

TRANSCRIPT OF LEVERAGING HEALTH INFORMATION TECHNOLOGY FOR PATIENT EMPOWERMENT

April 8, 2010

MALE SPEAKER: Welcome to today's webinar on Leveraging Health Information Technology for Patient Empowerment. I would like to introduce today's moderator, Dr. Teresa Zayas-Caban. Dr. Zayas-Caban is the Senior Manager for Health IT. She oversees projects in the portfolio that implement and demonstrate the value of health IT, such as the enabling patient-centered care through health IT grant initiative. She also manages several contracts focused on clinical decision support, workflow, and the design and implementation of health IT and its impact on customers. So at this point I am going to turn the podium over to you, Dr. Zayas-Caban.

DR. TERESA ZAYAS-CABAN: Thank you, Collin, and welcome, everybody. We are very glad to have you for this teleconference. We have lined up an excellent panel of speakers. We will have four presentations led by three speakers. Our first speaker this afternoon is Dr. Christine Sinsky, who is a General Internist at Medical Associates Clinic and Health Plans in Dubuque, Iowa. She is frequently an invited lecturer on practice innovation, redesign, and the patient-centered medical home and has been a presenter at the Patient-Centered Primary Care Collaborative Stakeholder meeting. She serves on the physician advisory panel for the National Committee for Quality Assurance, or NCQA, physician recognition programs, and is a Director on the American Board of Internal Medicine.

Our second speaker this afternoon is Dr. Alexander Krist, who serves as an Associate Professor in the Virginia Commonwealth University, or VCU, School of Medicine's Department of Family Medicine. The majority of his research is conducted through the VCU Department of Family Medicine's multidisciplinary research team and its practice-based research network, the Virginia Ambulatory Care Outcomes Research Network, which includes more than sixty primary care practices spanning six health systems assembled to coordinate on research projects. He helps direct his practice to implement an electronic health record including e-prescribing, laboratory and radiology interfaces, electronic billing, performance monitoring, and a registry for population management.

Our third speaker this afternoon is Dr. Christine Ritchie, who is an Associate Professor of Medicine in the Division of Gerontology, Geriatrics, and Palliative Care, at the Department of Medicine at the University of Alabama at Birmingham, or UAB. She is also an investigator and staff physician at the Birmingham VA Medical Center. She is a board-certified geriatrician and palliative care physician with long-standing experience in clinical care delivery and telemedicine. Her research experience has focused on advanced illness and multi-morbidity, nutrition, and comparative effectiveness research. She is Director of the UAB Geriatric Education Center and the UAB Donald W. Reynolds Foundation Comprehensive Program in Geriatric Education. She co-directs the Health IT section of the UAB Center for Outcomes Effectiveness Research and Education and serves on the Editorial Board of the Journal of Gerontology: Medical Sciences. She is on the Board of the American Academy of Hospice and Palliative Medicine.

For this afternoon, we have, as I said, three presenters but four presentations: The introduction will be led by Dr. Sinsky, who will be focusing on Practicing Physician's Perspective with regards to patient empowerment; then Dr. Krist will talk about the study he is conducting at VCU focused on Personalized Portal for Prevention; then Dr. Ritchie will talk about the project she is leading at UAB that focuses on e-Coaching and Transition Support; and then Dr. Sinsky will bring it all together by having a brief discussion on Barriers and Enablers of patient empowerment through the use of health IT, and we will follow that with the Q&A session.

So Dr. Sinsky, you may begin

DR. CHRISTINE SINISKY: Well, thank you, Teresa. I would like to set the stage for you for two research presentations by giving you a practitioner's book at where we are and we hope to go with respect to leveraging HIT for patient empowerment.

And why focus on patient empowerment in the first place? Well, I think one reason is that the majority of health determinants are really outside of the provider's control. It is up to the patient to determine all of their lifestyle decisions, whether they decide to take their medications or not, what they eat, whether they exercise; those are all under the patient's control. And the more the patient is empowered and involved in their care, I think they are more

likely to make those healthier choices.

Second reason is that we know that engaged and activated patients and families do achieve better health outcomes. And one thing my own patients have taught me is that if the patient does not come up with their own solution, it won't work.

So the more we engage our patients in our practice in their care I think we will have better outcomes.

So for some context, I am a General Internist in Dubuque, Iowa, at Medical Associates Clinic. We are a 115 physician multispecialty clinic. We have had a fully functional electronic health record for the last seven years. And two years ago we were recognized as a Level 3 patient-centered medical home.

So how are we currently using HIT for patient and engagement? Well, I think the first is information and therapy, because information is one of our forms of therapy. Information is power and we want to bring our patients into the loop of information. I feel that when my patients have more information they can be more engaged with collaborative decision-making with me.

So what we do is we give all of our patients a copy of each other X-ray reports. As appropriate, we give them copies of any of the consultation reports that they have had. And we give them copies of all of their lab. In our practice about 95 percent of the lab is done ahead of the appointment, so that in the rooming process my nurse will go over the standard labs with the patient and explain to them what their A1C was and how it compared to the past. And since we have been doing that, it has really changed the way I interact with my patients, because now I can go in and say, "Well, how do your diabetes numbers look?" And the patient might say, "You know, I notice my A1C is going up and I think that is because I have not been exercising so much. I need to get back to the gym."

And this has just changed the way I interact with my patients because now, instead of being in lecture mode or in cajoling mode, I am more in a health coaching mode or a listening mode. And I might say something like, "Hey, we are on the same page on that. That is a really good idea. What do you think you can do to make that happen?"

We also have the ability to share what we call our encounter note with patients, so this is something we print up and it has the patient's vital signs and their past family and social history. And when we give that to patients and we ask them to check it over to make sure that the information that we have on them is accurate, and they will occasionally identify that something we had was not accurate, so they are part of our safety net in that way.

And now I also ask my patients to take that with them so that if they need to get care outside of our system they have a good foundation of information in which to start that care elsewhere.

This is a copy of the Lab Summary that we give to our patients, and you can see that they can see today's lab and compare that to previous values that the patient has had.

We also provide our patients with an Updated Medication List. This is particular important for our frail elderly patients or patients who have complicated medication lists or for whom we have made several changes. And we want our patients to have a written list of exactly what we think that they are taking so that they can keep that and have an accurate list, and I think this helps with adherence.

Another thing we do is we do some real-time research in the room with the patient. If I am working with a patient and we have something we want to look up I will look it up and up-to-date with the patient in the room and I will turn the screen and we will look at that together and read some of the management advice, for example, together, or I might print up up-to-date patient information handouts for the patient right there.

And then finally one of the things we are currently doing is we have a hospital-to-home program, and we initiated this about six months ago. So whenever I discharge a patient from the hospital one of my nurses will call that patient a day or two after they go home to identify if they are having any problems, if they have any questions about what their medication should be or any other issues that have arisen. And to help her do this most effectively, she is able to pull up their discharge summary from the hospital in our electronic health record and also their medication list so that she

is a more informed assistant for them in this hospital-to-home program.

So that is where we are. And now I would like to talk very briefly about where we hope to go in terms of leveraging HIT for patient empowerment. And in our practice we have on our 2010 schedule to implement a web portal.

And our hope with this is to allow our patients access to e-mailing their practices for further sources of information, and also to give the patient some authority and power over their own scheduling.

A little further down the line what I hope to do is be able to implement a pre-appointment questionnaire that can be done online. Currently when our patients check in for an appointment they are given a paper pre-appointment questionnaire that they complete in the waiting area. But I envision a time where we can send this to our patients who are online so that they can answer the questions when they are at home. This way they will have their medications right at home; if they have a question they will be able to see exactly what they are taking, and their answers then could pre-populate the visit note, and this will decrease some of the documentation burden on the practice.

I also envision that we can get more out of the questionnaire. Currently we have a PHQ2 question embedded into the questionnaire screening for depression. I can envision, where if the patient screens positive for the PHQ, then that would expand into a PHQ9 of the more in-depth questionnaire and may also then be able to link to other information about depression and other resources.

Likewise, I look forward to the day when a patient who might be a smoker and who indicates that they are interested in smoking cessation could be linked directly to information about community resources for smoking cessation.

On our pre-appointment questionnaire we have an added question for screening for at-risk drinking. I can see doing this electronically through our web portal, and then if the patient does screen positive, being able to link them to further information about at-risk drinking and alcohol counseling.

I also look forward to the day when we post the patient's lab results online so that they can see their results there. And, for example, if their LDL was elevated, that there be a link to a Mediterranean diet. Or that if their fasting blood sugar is elevated, that they be linked to community resources for exercise.

I can also envision this will work well for us when we have the medication lists available for the patients online, and then also to be able to link that to drug information for our patients.

And finally one of the things that I am most looking forward to, at some better point in the future, is of a hospital family portal. So if a patient is hospitalized in Dubuque and her daughter lives in Denver, that with her mother's permission the daughter could log in and track the mother's progress on a daily basis; she might be able to see her vital signs or read the visit notes, see some of the test results, and that way be a much more engaged partner in her mother's care.

So that is a physician's view of where we are and where we would like to go in terms of leveraging HIT for patient empowerment, and I would like to turn it back to Teresa.

DR. TERESA ZAYAS-CABAN: Thank you, Christine. I will now turn it over to Dr. Krist for his presentation on the work that he has been doing at VCU.

DR. ALEXANDER KRIST: Thank you, Teresa. I appreciate the opportunity to be able to talk about what we are doing down at Virginia Commonwealth University. I am going to be talking about My Preventive Care, A Personalized Portal to Promote Patient-Centered Preventive Care, and I am going to be presenting the work from our entire research team here today.

As Teresa mentioned earlier, we do our work in a practice-based research network. Our network has the now unfortunate acronym of ACORN, but we came up with this before it became a bad acronym, and it stands for the Virginia Ambulatory Care Outcomes Research Network, and we have been around since 1996, have 60-some plot (ph) practices throughout the state, six different health systems.

And the research I am going to talk about today occurred in eight of our Fairfax family practice centers that are more up in the northern Virginia area and use a common electronic medical record.

Our ideas came from a disconnect that we have observed about personal health records. Americans believe that a personal health record would improve their health and allow them to manage their health significantly, and they are very interested in using personal health records and they are very interested in using online personal health records. However, only about 2.7 percent of adults had electronic personal health record in 2008, so there is a big opportunity here to provide a service that could help patients improve their health.

So we have come up with an idea of a portal to promote preventive care and chronic disease management called My Preventive Care. This was created through grant funding through AHRQ, an R18, between 2007 and 2010, and we are now continuing on to the next level with a contract funded between 2009 and 2011.

And the portal is a PHR integrated into an electronic medical record. It is currently integrated into the Touchworks EMR. It was created by the clinicians in our practice-based research network and had a lot of patient input as we created it, and it is focused on preventive care. We have tried to stick very much with the US Preventive Services Task Force recommendations. But we had to also expand into chronic disease management, and so we have lots of recommendations from JNCVII, NCEP, American Diabetic Association, the dietary guidelines for Americans, and the American College of Immunization Practices.

And built into My Preventive Care is clinical decision support that promotes these different recommendations, and then it presents the patient's very individually tailored patient messages and educational links. So it not only shows them their medical information, but basically kind of tells them this is what your information is and this is what it means in a very patient-centric language. And we did this by partnering with the Office of Disease Prevention and Health Promotion; they have been working for over a decade on healthfinder.gov to try and present task force recommendations to patients. We took a lot of what they have learned and a lot of what they have created and tried to personalize it based on individual information to create what we did, and then the system provides patients and clinicians with reminders.

So I am going to show you how this works. But from a research study standpoint back in 2007 when we created this, what we set out to do was to test it in a randomized control trial to see if My Preventive Care would increase the delivery of age and gender appropriate task force recommendations, whether patients and clinicians would use the system, whether it would promote shared decision-making for preventive care, and whether it would improve patient-clinician communication.

And the study design that we did is we used eight practices in our network up in northern Virginia. And we took their active patients that were seen in the past year, there were 82,000 of them, and we randomly selected 5500 patients and mailed an invitation to half of them to visit My Preventive Care and telling them about what was involved with My Preventive Care and how it might help them, and then half of those patients we designated as control patients to receive usual preventive care.

Now, what we have learned and what I will talk about is that we really need to look at integrating this into care and deliver it on a population level and practices. But we wanted to kind of systematically test this in a controlled randomized trial, so this is why we used this design. And then we collected very robust dataset involving electronic record data, data from My Preventive Care, and patient postal surveys to try and understand the impact that this had on the delivery of preventive care.

My Preventive Care covers 18 preventive services that are listed here. We tried to focus on [A and B] (ph) recommendations in the task force, but we did get into some I (ph) recommendations around prostate cancer and other ones to really explore the impact it would have on shared decision-making.

And what would happen from a patient standpoint, if they were in the intervention group, they would get a letter from their physician telling them about My Preventive Care and inviting them to visit My Preventive Care,, and it is open and freely available at these websites. But if you go to it you are not going to be able to use (ph) the full effect of My

Preventive Care because you have to be able to link to your doctor's electronic medical record to use the system.

But here is what the website looks like on the home page if you do not have an account established.

And if a patient gets this letter and goes to the website and set up an account, they have to enter their medical record number which was provided in their doctor's letter, gender, and their date of birth, and then they create a username and set up an account.

After that, My Preventive Care asks 11 or 12 health risk assessment questions, and we fully intend to expand this as My Preventive Care covers other services. But these were questions that we needed to promote the preventive services and the chronic disease management and to make decisions about what patients needed or did not need, and it was on information that was not recorded well in electronic medical records: Race/ethnicity, health behaviors, family history, and some abnormal tests results. So cholesterol or blood pressure is a very easy one, that is in the EMR, but something like an abnormal mammogram or an abnormal colonoscopy often is - well, we would ask patients about that.

So here is an example of the questions, and it would take patients about five to ten minutes to complete this health risk assessment.

So next what would happen for the patient is My Preventive Care would connect to their doctor's electronic medical record and it would then pull out 167 data elements from the doctor's EMR that were needed to run the clinical decisions report. This was demographics, vital signs, diagnoses, orders, results, management plans, medications, and immunizations. And this was a very robust dataset including their values and dates things were done; information that would be difficult for a patient to enter in to a personal health record.

Next what My Preventive Care would do is it would present to the patient their doctor's information and they give the patient the opportunity to update this information and change it.

So I have a screen shot of this here. Patients could review what their doctor's records showed them about them, their different diagnoses, dates they have had tests, and values of things. So you see below they had an LDL on 5/23/2008 and the value was 89. And the patients could click on these values and they could update this, so if they had a Pap smear more recently at their gynecologist, they could click on that and update the date.

And that would change the logic within My Preventive Care and it would notify the patient's provider.

So then next My Preventive Care would run the logic we created to determine their preventive service needs and their chronic disease needs, and that was based on the different guidelines I mentioned before, and it would categorize the patients. And we have some 391 categories that range from that they are up to date and do not need this, to they need this preventive service, to they have this disease and they need to do things to keep it more in check. So it is very highly personalized and individualized for each patient.

So here is an example of the logic we created. And I only show this for cervical cancer screening because this is one of the few ones that fit on one screen. Most of these logic sets take several different screens and are very, very complex and robust.

But next, patients are given a list of their personal care needs. And patients can use this on three different levels. The very simple level is they can just look at a list and recognize that they need these preventive services.

So this is an example from a test patient that we have, and My Preventive Care is telling them that they need to get tested for cervical cancer, they need to get tested for colon cancer, they need to get more active, they need to quit smoking. So a patient could stop right here. They could see this list, realize they need these things, contact their physician, and set up an office visit and know what they need to do to change things.

But a more active patient and a patient who is more interested in her self-management and wanted more details could click on any of these topics and it would open up a very individually tailored message that was specific to that patient.

And these individual messages all had this same format that I am showing here for cholesterol, so it would show them Your Information, so here is your cholesterol, the date it was done, you have four risk factors for heart disease, and because of this your goal LDL is 100. You would then have The Basics, what is cholesterol; The Benefits, why do we check this; Your Next Steps, what you need to do; and these are all very individualized to that specific patient's clinical situation. And the next steps were all designed to really try and promote and reinforce the doctor-patient relationship. So it would not say go get your cholesterol checked; it would say go talk with your doctor about whether this is important. And then there is information to guide your next steps, so that is the third level patients could use this. Your very motivated patients could click on the items listed under Next Steps to learn more.

And Next Steps included educational material, risk calculator, health tools, local resources, decision aids; a lot of the things Dr. Sinsky was talking that she would hope that their portal would be able to refer patients to. But this is very, very individualized to that specific patient's needs.

And we picked resources that were evidence-based from trusted non-commercial national organizations and that were patient-centric and easy to read.

So here is an example of this.

Finally, when the patient was done, it would send a summary into the EMR for the patient's provider to see the patient's experience with using My Preventive Care. And it sent this in automatically, it was like a lab result, so it is the same workflow and the same process our doctors use as they would use for other types of delivery of care.

And the summary included three sets of information. One is included information that the patient updated; two, it included the patient's health behaviors, because we said EMRs are pretty bad at documenting their health behaviors, so here is one place a doctor could look and see a patient's health behaviors; and then three, it would provide the doctor a list of the patient's needs. And we would not just say, "Your patient needs their cholesterol checked or needs a colonoscopy." We would say information specific to the patient so the doctor could act on it. It would say, "Your patient last had their blood pressure checked on this date, this is the value. Given their risk factor, this is the goal," and the physician could then take the personal information they knew about the patient, put it in the context to know if that recommendation applied to that patient or not.

So here is some of the findings that we have gotten about our study and the use of My Preventive Care. So the first thing is we mailed the invitations to equal numbers of men and women, and we mailed equal numbers of invitations to the people in these four age categories: 18 to 34, 35 to 49, 50 to 64, and 65 to 75. So the first thing you will notice is more men than women use the system. And then the highest age group of users were 50 to 64 years old, and the next highest was 65- to 75-year-old.

When we put the grant together, some of the feedback we have gotten is that this will work great for younger patients, but older patients won't use the system; that is clearly not what we are seeing here with this study, so this has been a fascinating finding.

The other thing that we have found is that we got less people to use the system than we had hoped for, so about 460-some people used it after a series of three mailings. We mailed invitations to 2,250 patients, and this is partly because we really did not integrate it into care. We mailed them a very simple invitation to use the system. This is probably not how practices would normally field this. And additionally, we selected patients that had been seen in the past year, so in many cases patients who had just had a physical or chronic care visit got this invitation and did not realize that it applied to them.

So this leads us to the next step of what we are doing with research, but from a use standpoint we got about a third of people or about 20 percent of people to use the system we sent invitations to. And a converse comparison would be Kaiser, who published data that they spent about two years to get about 30 percent of their patients to use their PHR.

So in some ways, while we were disappointed, this might be reassuring information. And then User Characteristics; not surprisingly, many of them had had wellness and chronic care visits in the past year and co-morbidities were common, particularly cardiovascular disease, but also diabetes and cancer.

And then if you looked in My Preventive Care about how it assigned what people needed or what services people needed, what we found is that users were only up to date with about 53 percent of preventive services, so this fits with what we know from our ran (ph) studies; that people only get 50 percent of the care that they need. And if you look overall and from a patient perspective, only 2.2 percent of patients were up to date on every service. And on average, a person needed 4.6 percent of services; a lot of these were screening services. Everyone needed to improve their health behaviors; it included vaccinations, medications, and chronic disease management.

So the practice impact My Preventive Care had is that the summaries that came into the clinician led the practices - maybe the clinician, maybe the clinician's nurse - to update about 60 percent of patients' medical records based on information that patients provided them.

It also led the practices to contact about 84 percent of patients; about a third of the time to schedule a wellness visit, about 17 percent of the time to establish a chronic care visit, and about 20 percent of the time to deliver a specific preventive service. An example might be a patient that was seen two months prior for a wellness visit, but still has not gotten her mammogram, and the practice would call her up and say, "Hey, Mrs. Smith, let's get you another referral to go get your mammogram if you are interested."

So this is the impact of My Preventive Care. And what I am showing you here is the impact based on our EMR data. So if we look at our specific aim, we intended to compare the control group to patients who are mailed an invitation to use My Preventive Care, so that is the first two columns that you see here. And we do not see an increase in the delivery of preventive services, and this is not surprising since we only have about 20 percent of our patients in the intervention group actually using My Preventive Care. We have a very strong dilutional (ph) effect.

Conversely, though, if we look at the patients who actually do use the service, or do use My Preventive Care, to start with, they are more up to date on their preventive care, but they have a substantial increase in being more up to date a year later on preventive services. There is about a 12 to 12 1/2 percent increase in the delivery of recommended preventive services, and we see this pretty consistently. We see these trends and these statistically significant changes in delivery of preventive services if we look at survey data or EMR data or even data in My Preventive Care if we compare users to non-users.

When we did focus groups on users and non-users and physicians, we found two big themes. Trust was very important, and functionality, and for patients, trust was key. They needed to trust the security and the accuracy of the information in My Preventive Care, and they needed to trust whoever was sponsoring this, and our patients reported to us that the fact that their personal physician was offering this was key. Many of them did not feel that they would want to do this from something not related to their personal physician.

And functionality was important. They had very high expectations about what the system could provide. They wanted it to be fast, efficient, real-time, and they actually wanted it very sophisticated and comprehensive. They wanted it to link to all of their providers, not just to their family physician. They wanted it to cover all of care, not just preventive care and chronic disease management.

And interestingly, users and non-users expressed similar views. Non-users did not have any particular concerns about trust or functionality. In most cases they did not use the system because they did not realize it applied to them and would benefit them. And when they were showed My Preventive Care, most of them felt that they would be very happy to use this.

So some of the conclusions we have made from this is that the actual (ph) beneficial service, this simple invitational letter, is probably not enough; it needs to be really incorporated more into the delivery of care. The stereotypes about who would use it do not really seem to hold, and all patients seem to need something here, and My Preventive Care seems to be increasing the delivery of preventive services.

And this has really set the stage for some of our future work. So we are trying to more robustly analyze our data and what we have to understand the impacts on patient-clinician survey - or communication based on our survey data.

And we are looking to now integrate My Preventive Care into daily clinical activities on a whole practice level using two different EMRs, Epic and Professional, and trying to integrate it into some existing personal health records that do not really have the preventive care and chronic care disease management functionality that we would like them to have. So we are doing this through a task order through AHRQ right now.

And we are also trying to link this to claims data from payers so that it has more robust data within the system and look at using it for PQRI reporting. Because our idea is that if you can have a platform that both patients and clinicians use together, you can move quality reporting kind of to a next level, where you do not just see how you are performing and then you act on it and can re-measure how you are performing, you can actually act on it through the system. And so you can find out who needs services, contact them through the system on individual or on population level, then try to change performance measures that improve quality.

So I will stop now and turn things back over to Teresa.

DR. TERESA ZAYAS-CABAN: Thank you, Alex. Thanks for a great presentation. Our next speaker will be Dr. Christine Ritchie. Dr. Ritchie, if you would like to start, and if you could please speak up. Some of the folks in the audience are having a hard time hearing the speakers.

DR. CHRISTINE RITCHIE: Thank you, Terry. So this is Christine Ritchie, and I want to thank all of you for your interest in patient engagement and care transitions.

What I would like to do is describe for you our ongoing work at both developing and testing and IVR-Enhanced Care Transition Support program.

So as many of you know, and based on the work from Coleman, Jencks, and others, leaving the hospital is a high-risk event. About one in five patients who are discharged from the hospital experience some adverse event; one in ten develop worsening symptoms after leaving the hospital; and about 25 percent experience some sort of complicated care transition within the first 30 days.

In a study of patients in the Medicare Fee-for-Service Program, about a fifth of patients, over 11 million Medicare beneficiaries who had been discharged from a hospital, were rehospitalized within 30 days, and 34 percent were rehospitalized within 90 days.

In this study by Jencks, et al., which is published in the New England Journal of Medicine last year, 30-day rehospitalization rates were particularly common among patients who are admitted for AIR (ph), pneumonia, and COPD.

At the University of Alabama at Birmingham, which is also known as UAB Hospital, our readmission rates for COPD and congestive heart failure are not as high as the national average, but they are still very high. And our hospital sees and admits patients from all of over Alabama, including some very rural areas and the southeast.

So our question then is what is the best way to support patients after they have left the hospital, given how far many of them have to go to get home and given the diversity of needs and resources available to our patients after discharge?

Now, as many of you know, there are actually many effective models for improving care transition support and reducing unnecessary readmissions, including three that are shown on the slide. Most of these interventions are somewhat resource intensive. They often include visits to the patient's residence, and although this approach is clearly ideal it is often not feasible when a hospital's catchment area is so broad like UAB's, where patients who are admitted to the UAB come, as I mentioned earlier, from all over the state, hundreds of miles away, or from adjacent states such as Florida, Mississippi, and Georgia.

So possible solutions for overcoming this distance between the patient after discharge and the discharging facility could include some sort of monitoring solution, such as a web-based or a home tele-monitoring based care transition support intervention, or some kind of stepped-care approach that integrates home monitoring post-discharge with a supported patient empowerment model.

Now, a great example of a patient empowerment-based model for care transition support is the Care Transitions Intervention, which was developed by Eric Coleman and his colleagues at the University of Colorado at Denver. Dr. Coleman developed this intervention after he learned from focus groups of older adults who had been hospitalized in the past six months. And those focus groups suggested that a care transition intervention would be most likely to be successful if it were patient-centered, individually tailored, and attentive to, one, information transfer; two, patient and caregiver preparation; three, self-management support; and four, empowerment on the part of the patient and caregiver to assert preferences.

The overriding goal of the care transition intervention is to improve care transitions by providing patients with tools and support that promote knowledge and self-management of their condition as they move from the hospital to the home.

So the care transition intervention focuses on four conceptual areas which you see here, which I will refer to as pillars, and these pillars are based on the domains that emerge from those focus groups that I mentioned earlier: Number one, medication self-management; the patient is knowledgeable about their medications and have a medication management system. Number two, the use of a dynamic patient-centered record that the patient understands and utilizes a patient personal health record and that they use it to facilitate communication and ensure continuity of care across providers and settings. Number three, that they have primary care and specialist follow-up. And then number four, that they have a good knowledge of red flags; that they understand when there are things going on in their condition that suggests that the condition is worsening and they know how to respond.

And these four pillars are then operationalized through two mechanisms in the care transition intervention: A personal health record and a series of structured visits and phone calls with a nurse care transition coach.

Now, one of those distinctive elements of the care transition intervention is this whole concept of coaching as opposed to case managing. Historically, the paradigm for case management has been to do for or rescue patients and their caregivers when they run into trouble, whereas the paradigm for the coach is to actually engage in and empower the patient and their caregiver to figure out solutions to the problems that they are facing.

In the case management role, often its achievement is clinician-directed; that is, the clinician has communicated what the goals are and they are directing the goals, whereas in coaching the patient is in charge of the goals and the coach tries to support the patient's goals by providing them with skill sets or sharing skill sets with them that will help them achieve those goals.

With case management, the focus is often on task completion, whereas with coaching the focus is really on supporting the patient and helping the patient manage their condition and interface with healthcare providers.

So in our particular study, we were particularly interested in using this model of care transition support, but adapting it so that it could be used by a complex tertiary care facility like our own who have patients hundreds of miles away and would not be able to be visited easily in their home by a care transition coach.

We also wanted to use technology that would easily be available to all of our patients. Many of our older rural patients either do not have access to or do not use Internet. And using home monitoring equipment often requires purchasing it by the facility and then keeping up with the equipment and having to have it returned when the patient no longer needs it. [0:40:02.5]

So with funding from AHRQ and from UAB Hospital and Viva Healthcare, we developed an interactive voice response supported coaching intervention that includes both pre-discharge coaching from trained coaches and an interactive voice response supported post-discharge monitoring system that identifies the coach's high-risk patients who need additional coaching support after discharge.

Prior to discharge, patients are given tools to support their care transition process, a patient health record, a medication tracking system, a list of early warning signs related to their condition, and guidance regarding seeking appropriate medical follow-up. They are trained in the use of an interactive voice response phone monitoring system that they can

use on whatever kind of phone they have: A landline phone, a cell phone, any kind of phone that they have available to them. After discharge, this interactive voice response system then calls them at regular intervals for up to four weeks.

Our study design was to first develop this IVR-supported care transition program, then evaluate the use of this program by patients and healthcare providers through a randomized control trial to evaluate its impact on patient outcomes and also quantify the cost associated with this program versus a control group.

So just again to highlight how this integrates with the pillars, the intervention essentially utilizes the care transition nurse in the hospital to coach the patient in the four pillars. Then after discharge the patient is called daily during the first week by someone we call IDA, and IDA actually stands for Interactive Discharge Assistant; that is the IVR system. And IDA calls the patient and asks them specific questions related to the four pillars.

The data from IDA is transmitted back to a secure web-based dashboard that can be viewed by the care transition coaches. And then problems related to any of these four pillars can be viewed by the coach, who will then call the patient and brainstorm with them about the best way to solve any new problems or issues they are facing relating to the four pillars.

So patients enrolled in the study are then randomized to usual care or to the IVR-enhanced care transition intervention. And usually care is essentially what happens to most patients who are discharged from the hospital; they receive a discharge instruction list, they go home, and then follow-up may or may not be erratic. They may or may not know what to do with medication discrepancies that they identify. And they may or may not have a clear understanding of their condition or their red flags.

If they received the intervention, they receive a coaching session in the hospital, where they learn about both the interactive voice response system, about a personal health record, and about things that are important for them to address upon discharge. Then when they leave the hospital, IDA, the interactive voice response computerized system, calls them within 24 to 72 hours post-discharge, and the coach will follow up with them if alerts from IDA are noticed on the dashboard.

So the role of the coach in this system is both to educate the patient on the care transition interventions for pillars and on the interactive voice response system; to then monitor the patient's symptoms that are communicated through that interactive voice response system through a web-based dashboard; and then contact patients when needed if alerted by the dashboard and work with those patients to resolve questions or concerns.

Here are some examples of the materials that we provide to patients before discharge that are related to the four pillars of care transition support. This treatment information planner, or TIP packet as we call it, has information related to the patient's personal health record, individualized information related to red flags or warning signs associated with their condition, and then high quality, low literacy friendly educational materials about their condition.

Here is one of our coaches instructing a patient in the four pillars of care transition support.

And when that patient goes home, the coach will then be able to monitor how they are doing through the E-Coach Dashboard, where data from the patient's responses to the automated phone calls is stored. These are all not real patient names, but just give you an example of how the coach would potentially see their patients listed on the dashboard.

The dashboard also provides to the coach the patient's name, their healthcare proxy, and their primary care provider.

And the coach can see if the patient is experiencing any problems associated with questions related to one of the four pillars. In this instance, Patient Jane Doe has answered questions related to both medication management and provider follow-up to indicate she is having difficulty with these two issues. The coach will know that Mrs. Doe is someone that she should call to work with and think about the best ways to resolve those issues.

Here you can see some of the questions that IDA asks the patients after discharge and how certain responses end up as

alerts - those responses in red - to the coaches.

When we piloted this system with an initial pilot group, we were intrigued by the responses that we received from patients. They were very happy to know that actually someone would be following up with them after discharge; that somebody really cared. They were surprised by how little burden there was in answering the questions and felt like it would be particularly useful if they really were sick.

So far, we started our randomized control trial on February of this year, and 44 eligible patients who were still in the hospital and capable of being invited into the study, 31 now have enrolled with a 70 percent acceptance rate. What we found was that on average we have one to two red flags per participant in the first four days post-discharge, one red flag in the four through seven days, and then about one red flag per week per participant surveyed post-survey seven.

So to sum up then, patient engagement is a key element of safe care transitions. And we believe that this kind of simple technology-supported monitoring approach can both integrate patient activation into care transition support that may be a very resource-efficient way to help patients and their caregivers. One of our biggest challenges had been in content development and programming; it requires tenacity and attention to detail, but it has ultimately been quite rewarding.

So I want to thank again AHRQ, UAB Hospital, Viva Healthcare, and a terrific back-to-home support team who is committed both to IT and to patient empowerment. Thank you.

DR. TERESA ZAYAS-CABAN: Thank you, Dr. Ritchie, and I will turn it back over to Dr. Sinsky, who is going to give us a brief summary.

DR. CHRISTINE SINISKY: Great. Well, thank you, Teresa. I would like to turn our focus now to a brief discussion of the barriers and enablers that physicians in practice encounter in implementing HIT, in general and for patient empowerment. Because Dr. Krist and Dr. Ritchie have given us some visions of where we can go and those visions are very attractive and we would like to minimize the barriers and increase the enablers of reaching that vision that they have shown to us.

But I have to start out with a bit of transparency, and that is for most of us on the front lines HIT is not completely there yet; that in our own practices it is often been a mixed blessing. In our practice, HIT has improved my practice in very important ways and we would never go back. But I think it is important to acknowledge and to take into account the fact that it has also made our work much more difficult in many other ways. And when we think about research and new implementations, as Dr. Christine Ritchie has shown us, I think it is important to recognize the potential for any intervention to add more work to the practice.

And I think we have recognized that there is a gap between the promise of HIT and the reality. And in this sense, thinking about a statement attributed to Yogi Berra: "In theory, there is no difference between theory and practice. But, in practice, there is."

So just to make that point again, that for most of us using electronic health records, our user experience is very different than our user experience outside our medical lives; that is, our electronic health record does not have the kind of easy navigation and usability that we have come to expect in our iPhones and other technology in our outside lives.

So briefly, what are some of the barriers that we experience to implementing new HIT? Well, I think one is time, and that is probably one of the biggest ones. And in my experience in that is many physicians across the country that even once we have gone past the learning curve, that our electronic health records have added about 20 percent more time to our day. And I think this brings up again the important point that there is a gap between the conceptual capacity of HIT to improve practice and some of the operational limitations that we encounter.

I think it is also important to look at workflow, because for many of us the electronic health record has increased the amount of clerical work that has been tasked to the physician. In fact, one physician leader mentioned that the electronic health record has resulted in the largest transfer of work to physicians in his lifetime. And so I think we need to be mindful of that as new ideas are being designed and implemented.

And then I think it is important to keep an eye on the quality of the interactions, because we understand that patient-centered care is really based on healing relationships, and with the electronic health record we have introduced a third party into the room. And there has been studies that have demonstrated that physicians are spending a considerable amount of time, a third to two-thirds of the time, with a patient on screen gaze time, looking at the computer and attending to the computer and less attention directly to the patient. And I think we need to make sure that our implementations allow us to make eye contact and focus really directly on our patients.

So those are some of the barriers, but really I would like to focus then on some enablers. The first is the design, and I heard that very strongly in each of our presentations: To make the design user-friendly. And in one way we can think of this as to minimize the number of clicks, scrolls, and screen changes involved in any particular implementation.

Another enabler is good display, so that when the information that we are looking at is displayed in a concise, clear way that is free of clutter; that decreases the mental workload on the physician. And I was particularly impressed with Dr. Krist's display of information to the patients; that was presented to the patients in a very user-friendly way.

And another enabler is thoughtful implementation of the IT technology. So that we minimize the amount of re-work, make-work, or mis-directed work that results from the good idea. It is important I think to match the right task to the right worker so that we do not automatically assume that every piece of information needs to loop back to the physician and that the physician be the one who has to respond to every piece of information that oftentimes another person in the support team is the more appropriate person to direct that information to.

And I think implementations are most successful when they integrate into an efficient workflow. One of my partners is fond of saying, "I am a medical doctor of data entry," and I think we want to work to avoid that. And another one of my partners is frequently saying, "You know, I am working for the computer rather than it working for me."

And so as we are mindful of our HIT implementations assisting physicians and their teams in the care of patients, I think we will do the best.

And at its best, I believe HIT will help physicians and our teams take better care of our patients, do it more efficiently, remain financially viable, and enjoy the work. I think if that happens, then HIT will have helped us take better care of our patients and help our patients achieve better outcomes.

And I wanted to close with just one thought, and this is a thought from a family physician in Iowa who said, "I thought of all the things I should have done for my patients and did not do...medical home," and here I would add and effective health information technology, "would give me the vehicle...perhaps I could come home a lot more satisfied and less exhausted knowing I have delivered the best care possible." And I think Dr. Krist and Dr. Ritchie have given us a vision of some tools that will help us really achieve our best intentions of delivering the best care possible.

And so with that I would like to turn it back over to Teresa for Q&A.

DR. TERESA ZAYAS-CABAN: Thank you, Dr. Sinsky, and I want to thank all of our panelists for great presentations today. We are going to move to the question and answer portion of the teleconference. I will be reading some of the questions that a lot of you have already posted. And, Collin, correct me if I am wrong, but you will be displaying the poll to gather feedback on the teleconference fairly soon?

Okay. So our first question actually relates to the concept of patient empowerment itself. The person asking the question is wondering how a patient can be empowered if he or she does not have control over who sees the information about themselves. But to broaden the question a little bit, can the three of you speak a little bit to what you envision an empowered patient to be?

DR. CHRISTINE RITCHIE: So this is Christine Ritchie, and I would say that there are quite a few things that would characterize an empowered patient, but one would be for the patient and their caregiver to feel like they can navigate, without distress, the healthcare system and feel like they have ultimate control over their health and what they can do about their health.

DR. CHRISTINE SINISKY: This is Christine Sinsky, and I would echo that. I have found that the patients that I care for who take a more active role in their care, who are interested in what their results are, get better care because they can ask more appropriate questions, they can proactively intervene in their own care.

DR. TERESA ZAYAS-CABAN: Great, thank you. Dr. Sinsky, I think this question was initially directed at you, but if others have any comments feel free to chime in. The person asking the question was wondering if you had gotten any questions from the patients with regards to medication information that provided by the medication list that you were providing them? Specifically, they were wondering if the list was prepared in laymen's terms, and if some technical terms were included, if you had gotten any questions about that.

DR. CHRISTINE SINISKY: Actually that is a really great question because that gets at this gap between expectation and reality or potential value and reality, because initially our medication list came in Latin and that is a good language for clinical users. But of course, when we print that in Latin, that is not of any value to our patients, so our nurses have to manually convert all of the sigs to English. And that is a barrier for us, printing up a medication list for every patient at every appointment, which we have tried to do and we have found that the work of that overwhelmed us.

Conceptually, you can imagine a med list that could be in Latin for the clinical users and could be in English for the patient users and that you could click Latin or English before you printed to select the proper language. But right now we manually sort of have a work-around around that which entails our nurses converting that into English before they print it.

DR. TERESA ZAYAS-CABAN: Interesting. Thank you, Dr. Sinsky. There are a couple of other questions for you regarding hospital admission. One person is wondering how you know if one of your patients is or was hospitalized. And another person is wondering if you had been focusing at all on trying to prevent readmissions when you find out one of your patients has been hospitalized, and if you can speak to that.

DR. CHRISTINE SINISKY: All right. And you had indicated that was to me, Christine Sinsky?

DR. TERESA ZAYAS-CABAN: Yes.

DR. CHRISTINE SINISKY: In our practice, our physicians, and in particular, I take care of my own patients in the hospital as an outpatient so that I know when they are discharged because I have discharged them, by and large. And I actually talk to my nurse every day about how our patients are doing so by the time they go home she has a pretty solid understanding of what their hospital care was like, which I think has also been important in her role as this transition coach, if you will, for when they go home.

Now, if I am out of town and one of my partners sees the patient, we have a routine practice of setting up a follow-up appointment one week after discharge for all of our patients. I will tell you I think that it is working. We have the Dartmouth Atlas data has indicated that Dubuque has the lowest cost for the last two years of life for hospital care for Medicare patients of all the over 300 metropolitan service areas. And I am not saying that is directly related to any HIT; I think it is probably related to our strong primary care. But I think our hospital-to-home initiative sits along that same line.

DR. TERESA ZAYAS-CABAN: Great, thank you. This question, we have gotten quite a few questions with regards to issues of illiteracy, both to a general illiteracy and a health illiteracy as well as numeracy, and I was hoping each of you could talk a little bit about how you are reaching low literacy patients, if you make any adjustments in terms of the material that you produce and present to them or if you make sure that all of it is at a particular reading level to make it as accessible as possible to your patients?

DR. CHRISTINE RITCHIE: This is Christine Ritchie, and we did have all of our scripts evaluated for reading level and literacy level, so they are at a sixth grade literacy level or less. But actually one of the roles of the coaches in the hospital is to get a sense of patient caregiver literacy. A lot of the work that is done in the hospital is based on observing what the patient does and does not understand, or what the patient is or isn't able - unable to read or write about their condition, and then adjustments are made accordingly.

Because the IVR is all communicated through voice, literacy there is more related to their understanding of the questions, and if there is any concern about that, coaches will follow up and call those patients in particular.

DR. TERESA ZAYAS-CABAN: Great, thanks. I guess I will move onto the next question. Dr. Krist, this question is directed at you. Some of the folks in the audience are wondering if there is physician support system behind My Preventive Care, and if so, if you could talk a little bit about whether your team developed it and the development process.

Okay, I will move onto the next question for now. This is directed at all panelists. One of the participants is wondering if you have managed to decrease the amount of work for the physician with some of the interventions that you described today.

DR. CHRISTINE RITCHIE: This is Christine Ritchie, and since we are actually in the middle of our trial it would be hard to say whether or not we have increased or decreased our physician work. It probably could go either way depending on how engaged and empowered patients are with respect to follow-up and how much additional time they require of providers with additional questions that they may identify as being pertinent to their condition.

DR. CHRISTINE SINISKY: And this is Christine Sinsky, and one of our goals with respect to all of our workflows is to make sure that we have matched the right work to the right person. Our goal really is to make sure that the team is caring for the patient and that the physician as part of that team is able to spend the majority of their time on shared decision-making and relationship building. And I think it is just a challenge in every HIT implementation to ensure that we have not just assumed that the physician is the one who needs to be the recipient of that work or that inbox information.

DR. TERESA ZAYAS-CABAN: Great, thank you. And I am sorry, Dr. Krist is having some technical difficulties with his phone, but I just wanted to let you know that in fact his team did develop the decision support logic behind My Preventive Care. They based it on national guidelines; so, for example, the United States Preventive Services Task Force guidelines, and that is something that the team did themselves.

Dr. Ritchie, this question is directed at you. This participant is wondering if the technology that is supporting the IVR is something that the UAB Hospital developed or if it was purchased from an outside vendor.

DR. CHRISTINE RITCHIE: So it is a shared approach where we used software actually from the Telestage (sp?) Company, but we developed all the queries, scripts, and routing mechanisms within that framework.

DR. TERESA ZAYAS-CABAN: Great, thank you. Another participant was wondering about the 26 percent of patients that chose not to participate in the study.

DR. CHRISTINE RITCHIE: Right, so that those individuals usually had cognitive issues that precluded them being able to answer the questions and without an appropriate or available proxy.

DR. TERESA ZAYAS-CABAN: Thank you. Dr. Ritchie, another participant is asking some more specific questions about the IVR itself and how you developed the scripts and the rule sets. Can you elaborate a little bit more on that?

DR. CHRISTINE RITCHIE: Sure. That probably could be done, presentation, because it has been a fairly comprehensive and fairly extensive process. But using the pillars and some of the original data that we had available through the care physician intervention we took it through a number of formative phases that included piloting it and engaging in focus group discussions both with providers, with hospital discharge planners, with patients, and then went through several refinement processes with those scripts, took it through another pilot study with patients, and then through refinement based on their feedback to the final product that we are now using for the study.

DR. TERESA ZAYAS-CABAN: Thank you. Dr. Krist, there is another question here directed at you with regards to how you measured some of the characteristics described in the focus group finding such as accuracy and trust.

DR. ALEXANDER KRIST: Can you hear me now?

DR. TERESA ZAYAS-CABAN: Yes.

DR. ALEXANDER KRIST: Oh, great. Apparently the mute works too well on my phone. So with the focus groups what we are talking about there was the theme that emerged from the patients, both the users and the non-users, and these were repeated messages or repeated statements that they said about trust being extremely important and functionality being very important. So we did not explicitly set out to try and measure this as one of our a priori hypotheses, but this was something that came out when we started engaging the patients and the clinicians.

DR. TERESA ZAYAS-CABAN: Great, thank you. I actually made this observation as I was listening to you present, Dr. Sinsky. A lot of the areas that you described are barriers, too, for the physician to use, health IT, but many of the systems described today are actually interventions for the patients themselves. So can all of you talk a little bit about the barriers in getting either patients to use them or in developing these systems to make sure they are useful to the patients?

DR. CHRISTINE SINISKY: Well, perhaps I will start with some general comments and the other two presenters would have some more specific comments related to their research.

I would say some barriers that I would envision for my patients from what I know from interacting with them would be, first the obvious one: Whether they had web access. And I have been surprised at how many of my patients do not have web access. And then secondly, I think a barrier would be how personalized the interaction feels.

So with Dr. Krist's, how personalized the patient, My Preventive Care feels to the patient, and I think they have worked very hard to make that feel very personalized. And for Dr. Ritchie's work, it would I think be a barrier if the patients did not feel that there was a personal connection with them. And it sounds like they would get that personal connection with the follow-up phone call that would come if they had a red flag. Those would be two things that I would identify from the patient's perspective as barriers.

We currently use our HIT more as our foundation that we can use then to give our patients more information, but we do not necessarily give that to them electronically. In fact, primarily right now we are giving it to them in paper form.

DR. ALEXANDER KRIST: This is Alex Krist. I was going to say I agree with the barriers of access. And clearly, using HIT for some patients is not the best way to approach this. But for many of our patients in Virginia we have found a very high number who have access to the Internet and the ability to use HIT systems, whether it is at home or work or other environments.

Personalization has been very important to try and promote the use. The other thing that has been extremely important is really to help patients to understand how it benefits them, how it can help in their care, increase their access to care and to their physician, and understand about how it can just make their care delivery easier for them. And once we have kind of addressed those issues, patients seem to embrace this pretty well. A bigger issue, which is what I was eluding to at the end of our study as well, if you are going to use this to increase access to make their practices and physicians more available, well, how do you integrate this into workflow and make this something that practices can actually deliver on, and that is some of what we are working on right now, but those seem to be really important to promote use.

DR. CHRISTINE RITCHIE: Yes, so this is Christine, and I would echo what Alex and Chris have already stated, which is that the personalized interaction is very important, something that we spend a lot of time working on. And along with the perception of benefits, for us probably the biggest barriers are either not having a phone, because this does not require - our intervention does not require Internet access - having hearing impairment or cognitive impairment, which does impede use of a phone.

DR. TERESA ZAYAS-CABAN: Thank you all. Dr. Krist, one of the participants is wondering if there are other EMR products other than those noted that My Preventive Care site will interface with or can interface with.

DR. ALEXANDER KRIST: Well, the short answer to that is that, you know, we believe it should be able to integrate

with everything. Right now we have only integrated it into Touchworks, Professional, and Epic, but we have tried to use a very centralized standardized process that would work for any EMR. And as move more and more to having effective health information exchange, I mean I think we are going to see more systems like this that can really integrate and span across systems. And I did not get a chance to answer kind of one of the earlier questions because of my mute button was working too well, but one of the attendees had asked a question about whether patients could control their flow of information. We really kind of always viewed that something like what we are creating could be something that patients use to kind of determine who has access to their information. And for our first stage we just linked it to their physician, but long term, we have always had this vision that patients could always dictate who has access to the information, where the information comes from, and where it flows, and to do that would require integration with multiple information systems, so that is where we are moving towards.

DR. TERESA ZAYAS-CABAN: So related to that, this is a question for all panelists. If a patient goes to a provider outside of your network, are you able to somehow incorporate that data or import it into your respective EMRs?

DR. CHRISTINE SINISKY: This is Christine Sinsky, and I will address that from a practitioner's point of view. If a patient is seen outside of our clinic or the hospital with which we have integrated our information, that is available in our EHR only as a scan document, which is a much more difficult document to access and use. And so yes, we have that information, but it is not integrated into our other data sets.

Going the other direction, we give patients - part of the reason we give patients copies of all of their results are so that they have that, and when they go to Florida for the winter they have the list of their past family social history to have the results of their recent CAT scan; they have the note from the pulmonologist who has evaluated them, so that they have those things to take with them.

DR. ALEXANDER KRIST: This is Alex. I will say we have the same situation for us. And I think the question highlights a big problem that we have with meaningful use of health information technology and patient-centered use of health information technology. It really needs to be transportable and integratable, and it is hard to transport and integrate these electronic systems, and that is a barrier. So every time that we try to integrate this, there is a lot of manual work that we need to do, and it is very hard for typical practices to do this, but this is a big barrier for meaningful use and for patient-centered use of health information technology.

DR. CHRISTINE RITCHIE: This is Christine. Because our focus is more on patient problem-solving and less focused on medical intervention, it is a little bit less of an issue from our vantage point because the patient is really carrying all the information.

DR. TERESA ZAYAS-CABAN: Great, thank you. Dr. Ritchie, one of the attendees is wondering if the IVR system provides any feedback or reporting back to the patient.

DR. CHRISTINE RITCHIE: It only provides feedback in reporting back to the patient through the coach.

DR. TERESA ZAYAS-CABAN: Okay, thank you. And I realize that you are in the second year of your project, but somebody was wondering if you had any preliminary data with regards to readmission rates for those who may be participating in the study.

DR. CHRISTINE RITCHIE: I wish we did. Stay tuned.

DR. TERESA ZAYAS-CABAN: Okay, thank you. There is a general question to the panel with regards to the response from the health IT industry, in particular regarding web-based portal solutions for small clinic and those physician providers that truly empower patients and improve healthcare access and outcome. So can you talk a little bit about your experiences working with the industry or in developing the systems that you have been developing for your respective care settings?

DR. ALEXANDER KRIST: Well, this is Alex; I will start. We purposely back in 2007, as we created My Preventive Care, decided not to work with vendors. We did it on our own, partly because we had had some difficulties in the past. And we are moving now towards trying to create what we are doing in partnership with vendors, and it has been a

positive and interesting experience. I think there are lots of issues with trying to increase the interoperability and to make these systems work. And many of the vendors that we have partnered with have a lot of different competing interests which make things difficult, and with a lot of the new stimulus money promoting the adoption of health information technology, on a personal level I have always hypothesized that this keeps vendors very busy with distributing the systems that they have as opposed to being able to invest tremendous amounts in advancing their systems.

But I think that there is a real opportunity to try and create some uniformity to make systems work well together, and that is what is really going to kind of get us over the hump to promote meaningful use and patient-centered care. So it is a very important partnership to foster and grow.

DR. CHRISTINE SINISKY: This is Christine Sinsky. I would just share that from a policy perspective I would really welcome policies that encourage an environment where vendors created a platform that was like the iPhone model, where you got a platform but then you could go out and purchase individual modules that plug in and play to whatever vendor you had. So that if I have just heard about My Preventive Care, I think that is just the right ticket for my practice, that I would not be dependent on my vendor selling a version that they have created, but I could go out and say, "I like that My Preventive Care. Let me plug it into what I have already invested in." And so I would hope that we can eventually get to the iPhone model of multiple apps coming into multiple vendor platforms.

DR. TERESA ZAYAS-CABAN: Okay, great. And with that I think I will thank our speakers once again for great presentations and lively discussion.

I believe a poll if it hasn't come up already will be coming up on your screen for the participants. We like to hear what you thought of the presentation, the topic, and the overall experience and participating in the teleconference.

Just so you know, we will have another teleconference coming up focusing on health information exchange, so we hope you are able to join us. Thanks again, everyone.

END TRANSCRIPT