Chelsea: The following is a recording of Cathy Trudeau with the American Hospital Association of Chicago on Wednesday February 11th 2015 at 2:00 PM central time.

Excuse me, everyone, we now have all of our speakers in conference. Please be aware that each of your lines is in a listen only mode. At the conclusion of today’s presentation, we will open the floor for questions. At that, time instructions will be given as per the procedure to follow if you would like to ask a question. I would now like to turn the conference over to Ms. Anna [Whittaker 00:00:31]. Ms. [Whittaker 00:00:32] you may begin.

Anna: Thank you Chelsea. Welcome, everyone, welcome to the national content webinar for February for the on CUSP/CAUTI and ICU project, this is cohort 9 of the national project. Today we will be talking about ICU clinical decision-making, processes to improve catheter insertion and removal choices and the signs of safety concepts to improve ICU culture.

To get started I wanted to remind everyone that there is a webinar evaluation. We’ll also post this link at the end of the webinar but if you have to leave early or if you have to drop out minutes early we do ask that you fill out this evaluation. It really helps us to improve the content that we deliver throughout the program. I’ll post that in the discussion area.

Today’s presenters we have David Pegues, Julia Retelski and Pat Posa. David is the medical director of healthcare epidemiology infection prevention and control and the antimicrobial stewardship program at the hospital of the University of Pennsylvania. He is a professor of medicine in the division of infectious diseases at the University Of Pennsylvania School Of Medicine.

Julia Retelski has 14 years of experience and is currently the clinical nurse specialist for the neuroscience division, which includes a 29-bed neuro ICU, a 29-bed stroke unit, a 36-bed surgical unit, and a 26-bed epilepsy unit. She is a certified critical care nurse, a stroke certified neuroscience nurse and a critical care clinical nurse specialist. She is also actively involved with the American Association of Neuroscience Nurses and the Education Planning Committee and the American Association of Critical Care Nurses.

Finally, we have Pat Posa. Many of you remember her last month’s webinar as well. Pat has 33 years of experience in the healthcare field including critical care staff nurse, manager, educator, and the director of nursing. She is an administrator of outpatient specialty and primary care clinic as well. She has excellence in clinical practice, it’s her passion, and she’s been actively involved in many programs with that aim of clinical practices, most recently the Michigan Keystone ICU Patient Safety Initiative. We are really grateful and thankful for all of our great presenters today. With that, I’ll turn it over to David.

David: Thanks very much Anna and boy! I’m impressed by the number of people here today. It’s obviously because of the topic although we have some wonderful speakers, present company excluded. I’m going to talk a little bit about … Anna if you could advance to the first slide please. I’m going to talk a little bit about progress today in the CUSP/CAUTI initiative and as this figure suggests compiling data for the project through December of 2014. There has been substantial progress but reductions in CAUTI rates in the ICU lies substantially behind there are only about one third that observed in non-ICU settings. Why is that? There are a variety of reasons but the next slide emphasizes one ongoing challenge. That’s overall high rates of device utilization in some instances shown by the yellow line which represents coronary care unit and probably reflects the increase in prevalence of N-stage cardio myopathies and congest of heart failure. In this population, we’ve seen substantial increases not decreases in overall device utilization in the ICU. A good rule of some is that most adult ICUs have urinary catheter device utilization ratios that represented catheter in place for 70% of all patient base.

Next slide first question in light of that data showing some difference but a lot of homogeneity in overall device utilization we were wondering if you could describe for us your ICU setting? I hope this is a fairly inclusive risk either. Are you a medical, a surgical, a cardiothoracic, coronary, other such as the neuro critical care, trauma and mix med/surg or do you in your hospital have more than one of your ICU types participating in this initiative? Please go ahead and vote.

Anna: The voting is now open so we’ll give it a few more seconds for people to register their votes. You just click on the little blue box in the center. There is no submit button; you just highlight the choice that you are selecting. Okay David, I’ll go ahead and publish the results now.

David: It looks like we have a representation including a lot of adult medical intensive care unit, other ICU types but not a lot of pure surgical, cardiothoracic or coronary but though they may be well represented in that more than third of participants today who have more than one ICU type participating. That’s useful thanks very much for sharing. Could we go on Anna to the next slide?

I was senior author on the 2009 [inaudible 00:06:13] guidelines to prevent catheter-associated urinary tract infection so I will acknowledge this was still appropriate. On the next slide inappropriate indications for catheterization based on modest is the best evidence but a good clinical rational and historic precedence. I’ve highlighted here what we are really going to focus on today which is choosing out among patients in an ICU setting who does need an indwelling urinary catheter. Next slide, and let this blow right by this one. Next slide.

This is an older study but it emphasizes what might be on first blush intuitive but when you dig deeper, I add some real pros here about opportunity for eliminating the duration of catheter use in a critical care population. This was an observational study using standard criteria for appropriate or inappropriate catheter use where a medical intensive care unit was compared to a medical acute care unit. Not surprisingly, the initial indication for placement of an indwelling urinary catheter was deemed to be appropriate in 93% of patients in the medical ICU population but it was appropriate in a substantially smaller proportion of patients, 10%. Mostly related to … I’m sorry I’m misrepresenting the slide. It was inappropriate in a substantially higher proportion of patients particularly because of issues related to urinary incontinence or monitoring of urine output outside of the ICU setting. Next slide.

This is a really telling slide. They then follow the patients daily and asses the ongoing need for an indwelling urinary catheter. Although the absolute proportion of patient days where it was justified or rather the proportion of days where it was justified was lower in the medical unit. Only 42% of days with the catheter indicated. The absolute number of days in other words the opportunity to remove a urinary catheter was substantially greater, 349 days where it deemed to be justified and 248 were inappropriate so there was a large opportunity, 41% of all patient days there was an opportunity to remove a urinary catheter in an ICU patient. Sorry I didn’t but I’ve optimally explain that. Indications for placement is typically appropriate in the ICU population but there is substantial opportunity as the patient stay extends in an ICU setting to remove the urinary catheter through daily assessment of catheter need. Next slide.

Let’s talk a little bit about what it means to be critically ill when it is sort of in the eye of the beholder. What processes can we use to identify patients who are no longer critically ill and who therefore are appropriate candidates for urinary catheter removal. Next slide.

Critically ill patient to me implies that the patient is receiving care in a critical care setting with one to one or one to two nursing at most. Further in terms of the utility of an indwelling urinary catheter for management of a critical ill patient you need to define whether it’s on the basis of physiologic, pharmacologic or volume status. Some reason why you need not just accurate measurement of I’s and O’s but the ability to measure accurately on an hourly urine output because clearly there are other ways besides an indwelling urinary catheter to figure out 24 hour volume in and volume out. In terms of physiology some conditions, which many would agree, meet the threshold for being critically ill and requiring and indwelling urinary catheter. These are patients who are physiologically unstable because of ongoing and progressive multi-system organ dysfunction or acute kidney injury with weaning urine output.

Pharmacologically or hemodynamically you can also define a cohort of critically ill patients, particularly those who are acquiring pressers with titration of volume and knowledge about urine output being very critical to the [minute committed 00:10:51] adjustment to this critical ill patient. Further for patients with acute exacerbations of congestive heart failure or active gastrointestinal bleeding where there is a lot of things going in and a lot of things going out we would agree that those patients are critically ill. What about the mother considerations? Clearly, a patient is and I hope do we have the chance to talk about this level of consciousness due to extensive pharmacologic sedation or an acute central nervous system there are indications often that make it appropriate to place a urinary catheter at least early on in the neuro critical care process. Mobility can also affect the need for an indwelling urinary catheter related to the use of paralytics, sedative, hypnotics or orthopedic trauma that make it difficult for the patient to toilet in any other way. Next slide.

I hope for the rest of presentation we keep a couple of goals in mind whether we agree at the end of the day on what is a critically ill patient, or what is an appropriate indication for urinary catheterization and ongoing presence of a urinary catheter. I think it’s critical always keep in mind assess the need for a urinary catheter to limit the duration of use using device rounds, daily assessments, reminds/stop orders or nurse-driven removal protocol. For those catheters that are appropriate to optimize catheter maintenance practices audit those practices to make sure what you think you are doing periodically and also involve the use of direct observation. I think particularly when we are talking about critically ill patients where overwhelmingly the indication for placement and ongoing use of the catheter is appropriate what can we do to limit this impact of surveillance defined CAUTI events as well as limit the impact of true systematic urinary tract infections.

I think there is a critical role to think about the position or ordering provider’s role in identifying these events through appropriate clinical assessment. Don’t send your in cultures unless there is signs and symptoms that point to a lower or upper urinary tract infection. Require a urinalysis to interpret the significance of the presence of bacteria growth in the urine culture and avoid routine inappropriate culture practices such as pan culturing for evaluation of fibril patient particularly when nothing has changed with respect to the patient’s cognitive or hemodynamic status. I’m going to pause now. I hope we’ll have plenty of time at the end of the three presentations for questions. Thanks for the time.

Anna: Thank you very much David. I’ll go ahead and pass it over to Julia.

Julia: Hi, this is Julia Retelski. Do you guys hear me okay?

Anna: Yeah, we can hear you.

Julia: Okay thank you. We are going to start with a polling question just out of curiosity. I’m going to be speaking mostly about insertion and maintenance of catheters but I’m just curious to know in your facility typically how do you teach your team or how do you share information? Email, hands-on, education educational classes, fliers posters in the bathroom or a combination of all the above.

Anna: Polling is now open so you can go ahead and make your selection by clicking on the blue box. I’ll give it about 15 more seconds for people to make their selection. Okay, Julia I’ll go ahead and post the results now.

Julia: Thank you. The reason I asked this question is because when we think about insertion and maintenance of urinary catheters and the education the time and energy it take to teach our team and communicate with our team. When you are looking at your facility and the culture within your facility is there an assumption that there is either a way that specific groups learn? Is there an assumption that physicians always check their email? Is there an assumption that nurses do better with classes? Do you really have to think about that and how are you getting to your team and sharing the information? That was one thing I want you to think about while we are talking.

The next polling question, who completes CAUTI audits in your unit? I’m really referring to after there has been an infection identified does somebody go through and do a complete drill down and if yes who is that person?

Anna: Again, go ahead and make your selection by clicking the blue box. I’ll give it another 15 seconds for everyone to make their choice. Okay Julia the results are now visible.

Julia: Thank you. Go ahead on next slide. When we think about insertion and maintenance and any type of urinary catheter protocols or anything we do it really it takes a team. It can’t just be one group. What we have really focused on is making sure the multi-professional team is involved in all aspects. Do you think about nursing, providers and in the acute care setting we also incorporate a [inaudible 00:16:46] from the rehab setting. You have to have administrative support for the changes that you are going to make. The infection preventionist needs to be a part of it, your care tech and family often needs to have the knowledge about catheters and why they are in place, how long they are going to stay in place, and what are the expectations with the urinary catheter. We need to be able to see to that. Next slide.

When you are thinking about insertion criteria for specific patient population, I think it’s very valuable to really have a standard for insertion. I know there are always small variations in populations working at their own surgical and medical so for the neuro world I can say any patient who has a bleed inside in their head and has a drain inside of their had should be kept immobile. Therefore, they need to have the urinary catheter for the duration of this drain being in place, but that’s not necessarily true. We really need to challenge some of our insertion criteria and think about in the first place. Because I think once you get the catheter in the patient the maintenance fee and the challenge they are taking it out and the thought when you are going to take it out it does occur but it’s more difficult purposely to just avoid insertion period. If we are constantly, evaluating our insertion criteria that is valuable and we need to be doing that.

I will say specifically again in neuro another patient population is the patient that is seizing continuously and incubated and sedated. They get a … Most likely you will think, “Well this patient has to have a urinary catheter.” Hemodynamically they are stable, there is nothing wrong with them bowing their urinary tract so do they really need a catheter? In this patient population, there are so many patients we have chosen not to put urinary catheters in them. Next slide.

Alternatives have to be evaluated. If we want to avoid insertion in the first place what are the alternatives that we are going to use? Condom catheters there are multiple different types out there. There is the daisy catheter. You have to look at your facility and what your facility offers. I think this really takes a hands-on approach in again multi-professional approach. I spend a lot of time in our unit but our group that purchases products and makes commitment to companies to buy their products they don’t necessarily have the hands-on that I do at the bedside. If a condom catheter does not work and from day to day nursing are saying, “This condom catheter doesn’t stay on,” I’m going to put a [inaudible 00:19:52] because I can’t get this product to stay on and it’s not working. We are going to have an increase in our utilization of urinary catheters.

Also moisture wicking incontinence pads. If you have pads that don’t work then they are not going to be utilized and nurses are going to find other ways … I’m sorry … To work around this and … My computer just logged me out. Sorry. To make this work for them so we really need to look at our products and what we have available. Also just the exception of if we are not going to put a catheter in do we need to evaluate the patient for urinary retention and developing some type of protocol to support this. The ease of use of protocol and an example with the urinary retention protocol would be the availability of bladder scanners. If you have one for a 36-bed unit and you have a protocol in place that says we need to be assessing for urinary retention are these patients going to get adequately assessed. Next slide.

Going back to insertion of catheter, we have to think about how to exactly insert it. Again taking it back to the bedside and really going in and looking at what the nurses and the care techs are doing with the patients when they are inserting catheters. What are they doing in the operating room when they put catheters in, how are they placing catheters in the emergency room. Further deep down diving we found out in the operating room there is an assumption that there the sterile down there is always clean. Some of the catheter insertions weren’t necessarily done as clean as they should have been because there was an assumption that the environment was already sterile. Really in your facility guiding this and getting down to the nifty gritty and going to the beds, and going to the areas and asking questions and actually viewing and seeing what people are doing. Of course, hand hygiene you always have to highlight with insertion keep it clean. Patient positioning, and I just bring this up because there are less and various in sundry ways you can put your patient with different tools that can make catheter insertion easier and keep it cleaner, if that makes sense. Next slide please.

Now when we think about maintenance of urinary catheters I think we’ve all heard the don’t have them loose, to make sure there is some kind of device to make sure the catheter is not moving around for example a stat lock. Keep the urine bags below the bladder. Those are our standards and what our insertion preventionist team audit on a regular basis because those seem to be the top three that we have issues with. Other things for maintenance your daily bathing and your actual cath care is obviously going to have a huge influence on a patient who has had a catheter for seven days. If we are not keeping it clean how likely are they to get an infection? If your policy is to have cath care once a day it’s valuable if the patient gets … If the nightshift nurse does cast care at 6:00 o’clock in the morning. Then the dayshift comes in they do a report and then at 8:00 o’clock dayshift goes, “Oh, they need cast care I just have to do it once a day so I’m going to do my cast care now.”

Is that really keeping the patient clean, are we really taking care of that insertion side the way that we should? Probably not. Some possibilities we need to have scheduled catheter care time and I say for example like 8 to 10:00 o’clock in the morning. One that’s the first assessment in the morning when patient gets there they can do their assessment, look at the catheter insertion, and make everything the way it should be. They can just deal with a lost cause in their hands. Also, schedule bath time so they possibly get a second cath care later on in the day. Just keep them clean and it gives patients better recovery. Next slide.

The rest of the maintenance piece I would add do not perform bladder or catheter irrigation unless it’s medically necessary. We always want to make sure we maintain a sterile system. For example, we would get patients from the emergency room and they came from an outline facility and their seal is broken from the actual catheter to the tubing. We never want to break that seal. Also just the maintenance of turning your patient, making sure that patients are turned every two hours so the urine in their bladder is moving around and we are promoting it leaving the bladder. If your patient is not being turned and they have a urinary catheter it’s going to cause urine [inaudible 00:25:18] in their bladder.

Also thinking about your bowel regimen and protocols typically patients on the intensive care unit either are not going enough so we start them on a bunch of medication to get their bowels moving and then they are going way, way too much. By then we’ll have problems with a lot of [inaudible 00:25:38] leading to infections. We really need to find a happy medium and I don’t know if anybody is working on that research wise so I think that would be a really valuable research project to find the perfect regimen to keep patients regular so we don’t run into these problems. One of the things that we have found is involving a nutritionist in our realm to address these issues early on so we try to avoid the too much or too little. Next slide.

Going back to urine cultures again it’s extreme important because this is not a culture to not pan culture and do it [inaudible 00:26:24]. We really should, possibly there is some literature supporting changing the urinary catheter prior to drawing urine culture. This has been in for a certain amount of time. There is some supporting literature for 48 hours and there has been some supporting at the catheter center for 14 days each as painted out. Again, looking at your facility your patient population and looking at the literature and what’s this deal patient population.

We need to really evaluate the technique and how urine specimens are drawn and I say this because if you investigate your nursing policy or if you had an infection prevention policy and are possibly a love policy they might be two techniques than how your own specimens are drawn. If they don’t want to or if the land ... I guess you would say the lab policy that we know nursing is doing A, B and C so drawing their own characteristics this way the nursing is not doing it the correct way. Then the lab is running it based on what they think nursing is doing. That could results that are inaccurate so we really need to evaluate how we are drawing our urine cultures.

It also has been recommended that we draw a urinalysis prior to doing a urine culture so really to look at the urine and see if we even need it. You can also work with your lab to think about reflex testing which would be you draw a urinalysis and the urine culture at the same time, you send them both to the lab, they run the urinalysis, if it looks like they potentially have a CAUTI then they would run the urine culture to see that. Or if the urinalysis was clean then they would not run the urine culture. In our facility, what we do is the nurses drive us, they do a urinalysis, when they get it back they look at it with the physician and then go from there. If they need to send a culture, they send a culture. Next slide.

When we think about removal of urinary catheters this really has to be an ongoing evaluation. The electronic medical record is wonderful. We have alerts in there so at 10:00 o’clock every morning they send a nursing protocol, nursing gets the question, does this patient still need their catheter and why and you pick your criteria. Say at 10:00 o’clock your patient is unsedated on [inaudible 00:29:16] fall they have a catheter but their injury is not going to necessary mean they need to remain unsedated. They are starting to wake up on their own so their goal for them for that day is to turn off their sedation and to get them exacerbated. At 3:30 in the afternoon they exacerbated the patient, they’ve turned off their sedation, they are going to do a [inaudible 00:29:39] do they still need that urinary catheter and do we need to leave it in until 10:00 o’clock the next day to wait and see? Probably not. We should be thinking, “Can we go ahead and take that out now?” Not waiting until 10:00 o’clock when we get the prompt from the electronic medical record.

Also if you are thinking about prompt removal again supporting the removal of the urinary catheter with some type of scheduled intermittent catheterization and bladder scanning follow-up just for your patient population. I would say especially with our stroke patients that’s something that we really need to think about. If the patient looks good we take out their urinary catheter and then they are not voiding. We need to have something in place that support urinary retention treatment. Next slide.

This is an example of a urinary retention algorithm that we have developed that we are hopefully going to be utilizing system-wide. This is just an example that’s based on multiple different sources but mainly on the CUSP from 2012. This hopefully would be a nurse serving protocol. What it does is it allows the nurse to bladder scan and intermittent catheterization based on volume and do some follow-up and then contact the provider later or if necessary. Next slide.

Just one thing about rounding. Making sure again that its ongoing and if you have the support, clinical … For us we have a clinical nurse specialist that rounds with the intensivist team daily. Our charge nurse also rounds at night when he first gets here and then he rounds at 6:00 o’clock in the morning. If patients do not meet criteria to have their urinary catheter they go ahead and pull the catheters at 6:00 o’clock in the morning. Also if you have any kind of virtual critical care utilizing their team to help do audit and or evaluation or ongoing follow-up with the nurses at the bedside. If a patient does meet the criteria we go ahead and take the catheter out and give them an opportunity to void. Next slide.

I go back to the auditing and to the deep dive. This will be an example of an event tool and I’m sorry it’s small. After a patient is off an insertion this is what we ask our insertion preventionist [inaudible 00:32:34]. Then the clinical nurse specialist or the CAUTI team lead for the unit fills it out in detail. We also ask that all the nurses involved with caring for that patient three days prior to the insertion complete the events tool. We have actually started if we have identified trends with physicians and or nurse practitioners, any provider that was involved with the patient we also are asking them to complete the event tool.

What this has allowed them to do … At first, we had a lot of people felt like, “Oh my Gosh! This is really hard I don’t understand why you are making me do this.” This really opened our eyes to a lot of opportunity that we have and other things that we could do for our patients. It opened our nurse’s eyes and our provider’s eyes as to all of the things that can go into preventing a patient having a CAUTI. That is just one example of an audit and I will highly recommend again that you involve your multi-professional team in all of these aspects and really get everybody involved. Again, I hope we will have time for questions at the end. I am going to go ahead and pass this over to Pat.

Pat: Thank you, Julia. Hi, welcome everyone and what a great information. Go ahead to the next slide. I was jotting down lots of notes. We just talked about the technical strategies to prevent CAUTI related to insertion and maintenance. I’m going to talk about the first step of the comprehensive unit safety program. At the last webinar you got an overview of all five of the steps and so today we are going to focus on how do you educate on the science of safety, what does that mean? Go ahead the next slide.

Remember in order for change to occur and be sustainable we have to work in the technical world but also in the adaptive world. We want to find that sweet spot where we are ensuring we are addressing adaptive components of change to allow those technical components to stick. With the adaptive components of change we are also impacting the local culture. The comprehensive unit safety program is one of those strategies. Go ahead to the next.

So far with CUSP implementation we have expected you guys to assemble a CUSP for CAUTI team and partner with senior executive. Let’s go on to the next slide.

Those are things that you are doing prior to implementing the other bend identifying defects, partnering with your senior executives is part of the CUSP model but we try and focus on doing that first in some of the pre work. Then we’ll move onto learning from our defects and then strategies to improve communication and teamwork. Today we are going to talk about how to educate on the science of safety and I’m going to educate you on the science of safety. Go ahead to the next slide.

What is the science of safety? It is really understanding that systems drive performance and that if individuals are working within systems and processes that are not effective they are not going to be able to get positive outcome. If we understand that systems also result in safety so when errors happen they are usually the result of system or process issues not really individual. By understanding that systems drive performance we can improve safety. How do you improve system performance? Three strategies to improve system performance include standardization, creating independent checks for key processes. You heard some of those referenced today the rounds and the flags to the nurse to do I still need this fully. Those are strategies of using adaptive concepts around the science of safety and applying them to the technical intervention.

Third, learning from mistakes. We’ll spend a lot of time on that when we talk about learning from defects. It’s important that you apply these strategies to both technical work and teamwork and recognizing that team makes wise decisions with diverse and independent input. This is important especially in the hospital environment. One of the things that we have to break through is the hierarchical culture and everyone on the team has great contributions to make and should be valued by each team member. When all of the input is taken from all of the different team members and that input is then used to make the decision you are going to get better decision. Go ahead to the next slide.

Lucien Leape who is one of the fathers of the patient safety movement tells us that medical errors are most often the result of a conflict interplay of multiple factors and rarely are they due to the carelessness and misconduct of single individual. Go ahead to the next slide.

Why do mistakes happen? We know that we are not trying to point fingers and blame individuals but look at systems and processes but there are people factors and process factors that increase your risk for error. Let’s talk about a couple of these. Under the process factors if you have … In healthcare we have variable inputs into our process. Each patient comes in, there is lots of uniqueness and individuality in the different patients. That alone sets itself up for mistakes happening. When there is inconsistency or variation, that lends itself to mistakes. If you are ever in a conversation and someone asks you, “How does this work?” In your answer you say, “Well, it depends.”

If it depends on who is there or the day of the week or the time of the day then you have variation in your process and variation and inconsistency can lead to mistakes. The more complex or too many complicated steps to a process leads to mistake. The fact that humans are caring for patients and dealing with patient care humans are fallible and so as long as humans are involved in healthcare and hopefully I just saw a report on how robots are going to take over a lot of things we do. Hopefully, that’s not going to happen in patient care. As long as humans are involved in caring for patients humans are fallible and mistakes will happen. Our goal in patient safety is to prevent that error from reaching the patient so we put in the right steps to catch it before it hits the patient.

Time constraints especially in the ICU we are very busy, so that’s how mistakes happen, and hierarchical culture and I talked about that a little bit earlier. That’s why using the whole team in giving input in making decision allows for better outcome and it also by having each team member’s input valued you have less chance for error.

On the people factors fatigue. We know in the last few years there’s been significant amount of changes in how residency programs are handled and there is residency work hours and people are saying, “Gosh! Why are we doing these residency work hours?” The work hours are 80 hours a week so 80 hours is a lot now they used to work 120. Fatigue we know impairs people’s ability to make good decisions and judgments and mistakes happen that way. Inattention and distraction. Those land itself to errors and that’s why we see some interventions related to very risky procedures like nurses passing meds, when they are asked to pick this as a medication supply-dispensing machine we have distraction free zone so that people can concentrate. Then communication errors are significant especially in the ICU and they are often the root cause mistake. Go ahead to the next.

There is a good reference and this was published by AHRQ in 2008 and it is a three huge book theory called Patient Safety and Quality: An Evidence-based Handbook for Nurses. There are lots of information in these books and they talked about nine basic concepts in patient safety. I’m not going to go into detail on each one but just highlight some key points. For example in the first concept user centered design. Really understanding how to reduce errors depends on framing likely sources of errors and then pairing them with effective ways to reduce them. You can’t prevent an error if errors aren’t made visible so that I can see the potentiality.

By engaging your front-line staff and the event-monitoring tool and auditing tool and having the front-line staff be part of that begins to create that. You might want to incorporate some solutions affordances or things that force function. Affordances are characteristics of equipment in workspace that communicate how things should be used. For example when you are leaving the door and there is a push bar on it, it says push, and so to help you know how to use that. We’ve applied decent healthcare by marking the correct site before surgery or procedure. Again X marks the spot and that’s where we should perform surgery. Go ahead next slide.

We also some basic concepts and safety is that we need to avoid reliance on memory. Simplify things and don’t expect people to remember everything. That’s important as you are putting in strategies to prevent errors. You also need to attend to work safety, staffing ratios, work conditions, sources of distraction. There is a lot of work being done on alarm fatigue and those kind of things. Next.

Just like we don’t want to focus and have people rely on their memory we want to also avoid reliance on vigilant. Just be vigilant about making sure that the catheter gets out. You need to set up some processes, put things in place, checklist, flags to alert the provider to do additional thing. We need to train concepts for team so when we train people we should be training multidisciplinary teams, not individual discipline. Very important to involve patients and family in their care. Patients and family know their history, patients and family know a lot of information. They see everyone coming into the room so we need to make sure that we involve them. Next slide.

We also want to try and anticipate the unexpected so if you are going to do a major change in your system how could it fail? Ask that question, what could be the unintended consequences as we make this change, what errors could happen as a result of that? When you are designing you also want to design for recovery. If something happens what’s plan B and using simulation to help practice those recovery strategies is a great way to ensure patient safety. Then finally to ensure access to accurate and timely information. The electronic EMR that’s been its major goal so that people have access. The EMR going into the outpatient arena so that when you get someone from some other institution you have more information on them. Go ahead to the next slide.

We’ve talked about the key components of the science of safety, we’ve talked about how mistakes happen, people and process factors. We’ve talked about some basic concepts of patient safety. In summary errors happen because people are fallible, medicine is still treated as an art and not a science and we have not created systems to catch mistakes before they reach the patient. Go ahead to the next slide.

When you are educating the staff on the science of safety some important key messages to ensure you include is that safety is everyone’s responsibility. This comprehensive unit safety program helps drive and build capacity at the front line to take responsibility for safety and to make things safer. Mistakes are usually the result of system and process issues and improving those we’ll improve safety. By improving your culture you are going to positively impact safety and remember the human factor we all make mistakes, our job is to identify the risk and put processes in place to mitigate that risk. Next slide.

As you decide how you are going to and on the coaching calls we can talk more about how to different strategies to educate staff but some of the slides that you saw that I used are from this website on the cusp stop hai. There is a CUSP toolkit and it has lots of interactive tools, it has videos and yes, different strategies that talks about the whole CUSP program. Also some links to science of safety videos. The second item here is also another good resource to do patient safety website and there is a video there called safety as a system. That’s a great review of the science of safety. I think that’s it.

Anna: Great. Thank you very much Pat and thank you to all of our speakers for that great presentation today. We have about 10 minutes left, I know that we have a lot of questions in the discussion are, but we’ll also be taking questions from people on the phone. Operator can you open for Q&A?

Chelsea: Yes, ma’am. At this time we will open the floor for questions. If you would like to ask a question please press the star key followed by the one key on your touchdown phone now. Questions will be taken in the order in which they are received. If at any time you would like to remove yourself from the questioning field just press star two. Again, to ask a question please press star one. Our first question comes from Lorna Prang.

Lorna: Hi, this is Lorna Prang at Littleton Adventist Hospital. I’ve heard several comments by speakers on the use of moisture wicking incontinence pads. I’m specifically asking about the evidence for that and the potential complications, pressure alters and thirdly what product.

Julia: Hi, this is Julia. The particular product I would have to actually follow-up on the name of it for you. We have worked with our pressure alter team to look at skin breakdown prevention. As you are turning your ICU patients every two hours and keeping them dry, we should not have problems with skin breakdown related to incontinence. That’s really, that’s what the evidence supports. If you are turning them and keeping them dry, we should be good to go.

David: This is David Pegues. Just a comment about on unintended consequences. Pat referred to that in her presentation as well with respect to use of these wicking incontinence pads. We found them to be very useful as part of a comprehensive approach to decreasing urinary catheter utilization in our neural critical unit. The unintended consequence however was a substantial increase in the budget for these incontinence devices that ultimately was a variance, I think it was an inappropriate variance but that’s one of the things that I think preferably have to be concerned with when you use the technology to decrease the morbidity associated with one device there may be unintended consequences.

Chelsea: Our next question comes from Karen [inaudible 00:51:16].

Karen: I’m calling from Kentucky. I don’t have a question, it’s how the [inaudible 00:51:22] that discussion area because it lists a lot and there is a lot of discussion in there about the product you actually use for cleaning. Is that something can be sent off or do any follow-up because it’s just hard to follow?

Anna: Sure and this is Anna. We’ll definitely take the questions from the discussion area the ones that we are not able to answer on the call today and we’ll make sure to post a Q&A with the answers and follow-up with the speakers on some of those answers.

Karen: Thank you.

Chelsea: Our next question comes from Shelley Diana.

Shelley: Good afternoon, my question was about cleansing during Foley care. Has anyone found [inaudible 00:52:07] soap versus perhaps [inaudible 00:52:11] fair works being more effective in reducing CAUTI?

Julia: This is Julia. I did some of a brief discussion about CHG wipes and peri care. For our process, we do use the CHG bathing for peri care, which is an [inaudible 00:52:32] use. We do it for our cath care from 8 to 10 in the morning and then we also use it for our bathing in the afternoon. I do not have any experience with fair works.

Shelley: Do you use that in the mucus membranes also?

Julia: We have another wipe that is just a bath wipe that is used in the mucus membranes. The CHG is really on the outside, down the catheter, inside of the legs.

Shelley: Okay, thank you.

David: This is David again. Although, I don’t think there is any good quality data one way or another what is probably more important in the product which is used for peri care is the process with which peri care is standardized and conducted at least once if not twice daily basis. I think efforts towards that end are probably better than trying to find one magic product over another.

Julia: Making sure also that the products that you are using are utilized correctly. The reason I say that is I was in a facility that has the CHG wipes and what I saw is the employees were taking the CHG wipes out of the packet and putting them in the sink to get them wet and then using them on the patient. That defeats the purpose of the CHG wipes. Again, whatever process or product you pick sticking with it, making sure it’s standard and done correctly.

Chelsea: Okay, our next question comes from [inaudible 00:54:18]. The floor is yours.

Anna: There is a lot of feedback on that line can we go to the next question perhaps?

Chelsea: Yes Ma’am. Our next question will come from Samantha Baker. Ms. Baker the floor is yours.

Samantha: Hello. Just checking does anyone have any experience doing urinalysis with reaps or fractures upon initial insertion of a Foley catheter?

David: That’s not indicated and again in spirit of not culturing unless there is an appropriate indication is really no utility and there might be potential unintended consequences such as treating a symptomatic bacteria and a side effect from the [inaudible 00:55:11]. That’s not a practice that should be encouraged. Did that … I hope that was addressing you specifically.

Samantha: Oh yes, thank you so much.

Chelsea: Our next question will come from Mary Reilly.

Mary: My question is for Julia about your retention algorithm.

Julia: Yes.

Mary: You mentioned [inaudible 00:55:38] like three times and then contact the provider. Our providers are telling them after one or two the third time to put it fully back in. do you have any other recommendation like when to do [inaudible 00:55:50] when to start [inaudible 00:55:50]?

Julia: We work with our rehab team to develop this protocol and really working with the providers and the education, the constant follow-up, the constant conversation. Because in the acute care setting I do not feel there is a good … There is not a good systematic review of evidence that we should or we should treat urinary retention like this. The evidence is lacking. It’s working …

Mary: Okay.

David: This is David again. We have a urologic clinical nurse specialist who is prominent in the urologic nursing society. Who is very vocal about the relative value of in and out straight catheterization performed for a minimum of 24 hours up to 48 hours before considering a reinsertion of urinary catheter. That’s a broad brushstroke but her point is that it’s far more comfortable ultimately and thick for the patients to perform in and out catheterization. I would think you should aim to try this at the bar at 24 hours. That being said if the cause for urinary extraction or urinary retention is some anatomic destruction that ain’t going to go a patient with a urologic blockage rather than some pharmacologically. If they are on medication it’s going to get cleared from their system then you might want to put the urinary catheter in. I think there is poor quality evidence but a strong clinical rationale but not rushing to put a urinary catheter in and continuing the process of bladder scanning to take catheterization up to and beyond [inaudible 00:57:41].

Mary: Thank you.

Chelsea: Our next question will come from Jennifer [inaudible 00:57:47] and again if you would like to ask a question please press star 1.

Jennifer: Hello?

Chelsea: Jennifer?

Jennifer: Can you hear me?

Anna: Yes, we can hear you.

Jennifer: The question I have is for David. According to what I’ve seen or what I heard you are saying that we should probably do urinalysis before we do any type of culture. Our intensive care unit here, our infection control doc did have an in service with us in which he was stating just this fact. If you do a culture some things are going to have things that this patient came in with that are normal. Now the thing that our specialist here says that is for example the day they come with some type of insertion and we didn’t do a urinary the day that they came in or a culture. Then our hospital will be mundane for that because we didn’t do anything to prove that they can in with this prior to putting that Foley catheter.

David: I don’t mean to interrupt please continue.

Jennifer: No, if you have some type of … What I am saying is it seems like a catch 22 for us.

David: In general you shouldn’t screen with diagnostic test for a patient on admission condition. I don’t want to get into the weed with respect to the NHSN surveillance definition but the presence of a positive urinary culture itself historically has not been sufficient to call rotation having a catheter associated urinary tract infection. Now I can’t tell you how the change in the definition as of January 2015 is going to impact that but I can tell you at least historically. What we are calling category 2a define CAUTI events needed, low level bacteria 1000 or less than 100,000 microorganisms any sign or symptom which is usually fever just having a positive urinary culture wasn’t sufficient in the definition. As a general rule of some we should make clinically appropriate decision culture when its clinically appropriate and not culture for some administrative purpose. I know this is hard i.e. to try to avoid getting quoting for someone else surveillance to find event. I’m not sure that is a perfect answer but I would always argue that you just have to do what’s right for the patient and what’s right for the health system bottom-line because ultimately doing what’s right for the patient that’s the bottom-line.

Jennifer: That’s why we are trying to change as far as the culture of the mind of the nurses that we have is that not always is this going to be a standard of what we do. We need to look at according to our infection control doc look at the fever, look at the symptoms look at all of this and I guess our process is going to have to be changing our policy to set the guidelines that are coming out.

David: That’s clearly the direction that we are going at the provider level to health providers are culture more appropriately when clinically indicated not as the routine part of any work for [inaudible 01:01:27] caused by infection. Particularly I think Julia can attest to it in the neuro clinical care population non-infection cause like central fever. Fever in of itself in the absence of clinical decision of a urinary type infection in a patient with a catheter shouldn’t prompt a urinalysis or culture, et cetera, et cetera.

Now there are situation in ICU where you want to not necessarily use the technique, which Julia alluded to, and Julia please speak to this. Like about reflexing, requiring certain threshold of abnormalities in the urinalysis before a urinalysis before a urine culture would be sent. For example, today you see a lot of oncology patients in your critical care unit. They don’t have peripheral white cells, they don’t have white cells in the key so that reflex need to be excluded and of course the patient’s hemodynamically unstable with the septic shock and probably don’t want to require or fund or in any way a urinalysis in the urinalysis result so that it would delay appropriate urine culture and antibody. There are clearly challenges that the pendulum is clearly also swinging away from routine culture and trying to put more than a modicum of thought into the whole process of getting a urine culture for that matter.

Jennifer: Thank you so much that really does clarify and substantiate what our doctor did tell us. Thank you so much.

Anna: Thank you David. I know we are about six minutes over the allotted time. I think we will take one more question if our speakers can stay for a few more minutes. I do want to remind everyone to fill out the evaluation of today’s webinar. The link is up on the screen right now and in the chat box. We will go ahead and follow-up on the discussion area questions and make sure that a document on those is posted on the ICU website. Operator one last question please.

Chelsea: Yes Ma’am. Our last question will come from Jenny [inaudible 01:03:44].

Jenny: I just have one question about as far as the medical provider and how do you get people to go away from the concept of pan culturing?

Julia: Daily conversations. I work with pulmonary intensivist group, neurosurgical group and a surgical critical care group. We’ve really addressed during multi-professional rounds with support from the administration. Find your cheerleader within those groups and get them onboard and get their support.

Jenny: And if I have no cheerleader?

David: This is David. I can tell you all medical ICU nurses are very proactive in questioning the rationale for why a resident wants to order a urine culture on their case. I think that some of this can really start at the level if the beside nurse.

Jenny: I’m not at a teaching hospital and I’m going up against my medical director.

Pat: What about your infectious disease executive or the medical director of infectious disease or infection control?

Jenny: He’s been to my critical care meeting and he’s given the speech on pan culturing but I still have not seen any change in practice. Nurses because it’s a new order crawl with a 10th grade then you will have 10 over 100.8 really no other symptoms that cause pan culturing result in a positive urine culture. Of course treatment is initiative and the only symptom actually that they’ve had would be a single or maybe its two temperatures greater than 100.6.

Julia: With our nurses we really try to guide them towards having a focused conversation when whoever they are calling for orders. If they have to call for [inaudible 01:06:16] ours is greater than 101.5. Telling them if the patient has been sedated for five days and they are having increase [inaudible 01:06:27] and what not do you think it’s potentially something that we need a respiratory culture call, tell the provider their temperature and say, “I’m calling for an order for a respiratory culture.” Having specifically in mind what they are calling to get an order for. If there is a pan culture we really ask our nurses to say, “I think and I’ve weighed the conversation on what would be appropriate to do and what would not be appropriate to do.”

Jenny: Thank you.

David: No simple solution but a common sense approach and really one of empowerment.

Anna: Thank you again to all of our speakers David, Julia, and Pat. We really appreciate your wisdom. Thank you everyone for joining we had a really great turnout today. Again please fill out our survey for the evaluation for today’s webinar and please refer to the website for more information on a lot of tools to help you in your project work. Thank you everyone we’ll see you again next month.

Chelsea: Thank you, ladies and gentlemen, this concludes today’s teleconference. You may now disconnect.