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POLICY MEGACHANGE AND HEALTH INFORMATION EXCHANGES

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P R O C E E D I N G S

MR. WEST: Good morning. I'm Darrell West, Vice President of Governance Studies and Director of the Center for Technology Innovation at Brookings and I'd like to welcome you to this forum on Health Information Exchanges and Policy Megachange. For those of you who are interested in tweeting, we have set up a Twitter hash tag @techcdi so that you can feel free to make comments or pose questions during the course of the actual event.

As we all know, health care poses many challenges in the United States in terms of quality, access, affordability and data integration. It is an example of policy megachange because it involves large-scale policymaking that gets into complex political issues, complicated organizational dynamics and major policy challenges. One of the latest efforts to address various aspects of health care are health information exchanges. Health information exchanges are designed to share data, enhance communications, integrate health provider networks and promote quality health care among other objectives. Today Alan Friedman and I are releasing a study of Health Information Exchange Implementation. As part of our research we looked at what states are doing in terms of implementing health information exchanges, we reviewed strategy documents submitted to the Office of National Coordinator, conducted interviews and gathered data and information on progress and barriers to success. There are copies of the paper on the outside if you did not pick up on one on the way in. It's also available on the Brookings' website at brookings.edu. We also want to acknowledge the assistance of several people at the MITRE Corporation which is a nonprofit organization that manages federally funded research-and-development centers, and that include John Piescik, Rob Creekmore, Joy Keeler Tobin and Lisa Todarow. They all helped with the research and offered comments on various stages of the paper.

I'll quickly summarize some of our main findings. I won't get too much into the details since you have a copy of the paper in front of you. Basically, what we found is health information exchanges have made progress in establishing organizational frameworks, building technology-based connections and bringing relevant groups to the table for discussion of all the complicated issues involved in those types of exchanges. However, we also found that barriers remain in terms of governance, financing and policy vision. Some states have experienced difficulties in producing consensus on strategies and approaches and also in identifying consistent revenue streams. In the paper we go through several different states in detail, look at exactly what their experiences are, what progress they have made, what challenges they've overcome, how they're seeking to overcome of those challenges and then we close the paper by making some recommendations on steps that we think would help promote implementation in the future.

To help us analyze the issues surrounding health information exchange implementation, we have brought together a distinguished set of speakers. Janet Marchibroda is Chair of the Health Information Technology Initiative of The Health Project at the Bipartisan Policy Center. She also served as the founding Chief Executive Officer for E-Health Initiative, a nonprofit designed to improve health care quality and efficiency through information technology. John Piescik is Strategy and Engagement Leader at the Center for Transforming Health at MITRE. He has over 30 years of technology and management consulting experience and has particular expertise in coordinating large-scale cross-agency change. Jon White is Director of Health IT and Acting Director of the Center for Primary Care Prevention and Clinical Partnerships at the Agency for Healthcare Research and Quality. He was trained as a family medicine doctor and at the agency he leads a group of individuals who work on the use of health IT to improve health care quality. Claudia Williams is Director of State Health Information Exchange at

the Office of National Coordinator of the U.S. Department of Health and Human Services. She leads ONC's efforts to enable health information exchange to support provider achievement of meaningful use and sustainable improvements in health care quality and efficiency. She came to ONC from the Merkel Foundation where she was Director of Health Policy and Public Affairs.

The format that we're going to follow today is I've asked each panelist to make a brief opening statement regarding their views about some of the issues in this area. We're going to start with Claudia Williams. She is going to review some of the ONC goals and the general framework that ONC has been following. Claudia?

MS. WILLIAMS: This is one of those good news/bad news days. The bad news first is I forgot my pumps, but the good news this is not webcast so you can enjoy my purple shoes. It's a great delight to be here today with this distinguished panel. I'm going to talk about exchange and our goals exchange at ONC touching on the role of the state program but really speaking broadly about where we are, where we need to go and how we're going to see exchange really take off this year.

To start with what is our goal; our goal is to get information moving to support patient care in a secure way. Our goal is not necessarily to support a particular model or particular approach, but to see the percentage of transitions that are supported by the information that's needed, of lab results going to doctors electronically and of patients able to get their own information. We need to see these measures really take off. That's a critical thing to think about. If our goal is to advance exchange as a verb, what should the approach and strategy be? I think historically we thought about whether there is an exchange organization in every market, but increasingly our thinking is evolving to realize there are multiple formats, there are multiple mechanisms, there are multiple organizations advancing exchange but how can we really see it take off?

Where are we today? We're not in great shape. Even the most basic care coordination task like getting a discharge summary when your patient is discharged which is critically important to improve care and reduce readmissions, we see that about a quarter of the time that occurs within 2 days and almost never electronically. We see that about 19 percent of hospitals have a mechanism to share clinical information outside their own system. So we are starting at a fairly low bar and we have a lot of improvement to make. In addition, there are pockets of what we think of as real based exchange across the nation. Some of the most famous examples would be IHI which is highlighted in the paper, the Memphis system also highlighted in the paper, and these are often providing multiple kinds of exchange living in those communities.

We want to see exchange take off this year. If you look at things like e-prescribing, we have seen a doubling in e-prescribing this year just in 1 year, literally a doubling, and we want to see that kind of hockey stick progression especially for the core care coordination tasks which are going to be necessary to supply information for payment reforms. If you remember, those of you who have been part of our tribe of meaningful use, there is a famous swoosh. Somebody said to me I can't look at that swoosh anymore without thinking of meaningful use. It described a progression, David Blumenthal used to call it an escalator, where we start with getting folks on board and we start with getting information digital. In stage two we moved to increasingly robust requirements around moving information and exchanging information, and as we move out even further we look much more closely at quality of care, quality measurement and performance feedback. I don't have the visual, but if you imagine that swoosh. We are poised at doorstep of stage two now. We expect that that rule will be released within the next month or so.

As we move into this middle phase where our expectations through meaningful use and through other things and for exchange, how do we think about the

tools and levers we have to affect that? If you think of exchange as a kind of scale with costs on one side and value on the other and trust supporting it, that value proposition isn't coming from health IT. It's not coming even except to a certain extent from meaningful use. It's coming from our changed expectations of what we want from the health care system. In a health care system that pays for volume and not quality, it's very rational not to see a lot of exchange occurring. It's obviously not what we want and it's not what's in the patient's interest. There is not a strong business case under that model. But as we see payment reforms whether through the ACA or through state efforts or through private efforts burgeoning this year, we're seeing a great increase in interest and a great increased focus on exchange and the value case is there. ONC's role is not to create a value case. That is being created by the transformation that's occurring within our health care delivery system and payment reforms, but our job is to decrease the cost and increase the trust, so let's talk about that a little bit. One of the core responsibilities we have is to drive adoption of national standards that can solve core problems of exchange and core problems of interoperability. How are we doing? People who are in the trenches, I talked yesterday to a CIO at a hospital who said this stuff is tough. Every interface takes a month and takes $25,000. There are not standards to support it. Let's look at meaningful use for a minute. We now have standardized ways to report medications and we have standardized ways to record information. We use vocabularies and content standards for all the information at every single certified EHR. The challenge of me giving you a piece of information and you understanding it and being able to incorporate it into your EHR is going to be driven by the content standards that were part of stage one meaningful use. You can understand something I send you, but can I send it to you? We need standardized ways to accomplish the sending and receiving of information and we have two national standards that are in use and that are being used today to do that.

We need to unpack the conversation. We need to drive toward these national standards, but sometimes the real issue is the business model. Business models that gain value from retaining and capturing and not sharing information, there is always going to be a reason not to reduce cost, there's always going to be a reason not to adopt standards. So we need to have an open conversation about the business models, the models that are rewarding the sharing privacy and security of information to improve patient care -- frankly it's not in people's interests and we need to encourage a change in the business strategy pursued by that organization. As cost goes down, as value goes up, we're going to start to see information really flow, going from a trickle to a flow to a flood.

It can only move as fast as we develop trust. Today often the trust relationships that are needed for exchange are negotiated one by one by one between organizations who sign business agreements, and that's not a scalable approach. This year we will be taking forward a set of governance policies through regulation that we hope would describe a way to have a common set of interoperability and trust requirements that again may make exchange scalable by decreasing the costs and burden of all of those one-and-one negotiations.

Now let's turn to the question of the State Health Information Exchange Program which has funded every state and territory across the nation to make rapid progress in enabling exchange this year to support meaningful use. I think when this program was first funded there was a conception of what this would look like. What this would look like in people's view was a statewide public utility that everybody was using that often started with in some ways the hardest -- which is finding information and would be available for everybody to use. But I think as we've seen the marketplace evolving, as we've seen exchange evolving, and as states started to look at the $5 million they had compared to the perhaps million dollars every single hospital was investing in exchange, I

think the conception and the evolution of thinking about the role of this program has really evolved. It wasn't enough money. There wasn't enough buy-in. That wasn't the model that people supported. Instead what we're seeing is really smart uses of these resources to knit together existing exchange organizations like in Indiana, to provide shared services like direct -- and I.D. services that could reduce the cost for everybody, to invest in emerging and nascent exchange efforts like in California, and in some cases like in the case of Delaware or Maryland, to provide a public utility exchange. We expect these dollars to be spent to reduce the cost of exchange, to fill gaps especially for the lowest resource providers and also to assure trust in the state. We expect these resources to leverage private investments not compete with them. And we also expect that key role of the state is to use the broad range of policy levers at their disposal from payment policies to regulations to advance the idea that care will not be delivered without critical information being there to support it. I'm sorry to have gone over the 5 minutes, but thank you very much for the opportunity.

MR. WEST: Actually, that was very interesting so it's perfectly fine for you to have taken the time. Jon Piescik, you originated this concept of policy megachange and certainly in the health care area we know there are tons of different types of complications. There are policy changes across agency boundaries that involve both public and private and nonprofit organizations and lots of different stakeholders in the process. Can you tell us a little bit about the broader concept of megachange and how it plays out in health care?

MR. PIESCIK: I guess it started in a weird way in that I was working on a review of a four-agency cooperative program called the National Disaster Medical System, a partnership of VA, DOD, DHS and HHS. I started looking for literature on large-scale organizational change across organizational boundaries and I didn't find much. Part of that may be that I couldn't figure out the right search terms because how

do you characterize that? We ended up coining the term megachange to describe this kind of change where there are independent actors involved and you're pushing on string as it were and how do you address those problems. I took a look at 22 different large-scale federal change programs and tried to isolate some of the factors that made for success or failure. I was somewhat surprised that a lot of factors I thought would be crucial dropped out, some of them about management style, some of them about leadership and some of them about the impetus for the program. But others did seem to present this core of things that you had to address in organizational and interorganizational change management to succeed in these kinds of programs.

We had an initial cut of about eight factors and a kind of spider chart that we used on a couple of projects and because we operate federally funded R&D centers, we applied the methodology with a couple of our sponsors. The problem we have is you have to see all the confessionals. They're telling you all the flaws in their program and you're seeing them all, then you can't publish or talk about it and that led us to come to Brookings and say we think this has some merit as a way to take a snapshot of where you are in your program and as kind of a survey tool which led to the conversation that we had with Darrell about could you guys apply this and what would be a great topic? As it worked out, and I'd work on a panel before with Darrell at HEMS (?) on digital health when he had published that book and I'm in the Center for Transforming Health at MITRE and I think it was Alan Friedman who first said why don't we look at something where a bunch of people are doing the same thing in parallel and the state HIE program was a great laboratory to apply this technique. I have to say looking at the paper now, I think I fell like Antonio Stradivari might have felt if he had gone up to Brandenburg in 1721 and had seen a couple of his brand-new violins being played in the "Brandenburg Concerti" by some master musicians.

MR. WEST: I like that metaphor.

MR. PIESCIK: I was going to say I felt like Zacharias Hildebrandt and people who ask who? He was the guy who built the harpsichords that Bach played every week at the coffeehouse in Leipzig, that feeling of that's my instrument they played. I think if you read the paper and look on page 36 at a sort of summary diagram you can say there's hope here for sure because look at where Indiana and Massachusetts have gotten to. How did they do it? A lot of that was getting fundamental agreement and getting the stakeholders into alignment. It's the blocking and tackling on all of these fronts that the megachange profile addresses. For anyone who's interested, afterwards if you want we have copies of the tool. It's free. There's a how-to guide. Any analyst who wants to use it to analyze this kind of change, I'd encourage you to get in touch with me or with Rob Creekmore, my colleague here, and we're happy to make it available. Again, I'd used it about five times in different settings with very illuminating results. In some cases we said that program will not work under any circumstances because there is a flaw in the design. I'm very pleased to see this has happened.

What I would encourage people to do if you find the paper of value in the way you think about health information exchange or about other multistate programs or public/private-sector partnership programs, think about doing it yourself. It takes a couple hours to figure this stuff out and do an assessment. It's not an overly elaborate process, but it's a very helpful sort of diagnostic tool. It's not a Swiss Army knife. It doesn't solve all of your problems. We have suggestions on some of the kinds of policies that help you correct some of the issues that come up. You can't change the external environment or the organizational environment. They're facts. You just have to deal with them. We certainly hope that people will take this instrument, play some new tunes with it and I invite anyone who wants to to try that.

MR. WEST: Thank you, John. Janet, you've had a long career thinking about health IT and information exchanges, so I'm curious if you could give us your

thoughts on where you think the country needs to go, what are the barriers we are encountering and strategies to deal with them?

MS. MARCHIBRODA: Thank you, Darrell. It's a great pleasure to be here, and I applaud the center's release of a report on health information exchange. It could not be more important particularly now. We're at an important time in health care.

Back on January 27, the Bipartisan Policy Center, in particular a task force led by Senators Daschle and Frist and comprised of a number of nationally recognized experts, took a look at what do we need as a country to achieve the triple aim of better care, better health care and reduced costs? We went through interviews with about 40 high-performing organizations, had a lot of dialogue and did a lot of research. What we found was a number of things, but we need to more toward more accountable, coordinated, patient-centered models of care, new ways of delivering care, new methods of payment. You know what? We can't get there. Health information care exchange is foundational and critical to get to those new models of care, so we've got to get there as a country. We explored a number of the barriers and I'll talk about that for the next couple of minutes.

Claudia talked about the biggest one and it's around alignment of incentives. She said that right now we reward doing more volume as opposed to quality and cost outcomes so that it makes no sense for a hospital or a physician from a business standpoint to see whether a lab test result has already been done or an MRI to check results, one just does one over. So we've got to tackle that one first and that's probably the biggest thing. We're encouraged with the work that's happening with private-sector health plans across the country who are experimenting with this at the local and national levels as well as CMMI.

The second thing is we think, and when we've talked with folks we need to get a little bit further on standards, whether they're data transport standards or data

content standards, more easy-to-use guides in order to apply those standards so you don't have to be a big, integrated delivery system in order to make those standards so we need more work there. I'll tell you that if you look at what's happened and necessarily so, the first set of adopted standards that came out as part of high-tech really focused on what we need for meaningful use. We would love to see it go beyond that because there are many organizations that are building accountable care organizations today or patient-centered medical homes that want to exchange data that goes beyond what might be required by government, so long-term data strategy with standards.

Privacy and security still is an issue but less so. I think the numbers are coming down. And from what folks tell us, more clarity around policy, not necessarily more, but maybe more clarity in education around what they need. I think there is still a lot of confusion out there. Again think about those small physician practices that don't have huge compliance staffs or lawyers to help them figure this out.

Then finally, and this is part of I think your model around megachange, consensus on path forward. I'll tell you that Darrell was saying I've been at this a long time looking at what's happening, and I think it was too early before. If you look at the federal government's portfolio approach on looking at what works, if decisions had been made 2 years ago, it would have been too soon, but now we've got a lot of lessons. We've got a business case on the horizon with payment reform and delivery system reform. And for the first time talking with a whole host of folks that maybe weren't there 2 years ago, whether it's providers, physician practices, hospitals, labs or vendors, I see an appetite for coming to agreement around a set of policies and standards, we'd have to talk about how far down you go, but principles and policies for getting to exchange even on a voluntary basis that could be something that could inform what the federal government adopts over the long-term. So that's my 4 minutes on where we are, barriers, challenges and some things that we'll need to get there.

MR. WEST: Perfect. Thank you. Jon White, you work on health care research and quality. Your agency has made some initial investments in this going back over a number of years. You think that people and processes are an important part of the information challenges. Could you tell us a little bit about your perspective on this?

MR. WHITE: In the beginning there was quality and it's at the foundation of what we do at the Agency for Healthcare Research and Quality. There is pretty broad consensus amongst us all that we think high-quality health care is good and that we ought to be striving for that and we recognize that there are some issues with our system in how we get there. So when you take a look at what quality means and you start to break it down and you ask what you need to do to be able to improve quality, there's broad consensus that you need to be able to exchange information. Different people need to have different information at different times in different ways to make this work. We recognized a long time ago that this was very important.

The Agency for Healthcare Research and Quality's role in the federal family is to help build the evidence for what works and what doesn't work in improving health care in this country. We do that in a bunch of different ways. We fund research, we fund demonstrations and going back 8 years now, a long time, we started looking at health information exchange and asked how do you do that? So we funded a number of demonstrations in a number of different states. You've heard about some of them here. Indiana has been mentioned, Memphis, the Mid-South E-Health Alliance has been mentioned, Delaware has been mentioned. These are states that AHRQ made initial investments in starting 8 years ago. They had several years to work on this. At that time there was not a legislative mandate to start moving ahead with health information exchange. Everybody said this is important but we said we don't quite know how we'd do this. That's what AHRQ does. We help build the evidence on how you do this.

As you'll read in the paper, what we found is that this is a little harder than we thought it was going to be. It's kind of like having kids. I love my kids. My kids are very important and I would never say that we should just throw the kids out because they're hard to deal with. Right? But it's harder than we thought. It's not just about servers and it's not just about software and standards. It's about people and it's about people cooperating. When we dug into it we found that it was as much about a function of high cooperation as it was of high organization and high capabilities. Again, Darrell and his colleagues have done an excellent job in outlining that in the paper so I'll let you read that.

We think it's still important. We still think we need to have it driven forward. We're glad that we were able to make initial investments and that ONC was able to take those and run with them. The different states that we funded years ago have served as models for different ways of how to do this and I hope you feel like folks have learned from what they've done.

As we moved ahead, you mentioned tools and levers that we might have at our disposal. Now that we've got it functioning, now let's start thinking about quality. That's good. It's good that it's working. But what does it mean that we live longer or that we get better value for our dollar? And how do we use these tools? What are the best ways to use these tools to get to those ends? That's again something that AHRQ does, helps build the evidence, so we're looking forward to continuing to work with all of you as we move ahead with that.

MR. WEST: Why don't I throw out a question for everyone on the panel and each of you can jump in as you would like? Claudia started with several interesting points and it was a kind of good-news/bad-news scenario, and not just in terms of your shoes but in terms of health information exchanges because you pointed out that today you said we're not in great shape, but then in looking forward over the next year you're

expecting the exchanges to really take off. In our paper we identified a number of challenges in terms of the business model, the revenue streams, aligning incentives, consensus on the path forward and Jon was mentioning the need for cooperation. For each of you, if you could think about the year going forward, what it is that we can do that will make exchanges take off so that we can actually achieve some of the benefits that we're all looking for?

MS. MARCHIBRODA: I think the first thing is there's a lot of progress being made out there amongst private-sector payers around testing new payment and delivery system reforms, doing that and doing that more, continued and sustained funding for CMMI because operationalizing some of those changes doesn't require legislative action. And something I didn't talk about in my 4 minutes is we've got a great opportunity with stage two of meaningful use. The field wasn't ready with stage one. If you look at the requirements, they're pretty meager. You have to do one test of exchange, it could be with fictional patients and then there's another menu option. But let's go further. This is a terrific opportunity to use that incentive program to go further on exchange. These are just some ideas in the coming year.

MR. WEST: Claudia?

MS. WILLIAMS: I think a lot has already been discussed that addresses that, but I think one thing we're starting to see is real dirt-under-the-fingernails approaches to asking how should we be using this capacity. One of the things we've seen in communities that have made vast investments in capacity is they still don't know how to drive adoption of it. If you have the capacity to look up a patient record, when should you do that, what should you be looking for and how do you use that information? Should you not do another radiology test if you see one has already been done? That's one.

When you refer a patient, exactly how should you send along the information? What notes should you make about how to use the information? Who's working on the workflow and processes and integrating into the EHR? If we really want to see adoption take off of exchange, we're going to have to have a much more granular conversation about the exact clinical cases where you should be using exchange, what the results you should expect would be in terms of reduced testing or reduced medication errors, and how do we bring that workflow all the way down to where the doc is working on his or her EHR? This is obviously not something that we can overnight snap our fingers and say here is what it is. It's going to involve EHR vendors working on it. It's going to involve payment initiatives describing what their expectations are. It's going to evolve usability around HIE. It's going to involve evidence around what's working. But I think we have to take the conversation to the next layer of granularity around exactly what are we talking about? How should this be used and what outcomes do we expect? And how can we almost script out a set of workflow steps for a doc who wants to be able to send information electronically to patients and to other doctors?

MR. WEST: Either of the Johns?

SPEAKER: I think, yes, incentives are crucial and one part of the incentives will be if the bundled payment initiative that CMS has underway to create ACOs work out, if that begins to be adopted, there will be a lot of incentive for coordination of care often times across organizations or among virtual organizations. So I think incentives are going to be really important. And I think in our model we talk about willingness to contribute as a really crucial area. You're not going to get voluntary cooperation. You have to be willing to pay for things. Right? And two models could happen. One is that you could reimburse for the actual exchange which could be built into the medical care reimbursement cost in Medicare Part A and Part B. Or you could say if you can use these tools to improve quality at reduced cost and reduced

readmissions, go for it. That will create a demand pool for that kind of service. So either of those approaches can work. If we try to overengineer the use cases, we'll just delay the onset of it. It really has to do with where's the money in a lot of cases so that I think that's important.

I do want to mention because it came up that I think ONC has been better than most organizations at reaching out to stakeholders, getting feedback and adapting, to the point at one point one of my friends, Ameed Moganot from Intel was saying they went from a strategy of let's build a network and no phones to let's buy the phones and no network, but now they've got the right mixed approach to adoption to HIE formation going. I think it's a balanced program and they're looking at all the indications and trying to make things happen. I think it's hard. You are pushing on string anytime you're doing a megachange. But one other thing that we really have to work out and I think this is going to take more work both technically and on a policy level is the trust element. We have all these people who will have VHRs. They're sort of like getting all dressed for the prom but you don't have a date. Who are you going to exchange with if you don't trust anybody? So it's a problem that we have to solve. We have to have a scalable foundation for trust. There are a number of projects that are being done around this, Claudia has -- and there's a team at ONC working on privacy. It's got to be tackled in a big way. I think whether the state is the right unit for trust or some smaller segments, whether it's federated, how do you do that? There are a bunch of issues there to still work through? They shouldn't be allowed to delay. If the market is demanding action, then people will take the risk of trusting more because it becomes a business risk like with credit cards or anything else. But right now there's a sort of draconian HIPAA compliance thing and no offsetting benefits so you're going to ask why take the chance? Right? Between incentives and building a trust framework, we can overcome that issue.

SPEAKER: These are great points. The only thing I would add is that there are a couple of organizations, locations, around our country that are doing a reasonably good job with health information exchange, and not just because they're exchanging the health information, but they're changing the care that they deliver and it's getting better because of it. I really think in the next year, which is your question, those folks need to stand up and they need to show the rest of us what they're doing, how they're doing it and why it's so good. What then needs to pull behind that is the rest of us need ask how come I'm not getting that and how come my system isn't going there or how come we're not participating in that or we need to participate in that. I think that's going to provide that drive that you asked about and ask why aren't we all kind of getting there? I think once folks show that the care is changing and people are getting better care because of it, that will pull us ahead.

MS. WILLIAMS: I know it's something that everyone probably on this panel has thought about and it was figured prominently in the BPC report, but it's time we bring patients into the conversation about exchange.

MS. MARCHIBRODA: I was going to say the same thing.

MS. WILLIAMS: Yesterday I was on a panel in Maryland with a family practice physician who had initiated a consumer portal. She was the first in her practice to do so. Her colleagues wanted to wait and see how this worked. She had a patient with multiple chronic problems and she hadn't figured out the way to help him. She said let's try security now. Let's see if that works. He started sending her messages every night. She said that he didn't expect a response. But he would say I've been thinking about what you asked and the kind of engagement that we see in every sector of life using the tools that we have, we are not going to get to the changes and improvements we want if we can't figure out a way to leverage it. It brings its own set of challenges, not least of which is what is the workflow again for a doc in sharing information with a patient

or what are the privacy issues. But we simply will not get to our health care goals if we don't tackle this front on.

There are some very promising policy movements. For instance, there is an NPRM out on sharing lab data directly with patients with a delay that allows the doc to inform the patient ahead of time. But we need to make it easier and cheaper and more automatic for patients to be able to get their own information because we're simply not going to be able to achieve the goals we want without it.

MS. MARCHIBRODA: Something that we wanted to pursue but didn't have the time within the report was consumer-mediated exchange and many folks think if we can't get there across providers, laboratories and the like, what if we had an easier time, and exchange plays a key role there. If I can download and pull my information, not so convenient that I need to take it to my doctor over here or the hospital over here, but that might apply some further pressure on the system and a number of folks that that might be the answer in the long-term, some area of research and piloting I think.

MR. WEST: Speaking of bringing the patients in, we would like to bring the audience into this discussion. Let's open the floor to questions and comments. We have microphones that will be coming up. We have a question right here on the aisle. If you could give us your name and if you have an organizational affiliation as well. Also we'd ask you to keep your questions brief so we can get to as many of you as possible.

MR. ALTMAN: I'm Fred Altman. I belong to Kaiser. The information exchange there is really terrific. I get my test results when I have tests in the morning and look at the computer in the afternoon. I don't understand why there isn't greater adoption of this. Although I did notice one problem where I'm enrolled here and I needed services in Cleveland and it turns out even among Kaiser, they can't transfer the information from --

SPEAKER: Region to region?

MR. ALTMAN: -- the Midwest, so that's a problem. But greater adoption of health maintenance organizations would go a long way.

MR. WEST: We have a question right here.

MS. PERCY: I'm Alison Percy from the Congressional Budget Office. You talked about trust and I want to find out what you mean by trust. Is it just privacy and security or are we talking about different possibly competing businesses trusting what's going to be done with the information and how does that build into the business case that you've been talking about?

SPEAKER: It really involves both I would say. At a fundamental level patient information is private and protected by law and so that creates obligations on the part of anybody who's going to send it to anyone else to make sure that that patient consented to the use of that under HIPAA. But the business case questions are also very interesting. You will see providers who will begin to say it's a competitive advantage for me that I can do this, so I think that ownership rights of medical information, it has got to be clearly expressed at some level that the patient owns those records. One method is to move to the consumer model. I think we're a little ways off from that. Google gave up the ghost on their attempt. Microsoft had limited uptake. Probably many people in this room have tried one or both of those and quit because it was too hard to use. We've got a ways to on that to make consumer pull happen which would overcome the competitive business resistance.

I think health care more than a lot of industries is more public spirited but not to the point of saying, yes, I'll tell you all about my patient and then they won't come back and that will be the end of that. I think there is some of that too. There is foot dragging beyond, and I think the incentives have to really be there. You have to get paid to support that exchange of information and not just to provide the care. Or it has to be incidental to providing the care but compensated for so it's a tough problem.

MR. WEST: Claudia, since you mentioned the issue of trust, do you have a sense of what we can do to build trust especially across businesses?

MS. WILLIAMS: I want to go to this business case issue for a minute. Yesterday we were having a conversation with a national vendor who has been really I think a leader in solutions that deliver value to users. We were talking about could there be a model where what you're competing over is making it super easy for your docs to exchange information to support patient care? Maybe if you have a provider directory, you open that up to other people so they could find your docs. Maybe you use national standards to make it easier and cheaper for other folks to connect. It was interesting. They were very open, but there was a sort of a pause and they were like we haven't really thought about competing like that. That's not the way we've thought about our competitive advantage is.

I think part of what we're hopefully going to see is a new type of competition based on competing on making information available that's needed. If this one vendor did it and nobody else did, it wouldn't have much of an effect. But let's say a third of the marketplace did this and maybe tried to think about how it would look like to compete not over capturing and retaining and not sharing information, but based on securely sharing information to support what the patient wants and what the provider wants. I hope to see new kinds of competitive spirit, and these are marketplaces so over time you would hope that those businesses rewarded by a marketplace of users and by a payment system that's pushing in the right direction would start to gain traction and that those that aren't lose traction. There's another term for megachange which is an ultra-large-scale system that's been describing how do big systems develop. I think we see these incremental changes moving the direction of what people are competing over and what they trust over. We all know that this is not an easy change that will occur over night, but I think we have to think in terms of what kinds of rewards are we giving not just

to providers but also to vendors for the behaviors that are going to support this and how can we better through our purchasing decisions and our business decisions support those that are delivering value? I don't know if that answered your question.

MR. WEST: It did. Right there is another question.

MR. SLACKMAN: I'm Joel Slackman with the Blue Cross/Blue Shield Association. This is a terrific conversation. I wanted to follow-up on CBO's question and the discussion you've just had where the last several years have seen an acceleration of provider consolidation, hospitals have physician practices, hospitals merging and so on, and all other things being equal, a consolidated health system does not want to share information for competitive reasons. My question is when we look at places around the country where exchange is working like Indiana, like Memphis; could you give us some concrete examples of what those places did to overcome this natural tendency among consolidated systems not to want to share information?

MR. WEST: What we found in some of our interviews in those places is cooperation takes place when each of the stakeholders see it as in their own self-interest to do so. Certainly in the case of Indiana, they had the advantage of they got into this data sharing very early and so there was kind of a history, you built up the relationships over time, that creates the trust and so all of those ingredients we found were important.

SPEAKER: When you start talking about digital data, those whole ownership of data gets kind of funky. It's a model that we have engrained in our head, but it gets a little funky because you can replicate that data as many times as you want and send it all over the place. For, I don't know, 5 years we've been talking about stewardship of data as opposed to ownership of data and working with the folks in Indiana and the folks in Memphis for example they saw themselves as stewards of the data, that there was a purpose that was being served by that data and it wasn't necessarily for them, but maybe it was a shared resource, maybe it was in the interest of

the patient, it varies a little bit from place to place. Another way for folks to address these competitive issues is to try to find a common pain point. In Memphis they did it around emergency room visits and they said this is a place where we clearly have an issue. Everybody is feeling pain about this with people coming into the emergency department and we don't have information about them, let's try to address that and it grew from there. They've been able to go beyond that, but they found a common pain point that they started at.

SPEAKER: I would spend a lot of time looking at Indiana over the last 5 or 6 years, and what was compelling for me is recognizing the power of the market. If you look at the folks who started the Indiana efforts out there, the employers were at the table, the hospital CEOs, the physicians and the health plans, they've had involvement of everyone. But it wasn't just getting people to come together to sing Kumbaya and agree on doing something. Actually, everyone got something out of it whether it was the blues plan or the national plan in Indianapolis through Quality Health First they were able to see how their physicians were doing and change payment as a result. For the hospital CEOs, they saw reductions in cost, considerable reductions in cost, and so it made business sense, and then the physicians also. So a very much market-based approach recognizing that actors have interests and to deliver a service that provides value for which folks are willing to pay I think set them apart from some others.

MR. WEST: Just one quick footnote to that, we certainly found that governance was crucial to building those relationships. If you have the institutional processes of consultation and relationship building that is a huge advantage in terms of helping produce a broader consensus over goals, tactics and strategies.

SPEAKER: There's a funny underlying thing too around sequencing. In Indiana and I think it's talked about in the paper they started with electronically delivering results and then moved to query and then moved to quality. I don't think in every case

that's going to be the progression, but I think what it speaks to is biting off something that delivers value immediately. In Memphis they restricted the use of the exchange initially just to ER docs and just to the clinical use cases within that ER. Obviously that's not where they want to get eventually, but it allows folks to understand that particular thing, to develop the policies appropriate for it and not try to design one solution that can do 100 things because you get mired in complexity and mired in difficulty. The challenge is how to build increasingly complex, interesting and resource-rich exchange but do it in a way that allows you to show real progress along the way rather than say 5 years from now we're going to have this thing that's going to deliver value because I don't think that's the path that most exchange has taken.

SPEAKER: There's a funny thing about Memphis. It's funny that you said it that way, that they restricted ER docs. As we funded them and the years went by, when I first knew that it was showing value was when they said, yes, we're keeping the ER docs, but it turns out that the in-patient docs are sneaking downstairs and printing out stuff and taking it back up to the floor because that was the only way they could get the information. So when you've got work around to get at your health IT, suddenly you're creating value for people.

SPEAKER: It's funny. Twenty years ago or so I wrote a paper in the "Journal of AHIMA," and it was on the health information management department as a source of competitive advantage so that I appreciate the question enormously. But on further reflection I think that if you were to go around and ask patients why do you go to your doctor and what would keep you from switching, where your health record is is probably way down the list actually. It's that they know you, you know them, there are relationship factors. People probably overstate the importance of that as one of the factors in where people go for care. It is probably a factor but not near the top of the list. Part of it would be seeing what happens and I think maybe what happened with

Indianapolis was they got their toes in the water and then nothing bad happened, and then they got their ankle in and so forth, but there was probably that whole resistance and it takes time to overcome that.

MR. WEST: Here in the front row, did you have a question?

MR. LANG: Good morning. Will Lang with the American Association of Colleges of Pharmacy. I'm going to change from the business model to the education model. I'm wondering how any one of your groups or anybody has come to health profession's educational community saying there has to be a fundamental change about the way that we educate physicians and pharmacists and nurses because of HIE's expectations that you're going to have different ways of engaging with patient communication, data analysis and all the kinds of things you've mentioned today. Is anybody talking to us?

SPEAKER: As long as he has a great workforce training program.

MS. WILLIAMS: I wish I were the person who knew all the things that we're doing because I knew we're doing a lot in this area. It's interesting. One of the things that's true is almost every doc trains in the VA in the course of their residency or their training so that everyone is being exposed to the potential that we have here. I think there are a lot of workforce and graduate medical education challenges that focus on adoption, that focus on how do you do quality feedback within a practice, that focus on the care management skills of planned care for chronic patients. My hope would be that we can situate exchange not as a separate thing but as a key tool to accomplish these other things that are needed to deliver on the triple aim. Our workforce efforts at ONC have focused on graduate education as well as community college education to train the HIT workforce. But I think what you're raising is a separate question of how do we engage and prepare physicians and other medical professionals to deliver care using health IT.

MR. WHITE: I'll quickly mention that AHRQ has a great resource called Webm&m. Every month there are a couple of cases that are posted, and being a doctor I know about the doctor side of it so that you can get CME. I think you can also get nursing credits and pharmacy credits for different things that we have. At least one of the cases over the past several years a month has been about health IT. It's also about patient safety and care management and stuff like that. That's the kind of resource that you need. That's a graduate approach. That's not getting in at the ground level. That's got to be done too though.

MS. MARCHIBRODA: I would like to say you raise an excellent point. As Claudia had said, there are a number of workforce programs that focus on training health IT workers where we've got a big shortage in our country right now and need to do more and it's a great source of jobs. I was down in Miami last week talking with the head of nursing and I wonder if there's a way to take the curriculum or the modules and infuse that into education for pharmacists, nurses and physicians. I don't think we're even close. This woman said even my nurses, my students, if we could have a laboratory where they could play around with and use electronic health record systems, a range of them and not just one and learn how it changes delivery of care. So I think there's a lot of work to do on the policy side and practice side.

MR. WEST: Was there a question right here?

SPEAKER: It's a comment in response to this. One thing that this makes me think about is payment for graduate medical education at least Medicare. I know that Medpac (?) and others are talking about accountability measures and how those should be tied into how the federal government finances GME so that's on the physician side. But I think that's something to look at because Medpac has recommended implementing accountability measures that say that programs need to address the changes in the workforce that are needed so that workforce development is

really part of that. So I think looking at both the associations and accreditation organizations for these providers is a really good place to look and of course coordination with any federal efforts would be critical. I know that's already on the table for GME so it might be for other provider education programs as well.

MR. WEST: Thank you for that comment.

SPEAKER: Let's not forget about names and organizations as we ask the questions. I'm just curious.

MR. WEST: Yes, if you could give us your names and organizations, that will help us.

MR. SHAPIN: I'm Paul Shapin with MedStar Health. We've participated in the D.C. HIE and many of you know it was shut down last fall because the D.C. government decided to defund it. One of their arguments was that the ONC really wasn't pushing HIEs, they were really only pushing Project Direct and that's where the meaningful use incentives are. How do we respond to them?

MS. WILLIAMS: We had conversations with D.C. and we said to them you need to pursue the strategies that make sense for you and for your city. We asked them to show us the use rates and how that infrastructure could be used to meet the goals of our program which are to support meaningful use by providers. And we said you should make your decision based on whether this is the right infrastructure for you to get providers to be able to do the exchange requirements in meaningful use and for the program. They made a decision based on looking at their environment and looking at the capacity, looking at the current use, looking at the expense that they would face in trying to figure out the best way forward for them to support the programmaticals. I will say it's a challenge. I think that RIO (?) is an example of really great collaboration and investment. It was unclear what the use was of it I think and to what extent it was supporting patient care across the community. Those are the questions we asked, look

at how it's being used, look at the use cases, look at the adoption, look at the expense and make the best decision for you that's going to rapidly enable the kind of capacity we need. I think a lot of communities are asking those questions, what's the best way? I think one of the things you raised in the paper is places like in California it's sometimes hard when you start out with a big government investment. You need to make the investments in the things that people are going to be willing to pay for over time and there is no way to end run that. You can't say we invested $20 million this year and the community is going to have to pay for that next year. You have to look at what is the community going to be willing to pay for, what can it pay for, how can we use payment incentives to do that and how can we make it cheaper? So the question isn't let's build this infrastructure and then figure out how to pay for it but, rather, is how do we build up a set of services that are innately sustainable over time because they're delivering value, they're affordable and they're what works to make more coordinated. So it's a slightly different approach to thinking about sustainability I think.

SPEAKER: The money discussion has its place in a discussion with folks who are supporting these sorts of things. I mentioned before. You need to come back to them and say, great. You don't want to do this. I understand. How are we going to get there? How are we going to get to better care in your community if we don't have health information exchange, if we're not able to share information back and forth? They're the political leaders. Put that back on them and ask show us the way then. If this is not it, what is it, and I would expect that might spur the dialogue along.

SPEAKER: Two things. One is D.C. is a great case of a place where unlike Indianapolis which is shack in the middle of a big state, D.C. is in the middle of sort of a tri-state area that has a real need for information sharing across those boundaries so that drawing a line around the District may not be the right answer for D.C. and I'd say look at a regional solution. Also look at the problem as an opportunity. Is there

something MedStar could do? If there's a void, is that an opportunity for MedStar or for somebody who you stimulate to get involved in solving that problem? If there's not a demand pull, then it's a problem. I was flashing back when Claudia was talking to telecom startups in the late 1990s and early 2000s where people threw tons of money at infrastructure before they had customers. What you saw within the slower building states that started with the original grants from ARC or even before that, they had time to work through the issues and build a scalable business model and build trust which hasn't happened. It does take time for some of this consensus to get forged and for some of the things to prove out in practice and you've got to have this sort of start-up mentality in this particular kind of case because you need to be sustainable.

MR. WEST: Back there is there a question?

MR. REDHEAD: Steve Redhead at CRS, the Congressional Research Service. Money has a habit of driving behavior.

MR. WEST: I've noticed that in D.C.

MR. REDHEAD: The big money right now of course is the Meaningful Use Incentive Program, $2-1/2 billion and counting with the expectation absent any change in the law this year there will be several more billion dollars in this calendar year. It makes sense to hitch exchange to the meaningful use requirements because the law says that meaningful use has to include exchange and the swoosh has at stage two a growing emphasis on exchange. The HIT Policy Committee has made its recommendations for stage two and I assume they will drive a good deal of the discussion and the outcome at CMS in the upcoming rule. The question simply is if all that is true, are the stage two recommendations adequate and sufficient? We're obviously going to have already this year an awful lot of providers around the country with these wonderful EHR systems most of whom I assume are not connected to Indiana's exchange or the other exchanges around the country but have got their HER systems

and getting their checks. Most of what they have to do right now only involves what goes on within the office with the exception of electronic prescribing which I think is a rather different case from everything we've been talking about.

MR. WEST: Thank you.

MS. WILLIAMS: Obviously we are in the middle of rulemaking and we cannot comment on the contents. But let me say that we relish your comments. So the minute these come out, we would love every form of debate and discussion remembering that it's only the comments that we actually receive that we can consider. And something to keep in mind is that we get a lot of comments about things people don't like, but remember to comment on the things you do like. I want to use this as an invitation not to necessarily get engaged on this question, but to invite you to please engage with us in what you think about the rule and what you think works and what you think doesn't work and we take extremely seriously CMS at ONC the comments and thoughtful responses that you give when we put out rules.

MS. MARCHIBRODA: We've made it pretty clear in the report that we released that we think we need to go further on exchange. Much of the value that's derived from electronic health record adoption comes from the exchange of information. You have silos of information so we need to go more quickly toward health information exchange systems, EHR technology to be able to receive, display and transmit data using standards and also for those transitions that Claudia talked about to be supported by exchange. I think unlike where we were a couple of years ago, we've got more time for implementation and I think the market likes certainty and a long lead time in order to get ready. Again alignment of incentives was a key component. And we also have all of these wonderful reforms underway, delivery system repayment reform, and these hospitals and physician practices are going to need to exchange data even if they don't

go for meaningful use in having some certainty around standards and infrastructure to enable the flow will be all the better.

SPEAKER: With money driving behavior, another thing to keep in mind is if the 27 percent cut in Part B Medicare reimbursements to physicians doesn't get fixed pretty soon, every day that that doesn't happen more hospitals are buying more physician practices because the reimbursements hospitals get for outpatient services are much higher than that ones that private practices get. So there's sort of an arbitrage opportunity that's created by these incentives right now. One of the answers from an adoption perspective is that's god because the hospital systems adopt and they'll extend records to those hospitals and maybe having a cottage industry isn't the right answer. On the other hand, other people say I like a private doctor's office and I like that one-on-one attention and all that that I'd feel in a bigger system. But already consolidation is being driven by incentives and consolidation will spur some level of adoption.

MR. WEST: We have a question over here.

MR. PANTOS: My name is George Pantos and I'm Director of the Health Care Performance Management Institute which is a nonprofit think tank formed by some companies including Lockheed and IBM. We're looking at ways in which business principles and management technology can be applied to the health care problem focused primarily on cost and on better quality. I noticed in the discussion this morning that a great focus here of the exchange of information that you've been talking about on which I commend you has been focused on the treatment aspect on the interchange of information between providers and the patient. I wanted to add another thought to the discussion which would be to consider the exchange of information at the organizational level which is mentioned in your paper which talks about that as a goal in which the exchange of information is between the payer which is approximately 70 percent of the amount in private-sector coverage and the employee in the workforce context the

exchange of information, and again to add a dimension, focus not on treatment but on prevention. Studies have shown that prevention is a significant factor in the ability to control cost by identifying high risk before it occurs and applying tested wellness, care management and other principles to dealing with the issue of prevention rather than dealing with illnesses after they occur which are very costly and we know that chronic conditions account for some 80 percent of these costs. How do we avoid those chronic conditions as a part of the dialogue? My question really is is the government, and I take it your focus has been on standards and incentives as the government role, but you haven't discussed the linkup between those and what the private sector can be doing to utilize some of the thinking in the government with the incentives that need to be applied so that the business sector can apply the same technology that it uses in performance management which deals with talent management and deals with such things as inventory control. Walmart knows at any particular time where all their inventory is so that's a pretty complex system. Why can't we apply the same principles of business, private-sector technology, to the solution of this very complex health care problem? Thank you.

SPEAKER: That's a great point. A lot of resources exist now for payers to be able to communicate with their subscribers. I will not name my health care organization, but they've been working hard over the past couple of years to try to push information to me and make sure I've got my information and part of the reason I'm going to name them is I'm about to say that it's a little -- I'm a little technologically sophisticated which is okay, but for my family members who are not as sophisticated, it's not necessarily what they need and the way they need it. This came up earlier talking about getting information to people involving patients in their care and getting them the information they need. It is an open question about what's the best information to get people and what way do they need it and when do they need it so that it makes the

biggest difference to them. As for prevention, believe me, I'm with you is where you want to get them before they get sick. It's a research question for us. Right now we have an open funding opportunity saying what information do health care consumers need, when do they need it, where do they need, how do they need it and we're hoping over the next couple of years to get you some good answers to that so that that's a great point.

MR. WEST: Janet?

MS. MARCHIBRODA: Governor John Engler who heads the Business Roundtable is an enormous advocate for consumer access to information electronically and rewarding providers who coordinate care. There are a number of ways that your members can take steps forward. In fact, IBM through its benefit design and reducing copays or eliminating them for preventive care has been very positive. Also again through benefit design, rewarding your employees when they use tracking tools and electronic tools to improve their health and wellness. Then also working with your plans and highlighting those doctors or hospitals that are meaningful users or engaging in coordination of care and engaging with their patients are some quick ways. There is a great opportunity here to leverage the business community. They've been a little quiet here in the last 3 or 4 years and there's so much value for America's employers to invest in some of these tools and in exchange.

MR. WEST: Claudia?

MS. WILLIAMS: There are many rich layers to that discussion that I think Janet has hit on. I want to highlight one particular opportunity. In September we convened a group of many different kinds of folks on national health plans, national professional societies, local exchanges, provider groups, for an effort that we called the Consumer Pledge Effort that is to say how can we make progress this year on getting electronic health information in the hands of patients? There is a very interesting, simple thing that I think health plans could do. I don't know how many of you have heard of the

Blue Button Effort, but it was launched by the VA to give vets a simple way to download their information from the VA system. It's now been adopted by many, many organizations. In fact, we just saw the Federal Employee Health Benefits Plans agreeing to Blue Button employee health information that would be held by health plans across the nation. A simple think would be to say those crazy EOB forms you get on paper and you can't track and think is this right or is this not right? What if those were all electronic and what if you then had a tool to download them let's say to your health account or some other PHR and could combine that with the clinical data you were getting to track whether there are billing errors? We know that there are billing errors I think some estimates show about a quarter of the time or more. So there might be some simple steps we could take over the next year to tackle the things Janet talked about broadly, some simple things you could do to say you can get it today, use it electronically. We need consumers not only to be improving their health but also to be tracking billing errors which often create overpayments and waste in the health care system.

SPEAKER: I find both my health plan and my pharmacy benefits manager are pushing prevention information to me based on what they know about me. I have to be logged in and it has to be me. They have to feel confident that they're talking to me, but I think you'll see that. Also employers have been pushing it. I think Whole Foods has a great talk they give about their incentives for employees and there are a couple of inspirational stories. I think employers have a big role to play in pushing prevention awareness.

MR. WEST: My providers keep pushing prevention information to me and I keep ignoring it.

SPEAKER: Human nature is the other problem.

MR. WEST: We have time just for a couple more questions. We'll go right there on the end.

MR. KOFFLIN: Jeff Kofflin from Marwood Group. Thanks so much for this session. It's been a very interesting discussion and I look forward to reading the report. One question I had in the course of your research is what the breakdown was between HIE systems that were vendor driven and others that were home grown, created home-grown systems. I'm curious as to whether it's even possible to create an HIE absent vendor involvement.

MR. WEST: I think most of them are home grown if I understand the way you mean the term, in the sense that there have been a variety of local and regional HIEs that have been in existence for a number of years so with the state effort to try and impose a little order and connectivity on that, it was building on efforts that already had started in hospitals, health care providers and physician organizations.

MS. MARCHIBRODA: I think we see a little bit of both. For instance, Indiana has built their own, but for most of the other examples here, they've relied on vendors as key partners. So I think we see a little bit of both. I believe in a lot of the ACO driven HIE efforts, they're putting out RFPs and they're hiring folks whether they're a EHR vendor of HIE focused vendor to drive the implementation. So I'd say generally we probably see more examples where there is a key vendor IT partner. Let's remember that Indiana came up with LOINK (?). These guys are at the bleeding edge of a lot of technology development, but I think they're a little bit unique.

MR. WEST: Janet?

MS. WILLIAMS: I was looking for the data points. There was a survey somewhere that tracked both the publicly funded systems and the private-sector systems and this relates to -- question earlier around consolidation I think. We're seeing a bit uptick and although it's not really apparent but it's happening across the country around networks, private networks being built to address this. And I'm hopeful that some of the policy changes will help assure that data flows so one can get to coordinated, high-quality

care without having to merge. I've switched subjects on you, but health IT offers the capability for even small physician practices, less sophisticated systems to achieve many of the attributes of more coordinated accountable care.

MR. WEST: I'll take time for one more question right here on the front row.

MR. GRIS: Bob Gris with the Institute of Social Medicine and Community Health. Most of the discussion has focused on the use of HIT for coordination within a provider system or between a provider and a consumer. But the question that was asked her stimulated a thought in my mind which I have not heard addressed but it is very relevant to bridging gaps between medical care and public health.

That is, what are the implications of using health information technology to clarify inefficiencies in the system at a geographical level, not at a provider level but within the neighborhood or within a geographical level so that the fragmentation which we often criticize but hold onto because it's profitable, but that fragmentation needs to be chipped away at, overcome and overcome in a way that permits a redirection of inefficiencies so that savings let's say in health care could be reallocated to the public health issues that are often associated with preventions. Has there been any thinking of how this kind of information system could be of use in community health planning purposes?

MR. WEST: A great closing question. Janet?

MS. MARCHIBRODA: When we talked to high-performing organizations across the country, particularly one in Minnesota comes to mind and some others. We talk and Darrell's report talks about the use of administrative and clinical information, but more and more just as you say, accessing patient-generated information and even

community health information can help to identify where there are issues through combinations of that data.

There's a wonderful little organization in Austin, Texas that identifies, I can't remember their name, hot spots based on where there are higher levels of obesity and then they correlate it with other community datasets to figure out how do we address this problem and so much of it is outside of the health care system as you mention. I think they ended up adding some classes and even exercise equipment within the schools to address the problem. So that's a wonderful area for research and more movement. And health plans, employers and government have great interest in that.

MR. WEST: Claudia?

MS. WILLIAMS: I was doing some thinking yesterday about -- claims databases which are being pursued in 27 states and trying to do a little blue sky thinking not knowing a lot about how could you open up that as a data source that could be used.

If you think about Todd Park's Community Health Data Initiative where you're taking these incredible stores of information and making them more useful to all kinds of folks whether community health planners or community health centers or crime prevention people to use those data for their own purposes. D.C. -- like 100 data feeds from various data sources. I think we have some real opportunities to link HIE data and some of these -- claims database data but also increasingly to make data feeds of those data available to the public because I think it often won't be just the government planners but frankly the community watchdog group and the diabetes prevention organization and the health plan that want to use those data to analyze and figure out what they're going to do.

I know one of the things is that some of the states are putting our challenges to see if they can create API feeds of HIE data aggregated that might be combined with other public health data sources. I think we're going to see a lot of

innovation in this area if we can make those data more liquid and more available to a broad range of users.

SPEAKER: There is I think a very relevant program at ONC, the POP Health Tool that can be bolted onto EHRs. It's an open source product that ONC sponsors. My colleague Lisa Tudrow here could tell you more about that if you have any interest. It's a freely available tool.

The thing about is it aggregates quality measure data right now currently from stage one. It will grow with the program over time. How many smokers in a given physician's population or organization's population have not received smoking cessation counseling for example? How many patients are obese? And it's designed to remove identifying information so that it can be used for public health purposes without the HIPAA problem. That's one of the things that's going on.

The other thing is there is now a joint public health IT working group that will be meeting at HIMS (?) in Las Vegas in about 2 weeks, so Sef Boldy CDC has been very active with that group, Bill Hacker from Kentucky, a number of state public health and local public health officials participate in that.

We've been able to work with them on thinking about how to do the kinds of things you're saying because there was an interesting forum on Capitol Hill where we talked about how all this investment in EHRs can be leveraged for public health and it won't take very much effort to make that happen so that it's a really good point.

MR. WEST: John, we'll give you the last word. It needs to be brilliant and insightful.

SPEAKER: Brief and brilliant. I think we're on the cusp of a lot of exciting things. I think that health care has tremendous potential to learn from other industries that have done this and combined information in ways that are really kind of cool and you can do really cool things with it that you couldn't do with it before.

I want to pair that with and come back to this fundamental issue of trust that has come up again and again. It's just the same as what I buy at Target versus what my CBC is and what my HIV status is. They're different types of information and we have different expectations around that. So can we go there? Yes. Should we go there? We need to talk about that and we need to come to a shared understanding before we do go there and everybody gets really excited about it.

MR. WEST: A great discussion. I want to thank John, Claudia, Jon and Janet for sharing your thoughts with us. Thank you very much for coming out.

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CERTIFICATE OF NOTARY PUBLIC

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

Carleton J. Anderson, III

(Signature and Seal on File)

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