Hospital Inpatient Quality Reporting (IQR) Program

Support Contractor

Hospital Improvement Innovation Networks and Hospitals Collaboration to Improve Quality of Care: Healthcare-Associated Infections

Presentation Transcript

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Bethany Bunch: Hello and welcome to today's Hospital Improvement Innovation Networks and Hospitals Collaboration to Improve Quality of Care for Healthcare-Associated Infections webinar. My name is Bethany Bunch and I am the Hospital Value-Based Purchasing Program Lead at the Hospital Inpatient Value Incentives and Quality Reporting Outreach and Education Support Contractor and I will be the moderator for today's event. Before we begin I'd like to make our first few regular announcements. This program is being recorded. A transcript of the presentation along with the question and answers will be posted to the inpatient website www.qualityreportingcenter.com in the upcoming weeks and will also be posted to *QualityNet* at a later date. If you registered for this event, a reminder e-mail and the slides were sent-out to your e-mail about two hours ago. If you didn't receive the e-mail, you can download slides at our inpatient website at www.qualityreportingcenter.com. If you have a question as we move through the webinar, please type your question into the chat window with the slide number associated and we will answer as many questions as time allows. Adding the slide number to the beginning of your [question] will be very important during today's event because we have quite a few speakers today. Any questions that are not answered during the webinar will be posted to the qualityreportingcenter.com website in the upcoming weeks.

I would like to welcome our speakers today from

- Premier,
- Greer Memorial Hospital,
- New York State Partnership for Patients,
- New York City Health and Hospitals Metropolitan,
- Health Research and Education Trust,
- American Hospital Association,
- and Northern Maine Medical Center.

This event will provide an overview of how the HIINs work at the regional, state, national, as well as hospital system level, to sustain and accelerate national progress and momentum towards continued harm reduction in the Medicare program. The HIINs and their hospitals will share their solutions and processes to lower incidents of three healthcare-associated infections.

Participants will be able to perform the following:

- apply initiatives and activities to improve patient safety;
- identify tools to achieve quality measurement goals;
- and recall the systems and protocols implemented by hospitals to monitor progress for HAI measures.

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Before we jump into the presentation, I would like to give you a little background on the Hospital Improvement Innovation Network, also known as the HIINs.The Hospital Improvement Innovation Network under the Partnership for Patients Program, and since 2016, part of the Quality Improvement Organization Statement of Work, seeks to engage as many of the short-stay acute-care hospitals across the nation, as possible. Each of these hospitals has strived to improve quality of care provided to patients, in conjunction with, continuing partnerships with physician, nursing and pharmacy organizations, consumers and consumer groups and employers with which they have aligned their efforts. The Partnership for Patients Program, which was launched originally in 2011, is represented by 16 national, regional or state hospital associations. Quality Improvement Organizations and Health System Organizations serve as Hospital Improvement Innovation Networks. Currently these HIINs have engaged 4045 hospitals across the nation in quality improvement efforts in improving patient outcomes in the acute care setting. The focus of the HIINs is to sustain and accelerate national progress and momentum towards the continued harm reduction. Additionally, an essential element of this work is a commitment to improving health, equity and organizations will give specific attention to identifying and reducing healthcare disparities. The goals of the HIINs to be achieved by the end of 2019 are, a 20% reduction in overall patient harm and a 12% reduction in 30-day readmissions as a population-based measure.The HIINs work to engage the hospitals, provider and broader caregiver communities in learning collaboratives to quickly implement well tested and measured best practices to improve the quality of care. In an effort to bring about improvement in patient safety, the HIINs will continue to evaluate the capacity of large improvement networks by focusing on the required 11 core areas of harm. In addition to these core 11 topics, HIINs are expected to address all other forms of preventable patient harm most impactful to their respective population. This work, as of 2015, and compared to a baseline period of 2010, has contributed to a decrease in 3.1 million fewer harmed, a 21% decrease in patient overall harm, 125,000 lives saved and $28 billion in cost savings. So, I would like to say thank you to the work that these HIINs in the hospitals have done together for the improvement of care and cost in healthcare. We will be hearing from three HIINs and three hospitals today as they share what has worked for them in improving processes and protocols within the CLABSI, SSI Colon and C. difficile measures.

Please reference this acronym list throughout the presentation. Again, if you would like to have a copy of these slides, they are available at qualityreportingcenter.com.

Before I hand the presentation over to the first presenters, I want to provide a reminder regarding NHSN location mapping for the CLABSI

and CAUTI measures. Please note that if your facility participates in the Hospital Inpatient Quality Reporting Program, also known as IQR, then your facility is required to report CLABSI, CAUTI, SSI, MRSA Bacteremia lab ID and C. difficile lab ID events to CMS. In order to submit CLABSI and CAUTI data, first determine if your hospital has any CMS reportable locations for device-associated HAI events. The CMS locations for CLABSI and CAUTI are listed on this slide. If you do have at least one of these locations, then your facility is required to submit complete and accurate data to NHSN per the NHSN surveillance protocols and definitions for each of the locations in scope for the CMS Hospital IQR Program. If your hospital does not have at least one of the device-associated HAI reportable locations listed on this slide, then your hospital must submit an IPPS measure exception form with CMS to successfully meet HAI reporting requirements. I'm going to state that last piece again because it's really important. If your hospital does not have at least one of these locations listed on this slide, then your hospital must submit an IPPS measure exception form with CMS to successfully meet HAI reporting requirements. The form is available through *QualityNet* and also linked at the bottom of the slide allows a facility to indicate that in accordance with NHSN location definitions, it has no qualifying ICU or adult or pediatric medical, surgical or medical-surgical ward locations. The information that I just provided is available in a step-by-step layout form in the NHSN's location mapping checklist and additional resources regarding mapping are available in the NHSN location mapping resource document, both on the healthcare-associated infections page on *QualityNet*. The direct link is provided at the bottom of this slide. If you have any questions regarding the measure exception form, please do not hesitate to submit your question through the inpatient Q&A tool on *QualityNet*.

I would now like to turn the presentation over to our first speakers for today from Premier and Greer Memorial Hospital. Please remember when submitting questions to add the slide number to the beginning of your question. April Carroll, the floor is now yours.

April Carroll: Awesome, thank you so much Bethany for that great introduction and background and it is with great pleasure that I introduce CLABSI: Getting to Zero. It is absolutely possible, and Jan Lienau will be co-presenting with me from Greer Memorial Hospital, one of our HIIN hospital participants who've been actually a part of HIIN 1, HIIN 2 and now the Hospital Improvement Innovation Network. They are one of our top performers and not just in CLABSI but in many of the hospital-acquired infections and hospital-acquired conditions as well as readmission.

So with that being said, this is Jan and I, this is our snapshot here and Jan is a great colleague. She'll be representing Greer today. I'm coming here

from Premier as our Senior Manager of Clinical Operations and the Premier HIIN and we are delighted to present with you all today.

So as Bethany stated, we are one of the 16 HIINs that are part of the Participant for Patient's Initiative. She's greatly presented the overall arching goals. But one of the things that Premier really takes pride in as we promote the HIIN initiative and work with our hospitals is really initiatives and strategies that improve overall patient safety and quality, with the underpinning of leadership and safety culture at the foundation, incorporating person and family engagement into all of the work that we do in every single topic; as well as looking at health disparities and where the gaps and opportunities are within healthcare disparities that possibly impact any of these areas of harms and readmissions that we're speaking on. In addition, Premier really promotes a safety across the board programmatic approach so by focusing on safety across the board, we're able to reduce harm in every area and in readmissions and promote a culture of safety. Through Premier's collaborative methodology, working together with our members, sharing success stories, sharing strategies, barriers, aha moments and opportunities for improvement and also allowing mentorship between our various hospitals, we're really able to accelerate not just the improvement of one hospital, but we're really able to accelerate the improvement of all of our hospitals and so that is our approach.

So as the Premier HIIN, one team, one voice, although we're working with over 489 hospitals of all different types from academic, Indian Health Services, small rural, large urban to teaching facilities. We're working across 40 states to transform healthcare together to improve safety, to reduce harm, to improve quality and, synergistically, we work with a lot of the federal programs to improve cost avoidance, to improve the patient care experience and the partnership with patients, families and caregivers.

So, we're really delighted to present one of our top performing hospitals today, Greer Memorial Hospital located in South Carolina. They are part of the Greenville Health System. The Greenville Health System is seven acute-care facilities and two long-term care facilities. Actually, last November, Greer was designated as a magnet facility so we're extremely proud of them for that designation and they are definitely top performers and high achievers and if it's out there to be won, they're striving to get that. They're an 82-bed acute-care facility with medical-surgical services, an operating room, general and orthopedic surgery as well as plastics. They have an emergency department and a women and children services department.

One of the things I am most excited about with Greer and why we wanted to highlight them today is their culture of safety. They really did it and

literally walking on the campus you can feel the culture. As you're meeting with senior leaders, departmental leaders, front-line staff, you can feel the culture when you walk in this facility.

It's a full-service community hospital. They have a huge focus on their culture of safety and even have a 93% participation rate in their culture of safety survey, and you all know how challenging that can be. They are committed to the high-reliability goal within their state. They are a safe surgery certified facility and recently have won another award for zero harm in CLABSI and SSI several years in a row. They have a very high focus on patient and family engagement. They have a five-star rating in their HCAHPS and they really focus on zero harm and zero defects with a lot of times it's one of those things you hear folks say is not attainable, it's not possible, but Greer is really proof of that. Having met with the senior leadership and actually witnessed it myself, I've seen the leadership lead the safety huddle, hold staff and leadership accountable for any opportunities around patient safety or facility safety or employee safety. They pride themselves on a just culture, a culture of reporting not just harm and events but those near misses and good catches and proactively learning from those and making improvements. And then they also scored an A in their safety score with their leapfrog. So Greer is truly really proof of the value and the foundation that leadership can have, not just on hospital-acquired infections, but reducing harm across the board.

So the first graph I'm going to show is their central line utilization. So using 2015 as their baseline for this particular graph, this is just showing you a graph of their central line utilization from January to present. Now if you notice they're in the red here with their central line utilization. Back in April of 2016 Greer had an extreme increase in their census, in their acuity, in their ICU stays and they had to increase their utilization of central lines so although their acuity increased and their volume increased, they worked really diligently on decreasing their central line utilization and if you see, they're still on the downward trend of decreasing their line utilization.

So, with that being said, we wanted to emphasize that because even with the spike in central line utilization with their census and their acuity, they've maintained zero CLABSI in their ICU and NICU not just here what you see on the screen from January 2016 till present, but currently they're going over five years, five years, without a central line infection which is awesome. Not only in the ICU but also on all units, their med-surg unit has not had a CLABSI in over five years. So Greer has really demonstrated that it is possible to not only get to zero, but to stay at zero. They've hard-wired practices in place that have allowed them to sustain zero and they plan to keep it there. So we hope that all of you listening on

the call will understand that you can do the same thing and you can do it now. So, Jan with that being said I'd like to hand it over to you to really talk about what did you guys do and how did you get there? I'm going to pass it over to you now and you can start with the multi-disciplinary approach.

Jan Lienau: Thank you, April. It is truly an honor to be able to be here today and share with you our strategies and successes on reducing and literally eliminating CLABSI for over five years. I think the first thing we have to consider is that CLABSI reduction is a multidisciplinary approach and we must include all professionals who are in a position, who would insert, remove, maintain or use the central line. Certainly, your infection preventionist should also be involved in all of the initiatives if not leading those. Anybody who is on the PICC team and infusion specialists, you want your healthcare managers leadership involved but as importantly you want your patients and the family involved in the assistance and care of their central line. Next slide.

Bundling is a common practice these days. It's a simple way to allow a healthcare provider to have a checklist. It could include all the needed supplies, the order in which one would do things, it standardizes best practice and so we use an insertion bundle checklist which is actually a requirement for good reasons. We use those for also maintaining central lines and I believe it's important along with the just culture that you mentioned April, that staff are empowered to stop an insertion of a central line if they observe an improper procedure or a CLIP bundle measure not followed.

Daily the line should be assessed for necessity. We conduct daily safety huddles and each morning in the safety huddle every patient with a central line is discussed and the topic of whether or not that line is still really needed is discussed so that should be done daily. And frequent blood draws alone really is not a sufficient reason to have a central line in a patient, unless there's absolutely no other peripheral access available. The central line should be there for the patient, not for the staff or for convenience. Some proper indications for use would be prolonged IV treatment, TPN lipids, chemotherapy, dialysis, blood transfusions, or again, patients who have difficulty receiving peripheral line access.

Provide patient education to the family prior to insertion. This should be done and documented in the medical record. Hand hygiene of course is the cornerstone for infection prevention, adherence to a septic technique, applying the skin prep and then allowing that skin prep to dry. That is your contact kill time. Maximum sterile barriers. We require all staff who may become within three feet of the sterile procedure to be donned in maximum sterile barriers. So often I hear that some facilities only the

inserter has on maximum sterile barriers but those assisting are not in maximum sterile barriers and we believe it's important that any person for any reason stepping within three feet of that field should be donned in maximum sterile barriers. Transparent dressings are also ideal so that the line site can be assessed without interrupting or removing the dressing and any missing component or non-adherence is an opportunity to improve.

We have a CLABSI PI task force where every central line infection was drilled down on for root cause, discussing the utilization and best practice in a daily safety huddle, as I stated, and also an interdisciplinary round. We implemented CHG bathing on every patient with a central line, minimizing blood draws from the line and obtaining labs peripherally when possible. CHG impregnated dressings may also be used as well as antimicrobial antiseptic impregnated catheters, but those really should be used when core strategies have not decreased rates or the line is going to be in for greater than five days and the patient is incredibly vulnerable.

We have a new hire probation period where every staff member who would have access to a central line, either inserting, maintaining or using it, is on a 90-day audit period where every time they would change a dressing, access the line, administer meds, they are audited and witnessed for 90 days to ensure that they are adhering to our best practice policies. During one of our root cause analysis, we had an aha moment that radiology staff, who insert contrast and use the line, did not have the same level of training or competency as our nurses and once we rolled-out education to these ancillary units, our CLABSI rates at our main academic medical center dropped significantly. We are just finding that so often with CLABSI, the patient had been to radiology and received contrast from a healthcare provider that did not have the same training the nurses and physicians. We also conduct compliance audits on our maintenance audits so we audit our audits for compliance with all of the maintenance measures. We publish scorecards for each unit that has the rate, the device utilization and hand hygiene. Those are published and posted monthly in every unit.

April Carroll: And Jan one of the things that I personally noticed in walking through your facility is that you all use that same mentality with all of your scorecards. Transparently posting on the unit for the staff to see, for the patients to see. Really demonstrating the culture of your organization and when staff and when the public sees that you're focusing on safety and quality, you definitely see a momentum and an energy towards working towards that zero. Nobody wants to post bad scores.

Jan Lienau: Absolutely, absolutely and they …

April Carroll: Absolutely, so one of the things that we like to use to prevent CLABSI is this nice little mnemonic you know, C for clean hands and this is something that's posted on the unit. Look at the device, you know, meaning is the dressing intact? If you're using a BIOPATCH® for any particular impregnated dressing, looking at it, is it in place? Is it being used? Is it being used appropriately and I love the fact that the audit so much. Audit for appropriate insertion practices, audit for appropriate care and maintenance. Just because something is in policy and procedure doesn't mean it's actually what's happening at the front line so really auditing your auditing, so to speak. Bathing the patient. So all of their central line patients being bathed with the CHG. Scrubbing the hub, not just appropriately, but for the right amount of time. And is the line necessary because obviously if there's no line, there can't be a CLABSI.

So finally, as we end our presentation today I know we're coming-up right here on our time, we'd like to leave you all with a little bit of empowerment that zero is possible if you follow those evidence-based guidelines and particularly with CLABSI. The CLABSI bundle where evidence-based practices, when bundled together leads to better outcomes. Holding staff accountable is something that Greer truly does and they operationalize it. They live it on a daily basis. There's no threat or intimidation to speak-up if it's for the patient. They definitely live out that culture. Think outside the box, outside of those normal procedures, those normal units, those normal primary interventions, what else can you do? Inspecting what you expect and leadership really driving the culture of safety. You set the expectation, hold folks accountable, then you're going to get the results that you want, not just with CLABSI but with safety across the board, which is what Premier promotes with all of our areas of harm and throughout the Premier HIIN. So thank you from Jan and I, from Greer and Premier and we'll move on to the next speaker.

Bethany Bunch: I think we're having some technical difficulties so while our next speakers are getting ready for their presentations, actually April and Jan would you mind answering a few questions?

April Carroll: Absolutely.

Bethany Bunch: Sure, great, thank you. On Slide 26 we had a question, how often do you conduct compliance audits? Who completes them? So we'll just start with those two questions.

Jan Lienau: Okay, so I try to do a weekly rounding of maintenance audits. Now every central line that's inserted has an insertion audit and that goes into the electronic medical record so that's easy for me to view. The maintenance audit is one that I really drill down on and I try to do those weekly. And I also wanted to say that part of what I do in the maintenance audits of the

audits, is I round on the patient and I ask the patient or a family member, "Did the healthcare provider who serviced your line today, clean their hands before touching your line and did they scrub the hub for 15 seconds?" And engaging the patient and the family is also beneficial but again weekly is what I strive for.

Bethany Bunch: Great, that's helpful and then just one more question and I think we should be ready to go. When your IV team enters PICC lines, are they done at the bedside or in a sterile room?

Jan Lienau: We often do them at the bedside. Based on the acuity of the patient, often times we establish a sterile field right there in the room.

Bethany Bunch: Great, thank you and there are many more questions for April and Jan so we will get to those at the end of the presentation. Now I think we are ready for the next speaker.

Thank you for that wonderful presentation. As a reminder, we will have a question-and-answer session at the conclusion of the webinar and please list your slide number at the beginning of your question. I would now like to hand the presentation over to our next speakers from the New York State Partnership for Patients. The floor is now yours.

Wing Lee: Hello and thank you for the opportunity to share the approach that New York has used to reduce surgical site infections. My name is Wing Lee. I'm the Senior Project Manager at the New York State Partnership for Patients and we are very pleased to be able to share the approach that the New York State Partnership for Patients has used to reduce surgical site infections so we're on Slide 30.

To provide a little bit of background in terms of the New York State Partnership for Patients, we are a partnership of two associations, the Healthcare Association of New York State, or HANYS, and the Greater New York Hospital Association, or Greater New York. We have been working on the New York State Partnership for Patients contract since its launch back in 2012. At the beginning, we were working together as the two associations and the QIO for the state, IPRO, was working separately on a number of different infections. But we are delighted for this iteration of the contract that we have been able to partner with IPRO, and the three organizations are working together to focus on reducing hospital-acquired conditions of which surgical site infections is one of them. This particular HIIN covers New York State and we have about 170 hospitals within the state working on trying to reduce the hospital-acquired conditions. The way that we've divided-up the work to try and reduce these conditions is that each geographical area has a designated project manager so there are about 15, just over 15, project managers all working hands on with the

hospitals to provide technical support primarily in terms of quality improvement to help hospitals to plan and strategize around implementing strategies to reduce the particular hospital-acquired condition of interest. So today we're over here to speak to surgical site infections.

As you may all recall, surgical site infection is one of the most common hospital-acquired infections in hospital that accounts for 38% of HAIs in surgical patients. In colorectal surgery, the SSI rate varies from five to 30% and of course with acquiring a surgical site infection at least for a number of negative outcomes including an increased length of stay, increased patient morbidity and mortality, and increased readmission rates which is why we are also interested in working on trying to reduce SSIs.

So as a state you can see that we actually really struggled with surgical site infections particularly for colon. Back in 2015 you can see that our baseline SIR, or standardized infection ratio, was actually 1.16 which is above the one observed to expected ratios. We've managed to reduce the number of infections quite significantly and now we've been able to bring our SIR down to 27.42% and we are absolutely delighted with the work that the hospitals have done to do this and many hospitals have chosen to implement the New York State Partnership for Patients advanced colon bundle in order to achieve this great reduction.

So looking at Slide 33, you can see the different components of the advanced colon bundle. All of these elements were selected as they were supported by evidence-based peer review literature to suggest that putting these different elements together so normothermia, glucose control, antimicrobial prophylaxis, in combination with the increased perioperative oxygenation, skin preparation, cleaned sanitized fascia close and wound management can really help to reduce the risk of developing a surgical site infection. And even though we put it together as the advanced colon bundle elements, all of those elements that you see that are in the white text, so the ones that I went through, can actually be applied to a number of different surgeries to help reduce the risk of developing a surgical site infections. So in New York State not only are we looking at colon but we're also looking at coronary artery bypass graph surgery, hip replacement and hysterectomy. And all of these different elements have been shown to be able to impact the rates of infection for those. In this situation of the Partnership for Patients, we have had to introduce a new colon bundle element which you can see in the yellow, the mechanical bowel preparation in combination with oral antibiotics. This is because new evidence has emerged to suggest that adding this additional element, in combination with the six elements above, can really help to reduce the risk of SSI for colon surgeries and so we added this in and obviously that is the only colon surgery-specific bundle element that can only be used for colon surgeries. And now to introduce the materials that we've developed

for the New York State Partnership for Patients advanced colon bundle, I'm going to turn the floor over to my colleague Maria Sacco, who is also a Program Manager for the New York State Partnership for Patients. Maria?

Maria Sacco: All of the tools and materials are available on the New York State Partnership for Patients website. I'm just going to briefly, we've put together a package that begins with a flow chart that outlines four phases of the surgical process for a patient: the preadmission, preoperative, intra-operative and post-operative arenas.

We have a summary table outlining the bundle elements, as well as strategies, for hospitals to implement those elements.

There is a gap analysis we've developed for our hospitals to use to really look at: Are these elements in place in each of surgical procedures? So, are they in place preadmission, preoperative, intraoperative and post-operative.

We have a resource guide which outlines many available research studies and evidence including recently published guidelines that is a resource for our surgical teams if they want to look at the evidence that's cited here.

We also have a companion document to the gap analysis which again outlines some recommendations and resources. There are links within this document to publicly available studies and tools and resources.

We've developed an observation tool, too, for hospitals to use. It's Excel. It has both, it has colon, hysterectomy, CABG, and hip replacement tabs on it, so that hospitals can do monitoring of the compliance with the element.

And then we've developed an analytical observation tool that can take all the data from the first tool and create reports so that progress can be tracked.

The tools and resources page on the NYSPFP website has the entire package and these tools, as well as link outs to some meetings and other resources.

Going forward in the HIIN, we are doing education on the enhanced recovery after surgery in combination with the advanced colon bundle. ERAS as it's called, is an intervention that leads to quicker recovery and it has the items below, you know, early removal of drains, optimizing pain, patient education, both preadmission, preoperatively and throughout, early nutrition, early ambulation and preoptimization of a patient's nutritional status and other organ functions.

Why should hospitals consider implementing ERAS? ERAS has been shown to reduce mortality and morbidity. It reduces surgical site infection and other complications, reduces reoperation, reduces length of stay, leads to better quality of outcomes and last, reduces costs.

And my SPFP and ERAS resources are here for you on the screen

And can be found on the New York State Partnership for Patients website

And here's our contact information. Thank you for this opportunity. I'd like to turn it over to the New York Health + Hospitals/Metropolitan team.

Monty Littlejohn: Good morning, my name is Monty Littlejohn, the Chief Resident in General Surgery at Metropolitan Hospital. I'll be presenting our project on reducing colon surgical site infections and the implementation of the advanced colon surgery bundle.

This is a slide that shows the makeup of our team for this entire project. It's a multi-disciplinary team that includes surgery, anesthesia, peri-op and post-operative anesthesia care unit, pre-admission testing, ambulatory surgery, surgery clinic, pharmacy, materials management, infection control and also central and sterile supply.

A little bit about our hospital. We are a New York City Health and Hospital Corporation hospital, Metropolitan. We're a 317 bed acute-care hospital that has approximately 60,000 ER visits per year. We perform just over 1000 inpatient surgeries and up to 5500 outpatient surgeries per year. We serve a diverse patient population in a neighborhood formerly known as Harlem, now known as East Harlem in Upper Yorkville, and the patients come from a variety of countries.

John Degliuomini: I'm John Degliuomini, Deputy Chief of Surgery. This slide is our colon SSI rates prior to the implementation of the advanced colon bundle and if you look at the slide, you'll see that from 2013 our SSI rate was 17% and then in 2014 our rate went up to 30%.

Looking at this, we recognized that our colon SSI surgery rate was higher than the state average and this became our reason for action. And so we looked to partner with New York State Partnership for Patients to look at our hospital and look at the systems across the continuum of care, utilizing tracer methodology and PDSA cycles to identify opportunities for improvement in what and how we were going about doing our colon surgeries.

In order to implement the advanced colon bundle, we realized that we first have to educate all the stakeholders in the elements of the advanced colon bundle, and so one of the challenges was trying to determine how best to

do this. So what came to mind, was a grand rounds format where we would bring all stakeholders into one room together, in a multidisciplinary grand rounds. Incorporating the surgery and anesthesia teams and this included not only the attendings, but also residents and PAs, bringing-in members of the nursing teams, not only the OR and PACU nurses, but also clinic and the ward nurses, and then of course having the infection control team present. And lastly of course, senior leadership, because it became very clear that in order for this project to succeed, we would need the support of senior administration. So the element, you know, the actual education was going to basically be focused on the advanced colon bundle elements and the actions and those will be on the following slide which I will now pass over to Jocelyn Cesareo. Thank you.

Jocelyn Juele-Cesareo: Thank you. This is Jocelyn Cesareo, Director of Infection Prevention and Control. Before we implemented our advanced colon bundle, I remembered listening to a webinar in which one of the speakers mentioned that it took a village to roll one out. Well, she was not kidding. It took a village, as well as a very committed and engaged village. This is our advanced colon bundle which we implemented at our facility. So what we did was developed into the SSI prevention core measures of the SCIP project, which we already have in place and then we incorporated the elements of the New York State Partnership for [Patients]. I won't go over this slide in detail, because some of this were covered earlier and the others will be covered by the next speaker as well. Well then, what I would like is to share with you, how we worked on our bundle, how we did it at every space of our peri-operative care and how we were able to roll it out successfully.

This slide shows the various partnerships we formed while building our bundle. Partnerships which were dynamic and which proved critical as we worked through our gap analysis. So this is our village. With the buy-in from our senior leadership and chief of services, we formed our multidisciplinary team. Standardization was one of the team's primary goals as we went through product selection, process and form development. Checklists, checklists, checklists were used as a tool to ensure compliance to the bundle elements. When it was time for us to roll-out our skin wipe, our team partnered with a clinic and a pre-admission and cert staff so we developed a standardized preoperative skin prep patient instruction form. This group also worked on the post-op wound care patient education. We collaborated with pharmacy on our protocol for weight-based dosing and redosing. Pharmacy printed and laminated antibiotics prophylaxis protocol and placed them in all of our anesthesia boxes. When we were getting ready to work on our fascia closure trays, we worked with central sterile supply so we asked the surgeon to pick what instruments they want in the tray, central sterile packs them and the

circulating nurse in the OR included it in the checklist to make sure that we don't miss this tray during colon cases. Materials management was such a major player in the successful roll-out and I think a lot of you can relate to me how frustrating it gets when your team's willing to go and there are no tools to work with. Where our materials management expedited whatever supplies that the team had decided to use. The anesthesia and the PACU collaboration resulted in our processes of maintaining normothermia and glucose control. Close-up nursing came into play when they also initiated some of the elements, and followed the patient through, to make sure that before we discharge the patient they're prepared as much as possible. Standardization of our operative site skin prep using iodine and alcohol products called for a partnership with our surgeons, infection control and our OR teams. I think the hardest part in any bundle implementation is sustaining the gains. While surveillance, monitoring, compliance audits are crucial to the consistent implementation of these bundle elements, what we did with our data was just as important. Outcomes are reviewed on regular basis at departmental meetings, which allows for further opportunity to educate and identify barriers that had to be addressed. The infection control surveillance data were reported at several levels, including the infection control committee, the surgical PI committee, the hospital-wide PI committee, the executive leadership committee under the QI of the board of directors. This enhanced our staff awareness of the bundle, discussed reported also as part of the nursing PI committee. As mentioned earlier incentive education was key. In addition to the grand rounds, the advanced colon bundle was incorporated into our new employee orientation. The continued commitment of our team members made such a huge difference and it continues to influence our rates and achieve our sustained rate reduction for our SSI. So now I would like to turn this over to Blesilda Zapanta.

Blesilda Zapanta: Thank you and good morning, everyone. I'm Blesilda Zapanta, Assistant Director for Perioperative Services. Just how did we ensure this bundle compliance? We created a monitoring tool for pre, intra and post-op areas. For the next four slides, we show you the actual monitoring tools we utilized based on the bundle elements. So, the patient arrives in preadmission testing. The nurse will hand them the chlorhexidine skin prep and then give them an education on how to use them. They also give them education in post-op wound management so we ask for return demonstrations and feedback to ensure that the patient can articulate them. We believe in empowering our patients to be active participants in their care.

So, on arrival the day of surgery in ambulatory surgery, the nurse will check to ensure that they did complete it the night before, the skin prep watch, and of the day of surgery, the nurse will give them another step of skin prep to ensure that's being done on the morning of surgery. They also

check the blood glucose on the morning of surgery, active warming starts, we gave the patient Bair Paws® gown.

Upon arrival in the operating room, normothermia continues then it's to show that this is an active part maintaining this normothermia. Pre-op glucose is checked by the circulating nurse to ensure that it was completed. We have a standardized prep using Duraprep® and of course antimicrobial prophylaxis given, administered one hour prior to surgical incision. Now with wound closure, yes, we do have a standardized wound closure tray and the team change gown and gloves and then we re-tray by putting the laparotomy pack.

Upon arrival in PACU, normothermia and normoglycemia are the two goals, so active warming as indicated, nurse checks the temperature at arrival and then every 30 minutes until discharged from PACU. They also check the post-op glucose level and coordinate with anesthiologist in terms of glucose management. But following the bundle listed on the monitoring tool is key for effective outcome. Our compliance bundle is shared with the front-line staff and supported for our quality improvement committee. I think our team has done a phenomenal job in terms of tracking and adherence of the parameters. With that said, Dr. Degliuomini will share with you our post-bundle rates.

John Degliuomini: Thank you. So this slide illustrates our colon SSI rates after we implemented the advanced colon bundle and if you'll note in 2015, actually July of 2015, we implemented the advanced colon bundle and we saw our SSI rates go from 21% in 2015 down to 8% in 2016 and at this point in 2017 our SSI rates have dropped down to 4.5% and I think that this is illustrative of how working together as a team to implement the advanced colon bundle rates can impact a hospital's SSI rates. We are proud of this performance and hope to continue to maintain this level of performance moving forward. At this point then, having reviewed our post-bundle SSI implementation rates, I'd like to then pass over to the next speaker. Thank you.

Bethany Bunch: Thank you for that excellent presentation. I would now like to turn the presentation to HRET. The floor is now yours.

Mariana Albert Lesheron: Thank you very much. I am honored, very honored to represent our HIIN on today's event. Our previous presenters have covered what the HIINs are about in general, so I'm just going to briefly cover our program's reach, our HIIN's reach and our current C.diff progress. We can go to the next slide, please.

Our HIIN has over 1600 participating hospitals across 36 U.S. states, commonwealths and territories and is supported by 34 state partner organizations in addition to the Health Research and Educational Trust of the American Hospital Association. We have state hospital associations as well as QIN/QIOs supporting all these 1600 participating hospitals across the entire country. We have a huge range of participants as you might imagine. They range from small rural critical access hospitals all the way to large urban facilities and everything in-between. Next slide, please.

Collectively as we've been monitoring our C.diff rate with over 1400 of our hospitals reporting at the beginning of this timeframe, we've observed an overall reduction in those C. difficile infections, at least the rate per 10,000 patient days over time, since the beginning of the HIIN program. You can see that in our more recent months we're observing that this rate is dipping below what we have set as a 20% reduction goal from our baseline target as represented by the green dashed line. Next slide, please.

Northern Maine Medical Center is just one of these participating hospitals that has even more impressive results to share and a compelling presentation on how they got on-track with antibiotic stewardship, which is a key component in infection prevention. So, I'm really pleased at this point to turn the podium over to Dr. Erik St. Pierre, their Emergency Department Director to share his success story. Dr. St. Pierre, the floor is yours.

Erik St. Pierre: Thank you very much Mariana. Next slide.

So let me tell you a little bit about our hospital. We are located in the far Northeastern corner of the United States. We're a small 50 bed rural acute care hospital. We're not critical access and we do provide the services that you see there listed on the slide. Our nearest referral facility or tertiary-care center is about 3-1/2 hours away, so our resources are definitely limited there. Next slide.

So, what we're going to talk about today is how we managed to reduce our hospital-acquired infections mainly C. difficile. We had a trend that was getting a little worrisome back in 2015 and we implemented some measures to drop our rates down to zero since that time, which is actually achievable. These are hospital-acquired C. difficile rates, so we seem to

have done a fairly decent job at that. So the measures that we've actually implemented, and the thing that I have a passion, for is the development of our antibiotic stewardship program. We've also provided staff education on the prevention of hospital-acquired infections. We started an aggressive handwashing and monitoring program and then we've collaborated with our environmental services director and the housekeeping department to improve and standardize our practices to help reduce the spread of infection. Next slide.

So, this is the story, this is the story of our antibiotic stewardship program and this actually started before it became such a hot topic in the medical community. Back in September 2015 our chief pharmacist, Dustin Butler, decided to do a grand rounds because he had gone to a conference that had talked about this and how big this was going to be in the future. And he presented the topic of antibiotic stewardship and it was actually quite an eye-opener to myself and the rest of the medical staff. And it was at that point we kind of volunteered to say, "Hey, we need to start a program here. We need to do a committee, we need to work on this," so I volunteered my services as a co-chair along with Dustin to start a committee to try to improve antibiotic stewardship. Now you may ask yourself, "Why in the world would an emergency physician be chairing an antibiotic stewardship committee?" And I think there's two good reasons for that at least in our hospital. The first one being that A: our nearest infectious disease specialist is literally 3-1/2 hours away so that wasn't a resource that we could utilize to basically form this and the second thing, and I think the more important thing, is that emergency departments in general are known to be probably not the best at the proper and appropriate prescription of antibiotics and we have a tendency to overprescribe antibiotics. So, I think as a whole we decided that if you could fix the ER docs then probably the other docs wouldn't have any problems following this. So that's how I ended up being the co-chair of this committee. When we started the committee, we also decided to choose a few other physicians that we thought would be strategic leaders in instituting change, so we had one of our surgeons come onboard. We had a hospitalist and also one of our outpatient docs. Other members of the committee, which I think is critical when you're forming one of these antibiotic stewardship programs, is administration. You have to have someone from nursing, infection control, lab, computer systems, quality improvement, housekeeping and public relations. So how do we go about doing this? We formed the committee, but we had to actually educate our committee on how an antibiotic stewardship program needs to be developed. So, we reviewed some articles and figured-out some best practices on how to best form a committee and then we provided educational sessions to the members of the committee, but also to the medical staff, and also to the community as a whole, because patients need to partake in this also, because they have a lot of biases towards what

antibiotics are used for. The next thing that we did is, Dustin actually had undergone a training program to become an antibiotic infectious disease specialist and since we've instituted the antibiotic stewardship program, we've actually trained another one of our hospital pharmacists to do this. Next slide.

So how did we get this done? Well, the first thing that you do is you absolutely have to meet frequently and so we formed our committee. We met probably, initially every week or every two weeks to get things started, and then we set our goals to meet monthly thereafter and we've been doing so since the inception. The important thing is to set your goals, your objectives and your timelines and you have to have accountability to those when you set them. So we keep meeting minutes and we keep action items and we make sure that everybody has tasks when they leave and tasks that are expected to be completed when we come back. The next project was basically to figure out exactly what are we going to include in this antibiotic stewardship program and it was important to determine what are the most frequent infections that we see? So we had our computer department track back through our outpatient EMR, our emergency department EMR, hospital EMR to determine what are the most common infections that we're seeing and these are the ones that we came up with. So, from an outpatient basis whether ER or outpatient clinic, we chose bronchitis, COPD, cellulitis, otitis, pharyngitis, pneumonia, sinusitis and UTI. From an inpatient standpoint we chose COPD, cellulitis, pneumonia and the ever popular, sepsis, and from a surgical standpoint we chose appendicitis, cholecystitis and diverticulitis. So, the next step was to actually develop evidence-based algorithms and protocols to say how are we going to treat these and one of our outpatient docs said, "You know, the easiest things that a doc needs to follow is if you can come up with flow diagrams," and that's exactly what I did. I came-up with some flow diagrams for each one of the different infections above, and so this is, you know, if you have a case of pneumonia, how do you treat it? Which antibiotics do you choose? If penicillin allergic, what do you do? And we implemented those algorithms. The next thing we had, to educate the staff. So we actually provided some more grand rounds and some more teaching on our antibiotic stewardship program and then we integrated all of our data and our forms and our algorithms into our hospital EMR and our hospital intranet, so it's easily accessible by all of our doctors. Finally, the last thing that we've done just recently is we do have a long-term care facility attached to our hospital and we've incorporated in the antibiotic stewardship program there, because I think that's one of the places where you're most likely to develop antibiotic resistance and, you know, if you can help reduce C.diff in your long-term care facilities then eventually that hopefully will reduce it in your community. Next slide.

So, what do you do next? So, you setup the algorithms, you setup your program. Well, now you need to monitor whether or not this is going to work or not and there's two things to monitor. One, are people going to be compliant with the program and two, what are your outcomes? Does this actually work? So from a compliance standpoint, what we wanted to do is, we wanted to see if our providers, our physicians, our nurse practitioners, physicians assistants are actually following the algorithms. So this is very time-consuming and what I would recommend is that you take one of them at a time. Take pneumonia, take otitis, take bronchitis. For us our first one was actually bronchitis and it was the non-use of antibiotics for bronchitis is what we did and we turned it over time. That's really important and we did for each one, inpatient, outpatient and surgery and you report that back to the committee. The next thing that we did is we wanted to make sure that our hospitalists were documenting the appropriate, I guess the appropriate things, in the patient medical record that has to do with our antibiotic stewardship program and you can see those things listed there. The next thing you do is you measure your outcomes. And we measured our resistance rates, we measured the rates of opportunistic infections, C.diff and MRSA, and we also measured our costs, because we wanted to see if this program is cost-effective. And you'll see in a second that we have shown some changes that are definitively positive. How do we do this? Well we basically get our computer department and our quality department together and they help gather the data, abstract it, report it back to the committee and with that data we have the different leaders in that committee provide individualized feedback to all of our committee members. So what we are actually showing after a couple of years with this program is that we have improved compliance, we have decreased resistance to antibiotics. We are decreasing our incidents of hospital-acquired infections including C.diff that you'll see in the next slide and we're showing a moderate cost savings too at the same time. Next slide.

So, this is our C.diff rates. Now we're a small hospital. We didn't have a whole lot of C.diff cases, but all of a sudden in 2015 you started to notice a worrisome trend and that's quarters there. I know the print is very small so we were noticing we were getting more C.diff infectionsm, so we had to do something and that's when we implemented these changes so you could see a significant reduction there. Next slide.

So, what kind of barriers did we face in implementing an antibiotic stewardship program? So the first thing is money. We're a small and other critical-access hospitals, although we're not critical-access, we just don't have a lot of monetary resources so we basically had to delegate this as part of our jobs and we did have to have the hospital administration be willing to dedicate some man-hours to actually work on this. The next difficulty was gathering the data. That can take some time, so that's why I

suggest doing things one at a time. And the following thing is actually to get buy-in. And you have to get buy-in from all your providers, inpatient, outpatient and surgeons. Otherwise you're going to have a lot of difficulty achieving the results you want to achieve. We did do a lot of community programs both on TV and radio and educating the population on what antibiotic stewardship is, and also most small hospitals just don't have access to an infectious disease specialist and if they do they're extremely busy and they may not have time to do all this. So what we did is we used some of our local physicians, including myself, one of our internists and our pharmacist to become infectious disease specialists and experts and we only use the ID specialists sparingly. Next slide.

So, what would I advise you if you're starting an antibiotic stewardship program? I would highly recommend that you have two people as chair people on the committee, a pharmacist and a physician in order to make sure that things get done in the proper way. You need to choose your team wisely, choose people who had a large circle of influence and can institute change. You certainly need to achieve, set achievable goals and timelines and hold people accountable and delegate appropriately. Again, I talk about buy-in. You have to have administration buying in to this, the physicians, the providers, the staff, it's really important to get that done. We educated the community and then the other thing that we've done, most recently, is we've helped our other hospitals in the area collaborate to try to have them setup programs. We've shared our anti-biograms because a lot of times that can be a very similar to the resistance patterns maybe similar in your generalized areas so that's important also. Next slide.

So, what else have we done? So antibiotic stewardship program was the most important thing that I was involved with, but the rest of our hospital is actually involved in a pretty intense staff education program on how to reduce hospital-acquired infections, which basically included handwashing education, monthly feedback sessions and then a really strong push on environmental services. And we actually used checklists with our environmental services personnel to ensure that when they're cleaning rooms that this is done in an appropriate manner. Next slide.

I think handwashing education and monitoring is essential. The first thing that we did was to determine or to have ease of the access of all of our hygiene sanitizers, stations and sinks and if that wasn't accessible that we installed those. We basically also had staff, we had our infection control nurse act as a secret shopper a lot of times and monitor staff as to whether or not they are handwashing and track that with data and reported that back to the individual departments so that the supervisors could provide the individualized feedback to their staff as to how they're doing. Now it's also important, I'll mention, that you do not only negative feedback, but

also positive feedback in those situations, because people respond well to that. Next slide.

And finally the last thing was really the strong collaboration with environmental services. I think for that having a very clean hospital and doing it in a proper manner is extremely important and that was it. So these are some of the things that we initiated and I wasn't directly responsible for that. I'm just adding this in the slide so you'll see the different things that we've done to try to help to improve that. Next slide.

So what are our next steps? Well, our hospital is committed to becoming a high-reliability institution so we have multiple members of our administrative staff and physician staff that are being educated on that and we're reporting and having a transparency of total harm rate, which would include any healthcare-acquired infections or complications and the other important thing is now to try to spread this not only to our own long-term care facility but to other long-term care facilities in our areas and assisted living facilities to help reduce infections. Next slide. That was it.

Maria Guglizza: Okay, we're going to get to the questions now. We do have some time for some questions so let's start with April and Jan. Is there any way to exclude inappropriately tested C.diff positive patients based on asymptomatic?

Jan Lienau: I think that might go to the C.diff presenter.

Erik St. Pierre: Unfortunately the C.diff presenter is the chairman of the antibiotic stewardship committee and emergency physician so I really wouldn't feel comfortable answering that question. I'd have to relay that to our infection control nurse who is …

Jan Lienau: Actually ask me that again and I'll take a stab at it. Repeat the question.

Maria Guglizza: Sure, is there any way to exclude inappropriately tested C.diff positive patients, the asymptomatic?

Jan Lienau: Okay, so first of all they really should not test a patient for C.diff that's not actively symptomatic, with six or greater stools a day, meeting the (Bristol) stool chart 5, 6 or 7 in stool characteristics. But it largely depends on how the C.diff is tested. If it's tested via the PCR method, you can get inappropriate positives because they're simply colonized and do not have infectious colitis with C.diff. So the way around that is the new testing that tests, the EIA, method that tests for infectious toxins. So that's the answer that I would have for that.

Maria Guglizza: Okay, thank you.

April Carroll: And I'll validate what Jan said because that is something that we're encouraging with our hospitals as far as CDI testing goes.

Maria Guglizza: Thank you. Dr. Littlejohn and Jocelyn Cesareo, do you perform glucose on all patients regardless of history of diabetes? Have you considered implementation of intranasal Povidone-Iodine pre-op?

Jocelyn Cesareo: Oh hi, this is Jocelyn. Actually, we did just answer this call, but the answer to the first question, do we screen for diabetes for all, the answer is yes and when we implement of the Povidone-Iodine nasal prophylaxis, yes, but we only do it for orthopedic cases and we also have significant reduction in our SSI there as well.

Maria Guglizza: Thank you. April and Jan, do you use the ultrasound for line insertion and if yes, do you use high-level disinfectant for the ultrasound probe?

Jan Lienau: So we do not have interventional radiology at hand on my campus, so no, we don't use ultrasound guided assistance for the central line insertion, but if we did, you would high-level disinfect that transducer.

Maria Guglizza: Perfect, thank you. The next question also goes to you April and Jan. What type of impregnated catheters do you use?

April Carroll: Can I answer? I put that in the chat box, but they're using the Biopatch®, the Ethicon Biopatch® and the Curos™ caps for the alcohol-impregnated caths for the catheter in.

Jan Lienau: And Arrow is the company that manufactures many of the lines that we use. We only use the impregnated as a last resort because you don't want to create resistance with any impregnated in-dwelling catheter but Arrow is often the manufacturer of choice.

Maria Guglizza: Thank you. Mariana and Dr. St. Pierre, in regards to C.diff, is it your recommendation to discontinue all other options for cleaning except bleach if you're C.diff rates begin to rise?

Erik St. Pierre: Again I'll defer the answer to that question to Mariana maybe?

Mariana Albert Lesher: I was just going to defer it to you.

Mariana Albert Lesher: As a completely non-clinician and non-hospital person, we'll have to get back to you.

Erik St. Pierre: Yes, the rest of my team is not here with me, so that, I can't answer that question.

Jan Lienau: I'll weigh in on that. Since I'm in infection prevention I'll share my thoughts. We actually clean every bed with bleach in every room regardless of C.diff status and we found that that was very effective. So we do the handrails, the entire bed is cleaned with bleach and then we use hydrogen peroxide on all other surfaces, of course unless there C.diff, but I believe that there is literature out there that support the use of sodium hypochlorite or bleach. If your C.diff rates are high and you're having a hard time getting them down, you can't go wrong by cleaning with good old-fashioned bleach all the time.

Maria Guglizza: Thank you. Dr. Pierre have you had any experience with ESVL colonization and adjusting antibiotic prophylaxis? Oh, I think may have lost Dr. Pierre.

Erik St. Pierre: Sorry, folks, I was on mute there. Can you repeat the question?

Maria Guglizza: That's okay, sure, have you had any experience with ESVL colonization and adjusting antibiotic prophylaxis?

Erik St. Pierre: We did not, no. I would not, I'm sorry, I can't answer that question. I'm not feeling very useful here.

Maria Guglizza: No worries. We can always get them answered later on.

Erik St. Pierre: Sure, thanks.

Maria Guglizza: Let's see, April and Jan Slides 24 and 27, how do you complete hand hygiene audits?

Jan Lienau: We have electronic hand hygiene monitoring in our system so any inpatient unit and the emergency department are on an electronic monitoring system. Areas where you cannot effectively conduct electronic monitoring like the operating room, we do direct observations but by and large, we use electronic hand hygiene monitoring. For central line insertions, it's part of the insertion and maintenance audit and that is done by direct observation when those tasks are being completed and audited.

Maria Guglizza: Thank you. There's a follow-up question on Slide 59, Dr. Littlejohn. Did you notice any difference between superficial SSI reduction vs. deep/organ spaced production?

Jocelyn Juele-Cesareo: Yes, we did notice a significant reduction for all categories of SSI.

Maria Guglizza: Thank you. April and Jan, do you know what type of PICC lines you are using?

Jan Lienau: The Arrow.

Maria Guglizza: Thank you. Let's see, do we have any more questions? Yes, April and Jan when you have an emergency central line catheter insertion and are not able to follow your safety checklist, what special procedures do you take to ensure that patient is monitored further?

Jan Lienau: Well, it, you know, that's a physician's call, but if you have a sloppily-inserted central line, just like a peripheral that's done in the field of a motor vehicle accident or something of that nature, what we do when they arrive at the hospital is remove that line and reinsert a line under sterile ideal conditions. That's what I would recommend, is reinserting. If you knew it went in unsterile or unsafe conditions, I would get it out.

April Carroll: And I wanted to add to what Jan is saying since we're, you know, having this talk on hospital-acquired infections, that is the same thing that's recommended with our Foley catheters, if they're put in under emergent conditions, central lines under emergent conditions that they'll replace after the emergency, after the patient has stabilized.

Maria Guglizza: Okay, another question here, for surgical patients, how long do you monitor and treat post-op glucose and what is your range under 180 or 200 for all surgical patients both DM and non-DM?

John Degliuomini: Good afternoon, this is Dr. Degliuomini from Metropolitan Hospital so we will continue to monitor these patients as long as their glucoses are still remaining elevated after they start a diet and if they obviously they did not have a history of diabetes mellitus preoperatively, these patients will have a medicine consult because we would not want to discharge them home with uncontrolled hyperglycemia. With regards to the range, in OR PACU we're using 180 to 200 and on the floors we tend to be a little more aggressive and we're covering finger sticks above 151. I hope that answers the questions.

Maria Guglizza: Thank you. Let's see, the next question, is there a specific recommendation for post-op incision care?

John Degliuomini: So we don't have a particular dressing that we're using but we do use sterile dressings for the post-op dressing changes.

Maria Guglizza: Thank you and that is going to conclude our questions for today. Now we are going to present the continuing education part of our webinar.

Deb Price: Thanks Maria, this is Deb Price. Today's webinar has been approved for 1-1/2 continued education credits by the boards that listed on this screen. We are now an online, we now have an online, CE certificate process. You can receive your CE two different ways. If you registered for today's

event, you will receive a survey at the end of our slide. Take the survey and then when you click done at the end of the survey, you will be taken to another slide and another site to get your certificate. If you are in a room though with other people, only the one person that registered will have that survey so then what we ask you to do is wait until we send you another survey and that will be within 48 hours.When you get that second survey, please hand that or send it to the other people that are in your room and then they register for that certificate.

Okay, when you register and if you do not immediately receive a response from the e-mail that you signed-up with, that means that there is some kind of a link that is being blocked and the hospitals have firewalls that are up and down at all times. So, what we usually tell people to do is register their personal e-mail and their personal phone number because AT&T, Yahoo, gmail, all those accounts do not have firewalls up.

This is what the survey is going to look like as soon as I close-out my slide. In the very bottom, right-hand corner is a done button. Please click that button and then you will be taken to this page.

On this page are two links, a new user link and an existing user link.

If you have had problems getting your certificate, please click on the new user link and this is where you'll be taken. You give your first name, your last name and we ask again for you to put your personal e-mail in that box and your personal phone number.

If you have not had any problems getting certificates, then you would click on the existing user link. That link will take you right to this secure login site, your username is your complete e-mail, address including what's after the @ sign and your password is whatever you set your account up with. If you don't remember it, click in the box, the password box and you will be taken to another sign-up sheet.

And that will conclude our event today and we want to thank all of our speakers. We had numerous speakers and they have been answering questions and if we did not answer your question, we will get your answers to you and they will be posted at our qualityreportingcenter.com website at a later date. Thank you for spending the last hour and a half with us and we'll see you at our next event. Goodbye.