Center for Medicare & Medicaid Innovation
Bundled Payments for Care Improvement Initiative

Accelerated Development Learning Session #3
Data-Driven Continuous Quality and Efficiency Improvement

Tuesday, February 21, 2012 3:30 p.m. ET

OPERATOR: Good day, ladies and gentlemen, and welcome to the Bundled Payment for Care Improvement Initiative Webcast Accelerated Development Learning Session ADLS Session #3 conference call. My name is Erin and I'll be your coordinator for today.

At this time, all participants are in a listen-only mode and will remain muted for the duration of the presentation. If at any time during the call you require assistance, please press star followed by zero and a coordinator will be happy to assist you.

I will now turn the presentation over to your host for today's conference, Weslie Kary. Please proceed.

WESLIE KARY: Thank you, Erin. This is Weslie Kary from the American Institutes for Research, and I will be moderating our call today. Welcome to the third Accelerated Learning Session, titled, Data-Driven Continuous Quality and Efficiency Improvement.

Before we begin, there's a couple of things that you should know, the first is where to find the slides. They should be up within a week, and the place to find them is at the website http://cmmi.airprojects.org/bpci.aspx. And I will repeat that at the end of the call, but that is the place to look for slides and also for announcements of upcoming webinars, so, a good place to bookmark.

The other thing that you should know is that the views expressed in these presentations are the views of each speaker and do not necessarily reflect the views or policies of the Centers for Medicare and Medicaid Services, and the materials provided are intended for educational use only.

The objective for our session today — This is the second of two parts in the domain of care design and coordination, and our objective for both of these sessions, the one we did last week and the one today, is really to support your efforts to achieve the three-part aim — better health, better care and lower costs, through improvement, for all Americans.

And our agenda, we will have three presentations today. We're going to start with a presentation from Dr. Sid Thornton, called Data Considerations for a Sustained Engagement. And then, if we have questions queued up — and you need to submit a question by hitting the Ask-a-Question button at the bottom of your screen — if we have questions queued up at the end of Dr. Thornton's presentation, we'll do a Q&A then.

And then we will move on to a presentation by Dr. Richard Popiel, Episodes of Care: Measuring and Sharing Clinical Data. And we will have a presentation by Peg Bradke, Improving Transitions and Reducing Avoidable Rehospitalizations. And then we'll do another Q&A at the end.

And Dr. Thornton will still be with us at the end, so if we have questions for him, we'll be able to pose those as well. As I mentioned, all questions are through the chat function only; hit Ask a Question at the bottom of your screen, and you can do that at any time during the presentation.

I'm going to go ahead and introduce all three of our speakers, and then we will begin. Our first speaker, Dr. Sid Thornton, is a Senior Medical Informaticist at Intermountain Healthcare in Salt Lake City, Utah. His responsibilities include interoperability among clinical and administrative systems, including patient and provider registries and health information exchange. He also serves as adjunct faculty to the University of Utah, School of Medicine, Department of Bioinformatics.

Our next speaker, Dr. Richard Popiel, is President and Chief Operating Officer of Horizon Healthcare Innovations. And Horizon Healthcare Innovations is the company whose purpose is to launch new models of reimbursement and care delivery with network providers.

Dr. Popiel is a strong representative of the health plan perspective in all of these bundled-payment initiatives. He remains on the Board of Directors of Horizon Healthcare of New Jersey, and he has also chaired the National Council of Physician Pharmacy Executives at Blue Cross Blue Shield Association and the Chief Medical Officer, Leadership Group, at the American Association of Health Plans (AHIP), and was previously a member of AHIP's Board of Directors.

And our last speaker, Peg Bradke, is the Director of Heart Care Services at St. Luke's Hospital in Cedar Rapids, Iowa. In her 25-year career, she has had various administrative roles in cardiac care and currently coordinates the Heart and Vascular Service Line at St. Luke's Hospital.

Ms. Bradke also serves as faculty with the Institute for HealthCare Improvement (IHI), a Transforming Care at the Bedside Initiative, and also on the STAAR Initiative, the State Action on Avoidable Rehospitalizations. And those of you who were with us last week, you will remember that Dr. Eric Coleman talked quite a bit about the STAAR Initiative, and Peg will be able to give us the onsite perspective, the case study, as this has played out at St. Luke's Hospital.

So those are our three speakers, and I am going to turn it over to Dr. Thornton. Dr. Thornton, can you see your slides?

DR. SID THORNTON: Not yet, but I can see that we've switched presentations.

WESLIE KARY: Can you click on Slide 1?

DR. SID THORNTON: Let's see. I'm still seeing your presentation showing. Let me —

WESLIE KARY: If you refresh your screen by clicking on one of the other tabs at the top and coming back to slides.

DR. SID THORNTON: We're there. Thank you very much.

WESLIE KARY: Okay.

DR. SID THORNTON: Thank you for the introduction. I represent Intermountain Healthcare, and, in particular, the Homer Center for Informatics Research, where, for the past several decades, we've been focusing on ways in which information systems and data collection could be used to

sustain providers in their various efforts, including those for process redesign and for quality improvement.

And, today, I'd like to focus on what I would think would be a series of discussions that you, in your various efforts, might be able to have with your data engineers, with your data architects or your information services, however your various organizations are organized to protect that.

And, beginning, I'd like to say that we could start out with a common goal of using information to facilitate the engagement of all of our stakeholders as we go about various process and change, various cultural changes.

If we look over the past speakers in this series of presentations, almost all have talked about having a multidisciplinary approach to process redesign, that there are many different stakeholders coming from different perspectives to try and do this. And one of the interesting ideas, I think, that's been proven and demonstrated across all of these is that if we are going to keep the attention of these various stakeholders one of the best ways to do that is to provide meaningful data.

So, again, what I would hope to do and hope to achieve in the next 15 minutes is to tee up a series of questions that you might ask of your data service engineers to be able to, you know, help sustain, help format your projects in a way that they'll be successful and that will be able to achieve the goals envisioned.

I think probably three considerations or strategies that would be useful would be observations that have come from decades-worth of research in this area.

And the first one would be that quality care is, in fact, cost-effective care. What we've seen, time and time again, is that we can focus our improvement processes and our redesign processes on quality. Many ways, when we do that, we see that cost follows — improved cost outcomes follow our quality outcomes.

The second overarching theme that I'd like to tee up is that we need to envision and create reporting performance metricing that is targeted to the specific provider. As soon as we start using reports that are largely focused on systems or even departments, we lose the ability to engage at a personal level.

And so we'll talk perhaps in detail about questions that we can address that will bring the data to the individual provider or the individual stakeholder that increases accountability. There are ways to do that that are less threatening, obviously, but, oftentimes, what we see is when we try a group approach, unless we can target the specific individual person or the individual stakeholder and give them context into the larger picture, we often lose that engagement, and there's nothing more engaging than when you can see yourself directly compared against — your system against your peers.

And, finally — and the final overarching theme I would like to talk about would be that oftentimes we have tools at our disposal, particularly in the information services. Whether you're your own information development shop or whether you have outsourced these services, there's typically many, many underused opportunities that are available that are already within the particular organization.

And so it's often good to step back and take inventory and to go ahead and find out what services are available.

I'd like to begin, you know, with sort of an — with an idea that we have seen played out many, many times in our care redesign efforts, and that is this idea that trying to find common ground oftentimes leads to device-type discussion where each of the respective stakeholders bring their perspective to the table.

What we have seen is that if we can put aside, at least at the beginning of our discussions, and focus on quality care, focus on the patient and how the patient is actually touched by the process redesign or whatever our intervention will be, we can see that all of the other stakeholders can find that common purpose and we have an alignment then of incentives around this improved care, improved health of the patient.

We have seen many of our organizational efforts fail or at least be stunted in their effectiveness when we lead out with solely a cost or a payment-based incentive or if we only try and use sort of a heavy-handed approach of being responsive to regulatory or compliance issues.

It seems like time and time again, if we can step back and focus our efforts on improved care, then the standardization that follows, the financial outcomes that follow and the various efficiencies just seem to line up. So that's something to consider. And as we talk with our data services, I think, even though we have legitimate aims which are not care — which are not care directly, I think as we have those discussions with our informatics groups, we can find ways to make those representations, make those standardizations meaningful in those alternate representations.

Another idea, and one that's often forgotten, as we envision our reporting, are there ways that we can bring that data at the point of service? If we are indeed focusing on care, how can we have information at our fingertips, particularly focusing, at this point, on the provider and the individual provider, to say, you know, during this particular visit, during this particular episode, how can I have visibility into the larger process and into the goals?

And some of those things that we can think about are, you know, can I — what information is available during the ordering process? How can we leverage those natural communication tools which are part of our ordering methodologies and our integrated information systems, specifically when we're making decisions about ordering?

Another question to have with your data services is are there ways to highlight patient-specific variance? Do I know at the beginning of this visit or even during the course of the visit where my care is venturing outside of our standard goals, and in what ways might that be visible?

I know we have been successful, in many cases, integrating those type of alerts or notifications within the EMRs, within the financial and the billing systems as well. So it can be done, and it's helpful if we can have that timeliness again with the goal of making sure that all of our stakeholders are engaged as effectively as possible.

One aspect that will come up in these discussions is that of the care-process modeling. As we start to think about how our care processes — how we envision the staging of progression across the various tasks in these care processes, one of the things to consider is can that be

visible? Can we have some transparency again either in our patient notifications or provider notifications or directly into our EMR where we understand where we are in that progression?

We've had success, and I've seen in other organizations success, where the stage is part of the patient banner, where it's part of the encounter summary or the visit summary where you can actually see the upgrading or the downgrading of the patient. I've seen that be successful also in acuity modeling.

The other piece that helps, particularly, again, with the physician's focus at the point of service, has to do with is there a history or any information about that patient and their compliance and the patient participation. And, again, if this can be integrated nicely into the provider-specific notifications or into the encounter summary set that can help facilitate where we're going.

Another thought is, you know, as you're meeting with your data services, is to envision the larger picture first before you break up into specific visits.

So what is the goal of the episode? And the speakers later today will go into that into greater detail as well, but, again, the point being here is can I place this particular point of service or this visit in a larger context of our extended goals or our goals beyond what is happening at that particular patient-to-provider interaction?

We've been successful in our community to develop standards of care, particularly around common health issues that often cross multiple provider organizations. For example, in diabetic-care management, we've been successful. Our competitive organizations, as well as our collaborative organizations, can sit down together and determine what those goals are across the visit lines.

One thing to ask again of your data services is as we're envisioning these multiprovider and multiorganizational goals, is there a way to leverage our information systems to keep track of the patient-provider relationship as they move in and out of organizations? And sometimes that can be a challenge, but, on the other hand, there are typically ways that that type of information can be made visible and transparent, again, to all of the stakeholders.

Moving on, is there a way to encourage your — particularly, again, your providers, the ones that you're trying to incent, to participate in the development of their performance metrics? Ownership and engagement often is facilitated in situations where we can have everybody at the table.

And, again, we've heard this repeatedly, but some of the specific data questions that might be answered are how do we handle the outliers? Can we anticipate that? How can we be more prospective in our visualization? And, you know, again, I think one thing that will be a common theme will how do we handle the various reviews and appeals, and do I have a voice going into this?

Because exceptions do happen, and whether we like it or not, as we're trying to collect information, as we're trying to engage all of the stakeholders, and particularly the provider stakeholders, is there a way for us to not bring the systems, particularly the data-collection systems, to their knees if there are extenuating circumstances?

One of my favorite examples was a successful project where we were trying to improve the accuracy and timeliness of our problem list and we found that we actually had to bring terminology systems in line to be able to do sort of on-the-fly coding for exceptions as they emerged.

And, again, one thing to work with your informaticists or your data services is, you know, how can I know when I am on an exception pathway? How can I make that visible and then be able to have that available for those in the process who are handling the exceptions or doing the clean-up work? So it's nice to have that transparent and up front.

Finally, I'd like to focus on the actual transparency of the information that's happening. Many of us now have computer-assisted computations. We have computer-assisted decision support, and one of the questions that I would ask again of your data services is can we expose, as needed, the detail of those computations?

Can I understand, in a more — well, in a user-transparent way how my data from this particular visit or for this particular episode are being aggregated and working into the detail of the result and whether that result is a performance metric itself or whether it's actually working toward standardized care? And, again, what we're trying to facilitate is how do we make this visible?

We've had several successful integration or project integrations where we've used technologies like being able to hover over the particular data or recommendation and drill down into the detail. This is particularly interesting, I think, as we have financial implications. Some of our more successful projects have been where we focus on quality and then we let the background algorithms do the computations for the payment implications.

And it's been very, very helpful for our clinicians to be able to go in and drill down into the details, see where their particular points — whether their points of documentation or points of intervention have affected that overall cost. And to be able to have that detail in front has been invaluable in terms of engaging the patient.

So all of this leads us, you know, again into an environment where we have up-front and prospective dialogues with our information services to be able to leverage the tools that are already in our organizations and potentially where we might be able to optimize any new tools that — or development.

So with that, I appreciate the opportunity to walk through these ideas and look forward to questions or contacts. I am happy — at that point — So, Weslie, I'll turn it back to you.

WESLIE KARY: Thank you very much, Dr. Thornton. We don't have any questions for you right now. I do have what I always get, which is a question about where the slides will be posted. They will be posted within about a week on the AIR Bundled Payment for Care Improvement website, and I will show that URL before we close.

And I think, at this point, we should go ahead and move into our next presentation, but I want to remind everyone that the way that you ask a question is with the Ask-a-Question button at the bottom of your screen. And Dr. Thornton will be available to take questions in the final Q&A session as well.

So let me queue up the next slide presentation. Dr. Popiel, can you see your slides?

DR. RICHARD POPIEL: I can see my slides.

WESLIE KARY: Okay. Well, I will turn it over to you then.

DR. RICHARD POPIEL: Thank you very much and I assume all the applause has stopped for our prior speaker, so I will begin.

Good afternoon. My name is Richard Popiel, and I currently serve as president and chief operating officer of Horizon Healthcare Innovations, a subsidiary company of Horizon Blue Cross Blue Shield of New Jersey.

I'm pleased to present a brief overview of our episode-of-care program with a specific focus on measuring and sharing clinical data.

As you know, this is critically important to the success of these types of programs, as well as any of the new clinical models of care and innovative payments to support them that we have introduced. So the key themes for the presentation today include, one, understanding the definition of an episode, which I'm certain all of you know, and this will be a brief review for you, understand the basic statistical approaches to data analysis. We heard a little bit about that just a moment ago. Learn how we tackle the data-acquisition challenge and hoping that we see some examples of the data output from our work. So let's begin.

Our company and the work we do is driven by a sense of purpose, and that purpose is to achieve the goals of a triple aim — improve the health of the population, enhance the patient experience and reduce per-capita cost of care.

And to this end, we have developed payment models, not just for episode of care, but also for patient-centered medical home and accountable-care organizations.

But, today, we're focusing on the topic of episode of care, which, in our view, is both procedural- and condition-based. And, in addition, we have developed a consumer-engagement strategy to compliment the clinical models, because if we can't bring patients to these new delivery systems or new models, we're not going to get the results that we want, so consumer engagement is very important.

Sharing data is crucial for the success of episode-of-care models, and as an industry, you all know this, we have tried to address the quality and cost issue before.

Financial incentives, historically, while effective, are still insufficient. And provider organizations meet clear performance targets and specific knowledge as to where they stand at any given time.

Using insurance-based claims data for us is not enough. So we have developed a process to collect and merge encounter data with the claims data. And this graphic is intended to show the high-level process of a provider seeing a patient, capturing the clinical information from that visit, sharing that data with us — not an insignificant task, to get that data — enabling an informatics team to analyze the data, review the findings with the provider, and, ultimately, the end goal for all of this, to enable the improvement process. So that's what this slide is meant to demonstrate.

Our approach to measuring results is highlighted in this slide. As an example, in our PCMH program, we use a cross-sectional comparison between a population with an intervention and a population that doesn't get that intervention, and, typically, we apply a pre-, post-comparison for changes observed for individuals attributed to a pilot versus individuals not attributed.

In our episode-of-care program, we've developed a budget on a patient-specific level and a specific time period and compare that to our actual results, and these types of statistical models are the basis for all outcomes-based rewards that are a part and parcel of all of our clinical models, including episode-of-care.

This graph should look familiar to all of you. It's a regression line comparing poor hemoglobin A1C control with potentially avoidable costs for diabetes. And you should observe that while there's a relationship between poor control and cost, there's also tremendous variation. Hence, the challenge that we face every day in interpreting results. But this is the tool that we frequently use.

We also use what's known as a difference-and-difference framework, which enables us to look at both absolute changes as well as relative changes, so we don't overstate or we don't understate an observation. Very important in the work that we do.

So let me move to more specifics around our episode-of-care model and what we, over time, have found successful.

Our models are slightly different than the four models that were launched or announced by CMS. I think you're all familiar with those models. One is inpatient only or inpatient plus 30 or 90 days or post-acute care plus 30 days or bundled inpatient.

Our episode is defined 30 days prior to admission after the decision to operate is made plus the inpatient stay and surgical intervention, and then 90 days post-discharge, so a little longer and has a pre-admission component to it.

And what we've found, over time, is that it is crucial to partner with the orthopedic groups that are participating in the model in a way that goes beyond how we have historically partnered with them. It's not enough just to have a contract and then measure performance in the context of the contract. You have to really partner with these groups, and that has resulted in a collaborative that we call clinical advisory panel. I'll talk about this in just a moment.

We've also adopted a phased-in approach, a crawl-before-you-walk and walk-before-you-run approach. So our crawling is pay-for-performance. Our walking is shared savings, and then, ultimately, our running is evolving to some form of a risk arrangement.

We've also found that collaboratively aligning on quality metrics, methods and data sharing and data validity both with the physicians involved as well as some of our third-party vendors has also been crucial to success, and then rallying around the right group of technology and web-based tools to collect data and getting a patient-experience survey has also proved very helpful during the course of the first year of this pilot.

Sorry, I skipped a slide. So two of the aspects of the program that have proved extremely helpful are our clinical advisory panel and web-based tool. Our clinical advisory panel is made up of a group of participating orthopedic physicians who meet with us on a regular basis, and these

physicians participating have helped design the program, including the development of the clinical metrics.

In addition, they have also provided insight into many aspects of the program, such as variation in care or analysis around complicated cases or new approaches, such as this evolving new trend of same-day hip replacements.

And, over time, this relationship, through this monthly meeting, this collaboration, has strengthened the platform for collaboration, it's really provided an opportunity to air issues in a respectful way that has build bonds that, historically, weren't there, and this is also critical to success.

In addition, we learned very quickly that the claims data is insufficient and that additional encounter data is required to provide a full picture of the episode, and given the fragmented nature of care, it's very difficult to understand this full picture unless you can collect this non-claims-based data. And so we initially developed an Excel database tool to collect this information, but eventually replaced it with a web-based tool, and I will show you that right now.

And this slide highlights and depicts the collection tools that we have utilized. It may be hard for you to see the full detail of the slide, but, at the top, is the Excel spreadsheet that we initially used to collect data.

We had this on a protected website, where physicians could go in and input data for roughly 150 clinical elements, but that tool proved to be cumbersome and we evolved to a true web-based tool for those 150 data elements, and this has allowed us to collect data, as you can see on the right-hand side, prior to surgery. So we had advanced notice, including the decision to operate as well as other pre-op work.

And on the left-hand side, you can see that we collected — were able to collect data post-discharge, including post-discharge venue and the status at 30 and 90 days. So very important set of data-collection tools that has enabled and powered our ability to know what's going on and use that to help close gaps with the physicians who we're working with.

All of this, then, feeds to the outcomes of the results that we're looking for, and so this slide begins to show some output of the data collection and analysis process, where we're able to substantially measure completed episodes in both quality and financial performance of each of these cases.

And I realize there are no numbers on these slides, but the bottom shows for hip and knee, by group, the number of completed episodes, completed means 30 days prior, 90 days post-discharge plus the three months of claims run-up that we need to get a complete claims-based picture.

And the top shows how they performed from a budget perspective compared to an actual perspective, and while there's no numbers here, I can tell you that in the first sample that have been completed, we're actually seeing a trend going in the right direction. So we're looking forward to more material results and larger numbers.

Similarly, we collect quality data, and here are some of the outcome metrics, including adherence to VTE prophylaxis, Venus Thrombosis Embolism prophylaxis, readmissions, never

events. We're keenly interested in post-discharge setting and differences in who is discharged home versus post-acute facilities and if there are different patterns based on who the provider is. So this is an opportunity to understand that and allows us to drill down and dig into the underlying causes of variation in our outcomes.

And most importantly, we're looking for an improvement in functional status. That's why you, you know, begin to — we do this process. We do a hip replacement or a knee replacement because people want to function better, and so this is crucial. And we couldn't collect that before until we created this web-based tool.

We can actually take the span and break it down to type of setting. So, in this case, you can see we have pre-op, surgical stay, post-30 days, post-31 to -90 days and total. We can understand the historical performance and then the actual performance down to a patient-specific level and see whether their actual spend is at, above or below budget.

And here we have an illustration for three patients, which then allows us to go in at very high levels of detail to understand what's going on. So this is a very valuable tool for us.

To give you an example of how we can drill down, this is actually detail on implant cost for both hip replacement and knee replacement. And so this — and, as you can see, if you remember the prior slide, the biggest spend component in a hip replacement or knee replacement is the inpatient stay, and a large contributor of cost for the inpatient stay is the cost of an implant.

So, now, we can see by provider, by hospital, the variation in implant cost and begin to put in place action plans to drive down that variation, all based on — this is all based on web-based capture of information being married to the claims-based data that we have, so very important.

Ultimately this leads to a knowledge around how the orthopedic groups performed at a quality level and at a total cost-of-care level, and it informs, on a group-by-group basis, the level of shared savings they can access.

And so, here, you can see at the top of this graphic the requirements around quality that I mentioned in an earlier slide, and, here, you can see what we're going after, these what in our program are called potentially avoidable complications (PAC). We use a particular software that has that terminology, and if we're able to either reduce the non-PAC cost or the PAC cost, then, depending on the quality performance, a provider group — an orthopedic provider group can share in the savings.

So, with that, I will — In conclusion, I wanted to share with you our statistical approach to episode management, how we structured the pilot to best collect the necessary information and give you a high-level understanding of how that information is being used. And, with that, Weslie, I am done.

WESLIE KARY: Thank you very much, Dr. Popiel, and that was very informative. And we are getting some questions, but I think we're going to hold them until after the next presentation.

One comment I do want to make, we are unable to answer any questions directed at the CMS Innovation Center. If you have questions that you want them to answer, you need to send that question directly to BundledPayments@cms.hhs.gov. They do see all the questions that are asked in these webinars and use it to inform discussions about what future sessions should

include, but you will not get an answer to your question by asking it of us if it belongs with the CMS Innovation Center.

All right. Thank you very much, and let me queue up Peg's slides. Ms. Bradke, can you see your slides?

PEG BRADKE: Yeah — and I've got to — There we go. Yes, I can. So thank you for inviting me to present here. Just a little background, at St. Luke's, we actually had a heart-failure team since 2001 looking at readmissions, long before there was penalty talk, but one of the changing points for us was in 2006. We actually joined the Robert Wood Johnson IHI TCAB collaborative, which was going to focus on improving discharge processes and reducing avoidable rehospitalizations.

And, as a result of going to that meeting, there was quite an eye opening for us, as we were mostly inpatient people, and the presentation with that IHI group was quite a few talking about their experience with medical homes. So it really opened up a whole new perspective on readmissions for us.

And so, as we worked with that group, the first thing that we did when we got back, then, is expanded our team, and that's what I want to talk about is how we've built that team to make it not look like a hospital team, but a continuum team.

As a result of that, in 2010, this team actually now are transitioned to home team. It's not just looking at heart failure. We're actually focusing on all the core-measure patients as well as COPD.

As a result of being on that team and being with the initial innovation series, I now serve on the faculty with the STAAR Initiative, which it sounds like, Dr. Eric Coleman, who I work with on that for faculty, and that's the State Action on Avoidable Rehospitalizations.

So what I wanted to point out was kind of as we did our work and how we're going into a paradigm shift here. Traditionally, we just focused on discharging the patient and moving the patient to the next level of care or to the home and just — we did the handoff.

But I think the change in our viewpoint is we have to now facilitate the transitioning care and shift it to a handover, and rather than thinking about managing an in-hospital length of stay, we need to think about managing a 30-day length of stay, a 90-day length of stay, but much more than what we anticipated when we first started talking about length of stays. We always focused on the hospital, but we need to expand that out.

One of the biggest findings, again, from 2006, we brought home is when we heard all these people talking about medical home, we realized we were looking at this problem as a hospital problem, and it's really a continuum problem. And I think Sid talked about that as well, you know, you have to look at it's not about just the episode, it's about — or just about the clinic visit, it's about the episode of care. So that's what we're looking at now. And so a lot of that related to some of our teaching.

You know, previously, we would focus it more on what we were teaching the patient. Now, we have to focus more on what the patient learned, because it's not what we do. It's what the patient actually gets out of it.

And looking at the patient only be a recipient care to the patient being definitely part of that care, and if you're going to implement a process, you really need to involve the patient and the family in that episode, but then what you learn from that to take it on to comprehensive approach for all patients.

And then not just focusing on the clinical needs, I think. You can't focus on the clinical needs, because there are so many social situations and you've got to build that into your program as well.

And then focusing on the patient-care needs in each setting, that silo approach, to focusing on the patient experience over time.

So one of the things that really came out of that was a cross-continuum team, and the cross-continuum team — I think I slipped a slide. Get this slide here. Let me go back just a minute here. Oh, keeps going to the same one.

The cross-continuum team actually came out of a lot of the STAAR work, and the cross-continuum team is very much a team that you're looking at, again, that whole episode of care. And some of the key things as you're working on that work redesign is that cross-continuum participation and alignment of your goals, and I think the previous speaker talked about that, too, the common purpose and aligning of that.

Part of that, then, is developing and using standardized tools and compatible information and infrastructure to that continuum, and making sure that you have not just executive sponsorship, but a lot of this work is horizontal leaders at the front-line level or in the mid-level, but you definitely need that executive sponsorship.

And then, finally, effective external and external learning, and I think that is a combination of data as well as patient stories. I think both are very important.

So, as a result of — What I'm going to share with you is kind of the result of what we did here at St. Luke's Hospital, but what I have learned over the last three years, as I have worked with the super healthcare improvement on that STAAR project, so what we suggest for cross-continuum membership is a day-to-day leader, someone that can really get the team and follow the process.

Definitely patients and families, as you're designing some of these processes, it's important to have the patients and families at the table because it's amazing what they can bring to the perspective of when you're working on that.

And then it is — a lot of the work is hospital, and so you do want to have representation from the hospital. This is who we have suggested as we've done our STAAR work.

And then supporting staff, and I think, Sid spoke to that very well. They need to QI, the IT-the information technology, and finance, because, as you're all working on those, those supporting people that you go forward.

And then, most importantly, it's a cross-continuum team that's bringing those players in from the community, from the skilled and long-term-care facilities, from office practices, home health and community or public health services. And then, of course, third-party payers to definitely be a part of that as well, depending on what you're working on.

So with the cross-continuum team, we suggest that they meet every other week or at least monthly, and, again, by including the participants in that cross-continuum team, you really break down those barriers. And I think the two previous speakers talked to you about transparency, and that's a lot of this work, too. You have to become more transparent.

The analogy that I always give is when we first started our work with IHI in 2006, we were supposed to call five long-term care facilities and ask how our handoffs, handovers were. And I did that and I got rave reviews on our handovers.

And then, as I came back and built the cross-continuum team, and asked some of those facilities to be part of our cross-continuum team, relationships are very much a part of this. And after about, oh, I would say two months of meetings — and we were meeting every week when we first started — we really were able to break down some barriers and we realized we weren't so good, but we were their customer, and so they didn't want to tell us over that, because they didn't know me.

I didn't know them when I was just calling them on the phone necessarily. But as we built relationships, we were really able to break down some of those barriers and have some really good conversations and make the work very patient- and family-focused.

So roles of that cross-continuum team, our review in process and outcome measures, continue to look at any improvement aggregating some of the experiences as you go forward, and then all of that work, I think, helps gain executive sponsorship and support as you go forward.

So with our STAAR work, we have found that the cross-continuum team is really transformational. People really do begin to see things from different perspectives. You know, when you're just in the hospital, you don't realize what's going on in the patient's home, and home care can bring so much to that. You have no idea. We transfer patients to skilled facilities, to long-term care facilities, but most of us, including providers, have never, ever been in those facilities, and so we make a lot of assumptions, but by having them on the team, you actually build that relationship and get a better feel for what goes on there.

A reinforcement that readmissions are not just a hospital problem. It really is a problem across the continuum, and part of the cross-continuum team is you do need involvement from the executive level. And I kind of talked about this as well as from that front-line level, because part of this work is the power of the centers receiving codesigning the processes to improve some of this care.

So the result of the cross-continuum team is really new competencies in partnering across the care continuum, really setting the stage for an integrated care-delivery model, and then, secondarily, it gives a lot of focus to developing good data analytics, which we've talked about previously with the speakers, performance improvement, clinical integration and then just as we get ready for value-based purchasing.

So some of the things that have been helpful, and when we first started our cross-continuum team was actually doing some diagnostic reviews, and those diagnostic reviews actually being pulled out and having the group look at some cases and what perspective everybody can bring to that case as you look at it. That was very helpful, and, again, I think that helped break down the barriers and developed that transparency that I talked about.

And then these are just some questions that we used in our cross-continuum team, again, looking at diagnostic review, which I think is very helpful.

This next slide actually comes from the STAAR. It's a visual from the STAAR, and it talks about, again, the base of that is health information exchange and shared-care plans, cross-continuum team and the patient family being part of that build.

But then, from that, you move into the transition to home, maybe to post acute and then what kind of care you have in the community-care settings, and that's the people you want to have involved. And then what are those next-level, supplemental-care interventions that we need for the high-risk population. So that's part of the team's responsibility as well.

So, again, just a little — I'm just going to go through this quickly, but this is just touch points of what we have done here with our heart-failure population using standardized order sets, finding those patients, making sure we provide teach-back.

And that teach-back is a very important part of our care as well and something that we've moved across the continuum, so home care uses that. We work with the living centers on that, the care facilities, as well as the physician offices.

And then post-hospitalization, how we're using home care, how we're using heart-failure clinics or post-acute-care clinics, how we're involving that PCP and getting those visits in, and then follow-up phone calls and then actual classes that we have. So I'll spend a little bit more time on that.

This is just another reference from our STAAR work and it actually talks about the different changes in interventions that can go along in the different what used to be silos, but now we're working across those, but it just gives you some reference.

I think if you're interested, super healthcare improvement does have tool kits for each one of these, the hospital, office practice, home care are now on their websites, and I think they're very helpful if you're working on some of this information.

So I talked a little bit — It skipped ahead again. Sorry about that. So part of the work is an enhanced admission assessment, and, again, part of that admission assessment, not just the hospital admission assessment, but how we're using our community partners to build the real picture of what's going on with that patient. So rather than just trying to do a med rec in the hospital with just hospital personnel, how we can use the community pharmacies that those patients use.

If they're home-care patients, how we call out to the home care and ask, you know, questions. What's going on in the home? What are your assessments? What can we work on together?

So it's really using everyone on that continuum to build the picture of that patient, so we can intervene appropriately. And I think palliative care is a very important role as you're trying to reduce readmissions and the emphasis that they can bring if they're working with the patient or the referral that you need to make going forward.

The second key change with the package in the super healthcare improvement is enhanced teaching and learning. And, this is, again, where we use a lot of the teach-back. And one of the

things that we have found is, you know, the hospital maybe has a lot more resources than some of the community partners and how we can partner with them to provide that education in the facilities on the different populations that we're working with, so going into the facilities and talking about heart failure or COPD, the inhalers, all of that builds that relationship and gets everybody kind of on the same plane.

And then I just put in, just as a reference, some quick things, and this was the result of cross-continuum teams, so it's not just the hospital focus. It's amazing what home care, the office practice and the care facilities can bring to you to help you make your patient education a little bit more robust, and then, hopefully, you can all use it, so we're not giving the patient different information at different points. We're building on it as opposed to giving different information.

So one of the things that we do is we have little packets for our different populations and with the packet we actually have the teach-back questions along with the answers, and those are the important things we want to make sure the patient is able to tell us and be able to call to action on those items when they go home.

We have magnets that go along with that that — a quick reference, and then we've had really good success with regular green zone sheets. This is the one for heart failure, and then we have a complimentary one for COPD. With COPD, again, knowing your population, we actually added the next column, so what do you do if you're in one of those zones?

And then we have specific information on sodium, which is like eat this, don't eat that. And then we use a lot of calendars for — this one particularly for heart failure, for daily weight, and then appointments with the physicians.

So we do use data to drive our work, too, and I think that's been presented in the previous speakers, too. This is more some of the process outcomes that we're looking as we go along, but we do look at what our teach-back success rate is, and this is just an example of that.

We do teach-back in the hospital. Our home-care agencies do it in the home within that 24- to 40-hour visit. And then we do a seven-day follow-up phone call with an advanced-practice nurse, and we monitor our teach-back rates and what's going on with that.

Always very interesting, because the green is in the hospital and the red is the seven-day follow-up, so with that reinforcement over time we can improve upon that.

As I mentioned, we partnered with our home-care agencies to do these visits, and to work with the continuum, we partnered with our long-term care facilities and on standardizing some of the education and some of our handoff, looking more, again, senders and receiving, codesigning the process, so what — as a nursing facility, what's the information that you definitely want and we are providing that to you. If not, how do we need to change our information exchange?

And we've built some really robust information going back and forth with that team working on it together, which has been very helpful.

And then the last part is the post-acute follow-up, and, as I mentioned, we did try to do the home-care visit within 24- to 48-hours on our high-risk populations.

I think phone calls are an important part of that, too, and this is where the cross-continuum team can be very helpful, because we all talk about follow-up phone calls, but if we're all doing follow-up phone calls, too many is just as bad as, I think, no phone calls. So who is in charge of the phone call? Is it the office practice following up? Is it the home care following up? Is it the hospital themselves?

Looking at so you get one phone call and it's the right information, because if they get too many they're not going to give us all the information maybe that we need, because they're going to be tired of talking or saying, I've already told one person that. So it's pulling those processes together.

And then the partnership with physician offices helped us redesign our heart-failure visits. It was very common when we first started that every patient that went home with heart failure it was just an automatic two weeks — for the physician, and the physicians admitted that that often that just comes off their hand.

But one of the things that we did is we actually showed them data on when the majority of our readmissions were occurring on our different populations, and by showing them this data it was very clear that probably two weeks was too far out because a lot of our readmissions were actually in those first, you know, three to five days.

So the data helped us drive the work of fitting those physician clinic visits in within three to five days, and we have done those, we've segmented those by population, and then we've segmented them by office specialties, too, so they can see their own information going forward.

And then, again, using data, we looked at what percentage were able to achieve that three-to-five-day follow-up visit, and, over time, again, we could segment that by different practices and help our work moving forward.

Another part of our data that drives us, just HCAHPS with discharge instructions and how we benchmark to the nation, so we do look at that; so that is definitely a very important part of how we drive our work.

And then, of course, the final outcome is what the readmission rates actually are and we're constantly looking at those. We look at those — this is a yearly chart, and then we actually can differentiate that by quarter or by month. We look at it both ways.

So some of the things I think that we've learned going forward is that some of the — Well, I might have skipped ahead here again. Sorry. So some of the analysis that reducing readmission is dependent on a highly-functional cross-continuum team and the focus of the patient's journey over time, and the work is definitely patient and family centered. If you put the patient at the center, that team works a little bit better, because you kind of, again, break down some of those barriers and finger pointing and going back and forth.

Again, it's important to have an engaged executive leadership and physician leadership, particularly as you're working in the clinics, that's very important.

And then proving transitions in care requires codesign of the transitional care process, and I talked about this with the senders and receiving codesigning that, and we — I showed you a lot of data, but just as important as the data is we use a lot of stories. Sometimes stories get our

point across a little bit better than the data, and we've used those consistently with our community providers as well as with our physician practices.

And then how we decide to use intensive-care management services for our targeted high-risk patients. You want to have kind of the basic, and then what do you need for that really high-risk population?

But one thing we found out is it does take a long time when you're working on this because you can feel — Our cross-continuum team, again, we gelled very quickly, built some great relationships, broke down some of those barriers, but it was probably 18 to 24 months before we were able to see some of the results, so you can't get discouraged by that. And then information technology is definitely a very big part of that.

So some of the analysis of the results to date — and I'm including kind of the STAAR work in this with the three states that we have — is that readmission — that reducing readmissions is dependent on that — Oh, sorry about this. That some of the barriers are the cost of copayments, the medications and follow-up visits.

You know, we've set up that three-to-five-day follow-up visit, and, you know, we do hear a little bit from the patients, because that's another copayment for them as opposed to when they were seeing the patients in two weeks.

So sometimes you have to explain the importance of some of this stuff, but it does set up a barrier that, hopefully, as we build some of the bundle payments that we can build in and not have that be a barrier at this particular point.

The other big barrier from the very beginning of our work was the coverage for home-care services of the patient didn't meet home-bound requirements. That home-bound requirement is very difficult to define and operationalize and move forward.

But one thing that we have become convinced of is we think the best med reconciliation is actually done in the home as we set up our visits and we try to get most of our patients into the home care. If not, we do one visit, which is considered a care-coordination visit, because sometimes when you get the home-care person in the home they see the patient completely different and they'll actually see them as homebound and be able to convert them to certified visits.

Their assessment in the home of that is better than us trying to make that assessment in the hospital, and, again, the best med reconciliation occurs in that home. We've had so many saves with that, because all the meds are there and there's all the names of the drugs and the physicians and everybody that's been involved in the care. So that's been very helpful.

Lack of reimbursement for transitional care services. You know, the follow-up phone calls are covered, health coaches are not covered, even the APN, you know, we're doing those seven-day follow-up phone calls, but, you know, those are services that, you know, whoever the facility is is going to be picking those up, because those aren't really covered. So these are things that we want to make sure we build and get our time involved in that, so when we get into that bundled payment we have that information.

Limitations on electronic medical record is definitely a barrier. Sometimes access to the physician offices can be a barrier, particularly specialty physicians, and then the complexity of

comorbidities. That's constantly what we're dealing with, and how you build that into your process is important information as well.

And then I think I spoke to that just a little bit, there's a lot of challenges to med reconciliation. So what the role of that is and who actually takes that on. Is that pharmacy? Is it, you know, the clinic? Is it a nurse through a call? You know, how do you do that?

So, in summary, I think there are opportunities, because we know that readmissions are frequent, they're costly and they are avoidable. Not all of them, but many are, and that successful pilots have shown that they can be reduced, but it helps when the financial incentives are aligned.

And it also is not just a hospital and it's not just a community. There might be some state beyond the level of the individual provider with systematic barriers to break down as we move forward, and that leadership is definitely a very big part of that. And I think that's it.

WESLIE KARY: Thank you very much. We're going to move into questions now, and Deb Milne, who is here with me, will ask the presenters the questions that have been posed. You can still ask a question through the Ask-a-Question function at the bottom of your screen.

I'd like to point out that there's something else on the bottom of your screen, which is a button that says, "Survey." And if you are leaving us before we close, please take a couple of minutes before you leave and complete that survey for us. Okay, Deb.

DEBORAH MILNE: All right. So the first question is for Dr. Popiel. Dr. Popiel, how long have you been running your pilot?

DR. RICHARD POPIEL: Our pilots — can you hear me?

DEBORAH MILNE: Yes.

DR. RICHARD POPIEL: Our pilots started in January of 2011, so we're in our fourteenth month. And, as I alluded to during my presentation, even if you start a case in January, you've got to wait 30 days before operation, 90 days post-operation or post-discharge and then another 90 days for claims run-out.

So you don't get 'til seven, eight or nine months before you begin to see some completed cases, which is what I was alluding to earlier, but we've been up and running since January 2011.

DEBORARH MILNE: Thank you. And, now, the next question is also for you, Dr. Popiel. Do you have an estimate of what it costs as percent of revenue to develop and maintain this information system?

DR. RICHARD POPIEL: So we — I don't have that exact number. What I can tell you is our approach is to go slow to go fast. So whether it's the episode-of-care pilot or patient-centered medical home pilots or even some of the early accountable-care organization pilots, we wanted to make sure the design elements, the key aspects of the program are working and generating the intended outcome.

So we have created manual solutions early on, supplanting them with longer-term solutions, like the web-based tool. But I don't really have the cost currently as a percent of revenue.

DEBORAH MILNE: Thank you. The next question is for Ms. Bradke. Ms. Bradke, by what percent was your redesign team able to reduce the predesign bundled price?

PEG BRADKE: We're actually just in the implementation. We haven't actually bundled it yet. So we're just pulling all of our information together and be getting prepared for that.

DEBORAH MILNE: Very good. Thank you. The next question is for Dr. Popiel. Can you tell us a little more about your grouper? How do you determine what care within the time period is related to the hip-knee episode and which is unrelated?

DR. RICHARD POPIEL: So that's a much longer conversation. We use one of the several available grouper technologies that are in the marketplace, and there's a lot of definitional aspects about the grouper technologies that we use. But that's a much longer conversation.

But, clearly, you know — and I'm speaking at 500,000 feet right now — it's got to be, you know, linked to the specific episode, but it would take too long to really go into that detailed explanation.

I mean, I think you can go — I mean there are a number of different grouper technologies. Prometheus has one. Optum has a procedural-episode grouper. So I think you can go and find that out, you know, at their various websites.

DEBORAH MILNE: Thank you. The next one is also for you, Dr. Popiel. Could Dr. Popiel share his list of quality metrics?

DR. RICHARD POPIEL: I think we have a very small group of quality metrics. I laid them out in one of my slides. One of the things that we have learned in other pilots is that if we overwhelm an organization with metrics, we never see movement on any one of them. So we purposefully established a small set of metrics there, VTE prophylaxis rates. They're pre-op antibiotic. We also look at readmission rates and never events.

And what we're going to do over time, in collaboration with the orthopedic surgeons we're working with, is look at all of the data, and we have a much richer dataset than I was able to share with you on the webinar. We're going to look at all of that information and, over time, revise our quality and outcome — quality-outcome list, but we're not at that point yet.

DEBORAH MILNE: Thank you. Next question is for Ms. Bradke. Actually, there are two questions that ask about the same thing, Ms. Bradke, and so I will ask you the one that has more — more complete question. What website organization did you mention regarding your toolboxes?

PEG BRADKE: The Institute for Healthcare Improvement (IHI). So it's http://www.IHI.org, and you can go to Toolkits and there's toolkits for hospital. There's toolkits for office practice, nursing facilities and home care.

DEBORAH MILNE: Thank you. And then the next question is for Dr. Popiel, and it asks how is the web-based tool populated? What is feeder system?

DR. RICHARD POPIEL: Great question. So before I answer that, I just want to mention I failed to identify the change in functional status for — as another key outcome metric. I alluded to it during my presentation, but I just wanted to make sure that was included in the list that I answered just moments before.

So the way it's done, it's done by office staff in the various orthopedic groups. They log onto a website and then they input the data during the course of the episode and we capture information as I shared with you in the pre-op phase in the surgical and then the post-discharge phase. But it's all done by the office staff.

DEBORAH MILNE: Thank you very much. The next question is for Ms. Bradke. Regarding HF readmissions, what strategies have you implemented to overcome the barriers associated with coordinating with physicians' offices?

PEG BRADKE: Well, it helped — First of all, we had the physician offices — some of them — represented on our cross-continuum team. But I think probably what helped the most was when we did more specific data by office practices on what availability was to get the patient in and then what the readmission rate. So I think the data helped drive that quite a bit.

I know it helped with the heart failure specifically. We actually had an easier time getting patients into the primary care, obviously, than the cardiologists, but, over time, as we showed the data, the cardiologists kind of looked at that data and were concerned about it and then actually, through that, we partnered and developed the heart-failure clinic, so that helped that rate for them. So the data definitely drove it for the physician clinics.

DEBORAH MILNE: Thank you. The next question is for Dr. Popiel. Is the change in functional status a patient-reported outcome? And do you use WOMAC?

DR. RICHARD POPIEL: So we have a functional status scoring sheet that we've developed that has four main categories, and, depending on which category, a number of sub-elements to it, and, again, it happens, you know, at the practice level between the practice and the patient.

DEBORAH MILNE: Thank you. The next one is also for you, Dr. Popiel. Can you share with the public the elements of information that are solicited via the online system? If so, where can we find this information?

DR. RICHARD POPIEL: So I'm not in a position to share all of those elements right now, and there's 150 of them. So what I would suggest is if anyone is interested they can call me directly and I can, you know, share with them offline, eventually share with them offline. But there's no place that anybody can go to see these elements currently, except those who are participating in our pilots.

WESLIE KARY: Okay. Thank you very much, to all of our presenters. That was our last question. And we will wrap up a little bit early. I would like to just remind everybody to take the survey before they leave.

And I also wanted to tell you that we do have another session coming up on March 13th from 12:00 to 1:15 Eastern Time, and we're going to be talking about episode definition for care improvement. So this will be episode definition from two perspectives.

Rob Mechanic from Brandeis will be talking about sort of practical end data approaches to first selecting the episode that you want to define and then actually walking through the definition.

And then Dr. Thomas Graf from Geisinger will speak about clinical strategies to improve care within areas of variation that are coming out of the episode-definition process.

All announcements, slides and transcripts are available at this website: http://cmmi.airprojects.org/bpci.aspx.

Remember that the views expressed in these presentations are the views of the speaker and not of the Centers for Medicare and Medicaid Services.

And if you need to reach me for any reason, this is my contact information, but thank you again, so much, to all of our speakers. Very nicely done, and we appreciate the benefit of your expertise. Thank you.

OPERATOR: Thank you for your participation in today's conference. This concludes the presentation. You may now disconnect. Have a great day.

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