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Health Information Technology and Its Future: More Than the Money
Alliance for Health Reform and Robert Wood Johnson Foundation
June 20, 2008

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ED HOWARD, J.D.: Alright, why don't we get started, some folks can get seated as we do that. My name is Ed Howard, I want to welcome you on behalf of our Congressional Leaderships, Senator Rockefeller and Senator Collins and our Board of Directors to this Alliance for Health Reform Briefing to explore the promise and potential of health information technology HIT, you are going to hear that. I do not know whether it is an acronym when you pronounce it like that or not. But it certainly is easier to say.

We know Congress has a strong interest, a bipartisan interest in HIT and we may get legislation yet this year on this topic. We know that Presidential candidates in both parties, CHIT is a tool with the potential to save lives, to improve efficiency, increase the overall quality of our health care delivery system. It may even, and this is the source of some contention save some money.

Today we look at the state of HIT in America, particularly from the standpoint of physicians. The last time you visited a doctor, did somebody hand you a clipboard and a ballpoint, it happened to me. They ask you to fill out a form again. We are going to hear the latest research about HIT use by doctors and why it may not be as far along as we might wish,

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and we will look at the potential benefits of moving forward on IT and what they really might bring.

Our partner in today's program is the Robert Wood Johnson Foundation, America's largest philanthropy devoted to health and health care. They are certainly a leader in pursuing quality improvements. They among other things supported the research by Sara Rosenbaum and others that you find in your packets today in which we hope to incorporate into today's discussion.

We are happy to have with us today, Dr. John Lumpkin who is both Senior Vice President at the Foundation and Director of its health care group. John has starred in a real life version of ER. He is a member of the American College of Emergency Physicians and he was the long time Director of the Illinois Department of Health and we are pleased to have him with us today. John.

JOHN LUMPKIN: Thank you and good afternoon. I noticed as I was coming in this morning on the train from Princeton, New Jersey, two items in the newspaper. The first is that the CDC just issued a report that two-thirds of the people who have asthma in this country have not gotten a vaccine for influenza.

For people who have influenza getting a vaccine is an important preventive component, because they are much more susceptible to pneumonia if they get influenza and then risk of death.

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The second article I saw was that the State of Massachusetts and the Massachusetts Blue Cross and Blue Shield have announced that they will not pay for medical errors, following the lead of the Centers for Medicare and Medicaid Services. So that means that they will no longer pay for long sided surgery or other kinds of things where, in many ways the incentives have always been wrong for institutions on which way they would go in trying to improve quality.

But both of these stories relate to the core issues that we are going to be discussing today in the role of health information technology. The role of health information technology as part of our effort to improve overall quality of health care that is delivered in this country. As you may remember from a study that we funded done by Beth McGlynn in 2003 where we looked at case records. We find that the care that should be given is only given about half of the time.

Now when we look at the measure that two-thirds of the people who have asthma and not getting the immunization, this particular problem really lends itself to health information technology. A patient with asthma comes in to a physician's office, a very brief visit because everything is fine.

In fact the majority of people who did not get the vaccines were people who did not have their asthma kick up, and they get ready to leave and system says, oh by the way doctor

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this patient has not had their immunization for influenza, and another preventive treatment is given.

However, when you look at the second story which is what happened in Massachusetts, it is hard to imagine health information technology helping out in situation where a surgeon removes the wrong leg. There, really kind of basic technologies of putting markers on the leg with pretty indelible ink, putting a bracelet around the ankle, checking and rechecking and double checking and triple checking. These are all systematic changes that have to be made.

And I think the contrast between these two news articles indicates both the promise and the limitations of health information technology. Health information technology is one of the components of improving quality. And that is why at the Foundation we have just announced, and I hope many of you have heard a major commitment for quality based in regional portions of the country, in 14 regions.

We are committing \$300 million over five years to prove that by communities working together to do public reporting of quality and price information, and use that to adopt quality improvement of which health information technology is a key, technology will dramatically improve quality across the country.

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We believe that this will have a significant impact on quality in these 14 communities and demonstrate to the country that we can actually have dramatic improvement in quality.

And so, I would like to give my appreciation to the Alliance for Health Care Reform for putting on this Forum, it is a very important topic and one that is very timely for any activity relating to improving quality in health care. Ed.

ED HOWARD, J.D.: Thank you, John. We have a very impressive lineup of speakers for you today, so we are going to get right to it. And if you would invoke somewhat low level technology by turning off your pagers and cell phones now so that we will not interrupt either your listening or the speaking of the speakers it would be much appreciated.

At the appropriate time we have some microphones, you are going to be able to be part of the conversation. There are green question cards that you can fill out to get the question up here. And you will eventually I know fill out an evaluation form that is in your materials to help us improve these programs.

Our first speaker is Sara Rosenbaum who chairs the Department of Health Policy at George Washington University School of Public Health and Health Services. Sara is one of the most respected health policy analyst in the country.

And we have been lucky to have her grace a number of programs over the years, but we have never had her be two

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speakers on the same program as we are today. First, we are going to ask her to set the context with the discussion by giving us a brief overview of quality of care in the United States and HIT's role in improving quality.

And I should say she has two sets of slides in your materials, so the one that starts Health Care Quality Major Issues is the one you want to follow along with. Sara thanks for being with us.

SARA ROSENBAUM: Good afternoon, I am really happy to be here. I am really happy to be here twice and my first set of slides is essential a context setting overview for everybody to get the panel off to a start.

And the first question of course is what is propelling the discussion right now about health information technology and its role as Dr. Lumpkin pointed out in health care quality improvement. And as Dr. Lumpkin indicated, what has happened over the past decade is an even more intense focus on the problem of health care quality.

This is an issue that has actually been a focus of federal policy making for nearly four decades. It sort of come in fits and starts and I think what distinguishes this period that we are in from what has come before is the intensity of it and the very high level of interest and finally putting into place the kinds of reforms and systems and changes in financing

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organization process of care and other restructuring steps that will change the bottom line.

And of course, as we know we had data on patient safety problems, we have had studies that have pointed to the low international performance in the U.S. compared to other nations. We have had evidence of misalignment of financial barriers in relation to known and affective treatment that is of course, the McGlynn study. And I should note that that study in pointing to the failure to get recommended treatment has been performed not only for adults, but for children.

If anything I think children scored even worse. Failure to rapidly and equitably defuse information related to promising interventions, disparities in health care that cannot be explained by clinical evidence coverage, or lack of knowledge about effective treatments. And of course, a huge problem which is much to discuss which is the kind of excess costs that the health system incurs when people do not get effective care.

As Dr. Lumpkin pointed out, health information technology should be viewed as a tool. It is not an end in itself. Like any form of information technology, it is an enabling tool, although quite a transformative tool and what is a great focus to people is its role in error reduction potentially, particularly around E-Prescribing and decision

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support, its ability to enhance access to timely information regarding choices of clinical treatment.

The fact that health information technology may give patients better access to treatment information, the ability using health information technology to look at inputs and outcomes at a clinical level, at a patient level, at a system level and at a societal level. The public health implications of information technology are every bit as important as the clinical implications.

And so all of these factors go into raising the interest in health information technology. So then the question becomes well what is health information technology and I will delve into this a little bit more when I take you through the findings from the paper that was published yesterday.

But it is essentially a set of technologies that have certain core functionalities that are all tied to an electronic health record which has been defined now in federal law as a repository of consumer health status information, in a computer process able form and used for diagnosis and treatment.

And there are several key elements in what are thought of as the core functionalities. Health information and data, results management, order entry and support and decision support.

ED HOWARD, J.D.: That is terrific, thank you Sara.

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Now we are going to hear from Peter Orszag, who is the Director of the Congressional Budget Office, which he is rapidly transforming into the Congressional Health Budget Office.

He has been CBO Director since January of last year. Came to that post from Brookings where he ran several programs, including the Hamilton Project. He is an economist of course, and has more than a passing interest in HIT and other tools for getting value for our health care spending, and we are very pleased to have you with us again Peter.

PETER ORSZAG: Alright, thank you. I am going to start by walking very quickly through the context which I will do in the few slides and then focus specifically on health IT.

As is now I hope extraordinarily well known and is as shown in the first slide health care costs are the key to our fiscal future.

Alright, health care costs are the key to our fiscal future. If you look over the past several decades, the primary driver of rising health care costs have involved the adoption and diffusion of technology which has on average improved health outcomes.

But then gets applied in lots of low and perhaps even negative value settings and perhaps our key challenges had a continued it encourage innovation for the high value

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applications and weed out the low value or negative value applications that drive up costs without improving quality.

Most of the projected growth in our federal health programs comes from those cost increases per beneficiary, very little of it comes from the pure affect of demographics. As is shown here the dark blue part of that curve is the pure affects of demographics.

Health care is perhaps in my opinion the least efficient sector of our economy with very substantial variation in cost across different parts of the country as demonstrated by this map that cannot be explained by anything that we try to throw into the analysis. Even at our top medical centers there is very substantial cost.

For example, last six months of life at UCLA Medical, for Medicare beneficiaries costs an average of \$50,000 at the Mayo Clinic, it costs \$26,000 and we have no idea what we are getting in exchange for this additional money.

I believe actually on that that there may well be as much as 30-percent of the health care services delivered in the United States that do not improve health outcomes. 30-percent of health care is \$700 billion a year that we spend on MRI's and hospitalizations and doctors visits and all sorts of other things that do not improve health outcomes.

I cannot think of a single opportunity in any other sector that comes even close to that kind of inefficiency. And

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it is at the core of our long-term fiscal problem, it is reducing take home pay for workers to a degree that I think is underappreciated, and unnecessarily high.

It is involving an inefficient use of current payroll taxes today, and it is having lots of unexpected effects like driving up tuition at public universities because state government support for Medicaid is crowding out state government support for higher education.

So how does health IT fit into all of that? There is certainly promise and as the first part of this slide suggests there are a variety of applications of health IT that may help us capture that \$700 billion opportunity. For example, by reducing duplicative tests and eliminating medical transcription errors which maybe more of a quality issue than a cost issue, and a variety of other steps.

But, I think the kicker and what our recent report on the topic suggested is, do not look at health IT by itself as a panacea that is just going to get you that \$700 billion. And I think for some reason, health IT has become viewed as being exactly that.

The results of health IT will vary significantly depending on the context in which the health IT system is put into place and whether other parts of the system are aligned in order to use what is coming out of the health IT structure.

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In particular, in more integrated systems, we think the evidence suggests that health IT has helped to improve quality and reduce costs. But if you just plop a health IT system down in the middle of a fragmented system, with financial incentives that encourage more care rather than better care, and without a system for using the information that is coming out of the health IT structure to improve quality you are not going to get very much.

The analogy that Laura Adams who runs the Rhode Island Quality Institute uses is, we are all sitting around wondering why we do not have buttered toast and some people say the reason that we do not have buttered toast is we need to plug the toaster into the wall.

And other people say we need to go to the store and buy the bread, and other people say we need to take the bread and put into the little hole in the toaster, and other people say you have to press the button down, and other people say once the toast comes out you got to put the butter on top of the toast.

And of course, let us play this analogy out, health IT is like plugging the toaster into the wall. That is great, that is necessary, but it is not sufficient. You just plug the toaster into the wall the toast is not going to be buttered, especially if you have not even bought the bread.

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If we just plop a health IT system down into a system with distorted financial incentives and no way of processing the information efficiently, you are not going to have magic happen, and that was the basic point of our analysis.

Perhaps the most promising systemic potential from health IT, which is to say, let us say that we are doing that whole the end to end, make the butter toast process. Health IT could play a huge role in helping us capture that \$700 billion opportunity because I believe that a key driver or key reason why those kinds of inefficiencies exists is that we do far too little measurement of what works and what does not in health care.

Far too much of the medical care delivered in the United States is not backed by any specific evidence that it works better than anything else it is just the way we do it here. And then we have a set of financial incentives that encourage more care rather than better care.

And in order to change that we need to do a lot more testing of specifically head to head comparisons of what works and what does not, and then we need to pay for the stuff that works, and not pay so much for the stuff that does not. And essential to that will be a lot more data to allow us to do the analysis on what works and what does not.

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Right now we have a lot of insurance claims data and that is great in terms of telling us what is done to patients. Not so great on telling us what the result is.

Because you do not have the outcome, you do not have any of the biomarkers or you do not have any of the blood pressure readings or anything else that would allow you to be evaluating the outcomes of your input which we do have from the insurance claims information.

And so I think that perhaps the largest return from health IT would be if we had a broader system of health IT and it was used by a comparative effectiveness research entity or entities, to provide the data for that kind of analysis, and then we had financial incentives to pay for the higher value care rather than the lower value care. That is perhaps the most auspicious approach in my mind to getting us the buttered toast. But health IT by itself does not do it.

Then why is it that there have been other studies, and I am going to just address this directly, that have suggested huge savings and that have gotten pretty much every politician I know unbelievably excited about health IT, and I am not saying you should not be excited by health IT, I am just saying you need to calibrate your excitement in a context of meeting other things also.

In particular, I will focus on a study that the RAND Corporation has done, suggesting \$80 billion a year in net

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annual savings that is potentially attributable to health information technology. I think in your packet you have a letter that RAND set to me about our analysis and a response from me on my blog to their letter.

I do not think this is very complicated. They studied a much different question than the one that is relevant for policy makers. The relevant question for policy makers is, what is the likely affect of a broader set of health IT systems, not what is the maximum potential impact if you did everything else right.

The relevant question, if all you are doing is plugging the toaster in, is what do you get from plugging the toaster in. It is not what is the best output you can possibly get in terms of having bought the toast, and the butter and everything else. The RAND study examined the potential impact, not the likely impact, and that is a much different question.

As part of that, the RAND researchers did not incorporate even peer reviewed studies that failed to show net cost reductions. They were simply excluded and I do not think it takes a Ph.D in Economics to figure out that that probably is not the best way of obtaining an unbiased estimate of the likely impact.

And then of course, for our purposes we also need to evaluate what the impact of a given penetration rate for health IT is, relative to the impact if you did not intervene. And so

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we have to take into account our base line and the fact that health IT diffusion is likely to increase to some degree, even without a policy intervention.

So let me then get to what the policy interventions are that could get people to plug their toasters in. One approach is to give a little tax credit. We say we will pay you \$5 if you plug your toaster in.

What that will do if you give a tax credit for health IT adoption is, especially because policy makers tend to want to keep the costs low, they tend to be relatively small subsidies and all that you are doing then is someone, a provider or a doctor who is close to adopting any way voluntarily you push him over the line.

But there are a lot of people who are not close to adopting and there are a lot of people who would have adopted even if you did not give them a tax credit and you are buying out their base.

So, in other words there are lots of people if you offered them \$3 to plug in their toaster would not do it, and there are a lot of people who would plug in their toaster in anyway over time and then you are paying \$3 in any efficient way because you are not actually changing what they would have done.

An alternative which came up in the E-Prescribing Legislation, are proposals that are under discussion today, and

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that I think would get health IT almost adopted very quickly is to say, you have X years to adopt a health IT system that meets the following requirements, and after X years if you do not have that in place, you are not going to be paid under Medicare. Guess what! I think that we would get nearly universal plugging in of the toasters under that kind of approach.

And I would note that CBO did score savings in the finance committee legislation that was recently the subject of consideration, to E-Prescribing, both because it had penalties for physicians who did not adopt, and therefore there were some Part B savings, and because we believe that E-Prescribing would drive increased take up of generic drugs and there were some Part D savings, and then that budget impact over ten years from either the Democratic or Republican versions of that were somewhere between \$2 to 2.5 billion.

So, there are health IT savings that are possible in limited applications, but in terms of broad scale savings, one should not expect that a small subsidy which is the way that most of the policy proposals are framed will generate universal adoption of health IT, nor should one assume that if all you did was succeed in getting universal health IT and did not do anything else, that you are going to magically bend the health care cost curve. Thank you very much. [Applause]

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ED HOWARD, J.D.: Thank you, Peter. An unusual and warranted response I should say. Now we are going to recall to the stand, Sara Rosenbaum of GW, who is one of the co-authors of the major study released this week that you have heard about and that measures the extent to which American physicians are adopting HIT in their practices.

The executive summary with its pretty cover is in your packets, and as I mentioned a separate set of slides that Sara has for that purpose. You want to go ahead?

SARA ROSENBAUM: So, it is my job to explain where doctors are in relation to toast. [Laughter] And to do that, we actually have produced a study for you. The principles authors of the study, Kate Darosh [misspelled?] and Tim Ferris from Harvard are here today with us. And I was fortunate enough to be a co-author with them. And I hasten to underscore that if technical questions come up in particular, related to aspects of the study, questions about the study, I will strongly encourage people to talk to Kate and Tim.

But it is my job to sort of give you the summary overview of the study and its findings and bring it back around to the issues that Peter Orszag laid out.

So this is a study that was undertaken for the Secretary of Health and Human Services, the George Washington University and Harvard through the Mass General Hospital Institute for Health Policy have been collaborators for several

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years now on a major project for the Secretary of Health and Human Services with additional support from the Robert Wood Johnson Foundation to examine the adoption of technology by physicians.

And the first year of our work was spent essentially putting together the framework for the survey research that has been undertaken and then this represents now the first major survey of physicians to examine the actual state of adoption.

So, the study was designed to answer three questions. The first being, what proportion of U.S. physicians currently have electronic health records available to them. The second being how satisfied are physicians with their electronic health records, and the third being, what impact if any do physicians think electronic health records have on their practice.

The methods used for this study and of course, the study was published yesterday in the *New England Journal of Medicine*, but the full study and full findings from the report of the scan of HIT adoption today will be available shortly through the Robert Wood Johnson Foundation and Harvard and GW on July 2nd. So, what you saw yesterday was essentially an article pulled from a much broader study.

So, the methods used to do this study were of course, to first, as I mentioned before to find the key functions of an electronic health record using both evidence based studies and consultation with experts. And for this definition we

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developed essentially two sub definitions. One being a fully functionally system, and that is a system that records patients information and demographics, allows for results viewing in management, allows for the management of order entry, including E-Prescribing and allows for clinical decision support.

A basic system is something that has the functionalities I just mentioned, except for certain order entry and certain clinical decision support capabilities. The survey was conducted over the summer, fall and early winter of 2007-2008.

It was a representative sample of physicians drawn from the AMA master file, with a 61-percent response rates, and a number of key characteristics were considered in relation to EHR use including gender, ethnicity, race, number of years in practice and specialty, practice size, setting, location and regions. And of course the respondent's characteristics mirror the characteristics of all eligible physicians.

So moving quickly to the findings themselves. As you can see despite the delicious nature of buttered toast, [laughter] we see that 83-percent of physicians have absolutely no functional EHR as of the time of this study. 13-percent have a basic functioning EHR, and 4-percent have what we defined as a fully functional EHR.

Of the 83-percent who report no functional EHR, 17-percent had purchased the system but had not plugged it in yet.

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The toaster was not plugged in and 26-percent were thinking about plugging in the toaster sometime within the next two years.

Paradoxically, at the same time that you see this wide spread non use of EHR's, what you see is that regardless of whether people reported that they were using a basically functioning system or a fully functioning system, those who were using the systems really felt that the systems were having a positive impact on their practice.

So there is just this tremendous paradox underscored by the study. And you can see, that majorities of physicians in many cases, overwhelming majorities of physicians felt that the system positively affected the quality of their clinical decisions, positively affected the quality of their communication with other providers, positively affected the quality of communication with patients, although here there were some important differences depending on whether you were fully functional or basically functional and many reported a positive effect on prescribing.

Similarly, you can see overwhelmingly positive response in terms of timely access to medical records, avoiding of medication errors. People with fully functional systems, it is certain by a great majority and the majority of those with basic systems felt that the systems were having a positive impact on their ability to deliver evidenced based care, and

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similar responses on the delivery of chronic illness care that met evidence based guidelines.

So, this strong positive response, and yet at the same time a very small number of physicians who were even basically functional as of the winter of 2008. In terms of physician satisfaction, physicians again who were using the system were very satisfied, 80-percent or higher felt their systems were reliable they felt that they had ease when using the systems. They had high overall satisfaction with the systems. In other words, the adopters, the people who plugged themselves in and who were using their systems were happy that they had adopted.

At the same time, even both physicians who had adopted any system and physicians who had not adopted any system, reported significant barriers to adoption. So, it is a situation where adoption was clearly not pain free. There was a lot of bumps along the road in adoption which probably helps explain why there are so many non adopters.

So, for example, you can say that a significant proportion of both adopters and non adopters felt that the lack of capital was a problem, particularly for non adopters. You can also say that even adopters, a good number were uncertain about whether they were really getting a good business return, a majority, a slight majority of non adopters similar response patterns for barriers related to finding a system that met their needs, concerns about obsolescence again lower concerns

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in the case of adopters, higher concerns in the case of non adopters.

Significant concerns among both adopters and non adopters on their capacity to implement their systems, concerns, almost equal concerns actually about loss of productivity and just to sort of a general inherit, I do not want to plug in the toaster concern, just physician resistance as a concern.

I think the only lawyer among the research group, I was particularly interested in the question of legal barriers, and so we added a couple of questions about legal barriers. And you can see that non adopters have more legal issues on their minds.

They are concerned about the legality of hospital donated electronic health records, recall of course that regulations have now been promulgated in response to the Medicare Modernization Act trying to clarify legality, there are still residual concerns. People are concerned about inappropriate disclosures, about illegal tampering.

And most interestingly, and something that I think actually weighs on the mind of many physicians shows up as a pretty significant concern here is, what are my liabilities when in fact all of these data are much more visible. This is something that I think is not actually received the attention it ought to, but sort of weighs as a concern.

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Finally, what would encourage physicians to adopt?

Here they certainly do want to get a reward for plugging in their toaster. They just do not want to be told that they are not going to get any toast if they do not plug in their toaster.

They want a monetary incentive, they want additional payments. They certainly want a legally free safety zone in which to operate. They want publish certification standards, they need more clarity in that respect, and they would like, and this is where I think that the 15-percent figure before is way to low. They would like it if it were clearer that actually the liabilities from not adopting were higher than the liabilities flowing from adoption. So, with that I will stop.

ED HOWARD, J.D.: Terrific, thank you Sara. Finally we hear from Janet Wright. Dr. Janet Wright is the Senior Vice President for Science and Quality at the American College of Cardiologists. The Cardiologists are among the leaders in their use of electronic health records, and in using the data in them to improve the quality of care to their patients.

Dr. Wright also until last month was herself a full time practitioner. So, she brings both issue expertise and on the ground experience to her presentation today. Janet, thank you for being with us.

JANET WRIGHT: Thank you Ed. I would like to turn this discussion from butter to treadmills. You can plug in a

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treadmill just like you can a toaster. [Laughter] And the analogy I think fits, I have been playing with it since we started this Peter.

But it is a pleasure to be here today. I think I am suppose to represent, oh I almost said the street. I do not mean the street. I mean ground level cardiology and I also think I am representing an organization that is trying to get health IT out into hands of its members and convince them of the benefits, so I come to you with a bias.

I am going to talk about the challenges, the lessons and some elements of hope about adoption at the grassroots level. I think I actually got invited to come here because of a statistic that our CEO, Jack Lewin has been talking about in public forums.

And that is that 53-percent of cardiologists have EMR's. I did a little searching once I got grounded at ACC and I have to tell you that we have a little false advertising, I should at least explain it. 53-percent of our practices probably are not electronic. We ask this question in a very open ended way, did not define an electronic health record. And so, I think we are probably, that is an over generous statement.

But I think there are reasons why ACC could join this forum and that is the following. We have a fairly broad experience in registries in hospitals. As you may know we have

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registries for acute coronary events, for diagnostic catheterizations and angioplasty, as well as defibrillators and Carota disease.

In the oldest of the registries, which is not about 10 years old, we have over seven million patient records. So it is evidenced that we are committed to collecting data and to using data to help us guide decision making.

Secondly, we have experience in a program called, Guidelines Applied in Practice. Those four programs listed in below there are examples of taking well founded scientific evidence, converting it to the guidelines and then applying those guidelines out in a practice setting.

With good results, especially in the GAP program in Michigan which actually showed a decrease in mortality at 30 days in a year with the adoption of a discharge contract between the patient and the discharging clinician.

The other initiative that has gotten a fair amount of play is the Door-to-Balloon Time trying to drop those numbers of minutes from the onset of chest pain to the delivery of revascularization care. Over 1,000 hospitals around the world, predominantly in the U.S. participated. So these things show that we are trying to do the right thing, and we are trying to apply the science at the ground level.

What we are embarking upon now is an adventure that we are calling Improving Continuous Cardiac Care. And this is a

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recognition that although we have made some gains with the acute management, we have a lot of learning and a lot of work to do in ambulatory environment with chronic medical conditions, many of which are cardiac.

And many of which are costly, not just because of the disability invoked in the patient, but also in the number of tests that are performed and then the communication or lack thereof between the cardiologist and all the other members in that patient's team. Those being primary care physicians, nurses, family members.

So the argue behind this ambulatory registry is that we are looking at a patients progress over time. We are providing both physician and practice level data back to those practices in physicians. And it is based in adherence to well grounded science, those being the performance measures.

And for those of you who do not know, performance measures are those things extracted from the guidelines that a clinician absolutely must do in a patient for whom that is indicated. And then this platform or registry is the vehicle for taking performance measurement as an activity and actually making it improve quality.

So, the philosophy of the program is here, again it is about performance measurement. Giving that feedback promptly to the clinicians involved, making the care more efficient and providing coordination across sites and sources of care.

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I am just going to buzz through a couple of slides about the program and these are the conditions that will eventually be incorporated in the registry. We are starting with the granddaddy of them all, I know we are all mourning still Tim Russert's death, and every time this happens, and it happens everyday there are big holes in families as a result of these deaths, and we have got to stop, we have got to get this care better delivered.

So, we are making the pitch to practices that this is a tool we are offering them to help improve their care because of our experience in the hospital setting, we are a trusted source. All of this looks great, does it not? But getting into this we found tremendous numbers of hurdles and obstacles into making this vision a reality.

This is an example of the feedback we will give to practices, we also intend to give feedback to patients who report or call Cardio Smart allowing them to track their own progress. This is to really taking disease management to the level of electronic connection with a patient at home. That IX you are probably familiar with, stands for information therapy, a personalized and visualized prescription of information with every health encounter. And it takes a lot of partners to make this happen.

As I said this is kind of a diagram of how we intend for it to work. A patient's visit generates data, which is

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submitted to the registry reported on an annual basis to those who need access to that information. There is an exchange there of clinical and administrative data, and then it reports back to the practice as well as to the patient.

As I said, all of this looks great, but we have encountered a huge number of hurdles and challenges. I am not going to dwell on all of these, but I want to hit a few. In the survey I showed you at the beginning, it looked like we had 53-percent adoption. In the practices who have volunteered to join this program at this point we are seeing actually a higher incidence of that. And of course, we are dealing with a rarified group who are organized enough to recognize the value of this registry and participate early on.

So, here it looks like 63-percent have some sort of electronic medical record. And for those who do not we are providing access to this web based data collection tool called DocSite. My point here is that we are trying to meet practices where they are. One size does not fit all, as Peter pointed out, so we are trying to meet them where they are and provide for them what they need.

Again, compared to hospital based registries, this ambulatory arena is a completely new animal to us and represents these challenges from an IT standpoint. My only point in this slide is that vendors have multiple software

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applications and guess what? One does not talk to the other.

There is not yet uniformity.

There are huge issues in terms of work flow in the practice and we are learning about those issues. I was delighted to hear in a report a month ago from Peter that we are beginning to understand more about how people make decisions and the importance of understanding behavioral aspects of care.

So the lessons we have learned so far are that the platforms as we approach practices have to be flexible. We have to take them where they are, and we have to be able to update information quickly for that electronic platform to remain relevant.

We certainly have learned the lesson over and over again that when you give a clinician immediate feedback, and you create a decision support system that does not let them exit the system without completing the activity, the adherence to guidelines goes up immediately.

As I mentioned here the incentives are meeting the practice where they are and incorporating input from the rest of the stakeholders in health care, meaning health plans. The federal government can play a huge role, we have advocated participation and PQRI, but probably the most profound mover we saw in our registries was that when CMS mandated participation in the defibrillator registry, we had suddenly 100-percent

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participation. And so we realize the power of the federal government and state governments as well. And AVIM of course, has lots to say about driving people toward the type of care they should deliver.

So, what we found is that establishing this ambulatory registry for us has been transformational. Multiple perspectives, whether we are talking about getting practices in the habit of measuring their performance and reviewing that performance, demonstrating the benefits of health IT at the practice level, improving the doctor and the patient, physician relationship and communication, as well as improving the quality at the practice level.

The other thing about data is that we have learned multiple forms of data collection are probably the most appropriate at this point. We are encouraging people to develop these web base tools, but we are still accepting paper if that is what they have.

And the hope part of this is that this registry actually launched the latter part of October. We started collecting data in May. And now we are up to about 340 offices at last count, and the enthusiasm for this activity has sort of stunned us. We actually started this as a pilot, but have quickly developed plans to make it into a program and to achieve the kind of dissemination of this that we think will actually improve care. Thank you.

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ED HOWARD, J.D.: Terrific, thank you very much Janet.

Now I encourage you to use some of the microphones. We have them left, center and right so you can take your ideological position with you. And the green question cards in your packets you can fill out and hold them up and somebody will pluck them from your fingers and bring them forward.

And Janet, let me ask you whether the number is 53-percent or something less. Why is it four times higher or three times higher than the average that the researchers found in the study Sara was describing?

JANET WRIGHT: I think probably multiple factors there. One is that it is highly likely that the survey we did that got us the 53-percent we were corresponding with practice administrators who tend to be in the medium and larger practices. But I think cardiology perhaps, compared to primary care those offices have greater resources and can perhaps invest earlier. And then there is the corky thing about cardiologist, we are sort of techie people, we like techno stuff, so we are probably skewed toward adopting a little bit earlier.

ED HOWARD, J.D.: Somebody has just pointed out using a question a card that your presentation used some slides that we were not able to get into the packets, so those slides as well as the ones that you see will be posted on our website by the

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end of the day, as will all of the materials that you find in the packets as well.

I have got a question that was submitted in advance that anybody who would like to can take a crack at. And it is something that Janet touched on in her presentation.

What do you consider the biggest barriers to HIT adoption and what can HHS or any other government agency do to further stimulate its adoption? And let me stop there. There is a second question. Anybody? Sara.

SARA ROSENBAUM: In terms of the barriers in our study, one of the slides that I put up that you would have in your packet, show that the barriers that we were able to identify through the survey concerned money, standards and legal. Those are big barriers.

Is it going to be worth it to me monetarily, either not be a drag on my system or am I actually affirmatively going to get some financial benefit from adopting? Am I going to be able to adopt a system that is useful where I do not concerns that I have just wasted a lot of money adopting something that is obsolete or non compliant.

And finally, is this going to bring me more legal grief than legal relief? I mean those seem to be three big questions.

JANET WRIGHT: My practice that I recently left is not a electronic in fact, we laughed at our IT's and abacus we use

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for calculating things, but frankly there is a lot of insecurity in the medical environment these days because of issues of reimbursement, concerns over inappropriate use of technologies that have actually help keep practices afloat.

And so the idea of investing a huge amount of money and a lot of time, and at least the word on the street is that it takes a year to really get comfortable with your electronic medical system. In addition to which, many doctors are not experts in terms of electronics.

And so understanding which product they should buy and how it should be best utilized it is a foreign land. They much rather go and do their work than be embarking upon something that could be risky.

PETER ORSZAG: Could I just come back and say again, I think a significant amount of the return that we as a nation would obtain from health information technology on a broad scale basis is never going to flow to the individual physician or the individual hospital.

And so therefore, the theory of the case that you are going to on a voluntary basis encourage sufficient adoption by individual hospitals and physicians would likely require a very significant financial incentive in order to overcome that basic cost benefit disjuncture.

And I would just come back to saying that obviously without embracing any particular policy path, that if the

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objective were to get to universal adoption faster, I think there are clearly some policies that would get you there pretty rapidly, like the one I mentioned in my own talk.

ED HOWARD, J.D.: Question, I guess initially addressed to Sara. Did the GW/Harvard study look at the uptake of disease registries which can improve care, quality without requiring an electronic health record? And I would appreciate if somebody would spend 30 seconds explaining what a registry is to those of us who are not steeped in this.

SARA ROSENBAUM: Well, I assume that we did not look at disease registries as their own function. What we looked at here was an EAHR with the functionalities that are outlined in the study. The question of what is a disease registry is either an electronic or a hand written aggregation of patient level data related to a specific condition or indicator.

Back in the early 90s I worked for two pretty much slow going years on the notion of an immunization registry and much of that work was not done in the context of electronic adoption. The issue was having a population wide aggregated system that would allow a state health agency to determine the extent of immunization among children. So, it has a public health uses as well as potentially individual patient uses.

ED HOWARD, J.D.: John.

JOHN LUMPKIN: Let me refine that answer a little bit. Because one of the things that I get engaged in is as I co-

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chair with Julie Gerberging, the population health's work group of the America's Health Information Community headed up by Secretary Leavitt.

And our work group struggled with this issue of registries because it is a term that has two definitions. One definition is the public health definition which is a surveillance tool to monitor disease. And the second definition is used by health plans in other entities as a way to track and provide case management to patients who have chronic disease.

They have found that if you assign an individual or a system to monitor somebody with asthma or diabetes, and make sure that they get the preventive treatment, that their diabetes is managed or their asthma is managed that you have much better outcomes and the costs are lower. And using an electronic form to drive the function of that registry is a term that is often used. So sometimes you will find the same term having two meanings.

ED HOWARD, J.D.: And it was the latter meaning that you were describing in the registry that the ACC is operating? Thank you. Yes, you want to identify yourself, please.

GARY KRISTOFFERSON: Gary Kristofferson [misspelled?], former DOD [inaudible] transformation and early IT adoption. VA we're doing [inaudible] level transformation, big deal. IT adoption and renovation and rebuilding and new design and CMS

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where, she gets a nice word, but we do not know what to do with it kind of thing, which is what Peter is kind of eluding to as well.

I mean what you come out of here is well first a couple of things. First place is again, we suggest we revise the toaster analogy a little bit. I mean we have better bread and do not put butter on it in terms of that.

By the way, clearly what you see out there now is just plugging the toaster in does not mean very much. The real trouble [inaudible] in the next stage which is the effective use. So, yes you have to have the toaster plugged in, but if you do not use it well who cares in terms of that.

The third stage that goes along with that is really the issue of the quality improvement, which is what you do today, do it better. With better outcomes, etc., and so forth. But the fourth part of the transformation is really saying, I do not think they necessarily do a lot of the right stuff today period.

I mean we need to figure out what we ought to be doing better, and that is more primary care, care coordination, etc., those kinds of things. What is really true from the experience across those organizations and lot of other people as well is that health IT is a great screwdriver when it is used and used well and built in those transformational processes. Without the transformational processes very little will be gained.

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PETER ORSZAG: Amen! By the way I guess I will adopt the analogies so that we will have whole wheat toast with a high protein spread on top of it. [laughter]

JANET WRIGHT: Still work for the treadmill.
[Laughter] I think we need it.

ED HOWARD, J.D.: Yes sir.

ROB NELB: Alright, great. My name is Rob Nelb [misspelled] I am an intern this summer with the Senate Special Committee on Aging.

My question I wanted to ask what we could learn from electronic records in banking and what lessons we can learn to apply to health. It seems to me that an ATM you can go anywhere in the country, anywhere in the world and access your information. Why can we not do the same in health?

ED HOWARD, J.D.: Yes, why can we not? [laughter]

JANET WRIGHT: I completely agree with you. I am an inpatient traveler, I do not actually like to talk to human being when I travel, I like to do all of that electronically and a lot of the medical system I think I would like to access the same way. Appointments, prescriptions, getting my data, it is the way it should be.

There are some sticky issues around patient privacy, security that are also important in banking. I do not think they are insurmountable but they are going to take a lot of thoughtful people. And I know that people are working on this

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but, that is one of the things that has made it I think a little bit slower.

ED HOWARD, J.D.: Let me just ask, go ahead –

PETER ORSZAG: Just very briefly, in financial services and in other sectors there were incentives for the large banks in particular, to move towards more efficient processing of the information. So with regard to ATM's they save money on their bank tellers. Consumers clearly were willing to pay \$2 or whatever it is fees for access to ATM's for the convenience.

The puzzle is why are those incentives and what is the structure of health insurance in the health sector that differs that is impeding the kind of advances that we would all. I would love for given the kind of life I lead to, for whenever I see a doctor and not have to fill out another form. Just sitting there in the office which is highly annoying I think to a lot of people, and to be able to access things more electronically.

There is some progress being made on the personal side of the health record divide even outside of more institution based records, but we clearly not where we could be and I think a big reason has to do with incentives that are facing major providers that are different than they were in financial services.

ED HOWARD, J.D.: And can I just ask how big a role do you think that the complexity of the information itself plays

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in relative to a bank balance, having to encapsulate huge numbers of data on an electronic record? John.

JOHN LUMPKIN: That has been looked at a lot and trying to deal with the analogy between bank records, a single bank transaction and when you use your ATM compared to a simple electronic health record, or magnitudes difference, so there is an increase degree of complexity.

But on the other hand you have to recognize that the level of sophistication of technology is such that I have a digital watch. There is more information technology in my watch than exist in the whole world before 1960. So we keep on increasing the ability of the system to do it technology can hand it. It is not a technology issue. It is an issue of systems, it is an issue of standards and agreement and political will.

ED HOWARD, J.D.: Yes, go ahead, Janet.

JANET WRIGHT: I completely agree with you, and I want to go back to the point that Peter made because it is a fundamental point.

In a practice, in this current messed up reimbursement system we get paid for seeing a patient in the office. Whether or not an office visit is what the patient needs. Does the patient need to stay in his or her home and have either a phone visit or a video visit. I am not saying that medicine can be reduced, in fact it should not be. There are times that where

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the face to face is very important and you have to understand really how someone is feeling. But there are a lot of those parts of medical care that really lend themselves best to remote contact.

And right now there is no reimbursement for that. It is ridiculous, but so part of the process of conversion or transformation will be recognizing those things that are better served for the patient outside a traditional office visit and reimbursing for those.

ED HOWARD, J.D.: Peter.

PETER ORSZAG: If I could just add very quickly. Actually embodied on my digital is more information I think because it has my early morning run and my GPS position embodied in it and then my heart rate and what have you, than anything else I can access electronically myself with regard to my health status.

JANET WRIGHT: That is why he can talk about butter instead of treadmills. [Laughter]

ED HOWARD, J.D.: Yes. Before you do that question, I should warn folks that we have an incredible array of written questions up here. So there is no guarantee that we are going to get to all of them, so you may want to get up on your feet and go to a microphone if you absolutely, positively have to have your questioned asked, as this gentleman is.

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SHAUN GRENAJU: I am Shaun Grenaju [misspelled?] with the National Association of Children's Hospitals and Langly [misspelled?] says Hi, Sara.

Whenever a big thing happens in health care, we are always concerned that kids are going to get forgotten and get left behind because it happens every single time something big happens in health care. And I am really, really concerned that as policy makers move forward on the developing health IT policy and particularly electronic health records that kids do get forgotten.

We are hearing from pediatricians that none of these sort of off the shelf EHR's work in pediatric practices. And not to criticize Dr. Orszag, but the suggestion before that a great way to get people to adopt using EHR's is to build it into the Medicare system. It makes perfect sense, except of course kids are not on Medicare -

PETER ORSZAG: They do it on Medicaid and SCHIP too.

SHAUN GRENAJU: Well I agree of course, but then you have got convince 56 different programs.

So I am interested in hearing from anybody, what is it that policy makers can do to insure that special populations like pediatrics sort of continue to be part of this, rather than getting left behind?

SARA ROSENBAUM: Well, I am not sure that I can do justice to the question, but I think the same message that

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Peter had about advancing the field and the advancing the use of this tool, in one paying system.

And this is the problem with the U.S. right, that we have multiple payment systems and generally speaking Medicare reforms have tended historically drive reforms in other sectors and it is the most immediately accessible mechanism for achieving reforms. So Medicare reforms, I think, are just as important actually in the long-term to children as they are to people who are immediately affected because they are covered by Medicare.

But I think a lot of it is going to come down to this tension between, it is not a tension, but we have all eluded to the multiple roles played by health information technology that it has a role in clinical quality improvement, it has a role in social societal improvements and improvements to the health care system.

And I think that at the pediatric level I see no reason why pediatricians would be any less interested in the clinical quality improvement potential. Tim and I were talking right before we started about the wide spread use, at least in his area, or this considerable use even in small practice of health information technology.

And I must say as someone who is extremely concerned with children who are in multiple service systems, children who are in the child welfare system and a special education system

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and receiving health care. There is no place where the adoption of the technology made be more important because of this sort of this alternative the second definition of registry and the critical importance of being able to manage children in cross multiple systems at the same time.

ED HOWARD, J.D.: John.

JOHN LUMPKIN: I think as a State Health Director in Illinois, in '93 we built an integrated maternal child health system that was based on Medicaid, WIC, immunizations and so forth. And what enabled that system to occur was the fact that the Department of Agriculture with WIC, the CDC with the immunization register allowed us to use those funds and build an integrated system.

And it was not just a system for one way. And I think the important policy piece is that if you are going to build it out in a significant number of kids do have some touch with either CMS and so forth, through Medicaid, WIC, immunization registries is to use those as a way to build it out, and allow states to integrate and to mix funds coming from different federal agencies. And then to give incentives to the states to build out those systems that would provide resources to the pediatricians who care for those kids.

That would get over the hurdle of creating enough of a market for the industry to then provide systems that would be

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applicable and integrate with the state system and work in that way.

ED HOWARD, J.D.: Yes sir.

ED SALSBERG: Ed Salsberg [misspelled?], AAMC. I was wondering if the panelists had thought about the potential impact of the expansion of personalized medical records and the introduction into the marketplace of the activities by Google and Microsoft and others that are likely to lead the consumer or help the consumer get into or more aware of than electronic information system with their own medical information. And the question, if Google and Microsoft, and others can really push this movement on and with a consumer orientation.

ED HOWARD, J.D.: And while you are thinking about your answer, let me just reflect one of the questions that came forward on a card. And that is, if someone could explain the difference between an electronic health record, as we have been talking about and a personal medical record if that is the right term that the gentleman was describing.

SARA ROSENBAUM: Let me start because actually this is a question that from a legal prospective I have been interested in for a while. My colleague Melissa Goldstein at GW and I have spent a fair amount of time thinking about the legal framework for health records, whether they are medical or personal.

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From our perspective, I would say that the important thing about a personal health record which increasingly has a definition tied to ownership. Medical records are in the custody and control and have attributes of ownership by the providers that create the information.

A personal health record is a repository of information that is under the custody and control and therefore, has the indicter of ownership of a patient. There is a very interesting question of course, which we have skirted over and over again over all the years that we have wrestled with health information technology, which is who owns the information used to populate records.

So, the important thing about the advent of a personal health record is that it is an attempt to create a space of information ownership about health and health care that is not defined by the medical record itself. And whether in fact, the law begins to recognize this second front of information ownership is having certain rights in the underlined information.

I want information from my record of course. HIPPA allows me to get information from my record and allows me to have access to my record, to copy my record. And so, as I begin to populate a personal health record potentially with my own information you begin to blur the lines over ownership and you may in the end confront what I consider to be underneath

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it, all the most profound barrier to the diffusion of this technology, which is the concern about loss of control over ones property.

And so, it is an incredibly important social phenomenon. It is not at all clear to me whether this is going to get up a lot ahead of steam or whether people will become quite discouraged by the fact that it is actually it can take a while to get the access to the records that you need to populate your own health record.

ED HOWARD, J.D.: John.

JOHN LUMPKIN: Personal health records, as Sara describes are in the control of the patient. And I think that they have three very important attributes that will lead to adoption of electronic health records.

The first is that it gives patients control over their own health information, and they can determine who sees what, when. The second is that it puts the patient in the position of being a decision maker and gives them a more equal footing. And when you roll in decisions support just as we have talked about electronic health records, it enables the patient to then make the determination, you know my doctor did not ask me.

You know I am a diabetic, the doctor did not ask me, but you know I am supposed to get my eyes checked once a year. And now my personal health system will remind me that I am

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suppose to get it checked. And before I leave the office I will say, doctor I need to have that appointment.

The third very important thing that personal health records will do is they will drive adoption of electronic health records. Both the major vendors Microsoft and Google have features where if your physician has an electronic health record you can have them populate your personal health record. And people who get those records will go to their doctors and say, can you please populate my health record. And if the docs do not have an electronic health record, they are going to have a patient that is not going to be satisfied.

Personal health records as many of them are being set have one major drawback. Those that are called tethered which are related to a hospital based personal health record or health plan personal health record are covered by HIPPA. There are privacy and security protections for the patient.

Microsoft and Google and are not covered entities under HIPPA. So any entity that creates a personal health record that is not delivering health care is not required, that does not say they will not do it, but are not required to give the same levels of protection that covered entities are under HIPPA.

ED HOWARD, J.D.: And I think we can take judicial notice of the fact privacy is front and center in the debate in

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Congress now over the IT legislation that everybody seems to be in favor of but we cannot seem to enact. Yes.

CLARA RAINES: Thanks, Clara Raines [misspelled?] at the Marco Foundation, and I have a separate question, but I will note that this week we will be seeing a set of guidelines and policies that a group of folks have come together from many sectors to produce for PHR's, for personal health records and personal access services. So just invite everyone to be aware of that and to use it a resource.

I think it was almost a relief to all of us in some ways when the [inaudible] report to see put out and ideas that many of us have had for a long time, which is that we have seen the flourishing of electronic systems within the delivery systems and it is not just a function of the fact that they have more resources and they are bigger and they have more docs, but is really the incentives and the structures they operate under.

And I heard an anecdote last week from somebody from one of those systems who described, a nephrologist actually kind of reaching down all the diabetic patients to give them renal function testing so that they would not become his patients. So you can immediately see then the fee for service system is simply no construct for that.

Regardless of whether everyone had an EHR they would be no construct, and I guess the question I would logged back to

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all of you because I think you are thinking so hard about both health IT and health reform is as we think about the payments systems and delivery system changes we want to make to support better quality.

In keeping in mind the critical function that information will play, how do we create the account, not just the better payment for having a mammogram, but really the accountability system that can allow any nephrologists to see the need to prevent the occurrence of renal disease in a good, so it is really that accountability across the continuum of care across sites of care and across people and I think it is what we are all really struggling with how to do that.

Given that we vary as a nation decided that managed care is not it. So I am not saying that that is not a great option that works for some people, but I think we are all aware that we need to come up with those ideas that yes, it is so difficult to do. So, I would invite any ideas or questions.

ED HOWARD, J.D.: Good series of observations. Peter.

PETER ORSZAG: Obviously, I think that is an incredibly important and difficult question. I am not going to be able to give a magic answer now. I think many of you know that we are putting together two massive volumes that will be out in December and I am hoping that by that time I will have more to say, but obviously on very difficult questions that lots of very smart people have been struggling with for many, many

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years and have not come up with a perfect solution. One starts to raise questions about whether that perfect solution exists.

ED HOWARD, J.D.: Go ahead, Janet.

JANET WRIGHT: I think my statement about that would be as I am a participant in this process and I want to be a participant in the process. And I am actually more optimistic about getting to the goal that you described than I have ever been.

The reason I am optimistic is that the science, although we are still quite limited and we have so much to learn, especially from comparative effectiveness type studies. But the science has improved enough to show us where we want to be. The measurement has gotten better and better over time to show us that we are falling short. So, that is a tremendous amount already that we know.

We have to have the electronic piece in order to continue to measure, feed that back and do the continuous improvement cycle. So, I guess in my mind we cannot have accountability until we are able to measure what we are doing now, see where we need to go, that is the science piece and then connect all those dots to create the accountability.

I think the final two elements which I see developing now are a reimbursement system that will actually pay for the value as oppose to the quantity. And also the engagement of individuals in their own health care and raising their

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expectations that this is what I expect to get from my care.

So, all of those pieces I think are coming together.

ED HOWARD, J.D.: Can I just follow-up, to what extent and this shows up on several of the cards that have come forward with questions. To what extent is there a government role either as a purchaser through Medicare and the other programs or as a regulator to set standards in trying to get the alignment of financial incentives that Peter and Janet have alluded to. Yes.

PETER ORSZAG: That I will state very clearly. I do not think that we are going to get the change towards a payment system that rewards quality and better care, rather than more care without fundamental changes in the way that we reimburse through Medicare, simple as that.

And that those changes will generate follow on changes in the rest of the health system, and one can hope and pray the rest of the health system in the absence of changes to Medicare leads the way. But I think from a practical perspective there is limited likelihood that you will wind up where one will want to be without some fundamental changes in the federal programs.

ED HOWARD, J.D.: Okay. Yes ma'am.

NICOLE KEMPER: Hi, Nicole Kemper [misspelled?] with the Center for Studying Health System Change. I would like to thank the panelists and ask if we could return to a point that Dr. Wright mentioned, which is the enter upward ability issue.

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So after physicians and practices invest capital and time, they figure out that their EMR's cannot talk to other EMR's.

And I know that there are some groups that are working on standardizing the clinical and technical components, but I think there is a potential that this raises concern from those who favor a market based approach to our health care system that standards will inhibit innovation at the vendor level and might slow us down from getting the best EMR out there.

So, I would like to ask if the panel considers this an issue, and if yes how it might be resolved considering all of the interest in various stakeholders we have in our system.

Thanks.

ED HOWARD, J.D.: John do you want to start?

JOHN LUMPKIN: I have heard the argument made that standards will delay innovation and the problem is of course, that it you can imagine a railroad system of getting a railroad car apart, who is from one part of the country over a 15 or 16 different railroad companies.

Going to a 4ft. 8 inch standard for railroad tracks was a major innovation. The fact that that did not impede the adoption of steam engines, nor did it impede the adoption of diesel electronic engines. But it created the environment where that innovation could occur.

Standards and I think again, it has to be done in a thoughtful way with involvement of the industry and government

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and all the players sets the platform in which innovation can occur. It does not impede innovation. There is a lot of discussion about docs and one of the barriers for adoption is the fact that they do not know which system to buy.

My wife is an obstetrician/gynecologist and before she left practice she had owned three different office management systems, not EHR, but office management systems. And she had the first one and the company went out of business and she had to pay \$10,000 to get the data converted to work in the second one. And then when that company went out of business she had to pay another \$10,000.

Now if you think you can convince docs to adopt these systems if you do not have a standard so that they know that the data they enter, not financial data which is important to them, but their patient's data which can even actually affect their outcomes is not transferable then we are dead in the water. And that is the reason why a standard base has to be in place in order to enable transformation and innovation in health care information technology.

ED HOWARD, J.D.: And are we any where close to that standard base?

JOHN LUMPKIN: I think that there is a significant amount of work that, it started off in 1996 with HIPPA. That was the first major transformation and one of the components most people are familiar with, the privacy and security

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component. But there were over 400 different fields, electronic fields that were prescribed under HIPPA that set the standard for movement of data from one system to another primarily in the financial arena.

Since HIPPA, the next major innovation was the Consolidated Health Information Initiative which went from a federal mandate that you have to follow these standards to a federal leadership role. And the Consolidated Health Information Initiative said, okay here is a whole set of standards that Veterans Administration and HHS agree that when they use systems it will follow the standard and they encourage the private sector then to use those standards, and that was the second platform.

And now through various other standard mechanisms I think we have an adequate standard foundation that is in place more and needed, but there is enough of a foundation to create the kind of interoperable system that will bring forward the promise of health information technology.

ED HOWARD, J.D.: Very good. Gary, you have a quick follow-up?

GARY KRISTOFFERSON: Yes, let me just follow-up the point and again really on John's point. The idea of standards of efforts were being done, CHI and others were heavily involved with was to create standards that pretty much already existed, there were pretty well accepted by most groups and

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again the idea was to provide a way to have information that was transferable, that was going to be changing as time went on and as new knowledge and science comes in.

The EHR in particular, and the idea a similar model was for the PHR was to create functional standards. So we are saying, what should the EHR be able to do or rather than specifically what it is.

And that include both the information, the decision support, but it also include the inoperability that there would be an ability to move information back and forth very similar to way the internet works today as well.

So, again very careful to answer to make sure your point was taken care of, but to look forward as well at the same time and that is now all pretty much in place.

ED HOWARD, J.D.: Very good, Janet you want to add?

JANET WRIGHT: I would just say that I also have heard this standards verses innovation dichotomy if you will for a long time and it was applied to guidelines. The push back about guidelines that it was cookbook medicine, and did not allow for the diversity in the human animal.

And of course, that is not the case, it is very plausible to ground your work in science and still build in all the individual variation that we have. We are real interested in medication adherence or lack there of, and in looking at these practices that we are connecting through IC-3.

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We have seen almost 335 different versions of how practices manage medications, refills, questions coming in from patients. And so, there is a wonderful opportunity to put some standardization in that where it is reasonable.

ED HOWARD, J.D.: Yes.

MATT SALO: Thanks, Matt Salo [misspelled?] with the National Governors Association, and I want to thank all of you guys for being here and putting this session together. It is really, really good.

I guess a quick comment and then a question. I guess the comment is sort of to follow along with what a lot of people have been saying about sort of this chicken or egg of standards and innovation.

In terms of innovation there is an enormous amount of innovation and energy and excitement and activity at the state level. Whether it is E-Prescribing in Medicaid in Florida, whether it is some of the interrelated systems for substance abuse and mental health in Maryland, but the problem is you do have 56 different state governments working at this independently.

And there is just absolutely no way that system moving forward is going to create a holistic vision for this. And we absolutely do need Medicare, despite the fact that it does not cover kids or all the other things that it does not do. It does set a standard.

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It sets a national standard and within that framework all the energy, all the excitement, all the money, all the work that has already been happening in the states is going to be able to follow along. And yes we will build in all of the children with special needs issues and what have you. So, just to beat that horse a little bit more.

My other question is that I would like your feedback on. We talked a lot about personal health records and HIE and the fact that we are so far away from actually being able to enjoy the buttered toast. One of the things that we are focused on is more sort of a, an incremental but doable first step.

And one of the things that we are focusing on is E-Prescribing. And trying to get from here to there, can we start with a first step of getting Medicare to go to a inner operable, E-Prescribing system for the country. And then also sort of a side issue that I have not heard a whole lot people talk about which is the problem that the Department of Justice currently requires in its regulations that all controlled substances be prescribed by a paper and the impossibility that that creates in trying to do a simple E-Health System.

So I guess my question is do you think that that is a sensible first step in terms of getting here to buttered toast?

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PETER ORSZAG: I am no longer allowed to say whether something is sensible or not sensible and I am never going to use the analogy of buttered toast again. [laughter]

I would just say clearly the Senate Finance Committee proposals sort of started there, and that to the extent that I never like to encourage this perspective because I think it leads to flaws in the decision making process, but to the extent that it costs saving in the Pay-Go world is seen as an important criterion for whether something should be adopted or not which never really made that much sense to me.

E-Prescribing has been scored in the way that it is designed in that Finance Committee package as saving money. I mean obviously there is a lot that needs to happen to get the treadmill going. And E-Prescribing is only a very small part of that.

ED HOWARD, J.D.: Yes, go ahead, Sara.

SARA ROSENBAUM: It is a great question. The other thing it raises is the affect of the executive order that was issued several years ago, essentially directing. The White House ordered that directed all federal agencies to come into line with the importance, the urgency of health information technology.

And so, it is actually I think a very interesting question as to why this and other regulatory requirements that sort of pop up always in health care have not been addressed at

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this point, because quite apart from legislations intervening I would have thought that this is exactly what the executive order would have been designed to propel.

ED HOWARD, J.D.: Okay, yes in the back.

KALIN FLYNN: I am Kalin Flynn [misspelled?] with the Child Welfare League. As a Social Worker and having worked in free clinics in urban areas, I am wondering how the universal adoption of the second analogy will affect those clinics, especially considering that the population is so frequent.

Free clinics are usually low income minorities who are more prone to chronic diseases. And the second analogy has, I can see the benefits for those populations, especially considering if they usually move all around a lot and are not seeing one particular person.

I was just wondering how clinics who cannot afford technology on a whole will be able to implement such a wonderful system, and if the panel sees that as an issue?

SARA ROSENBAUM: We actually did again, GW and Harvard Researchers did a study a couple of years ago looking at special issues that arise in the adoption of technology by, in our case community health centers, federally funded clinics. Free clinics of course are their own actually their own group of clinics and tech tend to be not as well funded as a community health center is.

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Community health centers themselves have adoption rates that as I recall, do not look all that different from the numbers here. If anything, they are potentially more oriented to technology. A lot younger physicians and younger health professionals at work in health centers and health centers because they are heavily supported by public programs, I think are oriented toward the community affects of health care.

But I know that it is a great struggle for health center, certainly in terms of getting the capital financing that is needed to acquire the hardware and software that maybe required.

One of the things that I have heard anecdotally and that shows up interestingly in the Stark Regulations, the Safe Harbor Regulations is authority on the part of hospitals to be quite selective in which physicians with admitting privileges they extend the shared technology investments to.

Something that I thought was a very unwise move precisely because it would potentially permit redlining against clinics whose patients are disproportionately non revenue producing patients for hospitals.

ED HOWARD, J.D.: Very interesting. We have about ten minutes left. So I would urge you to get your last questions in if you can. We still have a ton of cards to try to get through and to start filling out that blue evaluation form if you will. Yes sir.

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BOB GRISS: Bob Griss [misspelled?] with the Institute of Social Medicine in Community Health. I was intrigued by the question that was asked from the woman from Marco when she contrasted managed care with electronic medical records and clearly managed care does make use of the electronic medical records, but not everybody is in managed care.

And we are spending a lot of time talking about how to get more of the health care delivery system, particularly the primary health care providers into it, when they come to us in small sizes. And it strikes me that we have an opportunity to address a lot of the social determinants of health at the community level if we require the collection of data on health outcomes along with the interventions, because it will be more obvious what the causes of those health problems are.

So from a government point of view, from a public health point of view, why do we not use the opportunity to require the entire health care delivery system to move in this direction? We saw how the government tried to move us all into managed care at an earlier stage, creating all sorts of structural pressures to do that.

It seems to me that the electronic medical record issue raises a lot of the structural constraints that Peter described in his fragmentation. In a sense this is a golden opportunity to confront those constraints and not just figure out how to

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help people ease into it preserving the fragmentation, but actually overcoming that fragmentation for once.

In the train analogy that John mentioned before as trains changed from a wood burning to a coal burning to diesel and electric, we still preserved the role of fireman on these trains, even though there was no longer any fires to worry about. And I am just wondering how much of the existing fragmentation in this system we ought to preserve when we have an opportunity to actually transcend it.

I am particularly interested in transcending it in relations to those social determinants of health that with this electronic medical record we will begin to start identifying those social determinants more clearly and see whether we are over medicalizing the treatments, rather than addressing them at their cause.

ED HOWARD, J.D.: Peter you want to try?

PETER ORSZAG: Sure, let me actually first since it was somewhat related to the discussion on low income clinics and since I am very concerned about the very dramatic increase that we have seen in life expectancy and equality, which is to say that the improvement in life expectancy and the reduction in mortality rates that we have experienced in the United States over the past two to three decades and this gets directly at the social disparity question, have not been equally distributed across the socio economic distribution.

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And in fact that the bottom of the education income distribution arguably depending on the data that you look at and depending on the time period that you look at, life expectancy is no longer increasing in the United States. Income and equality has received a huge amount of attention and life expectancy and equality which is rising rapidly has not.

And the question becomes, why is that happening and what can be done about it? I suspect without knowing for sure that only a small part of that has to do with the health care system itself, although some of it does.

And a lot more of that has to do with health behavior, including stress levels, including smoking, including obesity rates, including lots of other things. And I think what we are learning from behavioral economics in other fields, like I can use the analogy over time and saving this second is that a huge way of changing the gradient of something, with regard to socioeconomic distribution has to do with what the defaults are.

So, in the context of retirement saving, the single best thing that we can do to promote retirement saving among low and moderate income workers is to make it automatic and allow them to opt out. And the result of that as oppose to the traditional way of approaching the system which is you provide a tax credit or a match or sort of Econ 101 perspective rather than Psychology 101 perspective.

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The result of that automatic enrollment is to significantly level participation rates by income. I suspect that a lot of traction could be gotten from applying the insights of default and behavioral economics and how people actually make decisions.

And I would just say I think we are so far from where we need to be in terms of applying that kind of insight that too much public policy, especially with regard to low and moderate income households, regardless of whether it is health care or retirement or saving, purchasing a house has reflected the simplistic Economics 101 perspective. Then until we move somewhat away from that we are not going to be achieving the things you want.

Now you had asked specifically about electronic health records. I think that is only a small part of a broader structural change that needs to inform public policy. We need a lot more Psychology 101 and a little less Econ 101 in public policy. [Applause]

JANET WRIGHT: I do not know why we are in the mess we are in. I mean in terms of the obesity, the diabetes. But one of the components is that with the skewing of our reimbursement system the way it has been skewed, what has been bread out of the system is time for to people or the clinician and the patient seeking care.

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We bread out the opportunity to develop a relationship, and I sound like a broken record on this, but it is a therapeutic tool that is underutilized. And literally, and then in an environment of most offices these days, that is not valued, there is no value assigned to that.

And so, very little of that takes place, or it takes place in other forums, perhaps less effective. And so, part of I think the issue is reconfiguring things to provide the environment where that kind of exchange can take place, that kind of relationship can develop and to put value back into that.

ED HOWARD, J.D.: John.

JOHN LUMPKIN: And to bring it back to health information technology. A key component of the discussions that have been going around standard development with the Americans Health Information Community, the Committee that I co-chair, has been how can we develop the health care, care component in such a way that it also enables and facilitates population health.

As a State Health Officer, I can tell you that one the biggest frustrations was not being able to understand in a real way, because you cannot get data out of the health care system where disease was occurring, where interventions could be targeted, and whether or not those interventions were affective.

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Having connections between the clinical care system, and in the public health and the population health system, is a very important component of how we build out the systems. And you can do that in a way that is transparent to the clinician.

So if you think about it before you designed the system, doing the reports of public health will take no effort on their part because it can be built as an automatic part of it. And those are some of the components that are being considered and are part of the deliberations of current AHIC as well as AHIC 2.0 which is set to take affect in the fall.

ED HOWARD, J.D.: Well I think that is an appropriate final word in this discussion.

I want to thank you for staying with a very difficult subject for the long time. And while you are filling out your evaluation forms, I want to thank the Robert Wood Johnson Foundation for its support and active participation in this enterprise.

It has been a multifaceted. I think wide ranging discussion of a subject that fits that definition and even more. And I would ask you to join me in thanking our panel for helping us come to grips with it. [Applause]

[END RECORDING]