Meaningful Use Workgroup
Subgroup #3: Improve Care Coordination
Transcript
May 30, 2012

Presentation

MacKenzie Robertson – Office of the National Coordinator

Thank you very much. Good morning, everyone. This is MacKenzie Robertson in the Office of the National Coordinator. This is the meeting of the HIT Policy Committees Meaningful Use Workgroup Subgroup #3: Improving Care Coordination. This is a public call and there will be time for public comment at the end. The call is also being transcribed so please be sure to identify yourself before speaking. I'll go through roll, and then, at the end ask any staff members on the line and workgroup members to also identify themselves. Charlene Underwood?

Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs

I'm here.

MacKenzie Robertson – Office of the National Coordinator

Thanks, Charlene. Michael Barr?

Michael Barr – American College of Physicians – Vice President, Practice Advocacy & Improvement

Here.

MacKenzie Robertson – Office of the National Coordinator

Thanks, Michael. Jessica Kahn? David Bates? George Hripcsak?

George Hripcsak – Columbia University Dept. of Biomedical Informatics – Chair

Here.

MacKenzie Robertson – Office of the National Coordinator

Thanks, George. Eva Powell? Leslie Kelly Hall?

Leslie Kelly Hall – Healthwise – Senior Vice President for Policy

Here.

MacKenzie Robertson – Office of the National Coordinator

Thanks, Leslie, and Larry Wolf I know is unable to attend. Are there any other workgroup members on the line? Are there any staff members on the line?

Mary Jo Deering – Office of the National Coordinator – Senior Policy Advisor

Mary Jo Deering, ONC.

MacKenzie Robertson – Office of the National Coordinator

Thanks, Mary Jo.

Michelle Nelson – Office of the National Coordinator

Michelle Nelson, ONC.

MacKenzie Robertson – Office of the National Coordinator

Thanks, Michelle. Okay. Michael, I'll turn it back over to you.

Michael Barr – American College of Physicians – Vice President, Practice Advocacy & Improvement

Thanks so much, appreciate it. Thank you, everybody, for joining us. We have two excellent speakers today. Dr. Ileana Piña and Dr. David Kendrick and I'll introduce them briefly in a moment or two. We've asked the speakers to talk around the following set of questions to help inform our deliberations in Stage III Meaningful Use. First we asked them what they are working on to help inform Stage III. What are the opportunities or barriers they face? What infrastructures such as policies, tools, training, communication as need to make what they're doing successful, and what strategies would they recommend? How do they prioritize their efforts and how does what they're doing improve care collaboration and patient care and quality? And then, of course, one of the issues, if they can get to this, what does it cost to put them in place and to sustain them?

With that as background, let me introduce our first speaker today, Dr. Ileana Piña who is a heart failure and transplantation cardiologist expert. She serves as an advisor and consultant to the FDA's Center for Devices and Radiological Health and their section of epidemiology. In July 2011 Dr. Piña joined the faculty of Montefiore Medical Center at Albert Einstein Medical College as associate chair of Academic Affairs and professor of medicine and epidemiology and population health. She was formally at the Case Western Reserve University in Cleveland as professor of medicine and became the director of heart failure and cardiac transplantation in the Department of Medicine and the Division of Cardiology at the University Hospitals of Cleveland.

Let me turn it over then to Dr. Piña to give the first presentation of this workgroup meeting. Thank you Dr. Piña.

Ileana Piña – Albert Einstein College of Medicine, Montefiore Medical Center

Thank you and you will be controlling my slides right?

Caitlin Collins – Altarum Institute

Yes, just say, "Next slide," and we will advance them for you.

Ileana Piña – Albert Einstein College of Medicine, Montefiore Medical Center

Perfect. Really appreciate the opportunity. I have been sitting on the Electronic Health Initiative Leadership Counsel for the American Heart Association and so you hear this terminology back and forth but then when you really sit down and you need to apply it to your own place that's where things get interesting.

I think this is basically the definition of meaningful. I think this whole group understands this so we can go to the next slide. The things that's I've highlighted here are things that were already going on at Montefiore before I got there. E-prescribing was already there. The EHR is there in the inpatient and even though it's the same company it's a separate one on the inpatient, which is one of the challenges of connecting the two.

I went in to the CMS webpage and I looked at Criteria 3 specifically and it really sounds like an expansion of the two but with a real focus, which I love to see, on patient outcomes including self-management tools, being able to take a look at data real time, and being able to send the data to either public health groups or Medicare or I'll talk a little bit about Get with the Guidelines.

What are we working on? At Montefiore when I was hired I was told that our readmission rate, particularly for heart failure which is what I do for a living, at our three hospitals was 28% according to hospital compare. At the same time Montefiore had hired CMO that has been very active in trying to curb the heart failure readmissions on their own, and then, while I was there we became a pioneer ACO, which has really opened up a lot of doors. And we thought about mapping our process, which I call the patient journey and I'll show that to you in a moment, using the electronic health record to really communicate, prescribe and very important for me for transitions of care.

For those of you who aren't familiar with this, I was part of this National Priorities Partnership in 2010, which NQS got together to do all the following thing that we call the pillars of care; better care, affordable care, healthy people and healthy communities. I really want to focus on the better care, which talks about really patient-centered and family-centeredness, elimination of disparity (something else that I am very, very close to being Hispanic myself) and trying to align the public and the private sectors. These are the core principals.

We came up—there had been already a list of priorities for 2008 but for 2010 we added two here that you see with the red asterisk; equitable access and infrastructure. I'm going to talk a lot about the infrastructure needed to do what we're doing, and as we broadened this better care right in the middle in there was care coordination and under care coordination—if you go in to the next slide I'm just making everything … through—and here's the definition of care coordination. It's really forming relationships between the patients and the healthcare professionals not only with physical but also with psychological support, and very importantly respecting the patient's choice.

Here is care coordination and there it is on the right-hand slide is presentable readmissions, the 30 day readmission rates of heart failure, and this is something that we as heart failure specialists have known way back since year 2000 and 2002. We already knew that 20% of patients were coming in and the preventable readmissions—and I say the word 'preventable' because not every readmission is truly preventable—is to work in collaboration for better transitions of care realizing that every day unfortunately healthcare in the United States becomes more and more fragmented.

Right up there in the priorities list after major depression was heart failure. Why heart failure? Our hospitalizations have been increasing over the last ten years. We predicted … in this very well-known paper from the *American College of Cardiology Journal* showed that not only were first admission rates going up but also next admissions and that it was going up for both men and woman so we do have a problem. This slide encompasses every ICD code for every diagnoses not just primary diagnosis. That's an important point, which I'm going to get back to in a few minutes.

And that there was quite an amount of variability within these readmission rates. Steven … and his CDC colleagues put out this paper in the *New England Journal* and it really brought to me how different care is across the United States, and this variability even exists within the states. And you can see there for us, the State of New York, that if I broke that up in to counties I could show you wide differences from one county to the next being next door to each other. And the sad fact is that over half of the patients are never seen 30 days after a hospitalization. This also comes from CDC data looking at Medicare data.

The med cap, which again I don't have to explain to this group what that is, showed that heart failure readmission rates were the number one extents in readmissions period and it's right up there, and my understanding is that even President Obama has seen these figures as he was really supporting the Healthcare Act.

One of my favorite slides is this one. This is from Greg … showing that we deal with episodes of care. The ED staff and physicians see the patients and they get moved over to somewhere in the hospital but they may never see that patient again. And then discharge here is shown as a separate process rather than just bye, today here's your sheet of medicine, here's your next appointment, good-bye. And that the early post-discharge, which we've highlighted here in red, really falls in between these two black holes where patients fall in, but the patients don't see themselves as episodes of care. They see themselves as journeying through these steps and then, as an outpatient the fear and the concern is that they're going to come right back in to the hospital.

We find these as opportunities to improve, and I'll talk a little bit about the American Heart Association mission of Get with the Guidelines where we realize that the 30 day re-hospitalization rates have only gone up. They were at 20% in 2002 and here we are in my area 28% and that many are preventable but that there are strategies that work; they're just not being utilized. And, in fact, if you look at just across the board—and this is also from Get with the Guidelines database, if you look at the median follow-up of patients who get seen within those seven days it's really roughly 38% of the hospitals. The other hospitals that are Get with the Guidelines hospitals do not see their patients within seven days; again, a great opportunity for care.

Adrienne Hernandez from Duke took that data and took a look at core tiles by when the patients were seen and it was pretty clear that the patients who were seen at early follow-up, and again there weren't that many have a lower readmission rate. So now we've been able to at least in the dataset link seeing patients early to reducing the readmission rate.

I see these all as opportunities when I arrived at Montefiore last July. Now we have an ACO with a lot of covered lives. We have had really very strong hospital administration support. My chief of cardiology highly, highly supportive of this and that is so important that when you launch into a program you really get support from the high ups. I've been training the providers, pharmacists—I'll talk a little bit more about this—EMT. Here's this high readmission rate. I have my sense that background therapy in heart failure is not being used across the board according to guidelines. I found to my great delight that the pharmacy here was incredibly also not only supportive but eager to work with us, and I had spent three years in a quality fellowship within the VA, which has been very hard, had quality issues.

Bridging the gap; how do you take what you know needs to work inside the hospital and really using systems approach to bring it to clinical practice? And this is, in fact, what we've been trying to do for a long time with Get with the Guidelines at the American Heart Association and now our initiative which is sort of a subset of that called Target Heart Failure. And we realized, again from data, that every 10% improvement in guideline care really compares to a 13% lower ratio of 24 month mortality, and this is data that was just published in circulation that looks at real world. This is improved HF real world looking at things like ACE inhibitors, beta blockers, patient education. And these are the core measures of part of Meaningful Use Stage III has to do with the clinical core measures, which I'm going to also go in to from the CMS website, documentation of left ventricular ejection fraction, giving ACE OR that the patients have low EF, discharge instructions and smoking cessation. I must say that our new performance measures, which are part of our partnership with the American Medical Association, have just been published so I suspect that we will be modifying some of these core measures.

And we came up with three things that need to happen at the time of discharge. First of all, medication management; the patients must not only have access to the right medicine but we need to educate them on why they're taking it and how to take them. That early follow-up visits have got to be given at the time the patient leaves; not call us in the morning or call us on Monday and we'll give you the appointment. The third that we often don't think about; when should the patient worry about signs and symptoms; when do they need to call and who do they need to call and that's not an answering machine.

Rather than starting right off the bat I did what I was taught to do in the quality program, which is process mapping. You can't figure out where the patients are going if you don't know where they're coming, and so we drew this diagram. You can see on the left-hand side that the majority of patients come in through the emergency department, and we have 12,000 hits with heart failure anywhere in 2010. We have now paired that down to the primary diagnosis and it's only about 2,000 and some from which we are now starting to pull the charts, but we know how many Medicare patients. We know their age, their demographics. And then, the decisions are made whether to send the patient to the coronary care unit or to the floor and who decides has been very difficult to get my arms around. Who decides if they go to cardiology or do they go to family medicine? Hospitalists are throughout the system—another piece of the fragmentation of care. I've already given one talk to the hospitalists who are very interested and highly, highly supportive. The CMO providers are everywhere so they may be internal medicine, they may be family medicine, they may be cardiologists, and then I have discharge therapists, own separate little triangles because it is a process of care.

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We started what we call The Brown Bag Clinic to try to tackle some of those points that I made that were important. The Brown Bag Clinic is called Brown Bag because the patient are told at the time of discharge to bring all their medicines, put them in a brown bag and bring them in and bring them in to our early post-discharge clinic. Using this particular med rec model, which was developed by Dr. Dani Hoover who was one of my colleagues in the quality program and she has given me permission to use her slide, it's med rec as everybody knows med rec except if you look at the purple bar it says, "optimize'. The serious model includes optimization of medical therapy at the time of that early discharge clinic.

The workflow is the following: This is a clinic that could be very cost effective. It is run by pharmacists; pharmacists who act as preceptors who have been trained, in this case have been trained by me with a lot of support from their educators in the pharmacy. There's a nurse practitioner, a fellow, and an attending available. We are doing the Kansas City cardiomyopathy questionnaire to evaluate the health status of the patients. We can draw laboratories so the pharmacists now in New York have the option to add laboratories. They can order medications as well under a protocol and we have done that; we have put together a protocol. We are also ordering the pre-discharge brain natriuretic peptide because there is a lot of data showing that the higher the BMP at the time of discharge the higher the rate of readmission.

We spend a lot of time focusing on medication education. In the clinic right now we're running one half-day per week because we started small to see and work out any kinks.

What are our goals? Verify what the patient is taking. Why? What's the purpose of each drug, the correct usage? We really want to reduce … pharmacy and remove drugs that have been given for side-effects when you can actually change the basic drug. Try to work with them about if they're not compliant why they are not compliant; and talk about the common side-effects so that the patients understand this; and we give them the education booklet, which I'll show you in a few minutes; and an updated letter being sent to the physicians. We composed a letter that is given to the patients at the time of discharge.

Here is an example of the vulnerable … patient who gave us permission to do this. The vulnerable patient—she had just been in the hospital. There were all her medicines and it's really quite amazing to see how many pill bottles this poor woman had. As we broke them down you can see the expired duplicates, you can see all the under-the-counter herbs. She was using her husband's nitroglycerin for chest pain and the pill bottles on the right are the ones that were really active therapy.

Our pharmacists are seen here doing the teaching, going over each bottle. We put a red X on the things that she shouldn't be taking and separate and go over in great detail the ones that she should be taking. We often see three ACE inhibitors, two diuretics, four beta blockers, and the patients are terribly confused. This is what she ended up with. We eliminated a lot of the poly pharmacy. We let her keep some of her over-the-counter medications, and that arrow points to the five drugs that she really should have been on.

At the same time let me give you some of the data that we have collected from the Cleveland VA Center where I was working before, and as you hit the button there you will see there are medication discrepancies in this clinic; half of the patients had medication discrepancies. We optimized about three-quarters of the medications, particularly in patients with systolic dysfunction. This clinic happened in about ten days and within six months we had our readmission rate down to 8% when in fact it had been 15% before. It wasn't as bad as what I had been dealing with more recently.

What are the barriers? This group has asked us for the barriers. Interestingly enough I found a lot of discomfort already. Physicians both my own cardiology colleagues and primary care to say this is my patient and I want to do this myself. A lot of discomfort about the use of ACE inhibitors and I've been dealing with this for 20 years that a lot of physicians feel that the patient can't tolerate the drug, and, in fact, it isn't renal function and there are ways to get around it and you hear it's not tolerated. Those patients never fall in to the denominator of the clinical measures because they're felt to be intolerant to ACE so they don't fall in to the equation.

A lot of the physicians have not had experience with flexible diuretic regimen, which is something that I've been using for a long time, and a lot of clinical inertia. I already do the right thing. I don't need anything else. These are quotes that I've already heard. I was asked for infrastructure and what are our tools, tools … training. When I got there I had been training across the board. We have a National Heart Failure Training program that is on the web; you're welcome to look at it. I've been training …. I've been training pharmacy, the nursing units. I've already trained some hospitalists. I'm going to the ED residents very soon, and I'm doing this with very strong support from the leadership.

Other tools are understanding processes of care. I hear a lot from hospitals that say, "We need help in doing this," but you say to them, "Well, what is the process of care? Have you mapped your processes across your system so you know where the problems are?" So important is seamless communication between the inpatient and the out-patient's electronic health record. Right now we don't have that. We have access in the clinic, obviously, to the in-hospital records because we're right across the street and we're part of the same system, and one patient education booklet in the system, which we have already started.

Acceptance by the physicians has to be the highest priority; education about guideline-based care, seamless patient education, identification of the patients who do not get that early follow-up care, and providing those core concepts that I showed you. Again, I have acceptance by the physicians at the beginning and at the end.

Here's our patient education booklet. This is the patient education booklet that I had used previous at Case and I had given it to Get with the Guidelines, and we have all these great tools online under target heart failure, and I just downloaded it again, changed the wording. We have updated it and this is now in every ward in the CCU, the home healthcare group, and the … are going to be using one education system so patients do not get confused with different messages from different places, and we translated them into Spanish.

How does it improve care collaboration? Well, it's linking everybody. We're right now forming the real team approach to heart failure and it's too early yet for us to measure the impact on readmissions. I've only been there since last July and we had just started this clinic just a few months ago. I had to get everybody trained.

What does it cost? Well, we are exploring cost sharing so rather than having to hire a brand new pharmacist there are pharmacists already in the pharmacy who have tremendous amounts of interest for us in particularly in heart failure and we're looking to see how we can cost share. How will this help us financially? Well, if the costs happen to occur in readmission payments, which I'm sure they're going to come, then we're going to have to look at the savings of not having those readmissions versus the cost primarily of the employee; that's the biggest expense is salary. In New York—and every state is different—MPs and pharmacists can now bill so you can recover some of their costs and obviously having an ACO is very helpful because of the financial risk that is already existing.

Looking at the Meaningful Use table of contents, I put a checkmark next to some of the things that we're already doing. The med order's already directly going in to the EMR. The drug allergies are already in there and the pharmacist—that's something they go over in our Brown Bag Clinics. We have an updated problem list. We have a very sophisticated EMR with sheets specifically made for heart failure and one of my heart failure colleagues is very adept at these systems. We have come up with electronic prescribing; that's been happening for a long time, and we have recorded all the items here that are the demographics that include race and ethnicity.

What we have not yet done is using that system to report the quality measures to CMS, although the hospital is doing it independently. We have been checking off whether—but it's just a check right now whether the patients are smoking or not. We are sending clinical summaries of the Brown Bag Clinic to the referring physicians. Very often I get on the phone and make phone calls and the patients are getting a brand new medication list.

That is the end of my presentation, and I want to thank everybody for listening.

Michael Barr – American College of Physicians – Vice President, Practice Advocacy & Improvement

Thank you so much, Dr. Piña. I appreciate it very much. What we'll do is we'll let Dr. Kendrick go next and do his presentation and take questions from the workgroup thereafter. Is that acceptable to everyone?

Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs

Sounds great.

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Sounds good.

Michael Barr – American College of Physicians – Vice President, Practice Advocacy & Improvement

All right. Let me go ahead and introduce Dr. David Kendrick. He is the principal investigator and CEO of the MyHealth Access network, a Beacon Community. MyHealth is focused on improving health in the greater Tulsa area by implementing a communitywide infrastructure for healthcare IT and on providing advanced health information exchange, communitywide care coordination tools, and robust decision support platform to support providers striving to provide high quality care in the face of overwhelming data availability. Let me turn it over then to Dr. Kendrick. Thank you so much for joining us, appreciate your time and effort putting the presentation together.

David Kendrick – MyHealth Access Network – Principle Investigator and Chief Executive Officer

Sure. Would it be okay if I shared my screen on this end?

Caitlin Collins – Altarum Institute

You do actually have the right to that if you wish to do that.

David Kendrick – MyHealth Access Network – Principle Investigator and Chief Executive Officer

Okay. It will just enable me to click through, which will make it a little smoother probably. Here are the questions you all asked. I rearranged them a little bit to fit the pathway I was going to go through for this talk, and I'll hopefully check the box on all of these.

Just by way of background, I think it was in the bio but I lead our Beacon Community effort here in Tulsa, which is called the MyHealth Access Network, and we have sort of a three-legged stool of intervention that we're applying to the community. The first is having communitywide health data aggregated; that's our health information exchange. We're providing single sign-on contacts for that in the patient portal as well. The second is analytics, consensus of care opportunities. That is we're leveraging that communitywide health data through some business intelligence platforms to pull together analytics that we've built ourselves but also we're leveraging a tool called Archimedes and another tool called DocSite on a communitywide basis. And then finally, the thing I'm here to talk about today is these tools to address care opportunities and that's the clerk-to-clerk system and the doc-to-doc system. I think I heard that Dr. Bates is on the phone and he will recall that some of this work I was designing when I was working in his shop in Boston.

Active care transition management: I'm going to make some statements here and hopefully I can substantiate them as we go through this conversation, and I should say please feel free to interrupt me if you want me to clarify something. First of all care transition orders in my mind are physician orders and should be managed as such, so a fax even if it's electronic doesn't, to me, qualify as an electronic care transition or as a physician order because we're not tracking a status on a fax. It's just out the door and we don't know what's happened to it. I would suggest that sending direct emails with a CCD attached also doesn't have a status tracking capability so it's impossible to know once I've referred to someone using the direct protocols what they've done with that referral once they've gotten it. There's no feedback from them necessarily built into that.

The second thing I would say is the CCD alone is not a sufficient care transition document. Each receiving provider has unique information needs so I just ask you to envision the orthopedic surgeon eagerly pulling the CCD out of a referral and looking through it before they see the patient; it's just not going to happen. What they want is they want focused information that directs them to the services that they're being asked to provide. Then the next one is that not all referrals are necessary. A lot of times referrals are made simply because there's no other way to communicate with those specialists, and I'll show you some data behind that. And then, the last one is that the payment model for something like these activities can actually be used to drive the quality of the coordination process if it's structured appropriately.

This is a hypothesis that I put on the table in 1998 where basically I started thinking about care coordination and care transitions and recognized that we were no longer in the Marcus Welby days. We weren't practicing together in the same hospital and so primary care doctors and specialists especially but also ancillary care services weren't communicating. Essentially the obligation of the PCP was to write on a piece of paper send this patient to cardiology and then somebody in the office would make that referral happen but there was not necessarily a plan to move that patients. And because volume drives the workflow on both sides it just takes too much time to get on the phone with one another; nonclinical personnel therefore drive a lot of the referral process which results in a lot of unnecessary visits happening, but also necessary visits being delayed or missed entirely.

There's no effective way to monitor the quality of surrounding care transitions because, as I alluded, there are not statuses to care transitions other than yes we faxed it, at this point, or we emailed it perhaps. But new regulations have placed particular importance and emphasis on care transition management thus this phone call. Stage II Meaningful Use requires a certain percentage to be electronic, 30 day readmission policies which change which we've just talked about, and so on.

The place where this work began for me actually was in correctional healthcare and what we found when I started working in correctional healthcare was that inmates desperately, in many cases, needed access to specialty care but were not the most desired patients to have in specialty care, and the workflow for getting them there was really a mess, as you can see on this slide. It took many days, as many as 110 days if everything went optimally, and I have to say I saw very few cycles of this side that were shorter than 110 days, but it was very expensive as well because of the cost to transport as well as the cost of the care itself, not to mention some risks to the public in that process as well. And so when I got involved we basically made that process electronic and established the process of a referral request going to a regional doctor for review and triage, meeting basically utilization management step, and then, a direct electronic communication to the specialist. And then, if the patient needed to be seen as determined by both the facility provider that's the PCP and the specialist then the inmate would be bundled up and shipped to the specialists for their visit, but the specialist would have recommended the work-up before the patient ever traveled so that the patient only made one visit instead of several visits to that specialist.

What happened was a dramatic reduction in access to care, somewhere around 28 days. Total cost for referrals came down significantly as well, and the results were the face-to-face visits were reduced by 71% in the first 12 months, and those reductions have been maintained over the last ten years. In over half of the online consultations the specialists were able to manage the care entirely online, and over a third of the time the specialist could provide guidance that avoided additional unnecessary travel like why don't you get an EKG and send it to me or can you adjust the blood pressure medicines up and send me the blood pressures over the next three days. All of these things were done remotely through the system. And then, it actually cut the wait time for specialist input from over four months to less than 85 hours, which was a tremendous improvement, and I have to say in Oklahoma an inmate can get a dermatologist opinion within 48 hours, which not many citizens walking around in the community can get.

And so the statistical result here was that the exposure to the intervention, which was the online specialist consult, had a protective effect against the disease, which was a patient having to travel for the visit; odds ratio of 0.4 was a pretty tight confidence interval.

From that we designed—and this was back in 2004/2005—designed a study to say, "Well, if this worked as well as it does in an institutional setting surely there's some rule for this type of communication in the general practice of medicine in the community." We had the following questions: Would it improve access to specialty care? Will PCPs complete the required forms? Will specialists be responsive? Will patients be helped or harmed? Will costs be avoided and, if so, will payers recognize the benefits and participate? We had a data cluster randomized controlled trial and the full results are still in analysis but I'm going to show you what we've experienced under the Beacon as we go through this.

The first thing we had to do was understand how care transitions happen in the community. We went in to about 40 clinics in the Tulsa region and what we found was this process where many times a patient was told to get their own referral to a specialist; to get on the phone and make their own visit, or the PCP clerk would get on the phone and fax and they would have multiple iterations of communication before the visit ever got scheduled, and it was always understaffed. There were no written procedures in place. Initial contact, we discovered, was taking as long as 60 days before the PCP office could even contract a specialist office, and in some cases these practices were up to 3,000 referrals behind; meaning the initial contact had not yet left the practice and there were 3,000 of them stacked up. And the general photo, which I wish I had taken at the time, was stacks of paper sitting around the office with sticky notes on them saying, "Fax these on Tuesday, check on them next Thursday," and so on, and that was really the only way for a sending provider, let's say, a primary care provider to know what had happened with their referrals.

And so my thinking on this really began to move towards the fact that care transitions really are order and they should be tracked as such. Philosophically to improve something, to achieve quality we have to standardize the steps of a process, and then we have to track those steps to monitor the performance and to actually be able to improve them; the classic plan, do, check X cycle. And in reality there are processes that we do this with. Pharmacy orders are tracked with statuses from the initial order all the way through, in the inpatient setting often, medication administration, and lab orders are tracked through status from the order itself through specimen collection all the way through preliminary results and final results, and finally, results accepted and acknowledged by the provider. Yet we have nothing like this for referrals and care transitions. It's essentially the Wild West for the movement of patients from one place to another, and it seemed to me that until we nailed that down, until we really had a good structured way to move patients from one place to another we weren't going to get the kinds of performance and quality that we would like out of our healthcare system.

I should say I know integrated delivery networks and places with a single common electronic medical record that keep most of their business in-house and don't get much business from outside can do that within their EMR. But that's not really what the world is like outside of, you know, when I was at Partners or Kaiser Permanente, and so we have a situation where patients see an average of six different providers in our community and at least three of those providers are in different health systems.

The first thing we did when we unpacked the workflow is we discovered there are at least 25 unique states that are referral, or we all them visit requests because referral is such a loaded term, that a visit request could be in and they're logical. Accepted by the receiving provider, waiting scheduling, canceled by the receiving provider, basically some status of who's going to contact the patient, whether the appointment was failed, but it carries all the way through down to where the visit is complete and the report is received and acknowledged by the sending provider. We wanted to really get details on that, and then, when we mapped the workflow that was happening this was, I don't know, 20,000 referrals or something and you see the 25 statuses in the circles around the parameter and the thickness of the arrow shows how many referrals or visit requests were going through each pathway, and you can see it's essentially noise; that there were no consistent workflows happening here. That the statuses were used very differently by different clinics, and, in fact, they weren't even aware that they were using these statuses at the time of the study.

When we looked at a clinic—and this is a recent clinic we brought onboard actually—if we looked back 12 months in time at their referral activity you can see that they had—looking back at July 2010 from looking back from August of 2011 they still have 40% of their referrals in a status of pending appointment. What that translated to was that 60% of their referrals at 12 months out were still open or incomplete; that is the sending provider had not yet received a note and acknowledged it from the receiving provider. This is the problem we were trying to solve, and so we basically streamlined the process and added a layer to the system we call clerk-to-clerk and basically have both the sending provider and the receiving provider communicating through a common portal for moving patients from one place to another. All the communications were logged. The status and referral events were clear. No faxes or printing, everything is electronic and attached to the order and travels with the order. The status of every referral is tracked at all points in time and is available to both parties so that if the specialist clerk accepts the patient the primary care clerk is notified immediately and if the primary care clerk attaches a document or makes the change to the status the specialist clerk is also notified immediately so it's more of a—it's coordination but it's happening in the back office to make things more efficient.

Here are just some quick screenshots. In this screenshot you can see that when the sending provider is choosing a resource to send the patient to they can search by things like the languages the provider speaks or the clinical expertise but also things like the distance from the patient's home, which is especially important in rural areas like we have around the Tulsa area.

Some lessons we learned from that process were that the CCD alone or a summary document, which was always attached to the referral, was inadequate. That the receiving providers wanted to know specific things that were specific to their specialty. Like a nephrologist wanted to know a recent chemistry and they wanted to know if there was a 24 hour urine done and so on, and so the care transition orders needed destination specific tailored information so that essentially just like we fill out specific order forms for other kinds of orders we needed specific order forms for each receiving provider. Then the third thing was that workflow integration was key. We wanted to build interfaces where possible but where not possible we did time and motion studies to convince the staff that they were actually saving time by entering something that was already an electronic order in their EMR into this additional system.

Here is an example of one of those destination specific order forms. This is a radiology order form for a particular diagnostic center here in the community and if I order a CT scan it has some smarts built into it to say, "Does this patient weigh more than 450 pounds?" And if so, it tells me, "Hey, this is not a candidate for this study. You need to call or discuss other imaging options." Here's another one: If I try to order a stress test it just gives me information that I need to provide to the patient or helps me to make my decision on what this order ought to be. And I know that—I think it was at the … that the work was done with the radiology order forms, for example, to build in indications of whether the study was likely to produce a result that might change decision making. That's the kind of thing we try to accomplish in these order forms but it's not just radiology. It's for home health; it's for referrals to cardiologists and dermatologists, and all of the others.

On the left-hand side here you can also see that there a secure messaging tool because the order form is not going to cover everything and so the care coordinators or the referral clerks use this tool to send secure messages back and forth. And then what happens is this produces a work list basically and the care coordinators or the referrals clerks in a particular practice have a shared work list that they can work from and there's a filter tool. Basically now their workflow is changed from just spending their days trying to open all the referrals they can to spending certain periods of the day actually closing loops and making phone calls to patients to notify them about visits and so on. You can see here we now actually track referrals in hours and not just in days and this is demo data.

The other thing that we've been able to accomplish for this is we provided a command and control center for all care transition. We pull the data on all these care transitions and look at it through our business intelligence tool to see what the average age of our referrals are. This dashboard shows which of the clinics have made how many referrals and you can see by color coding what payer type they are. You can see at the bottom what the status of referrals is; how many are complete, cancelled, and so on, and then, the next box there is the cancellations with the trend of the reasons for cancellations. You can see the cancellations are generally dropping, which means to me the process is getting better at what it's doing.

This is another kind of reporting around productivity to help the clinic managers really understand how the referral processes are working. In the days of faxed paper with sticky notes they had no idea whether the referral coordinators were accomplishing anything, and, in fact, they would run say 21 days behind. In actually this clinic we're looking at now that now makes all the referrals in the same day that they're ordered. What you see here is days of the week. You see by referral coordinator, how much activity they're doing, how many loops they're closing, and across the bottom you can see how many are initiated and how many are terminated, which just summarizes the statuses in to opened and closed because we want to make sure that the amount we're opening is balanced roughly with the amount we're closing across time.

Here's the effect of that system. When we look at clinic one and then we look at clinic two you can see a dramatic improvement in the amount of loop closure going on. Now, there's still some red there but those are generally patients who are lost at follow-up or who don't have insurance and we're really scrambling around to find some care for them.

The next piece is really what we set out to study in the first place, which is what we did at the Department of Corrections, and that was to put the two providers together for a conversation so they could actually establish a shared care plan for the patient before the referral occurred. What we do is—I don't know if you can see it but—when the referral is initiated the PCP clerk before going out the door it got put on hold and sent back to the primary care provider who would add the clinical story that was relevant to that specialty. You recall the specialist wanted specific information relevant to them receiving the patient, and then, there's a bidirectional electronic communication (that's what the dashed lines mean) where the two agree on a care plan that could include medications or lab test results or procedures before the patient goes to the specialist or the specialist may say, "I don't need to see this patient at all." If they do say, "I need to see it" then it goes in to that scheduling loop.

Here are a couple sample cases. This is a dermatology case. The cases at the bottom basically say this patient has pigmented fingernails, couple of iPhone photos snapped and attached, and the dermatologist who is—this patient has Medicaid. It's going to be about a nine month wait for a dermatology visit for this kiddo but because of the electronic consultation the dermatologist actually triaged it within ten hours and was able to just basically say, "This is just post inflammatory hyperpigmentation. You should look at it again in six months. Use petroleum jelly on the nail folds and if worsens please refer." A pretty simple statement but four very critical things were accomplished there; reassuring the primary care provider about what was going on and giving their best estimate of the issue, when it should be followed up, what some temporizing measures might be with petroleum jelly, and what the next step should be if it doesn't improve. And so what's happening in this situation is rather than the PCP referring the patient to the dermatologist only to have that patient never hear from the dermatologist for about six month and that mom to be calling the primary care office saying where's my dermatology referral, what happened instead is that the very next day the primary care provider called the mom and reassured mom about what was going on and schedule a follow-up within six months, which dramatically strengthens the patient's … home relationship and the relationship with his family. We know this is the case because when we checked the call logs for the call center 20% of the calls were people saying, "Where's my referral," and so we know that this kind of thing has reduced that rate.

The next one I would show you very quickly is the specialist referral. This was one that was done for ophthalmology and if you can read the case load—it's kind of small I apologize but basically the kid has a little bit of a lazy eye and per the mom the patient also had a sibling with a history of a lazy eye. This was sent as a ho-hum referral by the pediatrician to the pediatric ophthalmologist with a six to nine week request for routine eye exam. Again, this patient had Medicaid I believe and so was going to wait nine months to get to see the ophthalmologist but because the ophthalmologist got the triage, and again I think it was in about ten hours, he actually said, "Well, this is urgent. I need to see this right away because the sibling history of a lazy eye greatly increases the 3-year-old's rick of permanent vision loss." And so he was able to check a box saying I'm willing to overbook this and he was also able to adjust the timeframe back to the next couple days from weeks or months from now.

You can see it's not just about pushing out care or pushing away referrals that are not really appropriate at this point in time but it's also about pulling in those care transitions and referrals that might be urgent or needed to be seen sooner. And so you'll recall the smart form that I alluded to on the clerk-to-clerk side, on the doc-to-doc side we also have a smart form so that the dermatologist here has created a form that he likes to be filled out when he gets referrals, and so if somebody refers for a suspicious mole he is essentially able to take a history from this primary care provider without having to be on the phone with the primary care provider. He knows from this that he has the information he needs to make an accurate triage. What's also nice about this is that the primary care provider's learning about what's important to provide for a referral for a suspicious mole, so that's the smart form there.

The online consult efficiency—basically, what this shows is that for every online consult that has occurred how many face-to-face visits were avoided, and mainly I show this just to show a wide range of specialties including procedural or surgical specialties as well as cognitive specialties is in there. You might wonder how you can avoid more than one face-to-face visit. We score such that if the receiving provider says, "I don't need to see this case" well that's one avoided visit, but if a receiving provider says, "I don't need to see it and here's how you work it up." Here are the lab tests you need, for example, that's actually two avoided visits because had the patient gone to the specialist the specialist would have ordered that work-up and had the patient seen in follow-up so it's at least two avoided visits there.

What we think we've done here is created generic process that supports many care transition types and so we actually use this for referrals from primary care and specialists but emergency rooms can also send patients from the ER back to PCPs or specialists to close that loop, doctors out to ancillary care providers, hospitals, the hospital discharge process, for example, out to the primary care provider to home health, CME, transportation, long-term care et cetera. And just about anyone else who needs to be involved in the loop of a care transition can be put in to the system or hang their shingle in the system to receive these kinds of referrals. Here are sort of the geographic areas we covered with these referrals and it's growing west through Oklahoma pretty rapidly at this point.

Some results: On the correctional healthcare side more than 120,000 care transitions over 11 years had saw 71% reduction in transports for specialty care, which I already mentioned; and fewer than 85 hours required to access specialty care. Then, in the Tulsa community—the model I was just talking about where we brought it out to a community level—more than 95,000 care transitions have occurred between 1,100 end points and on average—and I say on average because we check this on a monthly and quarterly basis—it varies from a 25% I don't need to see it rate to a 35% I don't need to see it rate, and we've reduced the wait time for a specialist opinion by 66% so it's improved access to care as well and that populations id predominantly Medicaid and uninsured that goes through this. Now, there are quite a number of insured in there as well but probably half to two-thirds are Medicaid and uninsured patients.

In both cases what we've seen is we've created a learning healthcare system where the primary care provider actually gets the specialist feedback on a case in the best way that I know to learn and that is in the context of a patient they're caring for, you know, that so-called teachable moment. What's happening over time is that PCPs are sending fewer requests to the specialists that are deemed not need to sees and more that just need work-up because the PCPs are learning what inappropriate referrals were in the first place.

They asked about barriers: One barrier when you move out to the community is people have EHRs and they're told their EHR tracks referrals, but most EHRs, in fact every one that I'm aware of basically drops the paper or sends and electronic fax at best once the referral has to cross the practice boundary just like anything else that crosses the practice boundary. That's where this process picks up is as soon as they are about to send a fax out they start using this system to move their referrals.

Another barrier, of course, is staff inertia, which is classic. Their workflows are preset in stone and they don't like to use them. They also are a little bit leery of the transparency that this provides in to their productivity, but those have both been overcome when we do the time and motion studies and/or put in the interfaces for them. The other thing is this system is communitywide, which for individual hospitals or clinics can provide some control issues because it's not under the total control of a single CIO even though they can only see their own activity in the system. Those are things we have to overcome.

Cost and Benefits: This is a web-based system. It's a software as a service, has unlimited end points so it can be attached. It's priced based on bulk pricing or transaction base and it can be pennies per transaction, and the payments to providers for online consults is an optional thing but it certainly is the way that a payer can gain their— uh-oh, did I lose the screen?

Michael Barr – American College of Physicians – Vice President, Practice Advocacy & Improvement
No, you're still with us.

David Kendrick – MyHealth Access Network – Principle Investigator and Chief Executive Officer
I am? I think my Wi-Fi just dropped here so I'm—it did. So let me review my remaining slides or you can switch to my slides and I'll click through them for you; how about that?

Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs
That would be great.

David Kendrick – MyHealth Access Network – Principle Investigator and Chief Executive Officer
Why don't you switch to me because my Wi-Fi dropped and it's a beautiful sunny day outside; I can't figure out what happened. Let me know when you've got the next slide up and tell me what it is if you don't mind.

W
You were last on the cost and benefits slide.

David Kendrick – MyHealth Access Network – Principle Investigator and Chief Executive Officer
Okay. I'll click through that. The system benefits we've seen that in reduced unnecessary specialty care visits, decreased costs, and when you reduce unnecessary specialty care visits from an employer's perspective you're also decreasing absenteeism and from a patient perspective you're decreasing out-of-pocket copays and so on so there's value there as well. And we've, as I've shown, provided quicker access to appropriate level of care for those who need it and that's as determined by the providers themselves not by some utilization management algorithm that requires lots of jumping through hoops.

Some payer reactions to this: Medicaid solved and resolved and committed to a reimbursement model back in 2008. They're currently paying for consults through a pilot program. I'll show you how they're doing that in a moment. Medicare has been very interested in this and we filed an innovations program grant. We also, in this region, received a conference of primary care initiative and so we are actually using that platform, which is two of our largest private payers, Medicaid and Medicare, in the region to build this process in to the conference primary care initiative. And in the commercials Milliman actually did a report for Blue Cross Blue Shield of Oklahoma that showed they could expect a greater than 25% reduction in specialty utilization with the tool, you know, it's still trying to work its way through process there. And in the self-insured corporations actually have been the most interested in leveraging these kinds of processes.

What we're looking for from these different payers is not necessarily covering costs of the clerk-to-clerk component but of paying providers for the important transaction taking the time to triage the cases because it does take them between two and four minutes after clinic hours to triage these cases. Most of them find it a highly valuable exercise but it does take them some time and so there should be some reward for it.

I alluded to this earlier, one of the things we've done is to leverage the payment rules for the system to drive quality. In the case where the specialist says, "I don't need to see this patient" there's first of all a performance requirement, and the performance requirement is that each leg of the communication be less than 48 hours but if that's the case and the specialist says, "I don't need to see it" and the primary care provider agrees with that plan then the payment occurs. Instead of just being a payment to the consultant the payment is divided between the consultant and the primary care provider because in this model the primary care provider provides essentially the history and physical and their draft plan and the consultant agrees, disagrees, modifies and provides some medical decision making, so that's if they don't need to see the patient.

In the model where they do need to see the patient neither party actually gets paid until that all important step that just appeared where the report gets returned from the specialist clerk to the PCP clerk of what happened in the visit with the consultant. At that point then the payment can be left to both of the providers.

As I talked through this I came up with a couple of ideas for recommendations. First, direct messaging is a great idea and it's something that's going to enable point-to-point communication much more efficiently between practices but it's really a container. It's something that as a messaging protocol it doesn't allow order status tracking. It doesn't allow me to know what happened with my message after it disappeared in to an organization, and so HL7 already has patient referral messaging standard. I was looking at it last night. I noticed Clement McDonald was one of the authors of it, and it enables referral initiation, change, and cancellation. It also enables status tracking and status querying. The recommendation I would make is I would really like to see in Stage III that we leverage that HL7 standard for care transition and put that as a part of the certification criteria for EHRs that they support it. Most, that I'm aware of, don't currently use that protocol but they all do provide various other HL7 messages. In fact, we're leveraging one called the ORN segment or orders out segment now to take data from EMRs and put them in to this … system.

Then, I would also like to see the certification of care transition or referral management systems because if you think about that there are some analogies to what goes on with SureScripts here because SureScripts basically takes orders from lots of different EMRs, moves them to lots of different pharmacies, and then tracks that process. I'm not suggesting there be a monopoly put in place but what I am suggesting is that there is some need to make sure that there's quality in those transitions, and whatever these clearing houses are that move these transitions should be certified.

Another recommendation is that primary care providers at this point in the current fee-for-service model that most of us are under don't have a financial stake in ensuring high-quality care transitions, and, in fact, don't really have the time to spend on making these transitions occur well and the performance can't be monitored or rewarded. Our recommendation would be to extend the current Stage II Meaningful Use requirement for electronic referrals to require the demonstration of closed referral loops through status managed processes, and that will tend to prime the pump for the previous policy to be adhered to.

Then, another one is on policy, unnecessary referrals, as we know, waste money and resources and since we've demonstrated that you can get a reduction in referrals through pre-communication the problem we face is there is no direct compensation or reward for these pre-referral communications. A recommendation would be to have CMS expand payment for telemedicine or create another classification code or CPT for documented store and forward telemedicine encounters, and eventually when they're certified systems they could require that they have them through certified systems. But this would dramatically increase the utilization of these kinds of communications and I think improve the quality of care transitions as they occur.

In summary, I believe this helps to achieve the three part aim and I'll stop there. I think I've run way over, sorry.

Michael Barr – American College of Physicians – Vice President, Practice Advocacy & Improvement

Wow. Thank you very much, David and Ileana, for two excellent presentations. You covered a lot of ground and I'm glad we had a little extra time to allow you to explore your full slide set. Let me ask now the workgroup members if they have any questions to either Ileana or David.

Eva Powell – National Partnership for Women & Families – Director, Health Information Technology

Hi. This is Eva Powell with the National Partnership, and I thank you both. These were fabulous presentations and you are clearly doing really important and innovative work. I have lots of questions for both of you but in the interest of time, Ileana, I just had a question about your thoughts on the Brown Bag Clinic and the implications for patient contributed data that might be there. I can really see how there's a lot of value to physically having the patient bring in their bag of meds, for some patients, but then if you're going to do that for every patient that increases costs. As you referenced, you started small and the clinic has just gotten started but obviously there is staff time involved there as well to sit with that patient as they go through them. But how might we think about using patient contributed data for those patients for whom it would simply be a pain in the rear to bag up all their meds and bring them in when they were perfectly capable of, say, entering the data through a portal and then having the check occur on the other end and having the communication that way? What are your thoughts on how we might leverage both of those modes and do you have ideas for how there might be some sort of triage for who requires the in-person visit versus who might benefit more from the portal approach?

Ileana Piña – Albert Einstein College of Medicine, Montefiore Medical Center

It's a great question because it does imply what the cost issues involved are. Right now we just started with the CMO patients because they are well-identified within the system. A challenge has been to identify the heart failure patients in the hospital because they don't often get their diagnosis until the discharge summary is done and so they may be in there with shortness of breathe but actually heart failure hasn't been declared. We're going to get better at that because with Get with the Guidelines we are hiring a student right now to identify the patients; just to walk around the wards and ask the teams and find the patients and enter them.

We have also talked about Skype. At the VA in Cleveland video teleconferencing is being used, for example, for diabetics where they can see each other very well. They can have good communication. The nurse diabetic teacher takes part in the whole encounter with the patient and that may be one cost savings. We tried not to take patients who are already part of a heart failure team because we would assume, but sometimes those assumptions are wrong, that they're on all the right things and that they will get a pretty quick check visit. The other thing we've started to do is we've opened up clinics for discharge patients from the ED, and I'm working on some care paths so that those patients don't make it in to the hospital unnecessarily. They can be treated in the ED and sent out to be seen within 48 hours by one of the heart failure providers.

We're trying to attack the most vulnerable patients in to this system but I find that most of the patients that I'm seeing are not really at the level that they can go back and get on the Internet and enter their own data; not this population. Maybe a more educated, sophisticated population but not what I'm seeing in the Bronx.

Michael Barr – American College of Physicians – Vice President, Practice Advocacy & Improvement

I have a question. You're presentations were fantastic and you spoke almost as much about culture change and workflow change as you did about the application of technology in both of your presentations. One of the challenges I think we have in terms of selecting measures and objectives for Meaningful Use Stage III as well as Stage II and I is the implication of those metrics on the workflow and whether by measuring the output we actually have established good workflows to get to that point. I'm curious—and feel free to comment around my question but I'm curious which was harder; the culture change or the implementation of the technology? And depending on your answer how can we structure the Meaningful Use objectives so that we can be reasonably assured that the preceding or required workflow and culture changes have taken place?

David Kendrick – MyHealth Access Network – Principle Investigator and Chief Executive Officer

Well, no question it's the culture change that's the more difficult. I have to say in Stage I Meaningful Use we had high hopes for the information exchange. For example, the requirement of information exchange to really buoy the business case so to speak for health information exchanges, and the requirements are just too soft for that. To me the most important thing that you all can do is provide really crisp, clear direction that is specific to the outcome you want to get and really think about the loopholes in it. I know we have people attesting for Stage I Meaningful Use around here just by sending an email with a test patient CCD in it through Yahoo, and so not even using Direct or anything else, and so I think that's the best advice I could give is to really be crisp and specific with those outcomes and how you expect people to attain them.

Michael Barr – American College of Physicians – Vice President, Practice Advocacy & Improvement

Ileana, before you answer let me just follow-up with David for a quick follow-up. That's, as you've already indicated, a pretty significant challenge, giving a crisp, clear direction because there is a desire to get lots of things measured. Do you have an opinion about whether it's better to have a few very direct, very specific objectives or is it better to have lots of different variety? That's probably a trick question, David, but you get my sense. Because if you have the kind of objective that you just were indicating that very specific would require very specific implementation as opposed to flexibility associated with some of the objectives now.

David Kendrick – MyHealth Access Network – Principle Investigator and Chief Executive Officer

Yeah. I feel you pain. As I said I was on the Stage II Workgroup for Care Transitions and the challenge there is if you give an objective that is too far from a process that people can control then I think they struggle with—and don't give a very specific process to them then they may never come to the conclusion of the right process. They'll go through the wrong pathways many times and ultimately I think it fails as a measure if there's not clarity on what they can do to improve that outcome.

On the other hand, as you say, too many small process measures they can kill a process and patients too so I tend to go towards trying to take things off the shelf that exist already. For example, I mentioned the HL7 standard exists for patient referrals now. I would try to embrace that and encourage that it be adopted and maybe even expand what's in it because I think that being able to track status of transitions from one place to another is critical and that's already a pretty widely accepted standard in the system.

Michael Barr – American College of Physicians – Vice President, Practice Advocacy & Improvement

Thanks. Ileana, do you have any comments?

Ileana Piña – Albert Einstein College of Medicine, Montefiore Medical Center

Yeah. We have found through the years that as part of this National Heat Failure Training Program hospitals have come to us, like I said before, about how can you help us improve our readmission rates? How can you help us improve our transition? And you have all these measures that you need to fulfill but the famous saying, "Physician know thyself" system know thyself, and if you don't give some very—not just crisp instructions but maybe— I've even thought of Webinars that would teach these smaller systems how to look at themselves; how to track a patient; how to track a patient through the system. I think David did it beautifully, how to track a consult. It's literally taking the paper or the EHR form and walking it through. If you don't know your own system and your own processes how are you ever going to find what's going on. In every place that I have every visited it has its own personality. One size, one fix really does not fit all, and the culture and the—it's more than culture; it's culture and personality. Every hospital has its own personality, which is the personality made up of all the individual personalities and if you don't understand that you can't implement anything.

Michael Barr – American College of Physicians – Vice President, Practice Advocacy & Improvement

Thanks so much. Other questions from the workgroup?

Leslie Kelly Hall – Healthwise – Senior Vice President for Policy

Michael, this is Leslie Kelly Hall. Dr. Kendrick, I recognize you from the Transitions of Care team and I want to thank you for all the work that you've done. I did have a question. The idea of using existing standards is one that I have a strong bias for myself because I have seen that … can be applied … and I wonder as we look toward the future where a patient is an active member of the tier team using the technology how that might be informing your order based assumption for transitions of care and is that also quite applicable when the patient might get, for instance, a carbon copy of an order for transition or the patient or their family member is now included as an active electronic participant in care? I'd like to get your comments on that.

David Kendrick – MyHealth Access Network – Principle Investigator and Chief Executive Officer

Absolutely. I should have added that as one of the recommendations. I failed to and that is because these referrals are sitting in a central place and they're between two provider offices and both those provider offices are working with the status forward there's no reason that the patient involved or the family member of the patient involved in that care transition can't also have a view of what's going on. We'd want to make it a little more relevant for patients, the view itself, but that's been one of the approaches to the health information exchange is actually to show the status of any care transitions right there on the screen in health information exchange, which means it could be in a patient portal or even in that same tool. Also, the patient could be there to help provide information as it's needed to make the transition occur.

I agree with you. I think that's a tremendous opportunity just by way of analogy. One of the things we've considered is as we try to reduce 30 day readmissions, for example, our plan has been to establish a couple of rules in the system that have the capability of seeing all care transitions for the patients not just the ones they are involved in. While the cardiologist might not be able to see all other care transitions in play, the primary care provider should be able to and maybe a care coordinator based in the community who's involved in that patients care so they can really quarterback and see where the patient's moving through the system. I think it's a great question and absolutely for the patient—

Leslie Kelly Hall – Healthwise – Senior Vice President for Policy

And I wondered how that could further improve your 25% to 35% unnecessary referrals. Just in the examples you sited there was those education that could have been provided to the patient and their care giver or family member just as much as the communication back to the primary care physician from the specialist both in the sense of reducing unnecessary referrals and also speeding up necessary referrals.

David Kendrick – MyHealth Access Network – Principle Investigator and Chief Executive Officer

Yes. Absolutely, I would agree more. I would sort of think of that as a primary care facilitating conversation between the patient and the specialist, and then, of course, you just have to figure out what the business model is, so to speak, for that. I mean how does a primary care provider and a specialist get reward for it?

Leslie Kelly Hall – Healthwise – Senior Vice President for Policy

And I guess also I would just follow-up your comment on the specification on HL7 which also allows for the information to be passed even to someone who is a passive participant so we can be … that that's with an HL7 order in the same way that you could—you will get that information whether you are a provider or active provider and not … transition to that patient standard themselves using that same standard. Is that correct?

David Kendrick – MyHealth Access Network – Principle Investigator and Chief Executive Officer

Yes. Absolutely.

Leslie Kelly Hall – Healthwise – Senior Vice President for Policy

Okay. Thank you.

Eva Powell – National Partnership for Women & Families – Director, Health Information Technology

I have another question for David. We've talked a lot about the interaction between primary care and specialists, kind of an internal communication meaning internal to the healthcare system and obviously those are things that we need to focus on first, but when we think about broader work for better outcomes the patient really spends very, very little time in the healthcare system itself and so when I think about transitions in my mind it's equally important it's not more so for some patients to ensure that the connections to community resources are made that will enable them to be successful in their self-care at home. I'm just really curious given that you mentioned community analytics and I'm not sure exactly what's included in that but I'm wondering if—and this actually could be a question for both of you—if the work that you've done has revealed some non-healthcare gaps and needs for support, and through these community analytics or other methods if there's a way to use the data that's being collected as part of the EHR to inform broader policy in the community? As in we've really got a transportation problem because all of our healthcare centers are located where the upper-class lives and our underserved populations can't get there so we need to invest in transportation, something of that nature.

Ileana Piña – Albert Einstein College of Medicine, Montefiore Medical Center

This is Ileana. I'll answer that one first. I haven't seen anything like that yet. One of the goals of this in Montefiore Medical Center has been to establish community links already. There we have colleagues who are spread all around neighborhoods, some of the more affluent ones too so that patients can be seen closer to home because that's always a problem when you have mother ship and patients don't want to always drive to mother ship. How can you do that?

We've also started—we've had a home care group for a long time and there's been a house calls group, physicians actually visiting the patient's home, and one of the physicians who is in charge of that group is going to do their own version of the Brown Bag Clinic in the home, and something I think that nursing care has done for years in the home care business except they've never had the option to make changes in medications. They have no power and so that's another one of my goals is that if we … drug up titrations is I am convinced that if the patients get on the right drug and the right drugs are not taken away we're going to see less readmissions.

David Kendrick – MyHealth Access Network – Principle Investigator and Chief Executive Officer

Yeah. I would just add to that that I think you're right. The analytics piece sort of can be our canary in the cave for lots of things that are happening in the healthcare system we didn't know before. For example, that chart I showed with so many referrals going uncompleted. That wasn't just referrals to specialists; that was to home health agencies. Those were referrals to nursing homes or to Children First. I mean lots of other resources in the community that were just falling through the cracks and so that led us immediately to jump on those and make sure that those transitions were occurring smoothly. I think that's a pretty positive use of this kind of data to identify, and as you say, we have identified some transportation problems, for example, that we've been able to correct for this information.

Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs

This is Charlene. Again, I appreciate both of the presentations. They're very informative. I have a question around the process of we're trying to create a glide path from whatever ends up in Stage II and some of the issues in Stage I were addressed with more specifics in the recommendations for Stage II. We also want to make sure that we leverage that in terms of getting to Stage III. In Stage II we've moved to this concept of this consolidated CCD to share data. I really embrace what you recommended relative to treating these transitions of care as an order and we status them and it makes a lot of sense. We'll get to close more processes in that way, so that's great. But you did mention that there's certainly gaps in the current construct of the CCD because it's generic rather than specific for each type of transition that you might do. You recommend actually making it more part of the ordering process rather than using the CCD so I just wanted you to talk through that a little bit and give us some guidance relative to the relationships of those two standards and how we can kind of move one end or both of those forward.

David Kendrick – MyHealth Access Network – Principle Investigator and Chief Executive Officer

That's a great question. I'm not saying the CCD is no good; I'm just saying it's probably not sufficient. It's a document I like to have on the desk next to me if I'm seeing a patient for the first time so that I can reference it and sort of direct my conversation with a patient but it doesn't help me to decide necessarily what the right timing for the visit is and other things. I mean they're all tied up in—when the receiving end is allowed to create their own template and their own form they get the information they need. The bottom line is—and I've sat through—I came to Boston at one point and sat through some sessions with Dr. … and others about the care transition forms for specific cases like out to nursing homes and out to long-term care and so on, and even in that situation I struggled with checking all the boxes that every nursing home might need to have checked for their particular payer, for their particular building, their particular facility.

I mean there are so many variables when you're sending a patient for a service that allowing the receiving end to maybe start with a common structure, which certainly has happened in our community, but then be able to tweak it to meet their own needs so that it makes sure that the order is just completed one time, and that the decision support, so to speak, is built in to the order form. I just think that's something that's pretty difficult to do on a global basis but if you can give easy tools like the tools that we give the receiving end here is Web-based so they can build their own templates and manage them. If you give them easy tools then you've got an opportunity, I think, to make the order process pretty efficient.

Leslie Kelly Hall – Healthwise – Senior Vice President for Policy

So, David—this is Leslie again—I think that really calls a question about how do we predetermine what data is always necessary and the answer to that is never; we can't. Is there a way to facilitate when the information is sent electronically some sort of request for additional relevant information that might be needed for that specific end user that could accommodate both something coming from Direct like a PCP or perhaps even order message? I'd like to hear your thoughts because this idea of predetermining needs seems to be not fulfilling anybody.

David Kendrick – MyHealth Access Network – Principle Investigator and Chief Executive Officer

Well, I think we can take our best shot at it, you know, getting the fields there but then you run the risk of overshooting and nobody completing the whole form; just having too many fields there that nobody ever gets to use it. But, yeah, I mean I guess that's the most important thing and certainly in primary care I believe in this. I always have a follow-up visit so let's always have the follow-up message coming back. Let's always have the ability for the receiving end to request clarification and to do it efficiently. I mean it happens today. I've seen more times than I can count the discharge planner in a hospital looking at a little book, pick out a home health agency, get on the phone, call the home health agency. The home health agency says, "We'll fax you our form." They fax the piece of paper to the discharger planner. The discharge planner fills it out and faxes it back. That all has to happen somehow efficiently and electronically, and so I think we were shortcutting it by making sure the form from the home health agency was already there but if it's not there is no reason it couldn't come back immediately in response to a request electronically. Does that analogy fit?

Leslie Kelly Hall – Healthwise – Senior Vice President for Policy

Yes. Thank you very much.

Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs

One of the things that we tried to get in to Stage II was the concept of a description of the purpose of the transition or the goals of the transition. Has that need—again, for both of you—surfaced relative to communicating? I mean you could have got the order for the transition but the patient goals or anything in that process been discussed as you've been rolling out these capabilities?

Ileana Piña – Albert Einstein College of Medicine, Montefiore Medical Center

I'll tackle that one first. I think our goals have been very clear, which is the reduction of the presentable readmissions. That's our goal and I have focused on that goal but at the same time I am collecting health status because the instrument that we're collecting is very sensitive to changes and it's also one of these predictable prognoses as I am doing the BMPs. Obviously I want to reduce the readmissions but I also want to improve health status, which should go hand-in-hand but not always, and I need to increase the right use of evidence-based, guideline-based care for heart failure so we will be collecting that as well.

My biggest fear here is that when the patient goes now to the primary care, which we do that—I mean we send them back to the primary care—that medications get altered and unless we are physically looking for it or there's been that communication back and forth, as David described, we may not find out. And that's happened even within the BA system that we don't find out unless you're specifically looking at that patient to find out what you've done has been changed down the line.

David Kendrick – MyHealth Access Network – Principle Investigator and Chief Executive Officer

Well, I think the process that we've tried to put in place allows us to really put a finer point on how the patient moves from point A to point B. I think the goals of care is hopefully coming through when the primary care provider or whoever is sending the patient attaches whatever their most recent interaction is with that patient, which is a part of the workflow that establishes the goals. But then there are other goals, which are my goals, as say, the sending provider and a critical question is do I want that specialist to take ownership of this patient? Do I want him to just give me their opinion and send them back? That's something that is a never ending problem at least for primary care providers, so what the expectation is there and we can very clearly establish what the sending provider's goals are with that smart form as well.

Michael Barr – American College of Physicians – Vice President, Practice Advocacy & Improvement

Great. This is Michael. Thank you very much. We're close to the end of the time allotted. We need to open it up for a couple of comments. Before we do that I just want to thank everybody for your questions from the workgroup, but also for the incredible presentation responses from Dr. Piña and Dr. Kendrick. Thank you both.

Ileana Piña – Albert Einstein College of Medicine, Montefiore Medical Center

Thank you for inviting us, that's great.

David Kendrick – MyHealth Access Network – Principle Investigator and Chief Executive Officer

Yeah. I enjoyed it.

Michael Barr – American College of Physicians – Vice President, Practice Advocacy & Improvement

My pleasure. Shall we open up for public comment?

MacKenzie Robertson – Office of the National Coordinator

Operator, can you please open the line for public comment?

Public Comment

Operator

We do not have any questions at this time.

Michael Barr – American College of Physicians – Vice President, Practice Advocacy & Improvement

Wonderful. Thank you very much, operator. Charlene or anybody else want any closing comments from the workgroup? You've got 30 seconds.

Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs

Again, we just wanted to, again, thank you for taking your time and hopefully you will be open as we debate some of these and come to some conclusions for giving us some feedback as we kind of work this through if that would be all right with you.

Ileana Piña – Albert Einstein College of Medicine, Montefiore Medical Center

We'd be happy to. I'd be happy to. David, I spoke for you.

David Kendrick – MyHealth Access Network – Principle Investigator and Chief Executive Officer

I definitely would be happy to.

Charlene Underwood – Siemens Medical – Director, Government & Industry Affairs

All right. Thank you, again.

Michael Barr – American College of Physicians – Vice President, Practice Advocacy & Improvement

Great. Thank you both and that will conclude this workgroup meeting. Thanks, everybody. Have a great rest of the day. Bye-bye.