with Art that we want behavior modification or actionable items built in. I think that is really important. Another comment is that as a health professional who has written patient instructions, I would encourage FDA to provide us -- I wish you had provided us with a prototype PLR, a prototype PI so that I could have commented better on the content. That's what I really need in order to provide good feedback to you. I would need to know a little more about the immune system. What's in the PI? My questions are what is the purpose of the CMI as it stands now? What do you want the person -- the patient -- to do? And is it really the patient you're targeting or is it a

consumer because it's called the CMI -- the consumer medication information? If it's really to the patient, I think you should call it the PMI. If it's going to the patient, my question is then what does the patient need to know to use a drug correctly? If this is risk information only, which I think was alluded to earlier. It's primarily risk information. Then maybe it's an RMI -- risk medication information. But hopefully we can come to a consensus that people need a PMI -- a patient medication instruction sheet. And if I knew a little bit more as to whether this was an auto injector, like it probably is and it's mimicking drugs already on the market, then I would say that we are introducing a whole new realm of risk by not giving patients adequate usage information. People need photos if it's an auto injector. They need to know all the steps in injecting this drug and how long to hold it down when they're injecting. Sometimes it takes six seconds. Sometimes you hold it down for 15 seconds depending on the product. So I would say if it doesn't provide usage information, and

we want patients to use this and help them take the drug safely at home, then we need a big black box warning on this that it doesn't include usage information.

FEMALE VOICE: I was just going to say again that that information wouldn't be in this document. It would be in the package -- it would be part of the approved labeling that would be in the package with the drug in a paper form as unit of use including pictures and whatever's necessary for the person to assemble, an inhalant, an injector -- whatever it is. That isn't -- that's kind of off the table here. We're not talking about that. Possibly this document should have a statement in it that says, you know, you have to read the patient instructions for use for how to give yourself a shot before using it. Maybe that's what this document needs. But this document isn't going to be the complicated instructions for the patient or the caregiver on how to assemble a device and how to give themselves a shot. That is going to be the FDA approved, manufacture -- same as FDA

approved labeling and these products all come in unit of use packaging so that they would always -- the patient would always get this when they picked up their prescription from the pharmacy.

FEMALE VOICE: What is the purpose of this CMI?

FEMALE VOICE: This is -- the purpose of the CMI is for -- to help the patient safely and effectively use the drug once they get home. It would be information about what the drug is for, common side effects. It would basically be somewhat of a reference sheet that they could look back if they -- after start taking it, they start to get some sort of strange thing happen, they could look at it and say well is this common with this drug? Should I call my doctor? To basically, hopefully, reinforce that which was discussed with them by their physician and/or pharmacist -- so it’s basically to -- it’s part of the system. It’s to supplement other information that they should have been receiving as they made the decision whether or not to take the product.

FEMALE VOICE: My concern is that now you're giving the patient two pieces of information rather than one good piece of information that can cover it all and that it's going to be even more difficult for a patient to sort this all out. And you said you hope that they will be able to use it. I don't think -- forget the injectable. What if it was a drug like Fosamax where you have to sit up for 30 minutes after you take it? That is usage information and you can develop a serious adverse reaction if you don't know how to use that drug correctly. So that usage information ties to ADRs. It needs to be in this document.

FEMALE VOICE: That would be in this document. This product is a small percent of what's being -- it's not like a tablet. It is -- this is something that's special like an inhaler or anything that requires, you know, a device along with the drug to use it. This is a very small percentage of drugs out there. Most of the drugs out there are tablets or like something like Fosamax, which is a, you know, a

tablet. So that in Fosamax would not have a separate piece of paper on how to take the drug. They would -- this is the piece of paper that they would get and this would have the instructions about when you take the drug, you need to take this on an empty stomach, which we know we have to describe what empty stomach means. You have to sit upright for 30 minutes after you take it. You know, and then it would describe, I would assume, the reason why, you know, that you could have problems with your esophagus or, you know, that these are the reasons and also when you would call your doctor if you started to have some of these problems. That is more typical of what this piece of paper -- this piece of information is. This Rheutopia is kind of an outlier I guess. But there a products that are complicated that people have to use at home and they have to know how to use them correctly. And so --

FEMALE VOICE: Can I ask a --

FEMALE VOICE: So is there -- are we getting feedback or I'd like to hear opinions about whether

Rheutopia is the right one to be going with. Or should we go with a more main stream tablet -- thank you -- product. Instead of -- we aimed for a kind of worst case scenario. Are we making life tougher? I've been seeing a lot of heads nodding.

FEMALE VOICE: No. I think Rheutopia is a good example because Rheutopia has usage instructions and it also comes with a device. So you're doubling the amount of instructions the patient needs. My one question is -- well, I really think you have to tell the patient how to use it. You can't rely on the health professional or any -- the doctor or the pharmacist to go through all the steps. In fact, before this, as I was preparing my presentation, I researched the literature and I found a study that one of them that said that 18 percent of pediatricians who were asked how do you use an EpiPen, only 18 percent were familiar with the EpiPen device -- the actual device -- and could actually go through all the instructions. So the physicians didn't even know. And part of the problem is you've got all these

devices coming out in the market and it's hard to keep up with it. So what the physician and pharmacist need are the same instructions basically you're giving to the patient so they can use it as a counseling tool.

DR. MCCLELLAN: Kala, did you have a comment specifically on this?

MS. PAUL: Yeah, it's been my experience somewhat differently with drugs that are either drug and device combinations or drugs that come with a device, which is that most of the offices that I -- and we would talk in doing patient information -- that there is usually a trained nurse in the office whose responsibility it is to instruct the patients. And when we were looking for patients to do our comprehension testing, we also did comprehension testing say with endocrine nurses or pulmonary nurses or whoever were appropriate for the testing. That may have been a very rare and elevated population, but indeed we did see that there was in the doctor's office -- for something like human growth hormone, almost every endocrinologist had a trained study nurse

or a trained nurse who did indeed instruct the patients because there were a plethora of injection devices. And since they rotated through them based on what the insurance -- came up on the insurance wheel, they all had to know what indeed was the next one that they were going to have to instruct on.

DR. MCCLELLAN: Okay. Mike?

DR. WOLF: -- directly respond to this. I mean I'm sympathetic to the need that you want to make this an end all be all document, but, you know, the idea for instructions for usage (inaudible) even with something as simple as solid pill form drugs. I mean there's still a tailoring that occurs with the way the doctor gets to right the sick. And so unless -- and I'll talk in my presentation about how we've been able to make it a dynamic document at the point of prescribing, but it's not a Med Guide. So anything that you do generate that -- and again thinking about where is it going to -- how you've given it -- get to pharmacies or doctors the documents that you want to disseminate, it's going to have this default. Most

patients usually take this medicine one tablet at bedtime. Even though that may not be the way your doctor prescribed it. So I think there's always that disconnect with the instructions piece. I don't -- I mean I would like to be able to -- I know with drugs that are masked -- the TNF blockers do have fairly robust education associated with the use of these medicines, you know, because the procedural learning piece is best done actually beyond even images. It's done best by video. But I mean I think this is a really large issue where even if you switched to a Lipitor or statin or something -- I use that as an example -- you're still dealing with the fact that the document cannot in a print form be as dynamic as we want it to be -- personalized per patient.

FEMALE VOICE: Yeah, I was just asking -- there seemed -- we picked one that has a device. There can be unit of use. There can be separate instructions for use. And is that a bad choice? That was specifically my question.

DR. MCCLELLAN: Okay. Mike, was that your -- you had your card up earlier. Was that your comment as well.

DR. WOLF: (Inaudible)

DR. MCCLELLAN: Okay. Okay. Jann?

MS. KEENAN: (Inaudible) Sorry. A very quick comment on how content is presented. Our research in the health literacy field -- plain language field -- shows us that interactive questionings can be highly effective and so we use them on Prototype 1 and 2. However, we also know that the directives on Prototype 3, like the aft, the stops that give the direct action is, so in a way you might look at a blend. And the other thing that we need to really look at is questions work when the questions that are asked are ones that patients and users would typically ask. I think you got at a lot of them. But that was something that you would probably specifically test in terms of content. So again interactives can work, but interactives with action is most effective. So maybe

you would, you know -- there's a big -- the jury is out on Q&A on a lot of literacy specialists.

DR. MCCLELLAN: Thank you. Angela?

DR. FAGERLIN: I'm going to go back to a point that Art made. In one of the things he asked is do you need to put in here ask your doctor before using, because it seems like the decision has already been made and patients are going to have difficulty going back and saying oh, I don't know. But I think at some level, that also assumes continuity of care and a physician who knows you. So, for example, we're tape recording urologists telling patients about their treatment options for prostate cancer. And what we're finding is doctors will say oh, because you have coronary heart failure da-da-da-da. And the patient is like yeah, that's not me. You know, so the doctor may be making recommendations or be making suggestions based on no knowledge or incorrect knowledge or misremembering. And so if there are these things that can really hurt somebody if they take it, you can't assume that the doctor knows. Because what if it's a

resident that's never seen them or a nurse practitioner that's never seen them and they're making these recommendations. So I think to exclude those things could actually be potentially harmful.

DR. MCCLELLAN: Thanks. Terry?

DR. DAVIS: (Inaudible) actionable. For instance, if we're going to say with Fosamax don't eat anything for 30 minutes. As a Fosamax user, I want to know why. Is that the stomach deal? Because I don't have any problems with that, you know. Or does it interfere with the update? So tell me why. Common side effects -- patients have said use patient language and not doctor language. One of the things we found out doing COPD book, shortness of breath is doctor language. Patients don't characterize themselves as having shortness of breath -- unless they're taught to. And then the final thing is, I want to put in the parking lot, Mark, besides content and format to help them navigate and understand -- how are they going to get this? Okay, they get it at the pharmacy. What does that mean? Is it stapled?

Research that I've done shows that patients throw away stuff that looks like it needs to be thrown away.

DR. MCCLELLAN: And stapled things on your pharmacy bag is in that category. Yeah. Good. Alright. Go ahead, Nancy.

FEMALE VOICE: Going back to the question about the research -- is this the right example or not? I guess the question is what's going to be of most use to the end user or the patient, but also of use to the FDA? Is it size of the cohort that is going to help you make a decision on what's the appropriate format? If so, then possibly going to a simple drug rather than a drug plus a delivery system may make more sense. And, of course, it is going to give you a larger audience to pull from. So I'll throw the question back to you.

DR. MCCLELLAN: Do you all want to comment on that?

FEMALE VOICE: I guess complexity. I guess -- thinking off the top of my head, if we go with Fosamax, for example, then we really won't be able to

answer the question should -- because there will be a second -- I mean there will be a second document about instructions for use and we won't have answered those questions at all. So I guess I'm kind of talking myself out of the simpler example and going for the worst case scenario and hoping that it will be generalizable to the simpler case.

DR. MCCLELLAN: Tom?

MR. CANTU: Yeah, I wanted to get back. I think Art was saying that certainly how to take medication is something important to have. And I agree the risk information is very critical. We want to inform patients about early signs of serious side effects so they can avoid that, but the indication bit and potential benefits, I'm wondering if there's still sentiment to have that in there -- at least to include what is typically -- maybe that's the language you use to get around the off-label thing. It's typically used for, you know, X, Y and Z.

FEMALE VOICE: Can I just expand on -- ask people to expand on that? So do we want to say something

about what it's used for? And if we do that, how do we grapple with the fact that Linda's husband was prescribed (inaudible) appropriately a product for an indication not labeled? And do we want to spend a whole line of this precious sheet saying your doctor may use this for other reasons every single time? Or do we want -- do we leave that to general community quality outreach educational thing?

DR. MCCLELLAN: Any comment specifically on that? Go ahead, please.

FEMALE VOICE: As a clinician, let me just say I'm not really worried about whether or not they were correctly prescribed it for an off-label use. I am concerned about whether or not they were not prescribed it and are taking it for a condition. So these are different types of situations and I think the federal agency -- you know, oversight of this needs to be that we have clarity that, you know, what are our real goals here and we don't -- I would say that an essential need to know for patients. And, you know, what do I want my patients to know about their

medicines? A -- I want them to know what they're taking. I want them to be able to tell me what they're taking. You know, it's at the top line, but we are doing work right now because it relates to drugs in general. You know, we call them active ingredients. That's the -- you know, that's our word. That's the one we set forward. But I need some common language so that everybody understands how important it is to know what they're taking. I'd like for every single person in America to be able to be to know what they are taking. And, you know, getting into whether or not it was prescribed for you for something other than that, I can't tell you how many people we see all the time who don't have a clue what they're taking and can't find it out. And so up front I think an essential need to know for safe and effective use is what are you taking? That's an essential piece of information that we want standardized and present in everything. Then you get into whose name are you going to use and why. What's the most important thing for the patient and why is that I can be taking one

drug that's the same chemical compound but it's called five different things? The safety approach is that there really is only one name for it. I mean this is a can of worms, but it's a really important one from a patient-centered safety standpoint. That if my patient says I'm taking five different drugs because they have five different names, but they're all the same chemical compound, that's a safety issue and I think that's one that deserves attention up front. So I think getting to sort of clarity on the evidence of the what and the why and I think if we have that clarity on the evidence, we can drive the content. But we're still struggling with some of those evidence points.

FEMALE VOICE: So it sounds like -- because this is something I was struggling with for generics, which can occasionally -- they're the same except sometimes an indication. It sounds like you would be an advocate for one sheet for all generics.

FEMALE VOICE: Amen.

FEMALE VOICE: Okay. That's helpful. Thank you.

DR. MCCLELLAN: Interesting. Theo?

DR. RAYNOR: (Inaudible) The first is going back to what Art said (inaudible) --

DR. MCCLELLAN: Microphone.

DR. RAYNOR: -- sorry. And the doctor should have already sorted that out. Some research that I was involved in in Australia found some qualitative research talking to patients -- found that indeed people were puzzled as to why that was there. And the response in Australia is to use the term check back -- to check back with your doctor if you're taking this medicine or you've got this condition or whatever. So it's sort of giving them permission to think that -- you know, it's not their job to do this, but if this has been missed. So that's just to follow on from that point. Going back to this issue of what the purpose is that was mentioned right at the beginning. Janet you talked about one of the purposes being that if somebody has say got a strange side effect, then there should be some sort of reference document that they could go back to see whether it indeed could be

the medicine. But a one page -- a one document -- a one page is never going to have -- because there's only three on here, isn't there? So I don't think it can serve that purpose. The final thing is to go to Terry's point about if it looks like it should be thrown away it is thrown away. I didn't know whether it was appropriate to refer to the examples that are actually in the pack that I've presented. Is that appropriate?

MALE VOICE: Yeah.

DR. RAYNOR: So the --

FEMALE VOICE: (Inaudible)

DR. RAYNOR: Okay. So there's three or four. So if you go onto the actual -- I don't know whether you can see it. It's hard to -- it will be hard to see. Essentially this is the first one in the pack. It's just the same content, but with -- no. That's it. Yeah. So I have indeed put the warning information second and instead of putting it in a box, I've shaded it. And there is some evidence that people actually skip over text boxes. So I think that's something

that we may need to take into account. But I think from our evidence from testing is that having very bold, very clear headings has a tremendous difference -- makes a tremendous difference to people finding the information they want. But it also appears to make it look easier. It looks more like something that you might easily navigate. If we go onto the next one, this is this concept of a birthday card format. If you go to the -- that's it. So, this is the inside of the birthday card. And so I actually marked up the Rheutopia leaflet CMI in the birthday card format and I (inaudible) some of these round. So this is two sides, not just one side. But it's just one piece of paper. And --

FEMALE VOICE: You're saving trees.

DR. RAYNOR: -- no, it's not saving trees. It's more information you can get on it. And so it actually end -- you've got a page and a half left on here. But if give somebody something like this in a testing situation, when we asked them questions at the end about the general views, they always say it's

really nice. It's like a book. You know, it's just so easy to -- so going to Terry's point, this doesn't look like something you throw away, because it's not something that's official in one page. And the last one is just to show that if -- actually can we go onto the -- we'll miss that one out. We'll go onto the very last one. So this is an Australian mark up for Lipitor. This is one page. But it's just to show how with using multiple columns in a landscape form, you can actually fit quite a lot in. So if you are going to stick to one page, one side, then maybe something like this would be something that would be worth considering. And we -- and testing does show that this landscape format does work reasonably well. Thank you.

DR. MCCLELLAN: Thanks, Theo. Ray?

MR. BULLMAN: For the specific question about is this the right drug for the prototype testing, I would suggest -- I guess encourage -- inclusion of a chronic disease med and perhaps an acute med for -- like an antibiotic, for example, because the -- we all know

what the challenges are with antibiotic usage and the lack of usage through the regimen. It's a great laboratory for perhaps asking and with qualified participants in that they're taking the medication recently prescribed one for that -- for a, let's say, an antibiotic or an acute medication. How they -- not just reacting to, but how they would want presented? It provides some opportunity for they themselves to reconfigure and explain why even briefly.

DR. MCCLELLAN: Okay. Thank you. Donna?

DONNA HORN: Thank you. For those of you who don't know, I work for the Institute for Safe Medication Practices and we have a medication error reporting program -- voluntary program. So we're very interested in the safety aspect of what the CMI is going to do especially in relationship to counseling. And if we get back to content for just one minute. I agree with Ruth in that it's good to have the indication on the information -- what the medication is being used for because most of the time it's patient who discovers they have a medication error.

And they do that because they read the information and it says what the medication is for and they don't have that. And that's when they bring it back to the pharmacy and say what did I get? And then the other thing is if there is used in the PLR for your content information, if the specific safety information that's not in the PLR, how does that get onto this new CMI? I know we're not calling it a CMI, but this new one document. Because, for instance, one of the things that we tell people with Vicodin is that they shouldn't take over the counter Tylenol products or anything that contains Tylenol products with it because of the duplication which leads to acute liver toxicity, which is a big problem in the United States. So if that's not part of the PLR, how do we get that into a message of safety which I think is an important one for the person to bring home.

DR. MCCLELLAN: Okay. You want to comment on that?

FEMALE VOICE: I'd just like to say that's a -- thanks for bringing it up and that's a topic near and

dear to our hearts. We're trying to look at that right now and measure just how big a problem it is and it's a big one. So, let me just say, what people do not know -- what consumers, patients don't know is that they're taking acetaminophen. Okay. What they do know is that they're taking Tylenol or they're taking a pain reliever. They understand what they take that has been advertised to them. And so, here again, we do have a path that we can do. This needs to be focused on the patient and on the patient's need to know to do. And so the patient's need to know is a very complicated word. It is acetaminophen. That is the active ingredient and that is what makes that product work. And somehow as most in this room understand and know, there are all kind of advertisements all over the place -- over the counter and prescription medications. If you're an over the counter product, you don't even have to list what the active ingredient is in the advertising because the oversight is not even with the FDA. It's with a different federal agency. We won't go there. It gets

very complicated. But from the patient viewpoint, how in the world would I even know I'm taking acetaminophen and yet here you're telling me that's important for my safe use of the drug. So, if we take the patient and the patient's need to know for safe and effective use, they need to know what they're taking. What they're taking is the active ingredient. It's not whatever it happens to be called by the manufacturer that made that product available. The great news here is that we can cut down those 25,000 documents by a large number by focusing on the active ingredient. It's no longer 25,000 anymore. It's way lower than that. It's still a lot of documents, but it's a more manageable, it's a more doable task. I truly believe what needs to happen here can happen. We have not put the time and energy and focus into making this a priority. And it is an issue of safety and it's something that we actually can put together good people to solve if we continue to see it as a priority. We won't do it overnight. But this is very doable. This isn't nearly as hard as discovering a

new drug. It just takes the focus and energy to say what is it we're trying to do? What is the evidence? Who is our target audience? And how do we do it? And we partner with them. So I think it's really important not to lose perspective, because I don't think this is that hard to do. It's just that we haven't done it. So, anyway. There again -- great example -- Vicodin. I mean we're capturing this right now and what we get over and over in measuring is oh, my gosh. How would I even know that I'm taking the same ingredient despite the fact that that is a safety issue for me? It's not out there anywhere for them and without a system approach that says where is this content, how does it get reinforced for me -- how would I even know that as the person taking the drug?

DR. MCCLELLAN: Yeah. And -- yes. Go ahead on this. Microphone.

MALE VOICE: Oh, I'm sorry.

DR. MCCLELLAN: (Inaudible) I said go to this guy with the microphone.

GERRY MCEVOY: Okay. There was a shift that occurred between Keystone and the FDA guidance document where Keystone had a generic drug orientation and FDA added into the equation with a guidance document the trade name orientation. And I think that Ruth, that's the perfect example -- acetaminophen. It's so important that patients know what they're taking -- not the brand name of what they're taking. And there are reasons to also consider in going back to that orientation 75 percent of all prescriptions already are being filled generically and it's over 90 percent of any drug that has a generic available for it that's being filled generically, not by the trade name. And that's going to increase because there are fewer and fewer innovative products coming on the market. So I really do think that both from a safety perspective and for what's really happening to patients, the focus needs to be on the generic because one time they may get Tussigon, which is a generic trade name, and the next time they may get something else. But it's the same drug that they're getting.

And I think going back to emphasizing the generic and letting patients know and electronically in this day and age, you can be as specific as you need to. So if you're dispensing the trade name and you think the patient needs to know that, you give it to them as a synonym. But the focus should be on the generic.

DR. MCCLELLAN: Thanks, Gerald.

MALE VOICE: Sure.

DR. MCCLELLAN: Kala, did you have a comment related to this?

DR. PAUL: My comment is related to some of the content and also some of the actionable items that were talked about. There were two things -- and it's related to the drugs because two things that I noticed were missing that might be truly actionable. What should I avoid? Or what do I avoid? Because there's something, in this particular case, live vaccines are not only that you shouldn't take it if you have had a live vaccine, but you shouldn't be getting live vaccines while you're taking it. So I think that that's a piece of safety information -- that whole

section. And within that context is the drug-drug interaction section. You know the patients ask us all the time when we're doing this, what does it say I can take it with? I take six different meds. Can I take it with this med? And then as a corollary of that to Ruth's point, the question for patients is what do they recognize? We have done putting the generic name first and then writing it in parentheses -- parenthetically putting the trade name. We've done it the other way around -- find the patients generally recognize the trade name first. But then you've got all these generics with the 80 million trade names, so you can say such as Motrin, such as Advil and then you leave all the other ones off. So I think those are questions that have to be asked in terms of getting the most safe use information out to the patient in the sections -- drug-drug interactions and what they should avoid. And then how do we carefully and correctly present the information so the patient only knows what they're on, but what they shouldn't be on or should be on at the same time.

DR. MCCLELLAN: Terry, also related to this?

DR. DAVIS: Yes. Those are big words, Ruth. And so that's the challenge.

FEMALE VOICE: (Inaudible)

DR. DAVIS: And the trade name and the active ingredient. People know the trade name largely because of advertising. It's hard to read. I couldn't even spell Fosamax this morning at the emergency room. Then, what we figured out with acetaminophen is this medicine has acetaminophen. Do not take with other medicine with acetaminophen. It may cause liver damage. So, the actionable and then what you want them to do -- don't take it with other -- here's the need to know, the need to do and why you need to do it. But the challenge is patients always say those are such big words. And so I know they -- I mean Ruth and I both worked in shelters after Katrina. People didn't have a clue what they were on. And so if they don't keep this or their bottle, they often won't know what they're on.

DR. MCCLELLAN: Did you want to respond to that, Ruth?

DR.PARKER: I love Terry. And I have to tell you, we -- just cause you always have to laugh. We've been called the Thelma and Louise of this issue. So we're at this, but you know. You can decide which one is which and you know. So anyway. Thelma and Louise were in the emergency room this morning, too. So, okay. So -- but what I would say is you can also step back from this and say, yeah, those are really big words. We're not going to change those big words. But there is a way to make it a word that is located -- stoplights are not intuitively obvious, but they control traffic. And this may be more complicated than a stoplight, but it may not be. At least it needs to be located in a recognizable place. It's always got to be there and we have to provide the content and the information consistently so that people begin to look for it. You can also make it a part of school curriculum. You can put this all over the place. But it has to -- there again it's what is

the evidence? What is the need to know? And then we can find a way to make it as presentable as possible, but it's going to have to happen that way consistently if we're ever going to teach something as complicated as understanding the word acetaminophen and the fact that you're taking it and that you can't take multiple products that have that in it. So I think there is a way to do it, but it's not doing it 20 different ways and sort of assuming that it can't be done.

DR. MCCLELLAN: Thanks. Mike and then Angela have been waiting a while, so I'd like to go to them next.

DR. WOLF: I just want to get out of the trees and away from the cliff. I've been driving along side of it from the back seat from a while and I'm just going to answer the question to get back to I think -- the comment I think 20 minutes ago I had and it's probably changed since (inaudible). What I remember was how do you -- some feedback on the evaluation. And look, the reality is I think the content issues, the formatting issues -- this is stuff that you

probably don't want to spend the six, six and a half hours together of us actually going through the detail. I mean the evidence is there. We know it. As far as the evaluation of what you end up developing, because I do think this is possible. I do appreciate all the comments, but I wouldn't stick -- I would -- one of the things that we've done with a project that may or may not support it, but we chose not to go with worst case scenario only, but to give three representative examples, where we took the 233 Med Guides, came up with median reading grade level word length of the Med Guides -- and these are just Med Guides. They're not CMI in general. And then also address -- we also ranked them in by frequency of use. So we felt that these are widely used -- these are drugs that represent widely used medications and medications also that represent one drug that we're evaluating is solid pill form drug. One drug is an injectionable and another one is a liquid medication. Because there you get kind of a very broad spectrum of the different representative type issues around

instructions for use or information around side effects and so all of these things have a lot of -- I mean so that might be one thing. I would also just make a quick comment that the outcome measurements -- I actually thought were quite decent for what was set forward. I thought the instructional questions that were trying -- you know, retrieval task. That was good. And also the application questions -- glass half full. I thought that was actually very useful depending on how many you put in there. I do really, really don't understand -- and I'll echo this. I do not understand why I mean purely if it's just a cost issue for doing an Internet based assessment, I think that it's not that out of -- outrageously expensive to do this in person where you can get a lot more feedback and also making sure that you have more robust assessments of for instance literacy age prior experience three well known risk factors of who are the groups that are going to be most -- having the most challenged to navigate these tools and show that they can comprehend it effectively. And if you do not

have good measures of that, unfortunately this is not going to be taken as seriously as it could be. I mean I commend that at least some of the -- and I think the choice for outcome measurement is unique, has not been done like that in most other prior assessments. So just some final feedback.

DR. MCCLELLAN: Yeah. Can you comment on the Internet-based approach? That's come up a couple of times now.

FEMALE VOICE: Yeah, I'd like to comment on that. Thank you for your feedback and, you know, we're going to take it back and talk about it of course. And I mentioned we have a lot of flexibility, but I would like to address the question in a little bit different way. Obviously, the health literacy issues are central and we have to think about those. But in terms of the questions that we're asking, Internet research can be very useful depending on the questions you're asking. What we're doing here is an experimental study and so we really want to know about how people respond to the different prototypes. We're

looking at between group differences. And so when you look at things like that in this developmental stage where we're at right now, Internet research can be very useful for getting large numbers for a quantitative assessment like this. In terms of using other methods -- you know, random digit dialing or other things like that -- there are debates about which way to go. There aren't very many people who respond to those anymore and that type of thing. We do have this first phase where we can do some of the special populations where we can work out the details with the prototypes. But for an experimental design, we're looking forward. We want to get one prototype where we can really move forward and change it and make the changes. I don't think that Internet research is completely useless for that purpose.

DR. WOLF: If I could just respond. I mean I think -- I mean Ruth brought up the contamination issue. I'm sorry. Should I not?

MALE VOICE: (Inaudible)

DR. WOLF: Oh, the mike. The mike is on Mike. The quick assessment is just that you have the potential bias that you have as far as just doing any -- if they're having to record responses using a web page, like a web based survey, survey monkey snap, what other tool you've chosen. You've got some user issues especially among the groups that were most, you know, generational, cognitive, literacy issues. So you just don't want to -- the most of the comprehension testing to date has been through face to face. And so I just was kind of curious. It's not saying that it's not going to be useful information you get, it's just I wouldn't view it as optimal. And just I'm trying to say justify the Internet over another method. And I think just the other issues just around and again it comes back to outcome measurement. So true outcome measurement of being able to assess, you know, the comprehension would be better face to face. You know, again I would say having multiple opportunities for them to review -- and here you also chose a selection sample of people

who actually have the disease. Why didn't -- I mean there's -- some people may find that rational, but I would actually view it as suboptimal there too. Or at least not getting two samples of patients with no background experience who have no need to be motivated to learn about the information, yet they had a purist kind of approach of I have no background knowledge on this information.

FEMALE VOICE: Right. There are always compounds. Obviously, if you select people who have the condition, then likely they will have seen medication and they will have seen pieces of information for this and other things like that. And like I mentioned, we will be measuring that to control for that, but because we are proposing an Internet administration, we don't want to have the noise of people who have no interest whatsoever and they're, you know, they're going to take their survey to get their points. So this is a way to control for that in terms of these are people who are somewhat interested. They have the condition. They may be more interested

because, you know, in the real world, people who don't have the condition, aren't going to be reading these pieces of information. So --

DR. MCCLELLAN: (Inaudible)

FEMALE VOICE: Well, unless they get diagnosed with the condition and need to figure out how to take the medicine. That's where I've got a little bit of a problem with it. Just to be clear. I mean if you've had this condition. If you've had ankylosing spondylitis for the last 20 years, and you've been under medical care or therapy for it. You've had rheumatoid arthritis. This is now your twelfth drug to try to treat your RA, okay? This is a new one for you and you got to figure out how to take it. So, you know, I've got a little bit of an issue with it because I'm concerned that the people that you will access in your pool through the Internet may well be people who are already taking these medicines or one that's in the class and they have a working knowledge of it that impacts their answers. You know, when you're just looking for how useful is the information

that you get from it, you know, I don't think the study would cost a whole lot more to do face to face and I think you'd get better data if that was (inaudible).

DR. MCCLELLAN: We've got Theo had a comment on this and I want to move on to Angela.

DR. RAYNOR: I just didn't want Mike, but obviously Ruth's chipped in, to think he was on his own here. You're not going to -- in the U.K. we've called people Joe Blogs. You're not going to get Joe Blogs taking part in the study and most patients are Joe or Mrs. Blogs. And so I don't think there's any substitute for sitting in front of somebody and giving them a leaflet and actually asking them questions face to face. I think you get so much more richness to what you get for feedback.

DR. MCCLELLAN: Angela?

DR. FAGERLIN: Well, I will address what I was going to address 20 minutes ago. But I'm going to first address Mike, who since we're professing love for people, I will profess my love for Mike. But I

actually disagree and I come from the use of the Internet. And so I think, first of all, I think a lot of people around the table don't know about Knowledge Networks, which is they take a random sample of the U.S. and then give people free computers, free Internet, web TV, different things. So it's not just what I lovingly refer to as a freaks and geeks who do these studies for like Survey Sampling Incorporated or Harris, who just do this for the money. This is more of a random sample. The other good thing about it is you can say we only want people with a high school or less education. We want this percentage of African Americans. This percentage of Hispanics. There's a lot of things that you can do with an Internet sample that you can't do by going to Emory or University of Michigan or something where you might actually have high literacy people, too. I mean you can really kind of narrow in. So I think a mixed approach is to use the Internet when you're trying to get 900 people. And then say, okay, so it's working. This one seems to be the best. Now let's go and do the face to face

and see if this is actually working with people who are in a rheumatoid arthritis clinic -- may or may not be taking this drug, but they're in a clinic. But I think to just dismiss the use of the Internet is not necessarily what I would argue because I think you can get a lot of really good usable data that you might be able to do in person. Obviously, it's always better to do in person. But, you know, time, money is not unlimited to allow you to do that. So --

MALE VOICE: (Inaudible).

DR. FAGERLIN: -- but I do want to get back to the point that I was going to return to. You can go ahead and respond, but I just want to make sure I get my other point in.

MALE VOICE: Thank you, Angie. One quick comment was -- I mean one possible use of it would be especially if you had a template or if you want a large number of people to review content and do two things. One, especially if you're going -- the only reason to go after a sample that already has the disease is to almost say hindsight, 20/20. What would

you have liked to have known but didn't know? Like that kind of question. The second piece would be if you have something that you want them to look at, ask them to mark it up. You know, circle, identify, click on everything that you don't understand. Let's just tally it up so you can actually quickly target parts and that would be a very good use of getting a lot of data really, really quickly. And I clearly don't want to dismiss the Internet, but it just felt clunky compared to how you could do it. And I would again I still support Theo that you learn a lot face to face.

DR. FAGERLIN: Okay. And then I wanted to follow up on Tom's question a long time ago about the importance of putting benefit information in. I think especially for chronic drugs, people are making decisions day to day if they're going to take the drug, right? You always have to decide whether to take your drug. And so I think if we only put the risk information in there, if people just keep remembering their risks, it might decrease their adherence because they don't know what the benefit is

or they forget what the benefit is especially if they're on 12 drugs. So I think in putting this information in saying this is a benefit you'll get from taking the drug or this is the good parts of taking the drug. Because nobody's going to take our drug if there's nothing good about it and to not include that information is actually harmful. And I will follow up on some research that we did where we looked to see what happens when you -- what order you put the benefits and the risks. So we used in terms of Tamoxifen and Raloxifene to prevent a primary diagnosis of breast cancer and when you ended with the risks -- even again it was like a three, four, five minute thing on the Internet. So you know it's totally worthless, but -- what we found is even within that five minutes, if you ended with the risks, people's knowledge of the risks are higher. People's perceptions of the risks -- how common, how worrisome, how (inaudible) experience was higher and their likelihood of taking the drug was lower. So you have to think, again -- you know, say are you trying to

persuade, inform or what have you? And I don't have a recommendation of do you do the risks first or the benefits, but I think you need to know that order can have an impact because I know that was one of your questions. Do you start with the warning label or do you start with the benefits? And I don't actually have a great recommendation, but I think it's something that I think needs thoughtful consideration.

DR. MCCLELLAN: Thanks, Angela. Linda?

MS. GOLODNER: Thank you. I wanted to comment on a couple of things. One is you're really trying to figure out what you are testing. Are you testing comprehension or are you really testing the format also? It seems to me that the format is very important. Those -- that's why I think possibly when Ray mentioned going to an antibiotic drug perhaps also with the RA drug would be appropriate. I think numbers now are 45 percent of seniors use the Internet or are on-line. I haven't looked at those numbers lately, but it seems to me we're missing a lot when we just use Internet. We're missing a lot of the seniors

who I think this format is very, very important so that they can understand what the uses are, what the directions are, the top warnings and side effects. It seems to me that simple message has to be conveyed to the seniors. In the discussion about whether or not to have the brand drug, I take Lipitor and I forget the name of the other -- you know -- what it is. And I think we have to look at what's on the label which is the other part of this. You have a piece of paper, but you also have the bottle of pills and on it will say Lipitor rather than whatever the drug name is. So I think that it is important to have brand name, even though, you know, I know that we're going generic with a lot of drugs, but I think some people also will be taking prescribed as written. Just the way the information is provided in Prototype 3 I think is good. I think some of the directions should be upfront rather, you know, rather than having stop use before directions. But I think Prototype 3 has the most potential for providing good information to consumers.

DR. MCCLELLAN: Thanks, Linda, for the comments. We've got just a few minutes left in this session, so I guess this is kind of the lightening round as I turn to the last few comments. Allan? We got microphone on?

MALE VOICE: I'm sorry. I just wanted to comment based on my experience in the food area and particularly in food labeling and listening to the discussion today, this idea of how to make the document more patient oriented. I really think that -- I mean from our experience -- it's really important to talk to consumers about how they actually use the information. I mean there's a lot of illusions sometimes on the part of the people who design the documents how people actually use it. When we design the food label, the intent was as an educational device to teach people about nutrition and one of the things that we discovered was that it didn't work that way. That people don't use that kind of information as education. They have other places they get education. What they use the food label for is for

product selection and it's very immediate. It's on the product. They think about it as it's product information. You need to ascertain with certainty, you know, how people are going to use this information, how they're going to think about it and the thing you need to emphasize -- at least initially -- is the qualitative part of the evaluation. You have to talk to consumers about how they're going to use this information. What do they think it's for? One of the concerns I have is this document seems to have many possible purposes and some of those purposes may actually be important and interesting to consumers and ones that solve the problems that they actually have, and others just may be they just won't work for the consumers. And you need to determine that. And that's going to affect the design of the document. It's also going to affect the measures that you're going to use, because you want your measures to reflect the uses that the document is likely to have.

DR. MCCLELLAN: Thanks, Allan. Shonna?

DR. YIN: Hi. I had a couple comments around evaluation strategy. One, I wanted to commend the FDA for including the stipulation about having 30 percent of the population being low literate. But I had a question about how that literacy will be assessed and I also second what Ruth was saying about literacy assessments done over the Internet and what are the implications of doing that. The other comment I have about literacy is that while you have that cutoff of, you know, having people less than or equal to the eighth grade, there's a very wide difference between someone who's at the fifth grade versus the eighth grade and how are you going to account for having a range of those literacy levels represented. The second comment about the Internet survey. I'm also a little concerned about that just because of the level of control that you have in a real world as opposed to an Internet setting. I know, you know, the whole idea of getting someone else to help you while you're doing this Internet survey is one concern. The other is if we're trying to test memory and retention of

information. How are you going to take that stimulus away or trust that people won't look at it to test some of the things around memory and retention of the information? And, finally, in terms of looking at the way that the study is designed, you are testing whether the warning is first versus the indication first. And I wonder if there needs to be some consideration of thinking about the how do I use information and whether that needs to be tested the order of that as well.

DR. MCCLELLAN: Okay. I don't know if there are responses to any of this and do you want to kind of keep it short because we'll run out of time.

FEMALE VOICE: I'll try to be brief. First of all, I'll guess I'll start with your second comment about the Internet -- obviously, the control issue. One of the things we can get with the Internet, which we can't get as easily in person, is timing variables, which is another way to get at some of the processing variables to understand how people are using the information and how they comprehend it. In terms of

health literacy measures, that's one of the things we were hoping to find out a little bit more from many of you who are the experts in health literacy in terms of exactly how to measure that and exactly whether eighth grade is the right cutoff, or how to get it that fifth grade versus the eighth grade level. And I forget what your last question was. How do you use -- oh, the order. I like that comment and we will definitely think about that in terms of looking at different orders of different parts.

DR. MCCLELLAN: Let me ask. I'm just looking at the clock. There are few more cards up. I'm sure FDA would like more comments, but I do want to make sure we have plenty of time for our last discussion. So any final very quick closing remarks? Art?

MR. LEVIN: Just very quickly. So when I was saying that tell your doctor didn't make any sense, I wasn't speaking to the specifics. I mean as a nonactionable category after you've got the drug. If there are items in there that are critical and important, they should be presented in a way that's

actionable before you start taking the drug. So I was just saying you could lump those together and I was dealing with a temporal disconnect.

DR. MCCLELLAN: That makes sense. Any other final -- yeah.

FEMALE VOICE: I just wanted to piggyback on what Allan said about the user and how they use it. I would hope there would be an opportunity to learn from patients who they think will use this because caregivers are huge users of patient information as well as healthcare providers often use our consumer information as talking points so they can briefly hit the key points that are important. Particularly when you start talking about in the eighth grade reading level with seniors and others, it is often caregivers and other healthcare providers who are going through that information that was originally structure for patients.

DR. MCCLELLAN: Thanks, Marcia. Angela -- a real quick comment? Yeah.

DR. FAGERLIN: One of the things that had been brought up is this concern that if patients are doing it on the Internet, they'll get somebody to help them. But I don't see that that's a downfall, because if you're having trouble with taking your medication, you're going to ask somebody to help you anyway. And so isn't that more realistic than asking them to do a task in isolation if they wouldn't have done the task in isolation? And the other thing that you indicated was going back for the recall and I think that's an important point. But "A" -- you can tell if people go back because you can track their progress on their Internet. So you'll know if they go back. And having done a lot of these studies, people never go back. They just want to -- you know. So it's not as big of a deal. So --

DR. MCCLELLAN: Dorothy? Jann? Closing?

FEMALE VOICE: I've just been sitting here waiting. I just wanted to respond to Rachel's question about unapproved use because Linda brought up a real-life situation that happens all the time when

an unapproved drug is prescribed. And you asked the question should you put standard wording --

FEMALE VOICE: Well, they put the standard -- I'm sorry.

FEMALE VOICE: It could be a standard lines as the doctor might prescribe this for other uses. That would be -- but --

FEMALE VOICE: But I don't think you need that. That's just my feedback. I think where the problem might have been prevented with Linda's husband is when the physician was making the decision to prescribe the unapproved use, if he or she had told your husband that it was unapproved, then he would have not been upset when he got his standard set of instructions? I think that goes back to the physician.

DR. MCCLELLAN: Okay. Jann?

MS. KEENAN: Just in closing on format. (Inaudible) Michael brought up that there is a tremendous amount of literature and data driven information on format. Layout is as important in health literacy and plain language as content. And so

I would caution FDA to look at line length. You want it to have three and a half to five inch optimal. So something that might work very well on Prototype 3, you've got a very long line length. So by the time people read to that end, they don't remember what they've written. We've all seen people read with their fingers. Short line length, eye bounce, reverse type. Might want to set off -- we know how limited readers read in a Z pattern and bounce, so it's hard to find a central place on this. So maybe some boxes and lines. A slight modification so I would suggest working with people who do layout -- experts in health literacy layout to come up with prototypes, too. Along working with people, of course, I go -- all of these patient driven first. But I would relook at that literature, which we do have hard data on these types of layout things that I do feel it goes hand and hand with content. Because if you can't get a central focus on it -- see here you have some lines. I'm not leaning toward any one in particular, but you do have a linear thing. A few of the prototypes had a left

and right access. Sometimes people can't make that leap between that left column bar going with what goes right next to it. The little short line lengths give you eye bounce -- don't know where to go. So Michael is correct. We've got -- it's a young field -- 20 years, 25 years young. But we have a lot of information on that so I would -- gave some sourcing, but relook at that and even consider a Sans Serif font for headers to set it off.

MALE VOICE: (Inaudible)

DR. MCCLELLAN: Real quick.

MALE VOICE: Use my time, too. Assuming it's open book, and if that's okay, I have no problem with it, then there is absolutely no reason for a recall outcome. Because everything is a recall. I can bet any retention outcome would be unnecessary if you were to follow up.

FEMALE VOICE: I just want to clarify. We don't actually have recall in our design because it is open book.

DR. MCCLELLAN: Okay. Alright I want to thank you all for a terrific discussion. Everybody take a breath. We've covered content, format, evaluation very extensively. I got a lot of good discussion in and I would like you to take a short break. As a result, let's try to be back in 10 minutes and hopefully we won't have to herd you in so much to get to the last session which is I think some really interesting, forward looking topics. Thank you all very much.

(Recess)

DR. MCCLELLAN: All right, I'm going to go ahead and start. This is our last session on alternatives to paper-based CMI. This is a bit of switching gears after the very detailed discussion we just concluded about the three alternative models for paper-based -- one page-based CMI. And it also, I think, is an opportunity to talk about some of the strategic issues or bigger picture issues that have kept recurring today with many of you pointing out that, look, this CMI information piece -- however

exactly it ends up being defined -- is not the whole picture for safe and effective use of medications.

I think it's helpful to think about that issue not only from the standpoint of how everything might fit together into a more coherent system that delivers patient-centered or person-centered care today, but also looking ahead over the next few years, since we're clearly not there today and since things are changing. So, I'm -- I think it should be an interesting discussion. And in particular, we want to focus on the channels that are most likely to deliver CMI over the next 5 years, 10 years, maybe even longer, 20 years, and the implications that these changing delivery mechanisms have for consumers, for patients, for caregivers, for everyone involved in delivering care.

We're going to hear three presentations on this topic. And throughout the session, I hope all of you will be thinking about what we all should keep in mind as these methods for receiving medical information continue to evolve. And in some cases,

evolve rapidly or even transform. I was talking with Art and Linda about you all remember those keystone discussions when there wasn't really an Internet to think about some years ago. So, I think we can anticipate some big changes ahead and I think it's helpful to try to get our arms around those as we're thinking about policymaking that's going to be in effect in a few years or longer from now.

So please think about the opportunities that exist to use these future directions, improve the effectiveness of CMI, and how that might impact FDA's near-term strategic planning around CMI. We've got three great presenters, and two lead respondents also great for this topic, starting with Michael Wolf. He'll be followed by Kala Paul and Baxter Byerly, and then Art Levin and Ray Bullman are our lead respondents.

So, Mike? Please go ahead.

DR. WOLF: So you can all channel the *Star Trek* theme going into new opportunities here.

So, I was talking about different channels

and modalities and I think I'm just going to be -- give you some possible examples that we were talking about with the more recent Institute of Medicine roundtable on health technology. It was a major issue, and talking about all of what's going on right now with meaningful use out of the office of the national coordinator in health information technology. There's lots of opportunities, once you resolve some of these very, very basic issues around what the content and format should be. And once you get that, and then it's just a matter of how do you want that information delivered and when you want it delivered.

So, I kind of just threw this out because -- and this was a general model that we had put together for patient education. But thinking that there's never going to be a getting rid of in the next 3, 5, 10 years -- probably, and I'm assuming -- and I don't think there should be -- of anything so tangible as a print material that is delivery either at the point of prescribing or dispensing of a medication. Once you have that kind of default resource, it's a matter of

how can you optimize the delivery and access of the information. And it's not about which, but how many and how do patients want it.

Because in this model that we just kind of presented is that, health information can be as generic -- like a med guide. But it can also personalized. So if you get the content at the right time, you know, certain pieces of information can be tailored to the communication of the patient. So having a med guide that has some information removed because it's not applicable because of a person's gender or age or other information that might be requisite in the med guide, that's all possible once you have, again, the content and the format laid out as far as how you want it.

The other things that I think are really on the table and that we have to be mindful of -- because this is more cutting-edge -- is the fact that we have increasing uptake of electronic health records. So pharmacies have long been automated, they've all had that information -- you know, they've worked with data

sources to include that content for dispensing med guides or leaflets. Now you have doctors' offices increasingly using that. And with funds through these regional extension centers, funded by the Office of the National Coordinator, we are really, really focusing on increasing the uptake of not just electronic, automated health records, but integrated electronic health record systems.

So, patient portals where patients can actually access their personal record -- whether it be a tethered record, something they are linked to a health system or their doctor's medical records system to get their access to, or e-mail their doctor or get information about their current medication lists -- is becoming a reality for about 20 to 25 percent of providers. Patients are registering -- two-thirds of patients in many health systems are registered, they're just not knowing how to use it. But that is an issue that we are putting a lot of effort into trying to improve.

But there's lots of ways, again, that now

information can be thought about as being delivered to patients before a visit, during a medical encounter, or after. You can provide that information as a default resource that they can refer back to as a Web site, not just as a print tool. It can be delivered, again, at the pharmacy, at the doctor's office, through other targeted exchanges throughout the community. It's not an either/or, it's an all of the above, if you'd like.

Right now I think a lot of the limitations when we think about targeting current prescription information attributes is that the paper material, we don't really know its purpose in orientation. We've been discussing a lot of that, dealing with issues of format, of sequence, of readability, the length and the redundancy of the information. Like -- so getting it down to one document.

Once you solve all these issues -- and again, these are the tall orders we've been talking about today. These are -- once you get through that, then it becomes a matter of, do we still want them

delivered at a pharmacy? Do we want them to be so disconnected from providers?

A lot issues with Medicare Part D have been that we've been doing demonstration projects targeting medication therapy management to talk to patients now about not just how to use medicines, but to be adherent to them. And a lot of these have been done at the point of dispensing medications, where the clinician at the point of dispensing is not fully aware of all the intentions of the prescriber. So thinking about getting information at the point of -- even if it's -- so, even if the tool is a post-decision aid, it still has value given that -- and I'll give some examples of what we're doing at Northwestern, in particular, of how we've been able to optimize some of this content. It can help support provider-patient communication. It can ensure and provide one more layer of content for delivering information to patients.

So, how can we be more innovative? How can we leverage health IT specifically and be thinking

about the current trends right now in the way health care is delivered at the point of prescribing to use this information to get patients to be knowledgeable in understanding their role and responsibility in safely using their medicines?

So when I think of -- when I talk about health IT, I refer to not just all of these things of telephone, EHR, and patient portals, Internet, interactive videos and games, which has mostly been used to convey how to use asthma inhalers and other medical devices, but also handheld devices, so getting smart phones and cell phones and iPads. There's lots of different ways. It really doesn't matter, once again, if you factor in some basic pieces of -- or attributes of the information and how you, at the FDA, choose to have it be either a repository -- as I was talking to Jerry earlier. You know, is this a central repository of information so you can standardize across generic versus brand drugs versus different manufacturers in similar drug classes? How do you standardize and centralize the content and make it

discrete? So if you think of it not as a one-sheet med guide, but information dissected into its small elements --for instance, purpose, indication, you know, side effects, risks and warnings, all those little bins -- then that information can be put together in different formats for the different technologies that you want it to be disseminated by.

Again, we also have computerized agents are being used right now in Boston in something known as Project RED to educate patients on new medication prescriptions at the point of discharge. That may be a little bit out there right now, but it's a reality.

And it's not limited to, again, all of these places. Anywhere is the bottom line. You can get information to patients anywhere you want to get to them at the moment. A lot -- there's so much increasing uptick in use of health technology, even in some of the most medically underserved areas, they have access to the Internet -- high-speed access to the Internet.

The IOM 2004 underscored health system

complexity as a target for intervention. So what we need to be doing is finding how health technologies can be leveraged to do all of the issues that I've talked about here. Conveying patient information, listing concerns about information -- again, that's not what the purpose may be of a CMI is to get at concerns before a medication is prescribed, or choosing one medication over the other, but that is one way it is being used right now through many AHRQ demonstration projects.

Track patient progress in outcomes. So how do you deal with -- you know, we talk about some voluntary reporting systems. Can we improve the reporting of errors and adverse drug events by the fact that now we have health IT that can track patients and have them more easily record how they're using certain medications?

And again, the benefits, I think, are pretty obvious. Expanding or targeting their audience, tailoring tools as needed -- so, some of the ideas that we've been able to use -- and, I think I can show

you in this next version. This is actually just our website where we've developed a lot of tools and have given a model on the side as how information can be developed; where you can educate patients, prime them before an encounter or during an encounter to have them -- to increase the content or comprehensiveness of a discussion between a prescriber and a patient and make sure that they leave with tangible tools at the point of -- as -- at the point of discharge from an outpatient visit when they have a new prescription.

This is the way we've currently -- at Northwestern, we took 500 medications -- the top 500 prescribed in general internal medicine -- and we created one-page med guides based on this template, which we worked with patients, pharmacists, and general internists as well as many of us in the field who do a lot of work on health literacy to develop. And we came up with this sequenced information of drug name, generic name -- which could be, as Ruth refers to, active ingredient -- purpose, benefit, how to take. And again, our tools -- the one great thing

that we can do with health technology that you might not be able if you just use it as a static print document is that we can pull from the sig field, the discrete sig field in the electronic health record, and get the -- make it a dynamic tool. So we can say that we don't want to just say most people take this medicine one time a day. But we can actually pull the actual sig, the way the doctor has prescribed that specific medication, into that field so what gets printed out is actually a tailored tool based on the way they have been prescribed the medicine.

Information about if it's a male patient and you don't think you need the warning about talk to your doctor if you're pregnant, think you're pregnant, or breastfeeding, you can have that removed. So again, these are really good opportunities that can be leveraged with health IT.

We also try to do things like provide additional tools that just give general information about what to do before, during, and after an encounter. But again, it's ways that we're trying to

figure out how to make this information salient, meaningful, something that they won't throw away.

And so the constraints that we have to be mindful of -- and I'm mindful of my time as well -- is access to IT, patients and providers -- you know, do they have access to it? You know, what resources do they have and have to -- do they want it on a smart phone? Do they want it through their patient portal? Again, all this can be tailored and personalized to the populations that you're serving.

There's limitations of clinical and patient environment. So when we think about all of this, what we've learned is it's not just about educating patients about their new role and channels for getting health information, but it's educating providers. The last thing I'll say about using health IT -- and I'm really focusing more on one specific process than I was thinking I would -- is that we also have created smart phrases in the electronic health record to increase provider-patient communication. As we all know, these are just defaults. We -- that the med

guide are -- CMI is just a safety net for what the provider didn't tell the patient -- is that we're working with providers now where for any drug, they can just type the name of the drug in, hit Enter, and that med guide appears. So, that little sheet that we have pops up, provides a structured template for the spoken communication for patients. So, providers can use these tools to remember -- because again, the reality is a lot of primary care docs may not have all the information necessary at their fingertips and know what to say.

So here we're going to structure it so it'll be standardized. And hopefully, that redundancy between the spoken communication about the medication will also be reiterated and strengthened by the tangible tools that they'll receive when they leave.

So, I'll end it there.

DR. MCCLELLAN: Thanks very much, Mike. Kala?

DR. PAUL: I answered this question with a little bit more closer-in look for me, and it may --

and without having all the potential for IT available to me. I was thinking more in terms of what could we do with what we have now, what we're striving for to get it out to patients?

So the question was -- one of the questions we were to answer is, where do patients get health information? And we know they get it in person from their physician and they get it from friends, from everywhere. They get it in print, they get it on air, they get it online. And these are various online venues that we know patients use, but in -- the issue with many of these is they are not push -- they are -- patients have to go to these venues. So we're looking at substituting a way to get patients the information in a push in the same way that documents are now handed out at the pharmacy and go directly into the recycle bin.

So, the question has always been, well, how easy is it for patients to get Internet access? This information comes from two different sources, one of which is Pew Internet, so I'm assuming -- I think they

were for two different years and they're pretty much the same information, that 81 percent of households have at least 1 computer. It's lower, obviously, in lower proportion in families that have lower incomes, but it's only -- it's down to about 56 percent. It's lower in African-American households and Hispanic households and households where the head of the household hasn't graduated high school, in rural areas, in homes without cable, and for older Americans.

And -- but even given that, we know that people go to the library, to their hospital library, and to various public services to access the Internet. A tremendous number of and percentage of Americans actually use the Internet, and 75 percent of Americans already are -- go online for information, for ordering, and so forth.

So the other thing that's notable is that broadband Internet access is increasing. So that if we're talking about the Internet as a way to deliver information for patients, it not only is viable now,

it will be increasingly viable in the future.

So the question is, how do we use the Internet as a push venue for getting information to patients at the point of dispensing? And this, again, is my focus. Was not to help -- this particularly was not meant when I was looking at what we were discussing here today was -- as a use for the physician, although it could be, but when we're talking about the point of dispensing, which was where the CMI was intended to be distributed.

So we think that it could be effective distribution, and it presents options. It's not available for paper, obviously. It's -- but we don't know if that's more effective than paper. I mean, we know it might get out there, but we don't know if it's going to make any more difference or if patients will read it. And that will obviously depend on the format and content of the CMI and I'm not going to deal with that, since we've dealt with it in as much as we can. All right?

Okay. This is what I just was looking at.

How do we fulfill the requirement to give CMI to the patient at the point of dispensing? And this would provide -- with an Internet, we want a single document across all sources and all venues. We want a uniform core content for all venues, printable, single or double page. And the reason I say that is I don't think we're going to get away from paper. I do think we want to make sure that the core information gets out. And if we don't limit ourselves to the physical real estate contact amount of information that we can put on a piece of paper, or reasonably put on a piece of paper, we're going to get what we've seen happen with a lot of the documents that are out there, and that's information creep. And while I did date one in high school, I don't think it's a good idea. (Laughter) I don't think it's a good idea for continuing medical education.

The other issue is, without any of the links that we might consider being apparent in the Internet possibilities, we need to be able -- if we want to be able to customize the documents, we may be able to do

that simply with headings and with additional pieces that are appropriate for certain kinds of information, rather than actually have programming involved.

So, the advantages for Internet? We push it to the patient. We could potentially alert patient for new information through e-mails.

We have the potential for live links, that is that within the document that's delivered on the Internet there could be a link to other sites -- to the FDA site, to the company's site if it's a company product, to other patient and product sites, global, chat rooms, and a reasonably high-quality information sites -- health information sites.

The -- and Mike was even talking about this, you can link the document to other sites, you can have other sites linked to it. It could be linked to -- we could make more engaging formats, theoretically. Then we could use color, which is more difficult to print, but it could be available on the Internet.

There's a potential for wastepaper reduction. We do know -- I think we were told at one

of the RCAC meetings or -- I think it was the 2009 September meeting that in California they have bins outside the pharmacies to catch the paper that people throw out on their way out of the pharmacy as they just put the pill package in their pocket. And if patients could opt out of paper printing, which would be a very nice thing.

We have -- I'm proposing electronic delivery from online pharmacies and -- or from the local pharmacist. And we have databases which have these patients in them -- they're very easy to pick up, an e-mail. And from an online pharmacy they clearly have your e-mail so it's very easy -- it would be very easy to make use of what's existing to push this information to the patient when a medicine is mailed out.

It can be embedded in the patient HER and accessed through the patient portal, and the technology actually already exists. The platforms are in use -- I think the data banks already use this type of information to deliver to a local pharmacist or to

the pharmacies that are mailing out.

Okay. If we had online pharmacy scenario, the doctor writes a prescription, hands it to the patient, the patient then calls it in or mails it into the pharmacy. They have the option to opt out for paper or go paperless. The pharmacy in dispensing the medication can access the data bank of approved and appropriate documents. The documents are e-mailed to the patient, the patient can read it, save it, print it, and if they print it we hope they recycle it.

If they opt for paper, then -- well, I already discussed these things. And I believe that this is not a HIPAA issue, so it's not a matter that we have to worry about patient confidentiality. And the document will be sent at the time of dispensing, so that would arrive probably before the medication and maybe even would be read because it would come in the e-mail and something different, new. If the patient opts for paper, it's somewhat different. The patient is then given the paper when it's mailed to them and hopefully, again, they would recycle that

when they were through with it.

If through a local pharmacy scenario, it's pretty much the same except, again, the patient takes the prescription in, has the option to opt for paper or to opt out of paper. If they opt out of paper the document is mailed to their home and they have, again, the same options to print, save, or -- and just read. And then if they decide if they want it in paper then the pharmacy can do what they do now and print it. The advantage would be, of course, that they would print a document that is already an approved document as opposed to what we've been hearing, which is documents that contain bible verses, ads, and ads for other prescription medications, ads for other things in the pharmacy on the limited real estate that comes with your medication.

So, the e-documents would have a certain amount of things you'd have to consider in them: How do they appear on the screen and that they should appear on the screen and not as an attachment; that the patient can search, download, read, print, and

save; and that there's even a potential for voiceover for either patients who have limited vision or you have an option for voiceover if its another language, or just that people can sometimes understand the spoken word more easily.

There will be live links for drill-downs, and we've already mentioned this videos, websites, connections. And the core document will be formatted to print up so that these URL links would still print within the document. There would be customization potential, but I don't think that that's something that's real right now if we're talking about implementing a solution, although maybe that's something Michael could talk to.

And these are the things that would have to be done. We'd have to define the core information, it must be included, and allow for customization based on some type of fixed parameter, maybe a checklist or something like that. And then the question would be, who makes the choices for customization?

One of the things that was a problem with

the CMI that we were hearing about was that they only printed pieces of it and it was up to the pharmacist to decide what pieces they would print. So, if you have the patient picking and choosing what pieces they're getting you may not, again, be delivering the information you think you're delivering.

So, the issue is if -- I proposed a data bank. There are data banks that exist, but then you have the issue of data bank management, data bank ownership. Who writes these, who controls them, who updates them, and who owns them? Do we -- if the -- we continue to have a need for paper options, then we still need to keep these documents as simple as possible. And the question would be whether we would want to have floating around a customized papered -- customized print document, e-documents that are different from the print documents, and that would be a version control issue.

And the question, again, who chooses what to send -- what to pick in customization? But, hopefully, someday we'll be in a situation where

information that's generated electronically, is transmitted electronically, and is read by the patient and used as much as possible.

Thank you.

DR. MCCLELLAN: Thanks very much, Kala. Next is Baxter.

MR. BYERLY: So, I want to try to cover basically a lot of the same information that you just heard about, looking at it from a little bit different standpoint.

For those of you who don't know, just a quick background. Catalina Health Resource is part of Catalina Marketing. We're based out of St. Petersburg. We do direct to patient messaging in the pharmacy, that's what we do. So if you're getting a duplex document from anybody just about in a pharmacy right now, part of that came from us. We helped put the duplexing process in, put in the printers. We print 1.4 billion of these things every year. So all the stuff that you're trying to figure out how to print and get rid of? We're helping the retailers

figure out how to make that happen. So, got a big interest in trying to move this to a different way.

So, moving forward, what you've got here is, we believe that the single document is really providing the relevant information to the patient at the time that they're most likely to respond to that information. So, we think it needs to be written from the patient's point of view, it has to be clear to understand. So, kind of the way that we've always talked about this is, this should be information that you should give to someone that's a loved one about the information that they need on how to take this medication. It should be really that simple. What are the key things that you want to cover with somebody that is a family member?

The other thing is, we believe that you definitely have to have real-life testing to determine what's the best format, and there's lots of ways to do that and that's a whole different discussion that we can go -- already went down some.

So, don't think paper is going away. I do

believe that the digital solution is going to have to be an opt-in process to start. People are going to have to say, I would rather get this through a mobile or digital design rather than getting paper or in addition to getting paper. And so what that's going to mean is that when the patient opts in, there's going to have to be a data record that's set up that says this patient prefers this type of communication. And it could be e-mail, it could be mobile, it could be text, it could be whatever they want. But this patient has said this is the way I want to be communicated with and that's the way we should try to get to doing it. Because that's the likelihood that they're going to most respond to that message is if you give it to them in the way they've asked for it.

So, when you drop off the script -- or, hopefully, it's sent by an e-prescribing solution -- that needs to be a lookup that says, okay, this patient is going to be picking this up, he'd rather get it by this method; give it to him that way rather than print. Or if you want to print it as well, fine,

but this is the method he's chosen to get it.

So, you look at how his opt-in worked. So you're talking about going to the web, you're talking about doing it in the doctor's office. You should be able to opt-in via mobile devices if that's what you want to do. Text some number to whatever and tell them that this is what you want. Lots of different ways to do that. I don't think it's really limited to just e-mail, mobile, SMS. It could be IVR and web. It's basically any digital solution that you can come up with, you need to have a way to make this happen.

The key thing is that the patient needs to be able to receive this in the format that they want, and the digital version has to offer the ability for two-way communication to get started. So what I'm saying there is that the advantage over a digital piece is that you can put in links that would allow them to simply say I need more information on this. And it can click back and take you to the pharmacy, it can take you to the drug manufacturer, it can take you to the FDA. You've got the option to do that easily

through an electronic media. It can give you the phone number and let you call the pharmacy or call the doctor or call whoever you decide that you need to call to get information right then and there. So, I think that that's one of our options.

The other nice thing about a digital solution is that right now, one of the biggest problems we've all said is that the stuff that gets stapled to the bag, which we print a lot of, gets thrown away a lot. So you don't even know if they looked at it. If you deliver it digitally, I can tell you whether it got delivered. I can tell you whether you had actually opened it. I can't tell if you read anything unless you go down and click on something further down inside. Those are all metrics that you can bring back that will actually give you a little bit of information that tells you what's going on.

So, you need to get pharmacies to really start collecting e-mails right now. So a lot of them do, a lot of them don't, and you've got to get them collecting other methods that people want to use. So,

I still think that PHI and PII are going to be concerns. And so, I don't think that there is a clear understanding that if I send you information -- even if you've opted in -- to your e-mail address, that that's something that I don't -- that I can do clearly without having to worry about the privacy issues.

The reason I think that is because your e-mail address may sit on the same computer that your wife has or whoever -- somebody else does -- you're sharing the same computer. Maybe not the same account, but it's very easy for somebody else to see that. We need -- I think there needs to be a little clearer guidance as to whether that's considered to be acceptable or not.

Initially, in talking to a lot of retail pharmacy chains, they're very uncomfortable about sending e-mails that basically would have anything about your prescription in there. Right now, all of them will send you an e-mail that says, your prescription number ending in XXXXX is ready for pickup. But they're not going to send you anything

that says, Dear Mr. or Mrs. Smith, guess what, this is what you need to know about taking your medication. They're not sending that through e-mail channels right now.

So, moving forward with that, I think that you've got to figure out a way as part of the pilot plan -- and whether it's you waiting until you figure out what the one solution is that you're going to use in paper or whether you decide that I want to take all three and put them out there, plus a fourth one which is a digital solution for people that want to opt-in, figure out what makes the most sense. You compare that to the group of people that we've got right now that are getting all the other stuff that they may or may not be reading, you look at this over a 6- to 12-month period and find out some true behavioral leanings, because you can track this stuff. There's ways to do this. We do it all the time with programs that we run for pharma to understand this patient is doing this behavior, and you can track that across a multiple period of time to see if I give them this

piece of information, do they change that behavior? If they don't get this piece of information, what do they do over here? Those are all the things we've got to do.

So I think that moving forward, that's where we need to go. I think that digital is obviously the -- really is the next step. My biggest concern is, how do you get around the PHI and the PII concerns? Because that's going to be a big problem as you move forward.

You can provide some pieces of this, but if you really want to be able to provide a clear solution, that's where you've got to go. And then ultimately I think, you know, the longer term solution is to expand this out and look at the big puzzle which is a wraparound message where the doctor talks to you, you get a message in between, you get another message at the pharmacy, and you can follow up all the way through the process.

So, I appreciate everybody's time. That's all I've got. I've brought us home early.

DR. MCCLELLAN: Baxter, thanks very much for the concise presentation. Art.

MR. LEVIN: Can I borrow the -- so, I saw the slide presentations before the meeting and I think people covered in detail sort of what the brave new world could look like. So I thought I'd get us -- go back up to 30,000 feet and talk about some sort of larger issues.

So, what I wonder about is when you reach electronic nirvana, however long that's going to take us. And every physician has an EHR and is using it meaningfully and every patient has a portal and is using it meaningfully. What will the concerns, I think, still be unless we start thinking about them now?

So, one thing is, how do we get people engaged in this process? We still have to make an argument, I think, that this is of value for people to want to do it. I mean, we can't assume that the world of patients and families and care givers are sitting by their computers waiting for this to happen. And

that when it does happen they're all necessarily going to go into a portal or know what to do with all of the choices they have through that access.

So I think we really need to start thinking now about how do we make the value case for the public that this new world is really going to benefit them and that they -- that there's a lot to gain, you know, in this for them. And I don't think it's by making vague promises that we're going to give you better quality and safer health care, because I'm not sure we can deliver on that yet. And I don't know, you know, how we're going to evaluate it. But I think we can start with some -- as is being done -- with some, you know -- getting rid of some of the hassles.

So, you know, one of the things that I think is a big hassle is you have to go to your doctor's office to get a refill very often. So we're talking a lot about secure messaging and the ability to get refills through secure messaging, e-mails. And the question is, what opportunity does that provide for getting other information?

So I think, again, we need to start sort of visioning what the future's going to look like, think about the fact that just by the fact that it's there is not enough if we want this, really, to be helpful both to people who are using the system and providers in the system to improve health care and health of the population. What do we have to do to get real engagement there?

The other thing is, there are a lot of policies that are ongoing now, as Michael mentioned: meaningful use, patient-centered medical, home -- none of this is in there. Now, we understand that the criteria for meaningful use, because it involves payments to providers, are all expressed in the provider -- you know, from the provider perspective. There's nothing in there that talks about what patient engagement is. So if you're going to get a clinical summary of your visit, what are you supposed to do with that? Why is that of value? How are you going to use it? And on down through the criteria.

So I think those of us who are around the

table need to really insert ourselves in the ongoing discussions about policy around all of these pilots that are moving forward in an attempt to transform care and improve health care and improve health.

So, I'm -- what -- it makes me wonder whether the paradigm really shifts so much that this piece of paper, even in electronic form, becomes unnecessary at some point. That if we have true engagement and a real -- between providers and patients, families, and caregivers, and if we have informed decision-making, really and truly informed decision-making going on, whether this doesn't get subsumed under it. That in the discussion, however it takes place: by e-mail, in person, by a combination, by pushing the info button and giving yourself access to lots of background info, that this gets sort of folded in. And at some point -- because we've moved now 50 years away from when we started to think about this -- this is not what we need to be thinking about. That this -- the kinds of concerns we're trying to address here would be really part of a larger

engagement that would address a lot of the generic issues that people raised here. And it wouldn't be a standalone, separate enterprise. It would be part of the larger enterprise.

So, I don't know what place that has in this discussion except we need to be thinking about it now because the world is changing very rapidly. Lots of regs and laws are being passed, lots of money is being handed out, and I don't think any of it deals with these issues we've been talking about today.

DR. MCCLELLAN: Thanks very much, Art. Ray?

MR. BULLMAN: I want what he's taking. I like that. I like that look at the universe.

I would also suggest -- just a personal aside -- that the name of this meeting be amended to the -- not "The Science of Communicating Medicine Information," but "The Art and Science of Communicating Medicine Information." Because woven throughout everything that we've talked about today, it's -- the fallback is -- in the plugged-in version nomenclature is the default is, this information in

the ideal ought to be communicated at the point of prescribing or even discussed in terms of the prescribing decision.

We know from the FDA's own surveys that tracking communication or receipt of information at the pharmacy and physician's office going back to 1994 through 2006 and reported in 2008, I believe, that consumers report that they are not receiving information about -- and instructions for use, precautions, side effects, and warnings to the level of about 35 percent to 65 percent at the pharmacy and physician's offices. In terms of consumer self-report, fairly qualified consumers in that survey -- that phone survey.

What do the the first question that I -- a bullet to respond to is, what are most likely channels in the next 10 years? God forbid that I'm going to try and reiterate everything that's been said today. I could say, me, too. I do, though, want to -- not to lose sight and it has been mentioned, the paper, the traditional model, as it were, is not going away soon.

What can we do in the interim to improve that? And perhaps if there is some incentive for pharmacy change when legacy computers are switched over, maybe there's some consideration. But I think now we've set up the situation where we're going to take a wait and see. So I'm not sure that anything new under the sun will evolve currently in terms of what we've, perhaps, all received at the retail pharmacy.

Also, I think it's important for us not to lose sight of the good old telephone. The hard-wired or, in this case, perhaps the hard-wired. And that is -- and the capacity for that phone system to be used not only now for Rx reminders and, you know, rapid refills and things like that, but also the potential for that to be used, perhaps, with an embedded or an assigned number to a prescription product where I could go -- where we could go to a phone tree, push 1 for information about instructions for use, push 2 for side effects, and multiple languages; it could be listened to as many times as you want. We've all been on, god forbid, voicemail loops, but this could be an

instructive loop that people could obviously seek out on their own and use to their own benefit as they find it appropriate.

We've already talked about a lot here today, the smart phone and how the application -- an app to details on Daily Med or MedLine Plus or FDA or wherever it might direct the end user for access to a full palette of information that can be -- that's available. Text messaging with links to CMI embedded if there's concern about -- beyond the secure network, if there's concern about putting it all out there, as it were, that the recipient would have to click to go further, to drill down.

Also, this week I attended the meeting with -- at Dr. Woodcock's and Dr. Weiss' invitation on safe use initiative. And twice in that meeting Dr. Woodcock specifically referenced how the television is so useful and available and underused for perhaps the delivery of medicine information. The idea of a video on demand library, for example, certainly could be in the short future.

The Internet, we've talked about the rich and deep palette, the scalability, the opportunity to not just put it in front of us visually, but to click for voice, to click for media, for video, et cetera, et cetera. And so -- and then the other part of the initial point to respond to is, do these methods or opportunities vary by demographic group? And I would say now, no, but they could and they should. I think we've talked plenty about that.

What opportunities did the channels of distribution offer for improving the effectiveness of CMI? We've talked about the opportunity to tailor the design, the look, and the feel, as it were, and the opportunity to deliver content on a user's preferred platform. That's -- you know, that's major in the scheme of things of thinking of how we all live our lives right now. And that may perhaps optimize use. Right now, it's a static piece of paper stapled to the bag, in many instances, for example.

What are the implications of these channels for content and format? Obviously, the opportunity

for tailoring and customization -- changes in font size -- there is the possibility, though, of loss of content. We heard downstream at the table about the requirement now to fit X-amount of content into Y-footprint, and that doesn't work. And I'm not sure it's an individual pharmacist's decision to lop off or to cut off content, but it is certainly a -- at the operational level, up in corporate, that perhaps that decision has been made.

So -- and then the next one is, are there strategies to ensure that patients have access to the most important messages without loss of content and or clarity? I may be the wrong person to speak about that, since I'm trying to figure out how to get a text message here -- an e-mail off of my Generation 1 iTouch. But there is -- I mean, there are now currently non-changeable or protected PDFs, for example. I don't know how protected they are. If we keep it short and we provide a floor rather than a ceiling, then I think -- minimal -- minimum essential information, I think, should be a goal that we strive

for.

Do these trends have implications for near term initiatives? I would say, perhaps. And I would say that they probably do, and the risk that we run is building railroads that don't connect. And that's a -- that could be a major concern as legacy computers are retired -- I mention that, for example -- and new systems are brought in. As the e-prescribing pipelines are built out and as more research is done, there's an opportunity to evaluate not just the access, but the use of this X that we're talking about developing at the point of prescribing as a tool to vet information to the patient and then downstream in the pipeline at the pharmacy, for example, as well. There's no reason that that document could not go back and forth and could not be handed out or used as a tool for communications at both of those points in times.

And I also think that one of the things that we have not talked about, but this opportunity allows, is -- and that -- but a decision -- lots of critical

decisions need to be made at the policy level and at the front end is, are we talking about a different document with the initial prescription, for a new prescription? Are we talking about a different document on the 12th refill, for example? So -- and how might that change and how might that improve patient's use and comprehension of information and their use of the medical products?

I think that's it.

DR. MCCLELLAN: Thanks very much for a -- I'd like to open this up for discussion. But maybe for the FDA people here as we get started on this, it struck me in listening to some of the presentations that these aren't 5 or 10 years off, but these are things that are at least doable now in pieces of our health care system and for some populations. And Ray made the point as well about potential short-term implications. I don't know if anyone from FDA wants to comment on the extent to which things like CMI could be incorporated on a pilot basis or something like that, and to some of these personalized medicine

tools.

SPEAKER: Yeah, I think we'd be very eager to see various of these ideas piloted. We have, even under current regulation, a fair amount of discretion. There are no lawyers (inaudible) with enforcement discretion, for example. Dear Doctor letters, it's in the regulations that they are to be mailed. But we broke guidance saying, in fact, no, they can, you know, be handled electronically. The PII/PHI issue has to be sorted out. We've certainly struggled with that with Sentinel and I think you're right, that's one of the first things we have to answer to because -- that and the timing.

I think there are two things. One, can you send it or do you link back? And also, how do you time that with that one -- the patient will actually get the stuff in their hands, that's when they really want to read it? So the answer, Mark -- and I think you know this because it's part of the plan we have with you guys -- is to think about what kind of pilots we can do under the current regulatory paradigm so

that we're not 10 or 15 years down the road saying, whoops, you know, the train didn't meet or the -- we would very much like to, whatever solution we create now, anticipate the future so that it will seamlessly meld into it, either be expanded -- it could become obsolete; it probably won't -- but somehow seamlessly just fit into this future.

DR. MCCLELLAN: Gerry?

GERRY: A couple of additional observations of things that are going on now or in development stages.

One device that oftentimes is overlooked, but actually is the most pervasive communication device in this country, is a simple cell phone. Not a smart phone, a simple cell phone. There are more cell phones in this country than there are televisions, than there are computers. And most cell phones, even though they're not used that way right now, actually have the capability to deliver text messages beyond what we typically see in the texting features that we have. I know my previous phone, once I got past two

lines, it went to the next message. But that's the way that those text messages are being delivered. You can actually deliver multiple screens of content if you want to through a simple cell phone. And there are people working on those applications.

And one of the beauties of this type of information is, it can be at the point of decision very readily. The patient's in the physician's office, they can call up the information, if it's structured correctly, to help them ask the right questions, help them make the right decision. It's a very useful tool.

And the second component that often is tied in with those sorts of developments is reminders. So there's also adherence tools that if you need to draw your blood sugar, if you need to take another dose, those messages can just be passed on to the patient.

A second thing that's currently in use -- and REMS is actually stimulating a lot of this particular use -- it's fairly similar to what Mike was describing, and that's digital patient education. You

know, in hospitals particularly it's becoming an increasingly important tool for communicating with patients at bedside, and it's looked to by pharmaceutical manufacturers, for example, as an innovative strategy for coming up with ways of making sure that they're meeting the conditions of REMS. And since most REMS have med guides right now associated with them, one of the things that these companies are doing are actually translating those medication guides into digital formats that are understood by patients. They're in conversational voices, they include illustrations, they use much simpler language than what's included in the medication guides.

Another piece that's been mentioned is already becoming publicly accessible to patients, and that's integration of this information with both the patient's health record -- their personal health record -- and EMRs. You know, the major web services -- Google, Microsoft Bing, even the government itself -- are already making forays in that area to allow integration of information with the patient's PHR and

EMR. So it doesn't really necessarily depend on their plan, let's say, their insurance plan.

Another development that's occurring with the search engines that are out there is something that's been called Health OneBox. And one of the major issues that consumers have in navigating the web right now is they don't know when they can trust the information that they receive. And both Microsoft and Google recognize the importance of trying to make it more obvious to patients or to consumers what is truly trusted information. And, you know, all of the major search engines are focusing on something that's called "search optimization" where it's the trusted information. Not the one that a pharmaceutical manufacturer is funding, not the one that someone has bought enough of the index terms to get a very high weighting in the result, but a trusted source of information. So that's a development that's already in play, both for disease management information as well as for drug information.

And then the final thing worth mentioning is

the structure of data. XML -- if it's not a term that you know, one of the beauties of that structure is that it's very intelligent, and as long as you create the information and tag it correctly, you can extract very customizable pieces of information very intelligently and fairly simply.

And for example, Daily Med, the structure product labeling uses XML. It's not very granular, meaning right now it's not structured in such a way that you can pull things out -- specific pieces of information out very quickly or readily, but that particular language is really going to drive a lot of the customizability of delivering this information.

DR. MCCLELLAN: Let's see. I think Marsha, go ahead. Oh, sorry -- Mike and then, I'm sorry -- I don't see who all -- yeah, Donna, go ahead.

Okay. Sorry.

SPEAKER: (inaudible)

DR. MCCLELLAN: Okay, Ruth or Marsha. Sorry.

DONNA: Thank you.

DR. MCCLELLAN: It's later in the day --

DONNA: I'm Donna.

DR. MCCLELLAN: Ruth, then Donna, please.

DONNA: Ruth then Donna, okay, all right.

DR.PARKER: So this dovetails right on what Jerry just said. And I -- it's sort of just a comment, really, to the FDA as they move forward on this, which I'm, you know, incredibly delighted to see happening. And it's about one of those high-level concepts that I think is incredibly important from the patient viewpoint, and that is this whole idea of trust and trusted information.

And I think one of the greatest needs for patients, consumers, whatever we're going to call them, us, is that you have to know what information to trust. And we've got to figure out -- I would consider this something for the FDA to take to heart as a public health agency. How do we help patients understand what is a trusted source of information that's based on evidence and really has their health and safety at its heart? That's -- that won't happen

if that's not intentional.

And the reason is because what we've done for the last 40 years is -- or 25 or however many years you want to count back -- we've had guidance in a market-driven approach. And, you know, we're America and market-driven approach works in America and that's what we're all about and we do it well. But for the patient, even for the prescriber, it's really hard to know what content to trust. When you prescribe -- I do it all the time -- we've got a few sources we go to, and it's really hard to know sometimes if you've got a trusted source of information that is guiding the clinical decision. This should really scare everybody who's a patient and who's ever taken a drug. It's really hard to figure out if you're following evidence that is about the patient more than it is about the sale and use of that product. So, that's for the prescriber.

Then you got the patient on the far side, and it's all about selling and using. And I get it and I like having products that work, and I like being

able to use them and prescribe them. But I think the public health imperative is to figure out how we brand trusted sources of information that are patient-centered. And then how we educate about that and how we disseminate.

So it's not just creating it, but it's also finding a way to make that common and used and I'm not exactly sure what the idea is, but I don't think it will happen. And what we will do is we will have a plethora of more and more and more that is available and a large amount of it has the purpose and intent of driving the sales and use, some of which is appropriate and some of which is not.

So, I would put forth a plea that we do the ethical public health decision-making that says that this has to be a priority: defining, understanding, and disseminating trusted repositories, both for those of us who are prescribing, but certainly also for patients who are using.

DR. MCCLELLAN: Can I push a little bit on what the FDA might do beyond what it's already doing

in this role now? I mean, obviously there's a lot of functions to make sure accurate information gets to patients. And as Jerry talked about earlier, a lot of private organizations that are trying to build trusted brands around places to go or if you want, you know, good personally relevant information on your health, you could use. More -- are there other specific steps that FDA might think about undertaking? So.

DR.PARKER: I think considering how we brand it and how -- you know, I think making it easier for those of us who are prescribing and for people who are using to know that something has had a certain level of scrutiny. And I'm not exactly sure how we would do that, but that's not been something we've currently done. And it is incredibly hard on both ends to figure out whether you're looking at something that is truly driven at an evidence-based decision-making algorithm about safe use and effective use, or about sales and use. And so something that helps distinguish. I don't -- I mean, Art, you may have thoughts.

MR. LEVIN: (inaudible) reconcilable difference in Keystone was a suggestion by some of us who participated that there be some sort of Good Housekeeping Seal or UL label for what was at that point medication guides. And there was a lot of disagreement and we actually submitted two options to the Secretary and she chose the other. So that's some of the history.

I think you should know that this issue of what is a trusted source is much larger than just what we're talking about here and is on the front burner. It has a lot to do with comparative effectiveness research. The IOM has two studies underway which, I think, may actually deliver within the next six months: One is looking to establish standards and criteria for systematic reviews, and the other is looking at clinical guidelines and doing the same thing. So it -- so I think there are efforts around the country to address either this very real problem, which is, even within the scientists and the professions, the variability and reliability of the

study information and the -- is mixed.

And it's going to be harder with the public, but I think there's more attention and we need to piggyback on those efforts to sort of flip it in terms of what we tell the public.

DR. MCCLELLAN: Okay. Dorothy? And Mike, I think you had something on this point. Then go to Donna.

DR. SMITH: I just -- I have a question. Is there any research on who can -- which group consumers would trust? Because I thought it was FDA, if it was FDA approved. Is there any research that documents that?

DR. PAUL: I don't know the answer to that. I do know that the two vetted -- ironically, two vetted sites, the sites that are under regulatory scrutiny, are FDA and the manufacturers. And those sites -- FDA -- within the -- you know, the degree of resources that we have for enforcement activities, we scrutinize those, the content and all other sites are not scrutinized by regulatory agencies.

DR. SMITH: But do consumers -- is there evidence that consumers would trust your site?

DR. PAUL: Well, it's interesting. Amie's division had a Part -- a two-day Part -- two, three day? I forget. Two-day Part 15 hearing on social media and Internet this past fall, and what was fascinating when you think about branding is that if the word "FDA" appeared anywhere it would mean that consumers believed that's an endorsement. I think we know this from dietary supplements when it says FDA has not -- I think it's FDA approved.

So, that's some -- Amie, you may remember more detailed. But what I remember, if there was any mention of the Food and Drug Administration, that raised the site up in the eyes of the consumer.

The manufacturer's side has these issues of -- you know, I think there's mixed emotions, if you will. And it was interesting that some of the details that were presented, some of the most concerning sites were, in fact, the -- not the blogs, what are they called? Social network sites? Where really some

horribly bad advice was being passed back and forth. But there's a lot of faith in those sites among the participants.

DR. SMITH: Right. And patients trust what other patients say --

SPEAKER: Right.

DR. SMITH: -- or consumers trust other consumers over the health professional.

DR. PAUL: Exactly. So when they say, you know, drop your dose of Coumadin or double your dose of Effexor, you know, based on a little bit of chatting across the Internet, it's very, very scary.

DR. MCCLELLAN: Mike?

DR. WOLF: I mean, well, I think there's data to support that -- well, actually, I wouldn't even say -- I would even think I'm going on a limb too much to say that most prescribers and patients don't know who currently generates the materials that they're getting right now from the pharmacy.

A quick comment on the trust issue. And I do completely agree with Ruth and I think it's a good

one to brand it. And I think a lot of the quality control is actually potentially leveraged by the use of these health technologies. And I would also say that having that kind of good redundancy between what could have ultimately be delivered at the point of care -- at prescribing, along with the pharmacy -- because right now we do have and it was mentioned earlier that disconnect between having a -- we're still struggling with implementing e-prescribing. How do you -- this clunky connection between the pharmacy and what data we could be getting back from the pharmacy and, you know, our electronic health record systems. But the more you can actually kind of make that connection and have that good redundancy and if the FDA was the single source guiding the development of manufacturer's development of the materials that were disseminated at both points, you could at least have a start for them having what you believe is a trusted source.

And I would say one quick comment that I'll just end it is, AHRQ -- you know, we are working right

now with AHRQ on a task order to -- that just started, I think, last week. AHRQ issued one to basically review and systematically pool all available patient education materials that could -- publicly available, and that's the key word -- that could be leveraged by health technology, electronic health records, and so forth. Come up with, using a technical advisory panel, an objective rating of the quality and accessibility of the health materials to then ultimately kind of create some sort of repository. So it wouldn't be a bad idea, and actually the task order is not actually -- it would include consumer medication information as well as for -- as how they're going about it.

It's a fairly large endeavor for the next two and a half years, but it's something that you might want to be aware of because it might have a lot of similarities that the objective rating assessment would be at least a product.

DR. MCCLELLAN: Thanks. Donna?

DONNA: Thanks, Mark.

Well, I'm a community pharmacist and surveys show that people trust me. So I think we need to bring it back to what you said before, that this is just one part of what you're trying to do.

And Baxter said that, you know, you have to opt-in for technology. You also have to opt-in for paper, because when a person takes the paper and throws it away without looking at it, they've just opted out. So, in order to involve the pharmacist, what -- as a community pharmacist what I'd like to see is to make it more -- instead of being passive, put a physical component into this paper.

So instead of having bullets, have check boxes so that the pharmacist can use this piece of paper, whatever it's going to be called, as part of their counseling. So it would be an interactive thing and they could check off what they've actually talked to the patient about and then the patient takes it home and can use it as a reference. We do that now with some of the information we have, we use just a highlighter because there's so much information on the

CMIs. We just highlight what we want the patients to know.

We actually at ISMP have a grant with AHRQ right now where we're going to be going out and testing this type of community-type of consumer information for safety on high-alert drugs. Those are the drugs that cause more fatalities or more harm when a mistake is made by people taking their medication incorrectly. So we will have that information. We're going out at the end of the summer to do that, we're going into 50 different pharmacies with 10 different drugs to test both patients' perception and the pharmacist' perception on how these things work. So be glad to get that information back, too, when we finish it.

But I would strongly suggest that this -- if there's only going to be one piece of paper, that it somehow be used so the pharmacist understands it can be used as a counseling guide, so to make it a more interactive piece of paper.

DR. MCCLELLAN: Thanks, Donna. Theo?

DR. RAYNOR: I just wanted to alert you to a UK site, medicines.org.uk, which has information on it called “medicine guides,” not to be confused with medication guides or med guides. So, they’re medicine guides and they’re produced by Data Farm, which is a nonprofit arm of the pharmaceutical industry organization.

But more importantly, these medicine guides are available through the main National Health Service portal, which is NHS Choices. So, there is a source of information that generally people will see as being of good quality because it comes from the National Health Service.

On those medicine guides you can individualize in terms of which dose formula you’re actually taking and also which illness you’ve got. So if it’s a beta blocker, you will chose which particular illness you’ve got and then you’ll just get the information related to the illness. They did have an option for individualizing it for gender, but they withdrew that because there was some concern. The

first what I consider fairly arcane reasons that there was a problem there. That clearly this is the start of, in the UK -- is getting to some sort of tailored information that people can tailor themselves on the Internet and then print out a form from that.

DR. MCCLELLAN: Great, thanks.

SPEAKER: (inaudible) presentation. The problems I had at the very beginning of this session was I had problems with where the risk information was going to be delivered, and then the usage information.

But as I listened to your presentation -- and I'm also thinking about e-prescribing. One of the problems I've had with e-prescribing -- and they've told me I'm 20 years ahead of my time -- but if e-prescribing is coming into the pharmacy, and I'm the pharmacist and the patient doesn't pick up their refill, I have no way of going back the other way to tell the physician we have a problem here, the patient didn't pick up their prescription.

And as I listened to Baxter's presentation, if he can tie into e-prescribing, so when the

pharmacist -- I mean, the physician -- is doing the risk-benefit informed decisions session with the patient, the physician -- if the physician could somehow click -- so Baxter sends the physician customized risk information to the doctor's office and then the patient gets to the pharmacy because they've decided to take the drug, then the risk information can be printed out at the pharmacy. And if the patient doesn't pick it up, the loop could be made back to the doctor. It seems like it could tie everything together.

MR. BYERLY: Yeah, so, ultimately, great idea. Unfortunately, the way e-prescribing was built is it's a one-way pipe.

SPEAKER: I know.

MR. BYERLY: It goes from the doctor's office to the switch, and then it gets handed off to the pharmacy. And it doesn't even get handed off to the pharmacy in a way that they can electronically always match up exactly who you are, so there's some finagling that has to go on behind the scenes to get

some information to try to figure out how to match you up so that if you're going from your doctor's office through, say, the McKesson switch to your Walgreens, there's some pieces that have to get translated to different parts in the puzzle, which are not built to be able to bring it back.

But ultimately, yes, you want to get a surround sound solution, long term, that lets you be able to sit there and go, okay, doctor prescribed it, did you pick it up? Okay, you didn't pick it up. Let me get back to the doctor and have him get hold of you to find out why you didn't pick it up. That's ultimately where you want to go. And if you did pick it up, then you want to follow up with different information as you're going through the therapy --

SPEAKER: Right.

MR. BYERLY: -- long-term to make sure that works out. But it's -- the technology is not there yet, but ultimately that's where you want to go.

SPEAKER: So we've got a problem with content and format. You've got a problem with the

technology.

MR. BYERLY: Technology will get there as soon as you figure out what it is that we want to do. We can get the technology there.

DR. MCCLELLAN: Thanks. Go ahead, Terry.

DR. DAVIS: I want to underline the handout at the point of prescribing and dispensing. We've done research for HRSA on childhood risk communication and on newborn screening, and we had a template for prescribers about what to say. These are the seven points that you need to know. And that could be a part of the handout. These are the seven things patients need to know or whatever. Then the doctors really -- were so appreciative of that and did it, because then they had a template of what they needed to say. The pharmacist would have a template.

The other thing is, just as we're talking about all this technology, I've done a ton of patient videos. They are not the end all, be all. You have -- no matter if you got the greatest thing since sliced bread, you have to play it. So why in the world would

you play it? And there's just a little barrier there that a print thing you've got in your hand, you can decide I'm reading it or I'm not reading it. But it's just one more barrier to plug that thing in, so.

DR. MCCLELLAN: Thanks. Are any of these comments over here ones that we haven't -- let's see. The cards that are up. Anybody I haven't gotten to yet. Yeah, go ahead, Ruth.

DR.PARKER: Mine was just a follow-up to -- not to forget as we talk about how nice it would be if everything we prescribed were taken and adhered that unless the evidence is there that you need to be taking the drug and that you're taking it appropriately, you're really lucky you didn't get it and didn't take it. And so this is actually really important.

For some reason -- not too hard to figure out -- we take so many more pills in this country without improved outcomes. And so we need to be really careful. We really need to get back to what's evidence-based and real and true, and make that and

the understanding of that the public health goal and to be very careful that we don't just take a lot of pills. Because it drives a lot of markets, and it helps us get to some that we probably do want to be taking.

So, I just kind of -- I want to put that out there. Because if you look at the data, they're very compelling data that we take a lot of pills in this country and we don't have the outcomes to match the volume of pills that we consume.

So all of this has to be done based on evidence. And it has to be very centered to doing what's right and at the right time and making sure that we're getting the desired outcome. Not that -- I mean, more is not always better. So, you know, I think tempering it with what it is we really want. Take it if you really need it and if it's based on the right evidence.

DR. MCCLELLAN: Thanks. Art?

MR. LEVIN: So, I just want to go back to emphasize that I think the opportunity we're presented

with all these tools is for shared decision-making. And now, I have to -- and, you know, tell you all that I am a board member of the Foundation for Informed Medical Decision Making. So, shared decision-making is something near and dear to my heart.

But whoever's product it is, the decision doesn't matter. The principle here is that a patient with family, caregiver, whatever the envelope is, is engaged with a provider and has a discussion about all these issues, including what are the alternatives to what you're advising me and what's the science and evidence behind that.

And it goes far beyond, you know, just this is where the benefit comes in. I don't think you can do this in -- the benefit in a CMI. This is where you do the pictogram -- pictograph, which shows absolute relative benefit as well as absolute and relative risk. Because you can have a very small risk, but you can have an even smaller benefit, which makes that risk perhaps not worthwhile.

So I think -- I mean, I think it's, again, a

very different paradigm. It involves this interaction from the very beginning of this process of thinking about how do I treat this patient, patient thinking about how do I want to be treated, having that dialogue, exploring alternatives, and making sure that everybody -- that decision is shared and, you know, that it's really based on the evidence. That's where we'd like to get to. I think we're a long way away, but I think we have to be really thinking about that now for it to happen 10 years down the line or whenever.

DR. MCCLELLAN: Kala?

DR. PAUL: Just in terms of some of the things that we've been talking about. I keep coming back to the one thing that -- one of the reasons that we're here today is to help the FDA come up with a way to deliver CMI to patients to fulfill the regulations, to fulfill the law. Is that --

SPEAKER: No --

DR. PAUL: No, okay.

SPEAKER: No.

DR. PAUL: Okay.

SPEAKER: And it gets to a question I was going to ask.

So there are certain mandated (inaudible). There's certain mandated patient information, like estrogens. There are med guides. If we decouple -- and then, of course, (inaudible) REMS, but if we decouple med guides from REMS, then there'll sort of be fewer of those. But there's not a regulatory -- there's not a statutory requirement for consumer medical or patient medical information.

We believe there's a need we believe we are trying to take with the current chaos of all this paper and fix it. What happened 10, 11 years ago is we tried to assert regulatory authority to do this and were denied that. And there was going to be this private sector solution, which we all know is the stuff that gets ripped off and thrown out because it's this big and so forth. So we're trying to say, the current paradigm isn't working, we're going to fix it. So I don't know that we're quite trying to fulfill a

statutory requirement, but rather fix a system that we all know is -- that's currently in place, that's broken.

And I think the question that popped into my head was, we don't want to invent something that's going to be antiquated before it's actually rolled out. That's what we do not want to do. But it seems to me that everyone around the table agrees there's a need in general for a patient to have access to patient-oriented information after they are provided with a prescription. And I think that the nation thinks that.

Janet, do you want to add anything to that or?

Does that answer your question?

DR. PAUL: Maybe I misinterpreted Public Law 104 -- 104-180, which talks about getting patients medical information at the point of dispensing, and which ended up with the private sector being provided.

SPEAKER: Right. No, you --

DR. PAUL: So if that does -- that does not

require that information is --

SPEAKER: Well, we have a solution in place. There's a solution that meets the law in place. Right? It doesn't -- well, doesn't -- it failed to meet the success requirements.

DR. PAUL: This is one of my favorite -- I told Art one of my favorite comments that he made when Bonnie Sparstad presented her information, which said that the information wasn't useful and that it was a failed study. And someone objected to that and Art said, what part of failed study don't you understand? (Laughter)

So the question is, if even -- if we're talking about making one solution, we are still talking about trying to fulfill the requirement to get information to the patient, or are we not -- at the point of dispensing?

SPEAKER: That's a fair point, yes. But I guess I thought (inaudible) responding to a different question. We could try and tinker with the current system, right? We could leave med guides as they are,

we could leave approved patient information as it is. And we could try and tinker with the other piece.

DR. MCCLELLAN: Well, I think that may be the point that we wrap up on. That this is clearly a very important -- or, I'm sorry, Ray, did you have a comment, too? Go ahead.

MR. BULLMAN: (inaudible)

SPEAKER: Again, we are going to officially solicit public input and officially (inaudible) comment rulemaking. But our clearly stated position is we believe there should be a one-document solution and every drug will -- and the 25,000, or if you want to reduce that to 12,000, whatever. We do not -- we will not have the resources, and will not have the resources to approve all of them, which means they are not going to be part of the approved professional labeling. Except -- and we may ask this question: Are there circumstances under which there should be an exception to that paradigm, which means that there's going to have to be some sort of certification program with an enforcement program? And that means there's

going to have to be, we believe, some sort of public-private partnership with a central repository. We believe that's a logical way forward, but obviously we want to have a lot of discussion around that.

MR. BULLMAN: (inaudible)

SPEAKER: Well, I think that would just be saying which office and CDER is managing it as opposed to anything else.

DR. MCCLELLAN: Yeah, sounds like regardless the goal of safe and effective medication use with good information to consumers is there. And we've certainly had a lot of discussion relevant to that topic today, and obviously a lot more is coming.

I would just -- a reminder before we wrap up that there will be a public forum that we are putting together on October 12th that will go over these types of CMI-related issues, but with a focus on identifying the key challenges to the adoption, dissemination of effective consumer medication information. Certainly, this discussion today has been very helpful for that and we hope to stay in touch with you and work with

you as we move forward towards that event.

In the meantime, I know I've benefited a lot from this discussion. I think the FDA team who is here has as well. And I don't know if you've got any other final comments to --

SPEAKER: No, just extremely informative. And thank everyone for their time and their effort and their thoughts. And you'll be hearing from us.

DR. MCCLELLAN: Yeah. So, all of you have participated, we very much appreciate the time and effort that went into not only the slides and the presentations but, you know, clearly this is a set of issues that means a lot to many of you as evidenced by the supplemental materials and the importance of getting a lot of issues on the table today that I know many of you felt strongly about. And I think this discussion has been all the better for all of that.

I do want to thank the rest of the FDA staff, Darryl, Janet, Amie, all of them who helped put some time and effort into this meeting to help make the discussion as productive as it was. And on the

Brookings side, Josh Benner, Sally Cluchey, Mike Botta, Beth Rafferty -- who's done now three events in three days and is ready for a break -- and Michelle Wong as well.

But again, biggest thanks to all of you for making the time and effort to attend. And, you know, again, I can't think of any more important set of issues for getting to a better health care system. And it's been a real pleasure working with you on them today.

Thanks very much.

* * * * *

CERTIFICATE OF NOTARY PUBLIC

I, Carleton J. Anderson, III do hereby certify that the forgoing electronic file when originally transmitted was reduced to text at my direction; that said transcript is a true record of the proceedings therein referenced; that I am neither counsel for, related to, nor employed by any of the parties to the action in which these proceedings were taken; and, furthermore, that I am neither a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

/s/Carleton J. Anderson, III

Notary Public in and for the Commonwealth of Virginia

Commission No. 351998

Expires: November 30, 2012