Caring for the Elderly: Is There Any Answer to Rising Health Costs?
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ED HOWARD: Good Day. I'm Ed Howard with the Alliance for Health Reform. And, on behalf of our chairman, Jay Rockefeller and our Vice Chairman, Bill Frist, I want to welcome you to this briefing that's designed to look at health care costs and the elderly in a slightly longer view than we usually have the time to focus on.

Two weeks ago, I was chatting with Dr. Straube in this room; we were talking about Katrina and the impact that it was having on victims. You can't imagine something much more immediate than that. This is not something that's going to have its full punch delivered tomorrow; but it sure is an important topic – on that probably involves a whole lot more money than we're talking about for Katrina, maybe even on an annual basis. But, we have to look out a few years on the calendar to see it.

Our partner – our partners, I should say, in today's program are the respected Health Policy *Journal of Health Affairs* and the equally respected RAND Corporation, which does probably more high quality analytical work on more topics than anybody around. Today's discussion, in fact, is going to flow from a series of papers published electronically in *Health Affairs*. Most of them authored or co-authored by RAND researchers and their colleagues.

Just a couple of logistical items, before we get to the

program – in your packets, obviously, a lot of background information including some of these RAND and other *Health Affairs* articles – there's, also, background information on our speakers that go beyond what we're going to have time to tell you about verbally. And, I commend you that information as well as the presentations that we got in time to put into those packets.

That material, by and large, and some additional material will be available on our website, if it's not already, by the close of business today. Also, by the close of business, you can watch a web cast of this briefing on Kaisernetwork.org; and a transcript will be available on both those websites probably in about three days.

And, those of you who do this sort of thing frequently know [audio skip] in this discussion there are green question cards in your packets you can use. There are microphones you can use to verbalize your questions at the appropriate time. And, there is in your packets a blue evaluation sheet that we hope you will take the time to fill out before you leave.

Now, we have with us today from *Health Affairs*, its founding editor, John Iglehart, who will join me in keeping this discussion civil and relevant and appropriately focused. So, I want to give John a chance to explain a little bit about what we're doing here today.

JOHN IGLEHART: Thank you, Ed, and Good Afternoon.

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Recent innovations in bio-medical research, topped by the sequencing of the human gene, seem poised to revolutionize medical practice – but just how is really the $64 question we're going to address today. And, as authors predict in this set of papers, the bio-medical community appears confident that unprecedented advances in our ability to prevent, to detect, and to treat disease more effectively are within our reach.

However, the stewards of Medicare and Medicaid and the private insurance industry, not to mention the VA and DOD health programs, hope this optimism is well-placed. But, they are uncertain, given the uncertainty of the future and, also, of trends dealing with demography, with disease, disability, and the economy in general.

These papers really represent for *Health Affairs* something of a demarcation and a new direction for us. For almost 25 years now, we've been publishing mostly content that reflects the medical economy, finance, and delivery questions – really that side of the health care ledger. And, we've published far less material on innovations, science, research, and the like. And, this set of papers really begins a new direction for us where we will be publishing far more content on the other side – the innovations, science, research side.

I've been saying to the staff for 20 years, one of my goals with *Health Affairs* was to introduce NIH to CMS. [Laughter] Two institutions renowned in their areas; but in

some ways, in really fundamental ways, almost ships passing in the night – different cultures, different values, they publish in different journals, they go to different conferences. Yet, whatever NIH and its private counterparts innovate, Medicare and Medicaid and private insurance more or less ends up insuring – covering; but, there's not been a robust dialogue between these two disparate worlds over the years.

And, we intend, in the future, going forward here to try to close that gap a bit and really introduce a dialogue between these worlds. And, in a way, this effort today – this set of papers represents a first effort down this new road for us.

Before I turn it over to our first speaker, I would like to thank the National Institute on Aging for lending us support to publish these papers and, also, of course, NIA contributed substantially to funding the research of this effort. I'd, also, like to thank the John A. Hartford Foundation that also provided us some support to publish these papers on our website and followed by a printed volume that will be available in several weeks.

CMS, also, lends support to the research effort; and I would applaud that as well. With that, I will turn it over to our first speaker, Dr. Barry Straube, who is the acting chief medical officer of the Centers for Medicare and Medicaid Services. Barry –

BARRY STRAUBE, M.D.: John, thanks very much. And, Mr. Howard, thank you, also. It's a pleasure to be here with you folks. I am a nephrologist and transplant physician and come to CMS; and now I'm involved with everything we've been doing. And, what I'd like to do this afternoon is to set the stage for the other speakers and give you a little bit of a high level overview of what we're doing at CMS relevant to this particular topic.

Okay. This slide, you can't see very well in the back of the room; but, basically, it shows the growth in number of Medicare beneficiaries. If you look at the total, that's the important thing here. And as you can see, starting back in the 1970s, numbers of Medicare beneficiaries – a steady and, actually, exponential kind of growth out into 2030. So, you're seeing the growth of beneficiaries that we're faced with in discussing the topic this afternoon.

This shows Medicare beneficiaries versus the share of the U.S. population. So, as you can also see here, the percentage of Medicare beneficiaries relevant to the Medicare – or to the entire U.S. population is, also, growing – not as a straight line, but nearing an exponential kind of growth.

We're at an exciting time in the Medicare and Medicaid programs. We just celebrated this summer the 40th anniversary of both of these programs. And, we're now spending over $600 billion a year for both of these programs combined, covering

over 80 million American lives at present. And then, as you saw in the prior slide, an increased number over ensuing years.

Medicare has changed significantly since its early days. It was, initially, as you can on this slide, institutionally based and biased. It was provider driven, particularly by hospitals and physicians – and among physicians, particularly among surgeons. It was – the long-term care setting was by default institutional and not in the home or community setting. There was a focus on reactivity to acute and chronic disease problems. And, there was a lack of information for choice for beneficiaries.

Current trends are very different, however, and are going to kind of frame the discussion that we're having here this afternoon. And that is the people are increasingly focused on prevention, the care is patient-focused, consumer choice is very important. There is a decrease on institutional bias; and more personalized medicine is being provided in a broader way of community settings and home settings.

Team health care has taken over from individual physicians. As I said, out-patient and community-based services – increasingly important. And, getting into what we're talking about this afternoon. The incorporation of technology and innovation as well as pharmacy and pharmaceutical issues is increasingly dominating our discussions on Health Policy.

Finally, we're trying to modernize the Medicare program. And, I'll try to present to you a few examples of how we're doing so that may be relevant to the discussion here this afternoon.

In terms of the CMS Quality Roadmap, we have a vision of the right care for every patient every time. And, I've listed for you here the six aims of the Institute of Medicine Report crossing the quality chasm that guide our CMS Quality Roadmap. But, in order to achieve the right care for every person every time, there's, obviously, the potential for great expense and certainly great complexity in terms of making decisions – not only in terms of what health care to deliver, but what it – how we're going to pay for it.

We employ the following strategies in trying to achieve our goals at CMS. First, we're working through partnerships. We feel we have to leverage resources. Second, we're relying very heavily on publishing quality measurements and information as a basis for supporting more efficiency in the system as well as quality improvement efforts.

The third big problem is paying for these services. And, we want to increasingly focus on trying to find a way to pay for services that express our commitment to quality; and it, also, helps providers and their patients to take steps to improve health and avoid unnecessary costs.

The fourth strategy is we need to assist providers in

making care more effective and less costly, especially by promoting the adoption and usage of health information technology.

And then finally, again, relevant to our discussion this afternoon – we're trying to bring effective new treatments to patients more rapidly. And, we're trying to help develop better evidence so that doctors and patients can use medical technologies and treatments more effectively.

This is a classic diagram of Jack Winnberg's [misspelled?] work, which is, basically, showing the utilization of in-patient hospital services across the United States. And, again, you can't see that too well in the back, I'm sure; but the important thing is that the dark red are areas where the cost per Medicare enrollee are the highest, and the pale areas are where they are lowest.

And, you can see, we have a tremendous problem here in terms variation on the expenditures nationwide. I didn't bring a slide in the interest of time; but if we were to map out the quality that ensues, it in many cases is the exact opposite of this diagram here. That is, the high quality areas show up in the lighter i.e. lower cost areas.

And, the high cost areas turn out to have lower quality results for many quality metrics. So, we have a disconnect between expenditure of dollars and the quality of care that we're seeing delivered to our beneficiaries.

So, what are the practical drivers of increased cost in this health care system? Well, a number of questions I pose, which I hope will stimulate some of the questions you have later on.

First, the new technologies – do we cover them or not? How much is reasonable reimbursement for a technology or service that we do decide to cover – particularly if there's no competition in the market to determine the cost in the marketplace? Will technology or medical interventions be used appropriately and cost-effectively once we've approved coverage at the Medicare level? How do we choose what to cover? How do we monitor the utilization, once we have chosen something to be covered? What about the quality of the services provided? What about efficiency, that is, for a given level of quality – can we provide it more efficiently and for a lower cost? And, what value do these services provide this society?

A big area that, as you'll see, and with the demographics I described, palliative, were end of life care – when is enough? And, how do we deal with the high cost of this particular segment?

And then finally, who decides all of these questions? And, how do we do those decisions?

We have – in the interest of time, we're going to skip over a number of these slides. But, the first conundrum we have is, in fact, our coverage process. And, you need to have

background about this, which we don't have time to talk about this afternoon. But, coverage of Medicare services are first determined outside of CMS. The Congress determines what the benefit categories are that are covered under Medicare. And, they can be narrow or they could be broad.

Subsequently, FDA evaluates each technology or service and determines whether it is safe and effective. If these hurdles are passed, then we determine whether we should cover it or not – and by cover, I mean pay for it. We have to determine a code for the coverage. We, also, then, have to determine an amount that we pay for these services.

And, the key factors I've listed here, in terms of our making a coverage decision, as to whether a service is medically necessary and reasonable, it first must be a potential benefit of Medicare. We have to have evidence of improved health outcomes. It has to be appropriate for the Medicare population. And, it has to be replicable in the provider community.

So, one of the ways – we've covered things historically under Medicare; but, frequently, we're finding that the evidence base, in terms of determining whether a service is medically necessary and reasonable, may not be complete. And, we're constantly under pressure to not delay coverage of reasonable and necessary services. So, we've recently instituted something called "Coverage Under Evidence

Development.”

I think this schematic tells you a little bit better what I’m talking about. Namely, we ask the question: “Is there existing evidence sufficient to support Medicare coverage?” If there is, we cover it. If there’s not – before, the service was not covered; now we’ve embarked on an intermediate zone where we gain and collect additional information to try to determine whether that service is, in fact, medically necessary and reasonable, allowing beneficiaries to have access to care while we’re still answering those questions. But, there’s a cost to pay for this. And, sometimes, it can be extreme.

Here’s some examples of some of the recent “Coverage Under Evidence Development” that we’ve recently done. And, you’ll be hearing about some of these with subsequent talks here. ICDs – we’ve also looked at off label use of cancer drugs and FDG PET scanning for cancer monitoring and treatment.

This just lists the other ones. There’s a number of others we’ve been doing. It’s been growing numbers here.

We’re working on parallel review, trying to streamline the process of FDA approval along with CMS approval. I’m going to skip over some of these leverage choices.

But, just in closing here, these are health care expenditures in the last year of life. And, notice that Medicare is paying huge numbers: $22,588 as opposed to the

same patients $3,901 when it’s not the last year of life.

I’m having technical difficulties with this clicker. Again, showing a source of payment – the majority are being Medicare and Medicaid. And, this is looking at the last year of life expenditures where you can see here – and my pointer – this is the – within 30 days or less of the time of death, you can see the majority of expenditures in the hospital and the last year of life as opposed to 12 or more months out. So, we have a huge problem with addressing this.

I’m running a little bit over here, Ed. If I could just, kind of, continue through. Excuse me. Could we go back? I’m sorry. One more. Here you go. This is just showing the necessity for CMS to, probably, be making cost effectiveness analysis in future years.

If you look at “Preventive Screening,” you can see that with a benchmark being one wants to try to get $50,000 per year or less per quality of life year expenditure, you can see the color active [misspelled?] cancer screening ranges from $10,000 to $26,000; mammography, $17,000; and cervical cancer screening about $4,000.

But, if we look at more high technology services, you can see that hemodialysis [misspelled?], something that I’ve dealt with a lot, ranges from $50,000 to $90,000 per quality of life year achieved; ICDs $130,000 to $210,000; and ventricular cyst devices, $220,000 to $320,000 per quality of life year

achieved.

So, we are going to have to be looking very critically at those things that we do cover under the process I've described before as to what the potential outcomes are. And, again, in the interest of time, we'll skip over these decision making tensions [misspelled?].

How are we going to be addressing this? I'll end on this one. We have a number of quality and "pay for performance" initiatives. And, in addition to refining our coverage process, extending the coverage process to gather information, and allow earlier technologies to come to market, in addition to working with FDA's streamline things, we have to look for the efficiencies that I mentioned early on in the slides.

And, in the mode of CMS functioning as a public health agency, we've got quality initiatives and "pay for performance" initiatives in the physician arena, in the hospital arena, home health arena, skilled nursing arena, and end stage renal [misspelled?] disease arena. And, we'll be focusing in these initiatives on quality efficiency primarily going forward.

So, I'm going to end with that. Just giving you this overview and we'll be delving a little bit more deeply into the specific areas of the papers being published. Thanks very much.

ED HOWARD: I should tell folks out there that Dr.

Straube's slides will be posted on our web site later this afternoon. So, the ones that you – he wasn't able to address as much attention to, you'll be able to find there.

Our next speaker is Dana Goldman, professor of Economics at RAND, who was the principal investigator of this research project. I'd, also, like to introduce to his left, Jeff Joyce [misspelled?] is an author of one of the papers, who will not speak, because of time; but will be prepared to answer questions that are based on his paper. With that, Dana.

DANA GOLDMAN, Ph.D.: Thank you very much. I'm having the same issues, so. This is a research effort, as everyone has noted that was funded by CMS and NIH; and for that, we're very grateful. And, it involved a lot of collaborators, some of whom are up here; but there are others at various institutions around the country.

But, to give you some background, here's the slide that causes most of the hand wringing in policy circles. It shows health care as a percent of GDP since 1960. And, the point is, it's going up; and it's going up quickly. But, if I put up here a slide that showed spending on broadband technology as a percent of GDP, that would be going up as well. And so, the issue isn't really "Is it going up? It's "What are we getting for it?"

And so, this slide shows you what's been happening to infant mortality and cardiovascular disease, which are two of

the most important health outcomes that we follow. And, you can see that it's gone down quite a bit over the last 50 years or so.

So, on average, what health economists say is that what we're spending is worth it. And, one way to think about that is if I said to you, "Would you rather have 1970's medicine at 1970 prices or the medicine we have today at 2005 prices?" Most people would take the latter. And so, on average, it's been worth it. But, the question is what's going to happen going forward?

And so, what this shows, this slide, is a picture of the left ventricular cyst device. There is a recent article, a very important article, in the *New England Journal* showing that this artificial heart actually saves lives. Now, I don't know. There's the battery pack, and there's the artificial aorta, and you wear this thing. And, what was interesting about this is it is quite efficacious. It does extend lives. Some of the people who had these devices chose not to continue with them when the study ended.

And so, the issue is will these emerging technologies that are coming forward be worth the cost? So, what we did is, we put together this group to identify the key biomedical innovations over the next 30 years and how are they going to affect the elderly, because they are the predominant spenders on health care.

In addition, there's some other issues we need to worry about. We hear a lot about obesity and diabetes and other health trends. And, those people who are young now are going to be old later. And so, we are interested in knowing what are the impact that their health conditions and trends among the young might have going forward.

And so, we took all this information. And, I'll show you some simulations in a bit and model the effects on spending and disease and functional status.

So, the first think we did to identify technology is we convened panels of experts from around the country. And, they identified key breakthroughs in various clinical areas: Cardiovascular disease, neurological disorders, and also cancer and aging. And, it turns out that those are linked at the biological level in ways that we're just now exploring. And, also, a panel of geriatricians and social scientists to help us think through these issues.

So, let me give you an example of what they came up with. Now, this was technology that you've heard about. They're intraventricular defibrillators. So, this is actually the devise that the Vice President has; and it's implanted in your chest. And, if you have a life-threatening problem with arrhythmias – if your heart goes into an arrhythmia, it gives you a shock, kind of, like – I'm not a doctor – so I think of ER, like the panels; and it brings, hopefully, your heart back

into appropriate rhythm.

Now, we know these technologies are incredibly valuable for people with the conditions like the Vice President has. But, the issue is where do we stop? And, how many people get them? I mean, maybe, I want one; because you never know when you might have an arrhythmia. And, that was before we had all these recalls, I might add that [laughs] now I know I don't want one. So, what we modeled is a scenario that the experts told us where it was being expanded quite dramatically. Next slide.

So, let me tell you about how armed with this information of these technologies we modeled them. I'll try to be very brief. We start with a cohort of Medicare beneficiaries who are age 65. And, rather than looking at things like the actuaries do in cells, which is appropriate, we actually looked at what happened to them over time. And so, we modeled their cost, and then we followed these people. They spent some money. Some of them, unfortunately, died. For the survivors, we went on and modeled their health and functional status.

Now, stop here for a second. One big issue as you go forward with this cohort is that new people come in. And, what's important is to understand that, even though on average the elderly are doing quite well over time right now, we have this cohort of younger people who are showing evidence of

increased diabetes and disease; and they're going to eventually age into Medicare. So, it is Medicare's problem at some point that the young may not be exercising and such; and, what, we take that into account to some extent. So, and so forth and so on, we model these going forward. So, next slide please.

So, let me give you another example. It turns out that – some of you may be more familiar with this evidence – but it turns out that if you take most animal models – so, if you take rats and mice and other animals in the lab, and you reduce their caloric intake by 30-percent, but you do it in a way that they still get a subsistence diet, you can extend their life expectancy by 25-percent.

And, they've shown this for many years; and this is well documented evidence. And, they're even doing it in primates now. And so, yeah, exactly. So, what is the point? [Laughter] is what the comment was. So, the interesting thing is that they now have chemical compounds that can mimic this behavior. So, in other words, there's actually a professor at UCLA, by the way, whose trying this. And, he's very thin [laughter] and he's not – he's got some issues. But [laughter] anyway, so, they have chemical compounds that can mimic this behavior.

You might say, "Why can't you get the chemical compound?" Well, it turns out if you give the rats just a little too much, they die. And so, right now, it's probably

not a good thing to put on the market. But, the point is, the biomedical community is very excited about the prospects of having such a pill, okay? And so, now, let's just say – and so, what we did is we modeled such a scenario. Can you go to the next slide, please?

So, here's the issue. Most people, when we talk about Medicare, we talk about the demographic risks, because there are going to be twice as many elderly in 25 years or so, about 71 million. Now, what we did is we simulated this with a compound and, the point is, this one pill will increase it by 13 million in 2030; and the point is these curves are divergent. Next slide, please.

So, here's what would happen. The heart disease – you can click forward – you'd have a lot more heart disease in the elderly under this scenario. Keep going, please. And a lot more elderly health care spending. So, you can see that our scenarios show that we'd be spending $300 billion more – that's in 1998 dollars, on elderly health care spending – elderly health care with the emergence of such a pill. Next slide.

So, you might say, "Well that's terrible!" Well, no, it's great. We, actually, would increase medical spending. You can think of it two ways, the range is 14 to 70-percent; and we would save a lot of lives and people would live a lot longer. And, the cost per additional life year is only between $9,000 and $30,000.

So, coming back to these ICDs, these defibrillators; we model these out as well. They're $35,000 for the device and the procedure; and then, that keeps people alive, and it keeps people alive in a very sick state, okay? And, there are economists – this is why people don't like economists. We tell you, "Well, that's expensive." So, let's go forward.

We'd be doing – in our scenario, we'd be doing about 350,000 of these procedures annually in 2030. Multiply that by $35,000 and you get a number that's really large. It's so large that I told my wife that we need to make sure our son is a cardiovascular surgeon when he grows up. And, maybe, he would even be Senate Majority Leader. But, that's another story.

Anyway, so, this would be adding about $20 billion to $25 billion annually to health care spending. Next slide. It wouldn't improve functional status in the elderly in any measurable way that we could demonstrate. Next slide. And, the cost per additional life year is about $100,000. Now, one thing to keep in mind is that's the average cost. So, the point is not that this is a bad technology.

Like I said, for people with life threatening arrhythmias, it's very cost effective. They've shown that. The issue is how do we – once the technology is available, it starts expanding to these marginal populations and it has less value for them. And so, we filled out this table based on all

the things that you can see; and then, the general point here is that everything we looked at cost money. And, that's because in the past everything we looked at cost money. And so, maybe, we're on the cusp of biomedical revolution; but what our experts are telling us is that things are going to cost money and a lot of them will be worth it, but have tremendous chance of increasing cost. Next slide, please.

So, what are the key findings? Just to summarize. We focus on the demographic risk to Medicare, that is, this aging of the baby boom. But, what we're finding is just one or two technologies post significant risks to Medicare. And, it's not like Social Security. We know Social Security is coming, and we can do some things to change it. These technological risks could be one technology we've found could increase – and I showed you – could increase spending 70-percent. And, we have to be ready for it.

And these things – there's not an easy fix, because it's not like you, say, don't have access to the technology. The challenge is to figure out how we get treatment to the patients who most need it.

I want to come back to what Barry was talking about, where he said CMS is being quite innovative in the way that they're following these technologies and getting the evidence. But, the reality is that it's very difficult to deny someone a procedure when both they and the doctor say they need it.

Okay? It's hard to say "You can't get an ICD, but the Vice President can."

And so, the issue is, how do we tilt the playing field? Right now, there's no incentive, given the process he's outlined for developing cost-saving technologies. The issue is can you develop something that has medical benefit, and then, we'll go out and market it to as many people as we can, maybe even off label. And so, there's no incentive in the system.

Now, there are things we can do about that; and I hope that will be part of the discussion when we – when the questions come up. Thanks.

ED HOWARD: Thanks very much, Dana. I just wanted to take a moment to introduce our final speaker, Michael Chernew, who is, also, an economist from the University of Michigan, holds a variety of faculty positions there. Among his many other achievements, which are chronicled in your Bio information, this summer he was named to the new Commission on a High Performance Health Care System set up by the Commonwealth Fund, which is, coincidentally, this is the commercial, a topic that we're going to be examining at a briefing a week from today. October 3, you'll be getting the notices about it very soon, if you hadn't gotten them already in your office. Mike, thanks for coming; and we're looking forward to your presentation.

MICHAEL CHERNEW, Ph.D.: I'd like to – yeah, I can't

even turn on the mic. I'd like to thank all of you for coming. I'm assuming it wasn't just for the lunch. This is a topic that I think is phenomenally important than ones that I have great passion for; and I'm happy to be involved. And, I echo what Ed said about all the good work being done at RAND.

ED HOWARD: Mike, you're going to have to lean closer, I think.

MICHAEL CHERNEW, Ph.D.: I can't even talk – hello? The study that I'm going to talk about was done, in conjunction with, from folks at RAND, including Dana and, also, funded by the Lasker [misspelled?] Foundation. Not working? Can anyone hear me? Can you see me? [Laughter]

ED HOWARD: Yeah, why don't you use that one?

MICHAEL CHERNEW, Ph.D.: They gave me new time.

ED HOWARD: That's right.

MICHAEL CHERNEW, Ph.D.: Is that better?

AUDIENCE: [Affirmative response]

ED HOWARD: Terrific.

MICHAEL CHERNEW, Ph.D.: Still a pleasure to be here. [Laughter] And, it's still an important topic. And, I'm still grateful that you all could come and talk about it. And, I'm looking forward to talking about this particular [interposing] paper right now.

What I'm basically going to do in the next few minutes is tell you a few things that I think you know and leave you

one thing that you might not know; and, hopefully, we can have some questions on the discussion about the implications of that one thing.

So, a few of the things that you know: The number of the individuals older than 65 is predicted to grow rapidly over the upcoming years. The number of individuals older than 85 is expected to grow extremely rapidly over the next several decades.

The pessimistic view of that is that, at least financially, so again, I echo what Dana said. It's nice when these are your parents, grandparents, friends, and loved ones that they're still living. But, at least from a financial point of view, the pessimistic version of this is that we're going to see a great increase in the number of Americans with varying levels of disability; because as people age, they have greater prevalence of disability. And, that's concerning for a number of reasons; but, at least in part, because costs rise. There's a physical liability that we face as the population ages. And, if you're concerned about sending that sort of a pessimistic statement, and since the economics is a dismal science, that's okay.

The optimistic view is that the level of disability for any given age groups – so if you're 85 or whatever age you happen to be, the level of disability in that age group has been declining over time. The probability of having a

disability for a given age has been going down by about .4 or .38-percent per year; and it might be that even if we age, if we can stay healthier as we get older, we can offset some of the cost concerns that I mentioned a second ago.

And, some people have estimated that the actual decrease in disability, holding age constant, might, in fact, offset the rising numbers of elderly in the increased rates that you would normally think would be associated with disability in those populations. So, the key question that we want to address – I don't think – so, I hope you at least believe me. You may have known some of those numbers before or, at least, the basic ideas.

The key issue that we wanted to look at in this work is that spending is not constant in different levels of health care for all individuals. So, what we wanted to look at was how spending trends varied by people in different disability status. Essentially, are spending trends for the sickest, most disabled Americans growing faster, the same, or slower than spending trends for individuals that are less disabled?

So, here's some unadjusted numbers. And, I have a hard time with my right and my left, because I think it's to your right on the slide. You'll notice that the ratio of spending for the most disabled people with five or more limitations and activities of daily living, the ratio spending for those individuals relative to the people without any ADLs, has been

declining, it's been converging. So, what we've seen, if you just look at the raw data, is the convergence in spending between the people who are most disabled and the people who are least disabled.

And, in a minute, I'm going to argue that that's important. We wanted to see if that pattern held for once we adjusted for a whole range of other co-variants. And so, essentially, what we did in the study was we looked at the relationship between health care spending for Medicare beneficiaries over time and how that related to disability. We used the micro-simulation model that Dana was talking about earlier to project how different distributions of disability – how different trends in disability might affect spending for Medicare and for Medicare beneficiaries.

We allowed there to be a different rate of cost growth for people in different health status. So, we didn't impose cost growth being the same for everybody; and we allowed – we varied different disability trends in some of the simulation type exercises that Dana was talking about.

In doing this, we were capturing two aspects of disability trends. One is, if you reduce someone's disability at a point in time, you save money. Less disabled people spend less than more disabled people. But, also, you increase longevity; so you have more beneficiaries. You can take into account the mortality effects of the – again, I don't like to

use the word problem; but the issue with making people healthier is, then, they live longer, and you have to cover them for longer periods of time. And, if you're doing a financial projection, you have to think through those two effects.

So, the results, in a nutshell, confirm what some of the descriptive analysis showed. These are adjusted for the medical care CPIs. So, when I talk about spending going down, it really means relative to the medical care CPI. But, in any case, the pattern, which is most important to understand, is that spending growth between 1992 and 2000, for the non-disabled, are people who are only mild disabilities. One, IDLs is a less severe level of disability, drew over 20-percent – 23- and 28-percent, respectively.

That's how fast spending was growing for those individuals; whereas, individuals with one or two disability categories, spending only grew 10-percent. And, as you got into higher levels of disability, spending actually grew a lot less. The rate of spending amongst the most healthy Medicare beneficiaries was more rapid than the rate of spending growth among less disabled.

I shouldn't say healthy – less dis – sorry. The rate – this is my one point; and it's the only point I can't say. The rate of spending amongst the least disabled Medicare beneficiaries was faster than the rate of spending growth for

the most disabled Medicare beneficiaries. And, that becomes important, because what that means is as we're – as we shift people from the more to the less disabled categories, one might think we're saving a lot of money; and in some ways we are saving money, because less disabled people spend less.

But, the amount of money we're saving is diminishing over time, in part, because it takes money to keep these people from having worse states of disability. So, if you take into account the money you're spending to reduce the progression of disability, you find you haven't saved as much money as you would have thought if the reduction of disability just happen magically.

So, the basic implication – I think the most important descriptive implication, is that shifts to low disability rates, low disability groups, reduce cost, we save money. But, it increases the rate of health care cost growth, because these lower disability groups have faster cost growth.

So, we modeled out two different scenarios: One of them was we reduced the prevalence among community dwelling elderly in each level of disability by 20-percent. And, the second scenario was we took everybody's level of disability and we just prevented it from getting worse, magically.

That's the beauty of the computer and, maybe, the beauty of RAND. You can just do these – so, we just magically did that to simulate out what might happen. And, what we found

was you can't see these lines look very different, then, that's really the point. I saw that guy turning in the talk. He showed me some lines. It looked basically exactly the same. And, that's what I'm hoping you're thinking.

There is some savings in the near term as people become less disabled; but in – as we move through time, and health care cost growth continues, in fact, a lot of those savings are eaten up by more rapid cost growth amongst the least disabled Medicare beneficiaries.

So, I don't want to give you a pessimistic message. We shouldn't encourage efforts to reduce the levels of disability. On the contrary, I want to give you a positive message. I think it's wonderful if people are less disabled.

But, I, also, want to caution you not to think that that's going to solve whatever fiscal crises we're worried about. So, sort of, the monitor [misspelled?] I've been pitching following a talk on this paper, in fact, what I say following a talk on any topic for that matter, [laughs] you know, Michigan loses – I say the same point.

We need to really think through how to design benefit packages to encourage the delivery of valued care in this country and make sure people are getting the services that are really the most valuable. And at the same time, discourage the use of services that aren't providing that level of value.

And, what's nice to be last, is I can say, I think

that, at least in part, is the theme of what Barry said and what CMS is doing. And, I think, that's largely part of the theme of what Dana has been doing and what Dana said. And, I really hope we can have a discussion about how we might go about doing that, because that's a lot easier said in many ways than done. But, I do think it's going to be one of the fundamental challenges we face into the next century. So, thank you.

JOHN IGLEHART: Thank you, Mike. We'll now turn to your questions and comments. If you would please identify yourself and the office or the organization you are with, that would be helpful for the panelist. Or, you can write out your questions on the green cards and bring them up here.

I'll begin with a question for the panel. Presumably, like any good group of researchers, one of their conclusions is that additional research must be done. With that, I would ask Dana and Jeff and Mike as well, if you were to give Barry and his colleagues, Mark McCullough [misspelled?] and others at CMS advice about what should that research agenda look like for CMS, what are the questions that hold promise in terms of trying to figure this mystery out and look into the future, what would some of those research items look like? Or, questions?

MICHAEL CHERNEW, Ph.D.: Okay. Since we're too far apart to figure out who is actually going to talk and too

polite to actually start talking, except for me, I'll give two cents.

I think there's two strands of research that really need to be done. The first one relates to understanding as much as we can about the impact of technology on different groups of people. Understand, not simply is this technology good or bad, but for whom? So, sort of, general health services research in that area.

And, the second area that I'll mention briefly is I think it's fundamental that we do more research to understand and how different systems of delivery, different systems of financing affect the utilization. My pet peeve for those of you that have followed disease management lately is we've got a lot of work in disease management systems trying to get people to use valued services.

But, it turns out if you look at the data, that at the same time people are put in disease management programs, other people in the same plans are charging them more to do all the things that the disease management companies are telling them they should be doing. And, now they have to pay more and more for it.

We need more research to understand the synergies between different aspects of benefit design to ensure we get the value that Dana was talking about before. Those are my two answers.

JEFF JOYCE: If I can add something to that? I think we focus, particularly, Michael and Dana, and our papers focus on the elderly and what happens when someone enters Medicare at age 65 with this constellation of disability or disease. And, I think that the bottom line we all found is that these improved quality of life – these are important things that we should do from a health perspective; but they're not a panacea from Medicare in their financial problems or concerns.

But, I think that changes when we look at the younger population. And, if we can fundamentally alter the health of younger populations – so, not only will they not enter Medicare with diabetes and asthma and other conditions; but their likelihood of developing it later is also minimized. That could have much more fundamental savings and input on just quality of life and costs.

JOHN IGLEHART: Okay. Barry?

BARRY STRAUBE, M.D.: Yeah. John, I'll turn your question back, too, in terms of what we could use help at CMS. Actually, one thing, I had to breeze over the "Coverage With Evidence Development." But, I think, that is one way of addressing what Michael has raised here.

If we use ICDs as an example, there is a population of patients that seem to benefit from ICDs; and there was some – several categories of indications that the evidence wasn't quite so great; but it was suggestive. In addition, the

categories of patients that have been studied for ICDs tend not to be Medicare only patients, they tend to be large group of patients, which include people under the age of 65 and, therefore, not usually eligible for Medicare. So, we've implemented this process with "Coverage With Evidence Development" where we're collecting information on the cad-array [misspelled?] of patients for these new indications.

And, looking particularly at that data to see whether there's a benefit in the Medicare population, let alone whether or not we can separate out those people who don't benefit from ICD placement, if you look at the medical literature, there's a great variation in terms of the prediction: If you treat a hundred patients, how many will benefit from the placement of an ICD?

Some series may be up in the 80- to 90-percent of patients who benefit; but there are others that as low as 10- or 20-percent will. So, we're in the interim collecting through registry information to try to differentiate out those two sub-segments of patients and see if we can get some of the information, Michael, that you are trying to get at.

JOHN IGLEHART: Thank you, Barry. Yes Sir, back there, please?

IRV CHAP: Uh, yeah. A couple of things. Irv Chap [misspelled?]. And, I work for Bloomberg [misspelled?] Radio. Was the implication of some of what we just heard that the

health of our young people is deteriorating is such that we can look forward to spending a lot more for Medicare on that account alone. Also, how do you deny treatment to somebody whose doctor, as well as they themselves, want it? The doctors, who are already screaming at some anonymous nurse in an insurance office halfway across the country, is doing just that and shouldn't be.

And, finally, there are people in this – young people in this room who've been told on their last birthday by Grandpa, "You should live to be 100." Well, if they do, if a lot of them do, the costs are going to go through the roof. What's wrong with that?

MALE SPEAKER: Go ahead Dana.

DANA GOLDMAN, Ph.D.: Part A: [Laughs] The issue of young people and their health, there is some evidence that we might be able to save money if we did a better job. But, the point of what you're hearing is that, the unfortunate point, is that unhealthy people, when they get into Medicare, they die more quickly and they end up costing us about the same as someone who comes in healthy who lives longer. So, I don't think we should be improving young people's health, because it's good for them; but it's not going to be saving a lot of money.

The real issue that you're hearing, I think, is technology. And, you ask, "How do you deny someone treatment?"

And, I think it's extremely hard. And, not only that, we can develop models that, say, for "person A," you should get it. But, the doctor always has more information. The doctor will always claim they have better information – "I know my patient." And so, it's extremely hard.

And so, I think we have to think about what I said earlier, which is "How do we tilt the playing field so that these things don't get into the marketplace? Or, if they get to the marketplace, they're in such a way that they are valuable to society." And so, we need to change the incentives.

So, one way to do that, for instance, would be just to say, "Let's take into account costs at the FDA." Now, FDA just says, "Is it a better technology? In that case, we'll approve it." Okay, Avaston [misspelled?], which is a drug for cancer, which is produced by Genentech [misspelled?] increases median survival for colorectal patients by about five months; and it costs $50,000. And so, people, instead of living 2.2 years, they live about 2.7 years or something like that.

And, if you talk to the patients, they really want that drug. And, I can understand why. I would want it as well. All of us would probably want it.

But, the issue is, we've developed that technology, we've created incentives to do that. Medicare will pay for it. And so, another way to do that would be people do not

understand the link between the premiums they pay and the incentives for technology. People do not understand that you will pay more next year as a consequence of all these things.

Could we, for instance, earmark funds for Medicare and say, “Look, we’re going to look at how much Medicare spending went up.” And, it’s going to be associated with the premiums; and there’s going to be a dedicated tax for funding this; and people will have to make decisions jointly – how extensive do they want Medicare to be this year, rather than having Congress do it through the appropriations process that I don’t quite sustain growth rate, which is continually adjusted.

JOHN IGLEHART: Yeah, Mike.

MICHAEL CHERNEW, Ph.D.: I just want to add one other thing to what Dana said, which is I actually don’t think you necessarily need to think about what you’re going to deny people. As a loosely free-market economist, I’m not big on denying. I think we need to think about how to get incentives right.

So, the question is, sort of, what should people have to pay if the want to use a service, if we think might not be cost effective per se, we could deny them or we could try and find ways to charge them in particular ways. We’ve been pushing a concept called the “Benefit Based Co-pay,” which would charge some people less when it’s really beneficial that they get access to the service and charge other people more

when the evidence is a lot weaker. So, no one gets denied.

It's just that the evidence isn't there. Other people – society doesn't have to pay for you, you have to pay. And so, that would allow us to make certain types of common benefit designs now, health savings accounts, or retirement accounts, sort of, more effectively used cost sharing.

So, you'll still be able to retain individual autonomy between the patient and the doctor; but you would allow the incentives to be, perhaps, more closely to what we might want to see in a market. So, one guy's opinion.

JOHN IGLEHART: Yes Sir.

JOHN GREEN: Yeah, I'm John Green with the National Association of Health Underwriters. In this slide on the pessimistic view, I was just hoping you could clarify this interval. It totally leaves out people age 70 to 74; and I wonder where they fall out.

MICHAEL CHERNEW, Ph.D.: Yeah, I actually, you're right. And, if I had the data here, I could tell you. I just don't actually know that data. Dana might know that data better what's been going on with disability rate increases between ages 70 and 74. I don't know that number.

DANA GOLDMAN, Ph.D.: I agree with you. I apologize. I will try and find that number if you want it. I can't see you. I see a lot of people. You all look wonderful, incidentally. But, if you email me, I will try and get that

number.

JOHN GREEN: Thanks. Yeah, because it's kind of confusing the way the intervals are set up. [Interposing]

MICHAEL CHERNEW, Ph.D.: No, I understand. That's true.

JOHN GREEN: Sorry.

JEFF JOYCE: And, if there is an answer or a comment that you want to share, Mike will make sure that [interposing]

JOHN GREEN: Right. Okay.

JEFF JOYCE: – it gets posted on our web site with the rest of the materials from this briefing.

DANA GOLDMAN, Ph.D.: You might check the paper first.

JOHN IGLEHART: Yes, Tom.

TOM MILLER: Tom Miller, Joint Economic Committee. We had a hearing last year on "Declining Disability and Health Spending Trends." So, a little different numbers based upon the Manton [misspelled?] and Lubis [misspelled?] Research.

I was just curious; because they seem to indicate that with declining disability, you can push the onset of those health care costs out to a later age, including the above 85 who get treated less aggressively. That if you take this in terms of the average per beneficiary, per year, the carrying cost of life time health expenditures, you do get some savings. Now, I gather that Michael's got, kind of, some recent trends showing that other folks who've taken those amounts.

So, I guess, my question is, in terms of dealing with that possible variation, one serious and one not serious variable, we've got a lot of information about coming out recently about sustainable growth rate in Part B [misspelled?] spending, if we pay doctors more, would they possibly do less, since we found out the opposite is the case?

And then, more seriously, on terms of some other work by Dana, did you look into the variable of education in terms of this health spending growth based upon what you've seen before in terms of that, that medical arms race with those who are better educated draw down more resources – are there trends going on in terms of education levels, which might be part of these projections going into the future?

DANA GOLDMAN, Ph.D.: If I could answer. Let me start with the disability evidence. There is a lot of work by Ken Nampton [misspelled?] showing that disability is declining. And, we addressed this in the paper. Disability is declining among the elderly. But, you haven't seen health care spending coming down. It's for the reasons Mike said, which is we're spending a lot more on the people who are non-disabled. So, the benefits of that are not going to accrue in a way that other people have forecast.

The second point is that disability is rising among young people. Okay. And so, if you look at other data on – that work that you're talking about looked only at the elderly;

and their news was very good. But, if you look at the young today, I mean, just kind of go outside and you'll see that there are a lot of diseases that have higher prevalence, especially obesity and diabetes, which are associated with higher rates of disability. So, I think that optimistic view needs to be tempered by the trends that we're seeing.

Oh, about education. There are two trends – demographic trends – that you point to. One is people who are well educated tend to be healthier and they spend less on health care. That's one benefit that will accrue to Medicare.

The other trend that people haven't noticed is the rising Hispanic ethnicity of the population, which is, also, quite remarkable. And, as those people age into Medicare, we're not sure what the effect will be. So, those two trends are interesting. And, we have looked at those. They're not dramatic differences, but they're certainly areas that are worthwhile for further research.

TOM MILLER: Yeah, you've got a different trend you identified in 2001, which those two are better educated use the system more effectively, consume more resources, and also may drive future research in particular directions in terms of what technologies we get may tend to cater to a better educated population.

DANA GOLDMAN, Ph.D.: That's a good point.

JOHN IGLEHART: Barry?

BARRY STRAUBE, M.D.: Yeah, I'd like to respond, too. You used one sentence, talking about, "Will doctors, if you pay them more, will they do less?" And, I'd like to highlight, again, what efforts are going on with the "pay for performance" movement in the United States, which is just getting off the ground.

Many of you probably work for either Senator Baucus or Senator Grassley, in the Senate, have a "pay for performance" bill that is working its way through the process. And, Congresswoman Johnson has a similar, but somewhat different, one in the House.

We're embarked, at CMS on developing, again, in the five areas that I mentioned, "pay for performance" strategies, which will try to incent [misspelled?] people to do the right thing and to be more cost effective and efficient in choosing therapy. If I could give you an example, right now, under "fee for service" Medicare, if a provider, let's say a primary care doctor, is seeing a patient in the office and is following that patient very carefully and intently, keeping them out of the hospital, by providing the best level of care and minimizing the number of office visits, that person gets paid relatively little amount of money for doing absolutely the best thing.

On the other hand, someone who's seeing a patient, isn't paying attention, has the patient come back repeatedly, but doesn't really, thoroughly go into their problems – the

patient gets admitted to the hospital, with an avoidable hospitalization. They have a complication in the hospital, which extends the hospital stay; they get prematurely discharged from the hospital, only to return to the hospital again. Those providers are all paid for a series of calamities and mistakes, sometimes.

So, what we need to do is to figure out payment systems. And that's what "pay for performance" is. It will try to incent those people who do the right thing and avoid these unnecessary costs, by keeping them down and perhaps minimize the number of dollars we're paying for mistakes.

JOHN IGLEHART: Yeah.

DOMINIQUE HENDERSON: Good afternoon. Dominique Henderson, George Washington University. At what point – at what economic point are incentives created to invest medical – to invest dollars in medical prevention and education to avoid these less costly chronic illnesses and diseases for future populations?

DANA GOLDMAN, Ph.D.: Here's the problem, [laughs] Medicare only covers 65 plus. Medicare's not interested in covering, and it's not their mandate to cover young people. The best time to prevent illness is when people are young. Employers see people, maybe four or five years, so it's not worth it to them to have their insurance benefits cover prevention. And, we're not sure, because we don't do good long

term studies, how well prevention works.

Screening, we know, in general, is not really that cost effective. So, the problem is, there's no one who's responsible, from cradle to grave, for encouraging prevention. So, I'd say, at this point, without some way of reforming the system, the incentives just aren't there. And so, we're going to under invest in prevention.

JOHN IGLEHART: Do you want to –?

MICHAEL CHERNEW, Ph.D.: Yeah, I just want to say one quick – I agree, completely with what Dana said. I want to say it's even a little bit worse than that, because the other side of this whole process has been charging people more; and often, that is working against exactly what you want to encourage them to do. We're charging people more to do those things, because we're trying – we're so focused on the cost problem in certain situations, we're charging people more to take care their – manage the conditions they do have well and do other types of services we think would be beneficial.

BARRY STRAUBE, M.D.: [Coughs] I'd like to add from the CMS standpoint, just to try to get at some of the obstacles, Dana, that you just mentioned. Mark McClellan, our administrator, who's a physician, has articulated a very nice concept of CMS being a public health agency. And, by that I mean not going out to do immunization flu clinics in local communities and what not, but rather, [coughs] using its

influence and revenue stream, primarily, to try to change all of health care. Not just Medicare and Medicaid, which are the programs we cover, but the commercial health care sector, also.

And this is, again, as I mentioned in the opening remarks by doing collaboratives and partnering and what not. But I think, when we're again looking at our quality initiatives, and even if we're implementing quality initiatives in the "over 65" population, we're also meeting in these quality alliances, both on the hospital and the physicians' side, right now, defining metrics of quality care, which includes preventive care services.

And, if we implement within the Medicare program and Medicaid programs, certain preventive services metrics, where we're measuring folks performance; we're reporting that publicly, so people can evaluate whether people are doing what they're supposed to do; we're doing an alliance with the commercial sector which does cover younger folks. There is the potential, I think, to drive change across all payment segments, not just the Medicare segment. So, I think that's a very key strategy that we've embarked on, right now.

MICHAEL CHERNEW, Ph.D.: I can add one more thing. I was going to say our research, I think, is generally akin to what we've seen in the disease management literature that all these corporations and health plans are promoting better care for their diabetics and asthmatic patients, etcetera, which

makes intuitive sense from a clinical perspective. But, I don't think we've seen any evidence again, that improves quality care and prostheses care; but I don't see evidence that it actually saves money.

JOHN IGLEHART: Yes, Sir.

JOHN HAUGHTON: Yeah, actually, I just have a – John Haughton [misspelled?], from a company called Dioxide [misspelled?]. I have a question related to the nexus of disease management and "pay for performance." And, it's along the lines of the basements of disease management and, sort of, what's the base line, averages gone up, and its number of process measures over the years, just a panel qualitative reaction. Are "pay for performance" and disease management, ultimately, a kind of – going to end up being a convergence of improved process and clinical care and coordination? I guess I'm interested in it from the economic – potential economic implications of that.

DANA GOLDMAN, Ph.D.: [Laughs] I – again, I haven't followed the paper performance literature that closely. You probably have a better insight than I do, Michael. But I think, the evidence from disease management, and we're seeing, again sort of, health plans falling off the cliff to implement it. By measurable processes are diabetic patients getting eye exams for an example, are they seen on a regular basis? It has improved measures qualitatively. We just haven't been able to

show any evidence.

I think that doing – providing better quality care saves money. And that doesn't mean they shouldn't be done, but the justification that this is going to dramatically reduce health care spending; it's going to make these diabetic patients more efficient in how they're treated. We just don't have evidence to support that, right now.

JOHN HAUGHTON: But isn't – actually, isn't there a pretty solid evidence around things like, if somebody's toward the end stage of diabetes and they don't have a crash into the intensive care unit to start their dialysis, you save $20,000 or $30,000. So, in that acute stay, and other places, where you can focus in particular cohorts to show that it really does make a difference coordinating the system.

DANA GOLDMAN, Ph.D.: You know you're absolutely right. There are specific cases and conditions where treatment has been efficacious both from a quality perspective and costs. But an aggregate, I guess I would say, so that the aggregate assessment of disease management, because it’s not all that cost saving, and not that it shouldn't be done, necessarily.

MICHAEL CHERNEW, Ph.D.: I want to jump in. So, you talked about "pay for performance" in disease management. Those are what I would consider to be sort of "two pillars of modern benefit designs", disease management, "pay for performance," and the last one being consumer cost sharing.

And you ask if those things are going to, sort of, work together in some sort of convergence? And, my quick answer is, "Only if we make them."

So, I don't know – if anyone here is involved in disease management industry, I don't – can't see by a show of hands, we've been going around talking to people, asking people in the disease management industry, "What incentives do your clients face to do the set of services that you're hiring people to call them up and tell to do?" The most common answer to that: "We don't know; that's not our part of the business." [Laughs]

The same is true, I think in aspects of "pay for performance." There's not a good integration between the incentives that we're facing – that individuals are being charged. The information they're being given by these growing disease management companies, and the "pay for performance" type incentives, which is kind of like incentives just going to the physician as opposed to see the individual.

And, these aspects of benefit design have to be coordinated better and they have to be targeted better. So again, there was no disagreement between what you said and what Jeff said. On average, I think disease management – the only strong evidence on average disease management works. But, we have tremendous evidence, some [laughs] from the people at RAND, that they're selected areas where we really could do a

ton better.

The problem is devising the system to combine disease management, incentives for the patient, and incentives for the docs in order to get those benefits. And right now, too often, different parts of the system are operating separately; and I would argue more often than not, people don't even understand that they're operating separately. They don't even think that they're operating separately, because every body is focused on either "pay for performance" or co-pay design or disease management, and not the melding of the three. [Interposing]

JOHN HAUGHTON: Just as a last comment [interposing]

DANA GOLDMAN, Ph.D.: Oh, sorry. [Interposing] Let me just follow up on that. Let me give you an example. There are all these health plans that are doing disease management, as Jeff said, for diabetics, and so, they're making sure they go to the eye doctor, to get their feet examined, and all these other markers, and even when they get into the hospital, they're doing a better job.

Meanwhile, they're charging them $60 a month for their medication instead of giving it for them free. So then, we know that one of the most important things is to make sure that they take their oral hypoglycemic. I mean, you could get rid – throw out disease management and throw all that money into charging them less for their medication and probably be worth it. So, that’s the benefit design part, they're jacking up

patient co-pays and, then, they're saying, "Well, let's make sure they do all the other things."

BARRY STRAUBE, M.D.: Yeah, let me just add a couple of points from the CMS standpoint, also. One, Jeff, I think that arguably, there are some interventions that do save money. Iposit [misspelled?] immunizations is an example that for every dollar you spend there's 50 to 100 or somewhere dollars of cost savings with unnecessary hospitalizations or morbidity in the disease process for influenza.

So, but you're correct in that there are many things that we're treating that we don't have good evidence. I think one of the problems, John, getting back to your question, too, is that we're looking, and I'm not sure if everybody in the room knows the difference between process measures versus outcomes measures versus efficiency measures; but we've historically looked, primarily, at process measures, are increasingly, trying to focus on outcomes measures.

And then, finally, what we really need to get at, are efficiency measures. And that is difficult for those of you who've looked into these kinds of things. Again, the good "pay for performance" models that are being developed, I hope we're going to have a good one from CMS, is focusing on efficiency and trying to develop metrics in collaboration with other stake holders to achieve that.

And then, finally, I think that Michael brought up a

very, very good point, in terms of, we've also focused on what the physician or the hospital or the nurse or the providers' side is doing for the patient. And, not getting into the debate about consumer directed health care, and whether that's good or not, I do think there's an increased role for patients working with their physicians and other health care givers to have more of a team approach to try to improve the quality of care and improve the efficiency.

And again, we believe that's possible about providing, again, more information to doctors and patients, to getting them to discussing these issues in more detail than they have before, and in giving increasing responsibilities to patients compared to what they've had before.

ALAN GLASS: Yeah, Alan Glass [misspelled?], [inaudible] This is a question for Dr. Straube. As you noted, it was just a few years ago that CMS expanded coverage for ICDs at a predicted cost of some multiple billions of dollars. And then, just recently, lung volume reduction surgery is approved at a cost of multiple billions of dollars, all evidence based.

But, this is going to keep going on and on, isn't it? Unless – does CMS have an idea about how to control, or should it control that aspect of the increasing costs? And one suggestion is, perhaps, maybe, do you do any follow up on let's say ICDs to look at people like the Vice President, who's never gone off? I mean, maybe there needs to be some refinement

there in your criteria.

BARRY STRAUBE, M.D.: Yep, I think a couple of responses to that one. I think, again, our coverage with evidence development is the first step in trying to look at whether a therapy that we've approved for coverage is, in fact, effective in all recipients of that particular type of therapy.

I think, though, we have a problem, to some extent, at CMS, in that, statutorily, the Medicare Title 18, and Medicaid Title 19 doesn't really give us the authority to make cost effective analysis decision making, per se, with the coverage decisions that we have. So, it is going to require some debate by Congress and a change in statute, in terms of really giving us the authority to make hard decisions about cost effectiveness, going forward.

It's an opportunity, too, maybe for me to, again, Dana made some points in his presentation that I thought it was worth, perhaps, addressing. And that is that, for me, it's difficult to forecast completely. The computer models are really interesting and give us better information than we could possibly have any other way right now.

But, I think there's some caveats with the data that Dana and Mike presented earlier. One is that, technology costs, in fact, drop over time, frequently. I was looking, the other day, back when my kids were small; and in some cases, my kids are younger than some of the folks out in the audience.

But, I remember my older son getting an IBM PC Junior computer when personal computers were first coming out, in the '80s. And, I went back and found a receipt for that; and it cost something like $2400. I can't imagine we spent that much money on something that had hardly any memory at all and could hardly do anything, compared to what we're used to now. And now, for $299, you can find something incredibly more powerful than anything dreamed of at the time.

So, some of the costs that we're making these projections, likely will go down over time. I think that the other thing is we can't predict what other new interventions might come along, after the fact, that could radically, address some of those costs rises. So, there may be new therapies that could come up, after the fact, that will reduce the increased costs, in terms of the volume that we see.

And then finally, I think the volume issue is another point to be made. [Clears throat} Excuse me. And that is that when, for instance, the ICDs that we were just chatting about, when you make those available for a new indication, there is pent up demand, if you will, that is a large group of people who did not have access to that therapy before, and will drive up the usage and, indeed, the numbers, in terms of looking at what the incidence is going to be, perhaps.

But, over time, you take care of all the people who have accumulated over time; and you simply have new patients

who are entering in. So perhaps in some cases, I think we may over estimated the total demand down the line by, perhaps, not taking that into account.

DANA GOLDMAN, Ph.D.: Yeah. [Coughs] Excuse me. Let me give you an example of that technology. It would be open heart surgery, which was enormously expensive when it first came out. And, costs have declined quite a bit. I mean, if you look at Kaiser, I think they can do it for $9,000, $10,000 or something like that. I don't know if I'd want to go there.

But, the point, though, is that what also happens at the same time is the total amount spent on open heart surgery is actually gone up. And, that's because when we first have the technology, it's very specialized and very expensive. And, everyone says, "Well, the cost will come down." And, that's absolutely true. But, we also find new places to do it and new people to do it on. And so, the total amount, spending does go up.

And so, when we chose – and this is an issue. And, I think it's worth – when we talked about areas for further research, I think how these technologies diffuse and what happens to cost is something that is not in our model and it would be nice to add and we would love to do that. But, we also – when we asked panelists about cost, we said "Give us a similar technology."

And, so in fact, when we modeled that anti-aging

compound, we assumed it was $3 a day. Now, when that technology first comes online, it's probably not going to be $3 a day. And, when you think about the demand for it, why would you price it that way? But, eventually, it's going to be off patent; and it'll come down.

And so, we try to use some of the costs assuming what would it come to? And so, I did want to say that in terms of pent up demand, there is this spike in all these things for sure; but the real issue here, as I hope you're getting, is that it's the diffusion of these new procedures into marginal patient populations of dubious value that's the issue. And, how do you deal with that using the evidence?

CARL POSER: Hi, Carl Poser [misspelled?]. I'm with the National Center for Assisted Living at the American Health Care Association in Policy. Michael and others, I was looking at your table on Page 4 about "Spending Growth." It's interesting that for folks who have three or four ADLs, it's flatter or a little, near flat. And, with five plus ADLs, it's negative. Those are folks that are in long term care institutions, where it's contrasted with people that aren't in institutions or homes.

Their spending has gone up 20-percent plus. Is there a factor here? Question: Is there something having to do with the setting, the care management, or the nature of the payment stream could be playing a role here?

MICHAEL CHERNEW, Ph.D.: I'm sure Dana will give you a wonderful answer as well, but what I think – well, first, these are adjusted for medical care spending inflation. So, the actually – numbers depends on how much you believe on the medical care CPI. But, the pattern remains, and so, I'll comment on the pattern.

My belief is a lot of what drives – there's two things that drive this pattern in my opinion. The first one is, people that are very ill, and these are community dwelling beneficiaries. We have a separate non-community dwelling group of people. But, in any case, they're spending a lot in the first place. So, the rate of growth is slower, because the base of spending is so much higher. So, that's point one.

Point two is a lot of the new technologies that have been developed, a lot the areas where cost growth has happened – a lot of the places where technology happens to have taken us recently are technologies that are commonly applied to people that are less disabled.

So, we're giving them new pharmaceuticals, we're giving them more imaging, we're giving them a whole range of other things. And, it may well be – I can't comment about whether they're being managed better in other settings or whether simply the technologies that are being developed are less appealing to them, given where they are. The key is that they're sort of a different phase [misspelled?]. And so, to

echo exactly what Dana said, it's a diffusion of these technologies into these other populations that we normally have not thought of being as tremendously ill, that has been very costly.

JOHN IGLEHART: Here's a question from the audience. Costs for imaging are rising rapidly, 18-percent, the questioner says: "How will this growth be slowed?" Or, maybe, the panelists would like to say "Should it be slowed?" Either one. Anybody? Barry?

BARRY STRAUBE, M.D.: I think, [clears throat] excuse me, that it should be slowed, John. And, there's ample evidence in many studies and/or over sight of imaging studies whether it's in the Medicare program, commercial health plans, etcetera, that there's still gross overuse.

In fact, I had to give a talk a couple of months ago at the Society of Nuclear Medicine. And, that particular Society was most interested in trying to work with us in commercial health plan payers in terms of trying to find ways to reduce expenditures in that area.

It gets rather difficult, because the experts in imaging studies or nuclear medicine studies don't have control over the ordering of the studies. So, it's really left back up to the people overseeing that in the Medicare "fee for service" arena, we have a bit of a problem, because we don't do prior authorization.

We can only look after the fact as to whether a service was medically necessary and reasonable. And, so far as, people seem to be not exceeding certain benchmarks in terms of the number of services they're ordering, we don't even – we don't have the capability of the resources to be able to oversee that.

I think it's going to be a big problem. Perhaps with some, still, shift towards managed care, including in the Medicare program, with the new Medicare Advantage PPO product line, there will be increased oversight. But, I think it's a big area of challenge to us.

DANA GOLDMAN, Ph.D.: Does the Nuclear Medicine Society want the slowness, or the slowing, to come from the general practitioner, or perhaps in the cardiologist who's gotten into imaging or do they want to see their own colleagues, also, slow the use of imaging?

BARRY STRAUBE, M.D.: Again, you can take at face value my discussions with them. They want to slow things across the board. But, again, we haven't sat down and thought of actual strategies on how to do that.

MICHAEL CHERNEW, Ph.D.: So, I might apologize for the tone of this response to the question, but how do you want to see it slowed? See, this is the type of question that I would like to – we could finish, and I'd love to talk to all you. There's different ways you could slow the growth of imaging or

pharmaceuticals. There's different decades; there have been different types of technologies.

The answer to how it's going to be slowed depends an enormous amount on the policy decisions that are made; the tools that people are given to slow the growth of these things down. You could use market forces; you could use other types of command and control forces. It really depends on the choices that are made by people in buildings like this; and, hopefully, the research community can help inform you about what the tradeoffs are when you make those decisions.

I think part of the message here is there are difficult choices. And, it's not going to slow down magically for the most part. And so, it really depends on what policy choices are made. And so, I – if I would throw some of that question back out to the questioner, wherever they may be, and ask how they would like to see these slowed if they should be slowed.

JOHN IGLEHART: Mike, here's a question for you. Did your increase costs for the non-disabled include the drug benefit?

MICHAEL CHERNEW, Ph.D.: Yes. Strikingly [misspelled?] brief.

ED HOWARD: I should say, while John's getting a question ready, I just want to remind you that as we – that we are going to have to end this session earlier than normal; and we want you to fill out those evaluation forms if you have to

leave. Go ahead, John.

JOHN IGLEHART: Here's another question from the floor. "Retiring baby-boomers will certainly exacerbate [misspelled?] cost pressures. In view of a projected physician shortage," and I think that's probably up for debate itself, "how will this access issue affect health care costs?"

DANA GOLDMAN, Ph.D.: Let me debate the physician shortage. There's a physician shortage, because prices free and they don't think they get paid enough. So, there are not enough of them who want to do it. You could raise prices to consumers; and there would be no more physician shortage, or you could increase reimbursement, and you get a lot more physicians.

JOHN IGLEHART: Given expenditure trends, doesn't rationing become unavoidable at some point? We talked a little bit about that; but, perhaps, it's a key question we can raise again.

MICHAEL CHERNEW, Ph.D.: So, usually, when the word "rationing" is mentioned, it's the time to say "Thank you very much." So, I think I will simply say some form of control of access is going to be important when medical technology progresses. And, I think the challenge that we face as a society is to allow medical technology to progress, because we love all of these things and, then, figure out how to control utilization better.

We don't need to have rationing. I'm not sure exactly what was meant by the question in terms of the word "rationing" the way we might think of, like, you only get – on odd number days, people whose birthdays are in 1965 can have a CATH, Cardio-CATH, [misspelled?] and on even number days, it's other –

We don't need rationing in that sense. But, we do need to think of some system of benefit design that would control utilization. And, the problem is in 1900 this wasn't such a big issue; because there wasn't a lot that medicine could do for us. In 2005, it's a bigger issue, because we're blessed with a lot of things that medical science can do for us. But, it requires us to think through benefit design, which you could argue is a nicer way of saying the word "rationing."

But, it does boil down to some hard choices of thinking about how we're going to design a system to get access to the valuable services to people whom we think would benefit the most. And, that's challenging. So, yes, that part is inevitable.

BARRY STRAUBE, M.D.: And, just a follow up. I agree with you completely, Mike. A benefit design is the way to go; but we, also, do that implicitly now. There's plenty of rationing in certain contexts: Prior authorization for drugs, for procedures, etcetera, etcetera, or a way to try and limit the use of certain procedures and technologies or medications

for specific patients.

DANA GOLDMAN, Ph.D.: I actually disagree on this point, because after doing this research – I mean, benefit design has value when you're talking about pharmaceuticals and that part; but when you talk about these expensive procedures that are $35,000, you're not really talking about benefit design. Whether someone pays $1,000 or not is not going to affect whether they're going to get these devices to a large extent.

I really think we have very expensive technologies that a few people are getting, and now they're starting to spill over. We have this new – we're going to have new bio-therapeutic agents that are going to cost $30,000 a year. And, if you have a $30 versus a $50 co-pay, it's not going to affect their access. So, I do think we need something other than benefit design.

I think the question is, is it upstream rationing or downstream? So, once the technology is developed, do you try to ration it, i.e. used prices, or whatever? I think that's not going to be effective. What needs to be done is upstream. You need to encourage the development of these technologies that are cost effective.

MALE SPEAKER: Here's another question. "Are there new health care technologies that are associated with extended life expectancy also associated with an increase in expected years

spent in the work force?”

DANA GOLDMAN, Ph.D.: Well, that’s a good question, because if we develop this life extension pill, suddenly 65 becomes middle-age. And, do we think that people are going to retire at 65? Well, Social Security is going to be in a lot of trouble as well. [Laughs] And, the entire calculus of what it means to work is going to change; and it’s probably going – there’s some – a lot of people say it’s going to change pretty soon. And so, I think it is going to change.

MICHAEL CHERNEW, Ph.D.: And, there are – if that was the specific question, there are a lot of technologies that help people with chronic illnesses stay in the work force and live longer. I won’t – the clinical-minded among us will list some, but Ace [misspelled?] inhibitors for people who are diabetic, a range of think-managing, congestive heart failure in people who are under 65. There’s probably a range of things that could achieve that goal of keeping people working longer and healthier.

DANA GOLDMAN, Ph.D.: Actually, I should say the pill is based on caloric restriction. They found a single gene that's associated with caloric restriction. You manipulate this gene and you can make the mice live 30-percent longer. And so they're trying products that people will take. In fact, in some of these labs people are taking them. The compound found in red wine that gives all those beneficial health effects,

people are exploring it in yeast, to extend life. But, eventually, those yeasts will turn into mice experiments and this or that; and we'll all be taking these things eventually.

MICHAEL CHERNEW, Ph.D.: Yeah, let me add, we've also seen the interaction of policy and technology, for example, with HIV, where new medicines really extended life and allowed people to maintain working. If in essence, their insurance coverage would allow them to – most people who got an AIDS-defining illness, then ended up on Medicaid or Medicare. And, they couldn't work under those circumstances. So, policy changed to allow people to maintain their public insurance and maintain work force.

JOHN IGLEHART: Barry?

BARRY STRAUBE, M.D.: Yeah, I'd just like to stress to the cost effect of analysis, a piece here, also. I think that's going to change market forces, to some extent. If you insist, as part of your criteria for coverage, that something be more cost effective – remember the slide I threw up there, showing some of the preventive care services were very cost effective for a quality of life here, compared to some of the high tech stuff.

If that enters into the equation, then the marketplace will be stimulated, if you will, or the incentives aligned for people to come up with technology that's cost effective. So, I think, the more we demand cost effective analysis, I think

that'll change some of the output.

JOHN IGLEHART: Barry, do you know whether this administration or prior administrations have ever sought authority to employ a cost effectiveness analysis in their coverage decision making?

MALE SPEAKER: I'm not aware, John, that anybody has done that. Obviously, one of the things I've learned that you folks, being involved in government, too, is that there are so many stake holders involved in the process that every good idea that you have or any idea you have, whether it's good or bad, there's going to be people who agree with it and people who disagree with it. So, my guess is that that's been raised; but probably, it's a debatable point.

JOHN IGLEHART: And, what's been the general industry reaction to your new concept of coverage with evidence development?

BARRY STRAUBE, M.D.: Probably the appropriate way to describe it is caution with some degree of concern. We have not completed our coverage with evidence development policy, completely. We had a draft put out in the spring, which we received comment on. We're about to issue a second draft that will be put out to industry. And, I think the trigger points of concern with this policy have to do with, under what conditions are we going to implement it? That is, what are the criteria that would get us to want to look to cover something,

but to cover it with continuancies [misspelled?] of collecting more data?

How are we going to collect the information? And that gets back to – again, I think we need the help of academics and other folks to tell us “What's the best way of collecting and analyzing that information?” And then, most importantly to them, what are we going to do with it, once we get that data? And we're still – we still haven't fully delineated all of the above.

DANA GOLDMAN, Ph.D.: One thing to add about that, I think the rules have to be fair, and they have to be spelled out. So for example, you'd think that industry wouldn't support a criteria based on cost effectiveness, but suppose we – the FDA said, "If you can demonstrate to our expert panel that your technology is cost saving, we will approve it right away; and CMS will cover it for people over 65, for the populations for which you've demonstrated it." That's a very clear rule. And, I think there are companies that would see that as an opportunity, so delineagural [misspelled?] as well.

JOHN IGLEHART: Just follow up. Barry, I wonder if the discussions that you had, so far, about this coverage and evidence initiative covered the contingency of, actually, having to pare back coverage, based on the results of your data collection, and what the political liabilities of that are, and who will get – who would bare them?

BARRY STRAUBE, M.D.: Yeah, that's a good question. We've been trying to stress this policy in a positive sense, that is, we're covering surfaces that otherwise would have been non-covered, based on the amount of evidence here. So in the sort term, it's a positive development. We feel, for most aspects other than we're paying out more money for, possibly an ineffective treatment.

In the longer term, though, you raise a good question, that, by collecting that additional evidence, we might, then, tailor or restrict some of the – or be more specific about the indications for the use of that technology or services than we would have. But that's again, a good thing, at least for every body except for, perhaps, the people making the devise, who would wish it would be used more frequently.

JOHN IGLEHART: The last question, here. Does NIA's (National Institute of Aging's) 30 year plus longitudinal study provide helpful information for your research?

MICHAEL CHERNEW, Ph.D.: Absolutely. [Laughs] I mean, one of the limitations of this is, we relied to the future elderly model relies on the Medicare current beneficiary server. We used about nine years of data. Being able to – we had to simulate – sort of what we think people's life expectancies were, based on transitions and the different disease or health states. But any longitudinal analysis gives us much greater insight and more precision in these estimates.

I don't know if any of the others want to –

DANA GOLDMAN, Ph.D.: We're actually developing another version of our model. It will incorporate retirement and Social Security, which obviously are an issue. And, it's using NIA's health and retirement study; and it's going to bring the model back all the way to age 50. And, that's a longitudinal study. So, it's going to be – the data they've collected are actually quite valuable. And, the reason why they're valuable is because, often times you have data collected on health by one group, and you have data collected on economic outcomes by another group, and NIA is the only agency that we know that actually marries the two.

ED HOWARD: That's a pretty good last word, Dana. I want to reiterate John's expression of gratitude for those institutions, including *Health Affairs* and Rand, who have supported both this briefing and its participants. I want to thank you for sticking through some pretty tough stuff. And, I want to ask you, once again, to fill out those evaluation forms to help us structure discussions like these even better in the future. And, ask you to join me in thanking the panel for asking some of the tough questions and actually answering a bunch of them. [Applause] Thank you all.

[END RECORDING]