

Pioneers in Quality Electronic Clinical Quality Measure (eCQM) EtoE Webinar Series

STK-5 and AMI-8a eCQMs

January 29, 2019

Lisa Anderson:

Hello, I am Lisa Anderson, of The Joint Commission. I would like to thank you for joining us for our Pioneers in Quality 2018 through 2019 Expert to Expert Series. Today, we will be focusing on the STK-5 and AMI-8 eCQMs. For participants that would like to use the closed captioning service, please see the link on this slide. We will also paste this information into the chat box. With the transition starting with January 1 2019 data collection and 2020 data submission, we heard many requests from hospitals for sessions for each eCQM as pertains to the CQL Expression Language. The Joint Commission and the Centers for Medicare and Medicaid Services, CMS, are committed to supporting hospitals on their journey towards quality measure eCQM and adoption to the new expression in which we have designed the act for expert series. We introduce this series with a November 29 Pioneers in Quality electronic quality measure, quality language basics webinar, and had the first session covering the first eCQM's on December 11. Participants will be able to apply the concepts learned about the new eCQM expression language for the two eCQM. You can identify questions and prepared to implement the CQL expression language for the 2019 eCQM year. Good news, the PDF of the slides is available under the handouts section of the go to webinar panel. Click the triangle next to the handout to expand the page and download the PDF.

This session is designed to be interactive. Participants can ask questions to the question function. We will be having a Q and a session after the presentation. You can also visit links or resources as noted in the slides. Please note a recording of today's webinar and the slides will be available on The Joint Commission website in February. An email that includes the link to the page will be posted and send to all registered participants in February. We hope you find this information helpful. CE credits are offered for all of our Pioneer in Quality webinars. This webinar is approved for one continuing education credit for Accreditation Council for Continuing Medical Education, American Nurses Credentialing Center, American College of Healthcare Executives, California Board of Registered Nursing, International Association for Continuing Education and Training, and Certified Joint Commission Professionals Recertification Credit. These are available for the live audio only. Credits will not be available for replays. To claim credit, you have individually registered, listen to the webinar in its entirety, only those listening live will be eligible to receive credit. Completed a post program evaluation, the program evaluation link will be sent to participant emails after the webinar. Principal certificates will be sent via email two weeks after the session. All participants will have certificates and at the same time. If you did not lose your own phone line to join, you can still obtain the credit if you meet these criteria. An automated email after the session will provide information on how to access the survey. For more information on the joint commission, continuing education policies, please visit the link.

The following staff and speakers have disclosed that neither they nor their spouses or partners have any financial arrangements or affiliations with corporate organizations that either provide educational grants to this program or may be referenced in this activity: Lisa Anderson, Mia and Avera, Karen Kolbusz,

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and Lynne Perrinne. I am now going to turn over the webinar to Mia and Karen for their presentation regarding STK-5.

Mia Nievera:

Thank you. Good morning, everyone. Stroke is the leading cause of death and disability in the U.S. Early therapy has been shown to reduce morbidity and mortality with stroke. The STK-5 therapy captures the percentage of the stroke patients who receive antithrombotic therapy at hospital arrival. Guideline recommendations to The American Heart and Stroke Association recommend that 325 milligrams of aspirin should be administered within 24-48 hours of stroke onset. Other antithrombotic medications administered on the day of or the day after hospital arrival will also meet the measure.

Before we dive into the specifications, I wanted to take a few minutes to provide a framework for today's presentation. CQL is the new quality language used to write specifications. The goal is not to teach you how to write CQL, but to help familiarize you to the terminology so that you are better equipped to read and understand the specifications to support your organization. A little forewarning to my clinicians, we will be somewhat technical in nature throughout the presentation. With eCQM, the technical jargon does impact the clinical intent of a measure. It is very important to be acquainted with both. I am hoping this is a repeat for most of you. The more you are exposed to it, the easier it is to consume. For those new to eCQM, I will do my best to keep it simple. Remember these sessions are being recorded and will be accessible to watch again.

Let's get started and I want to start with a high level overview of some of the basics to set the foundation. This diagram shows the evolution of the standards we used to create eCQM's. Transitive consists of three components. First we have the metadata, which uses the health quality measure format, which is the basic electronic specifications for the measure. The second thing we have is the data model. We use the quality data model, or QDM for short, which defines the relationship between patients and clinical concepts in a standardized way. Lastly, we have the logic.

As of January 1 2019, we made the transition from QDM to CQL. The transition has been a big undertaking, but it does have its benefits. From a technical standpoint, CQL simplifies the logic, making it easier. From a clinical perspective, CQL allows for more flexibility in the logic with utter timing precision of the logic can better be aligned with the clinical intent of a measure. This is a screenshot of a human readable. Those that are new to eCQM's, human readable is the file format of the measure specifications for a person to read versus a computer. The first thing I want to point out is if you look under the initial population, it is only referring to a single line. You see here it says to JC, and counter with diagnoses and age. This is a major difference from the QDM version. Here, the logic is simplified into what we call definition. We title these definitions using more natural language to capture the meaning of the logic it represents. The second thing I want you to note are the definitions and functions. I bracket these sections together as a building block, which I will talk about more in the next slide. Collectively, these are all the definitions used to build the population criteria that you see at the top. To give you a better understanding of the CQL structure, this diagram depicts a visual representation. If you can imagine with me for a moment that these blocks are like Legos and if you have never played with Legos before, you are given a set of directions that instruct you on how to connect several Lego blocks together in order to build some sort of

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structure. We can take that same concept into CQL where we have the clinical specifications as the direction to build definition. Each of those definitions are like Legos or building blocks. We use one to build upon another until we have a completed definition. Looking here at the diagram, the definition for building is the initial population, which is defined as C. You will notice we also have letter A and B block. Each block represents a definition. Each definition has a name and logic to represent a population criteria. And block A, this is looking for a specific and counter type. And inpatient encounter. You will also want to know that A is the largest block. As we start building the population criteria, we want to start narrowing down the scope of patients. If you look in block B, rather than repeating the and counter logic again, with CQL, we can simply pull in definition A and add the next criteria that we are looking for. In this case, we are looking for a diagnosis. This is how we connect the definitions together. Definition B now includes the encounter type and the diagnosis. To reference the Lego analogy, we need one more block to complete this structure. We would need an age block. So we follow the same pattern where we connect B with age to create B. Hopefully you see how we build off of the previous definition so that each definition helps to constrain the logic further. So now in C, we have all the criteria we have defined. We have the encounter type, diagnosis and age of the patient. That is how C becomes the initial population. Looking at this concept in more concrete terms, here is an example of stroke number two. We have three definitions to build the population. If we taught with nonelective patient encounter, it is looking for an inpatient encounter. In the next block, all stroke encounter. Darts with the previous definition name and add diagnosis criteria. In the next block, and counter with sensible diagnosis and age, notice we use the previous definition of all stroke encounter and add age criteria. So then finally, the encounter with principal diagnosis and age is direct used as the initial population. As you can see, using this methodology of building blocks it makes it easier for us to read and allows us to reuse a definition throughout the measure specification.

In the next slide, we will review some of the basic terms used in CQL. CQL uses definition and all definitions have a name. We try to use a name that captures the meat of the expression.

An expression refers to the content of the definition. Remember we can reuse definition and the way that we pull that in is by creating a library. Libraries can be created at the measure level. Each measure builds its own library of definition. We can also create global libraries that can be shared across all measures. So we use a library alias to identify which library the definition came from and here in the example, you can see it has been noted in the definition name. Some definitions may not come from a specific library, so you will not see that notation. Looking at a basic construct of an expression, expressions use datatype. Datatype describes the care process which refers to a specific category. That is the quality data model. For instance, the encounter for foreign datatype is in the encounter category. Medication administered datatype belongs to the medication category. Each datatype then also has their own set of attributes. Attributes provide specific details about the datatype. In the example, that relevant period is an attribute of the encounter performed. That means a relevant period defines the start and end time of that encounter. Next we have a value set. This specifies the kinds of data or codes that we are looking for in relation to the QDM category. These are the codes the logic is looking for within the PHR. In this example, the value set of non-elective patient encounters consists of codes. We would expect to see that anyone of these codes would be in the patient's records. Lastly, we

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have an alias. Alias is an expression used to give a source and name. That piece of logic can be referred to easily within the expression to avoid restating. Just briefly, this slide shows the terminology section in the human readable where you can see all the value sets and direct reference code used in the measure. The value set authority center is where you would go to verify these codes and for your knowledge, each value set has a unique object identifier. That way it makes it easier to search.

So one of the most common questions we get is what does union mean? Union is an operator that combines two or more lists together. In the diagram, any elements in the list A or list B will satisfy the condition. So anything in red. From this, you can understand why we related unions to meaning or. Anything from both will meet. I want to clarify what list mean. List are the results of the logic is looking for in the EH are. If you look at the example listed, the logic is looking for a diagnosis of code of either perforation of a window or uterine rupture or pregnancy. What union does here is it combines all the diagnosis codes into a list so that if the patient encounter has anyone of the diagnosis codes, it will satisfy this condition. Intersect is another common operator in CQL, which is only looking for the common elements between A and B. The red depicts the shared elements between the lists. To at some context, let's look at the example. If A returns a list of all patient encounters with age 18 years and older and list B returns a list of all encounters with AC/DC level, then the results of this intersection is a list of all and patient encounters with age 18 years and older and a CBC level.

So that wraps up our crash course. I want to transition back now to STK-5 five version 7. The version is important to note since it is a version for the 2019 reporting year, which did take effect on January 1. The initial population reads patients 18 and older discharged from inpatient care, nonelective admissions with a principal diagnosis of ischemic or hemorrhagic stroke less than or equal to 120 days that ends during the measurement period. The definition for initial population is an encounter with the diagnosis and age. For clarity purposes throughout this presentation, I will not be referencing the library when calling out the definition names.

Starting at the base of the definition, the logic is looking for a nonelective inpatient encounter that is less than or equal to 120 days. The nonelective admissions value set tends to capture all nonscheduled hospitalizations. That includes emergency, urgent and unplanned admissions. Going back to the attributes relevant period, this is used to define the duration of the encounter to be 120 days or less. It should also occur during the measurement period. To achieve that 120 day perimeter, we use a CQL function called length in days, which calculates the difference between the start and end of a value. Moving onto the next block, the pole and the nonelective inpatient encounter definition. That is what we are building on. We give it an alias. Nonelective encounter. We do this to reference it throughout the logic. The logic states that a nonelective encounter should also have a principal diagnosis of hemorrhagic stroke. Moving on to the final definition. Notice we pull in the all stroke encounter definition and we add age parameters using the patient's birthday. We use a function called calendar age to calculate the patient's age of the time of the start of the encounter. In other words, the patient needs to be 18 years or older by the start of the admission. So now once we have all the criteria met, the diagnosis becomes the initial population. Once a patient qualifies into the initial population, the process moves to the denominator. The denominator in this instance is a

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subset of the initial population and is only looking for patients with a principal diagnosis of stroke. So we start with the initial population definition highlighted here to build our next population for the denominator. Here in yellow are the three definitions from the initial population that are carried through into the denominator. We will not review since we just reviewed those. As I mentioned, we are only looking for a principal diagnosis of stroke. What I do want to point out is that even though the initial population includes hemorrhagic stroke, we can still refine the population to only include stroke encounters as we move forward in the algorithm. As a side, the reason hemorrhagic is included is because stroke was created as a measure set. The initial population is shared with other stroke measures.

Moving to the denominator exclusion, in this process, we are looking for patients who are to be removed from the denominator. For STK-5, we are looking for patient to have a duration of stay less than two days, patients with intravenous or intramolecular therapy administered within 24 hours prior to arrival or patients on the day of arrival. We combine these definitions together. Anyone of these conditions will meet the exclusion. Looking at the first exclusion, the definition is looking for patients who have a duration of stay less than two days. We start with the stroke encounter since that is the qualifying and counter that moves through the measure algorithm. In the next clause, we use a function called hospitalization length of stay, which calculates the length of stay of the encounter to be less than two days. Moving to the next exclusion, the definition of encounter with thrombolytic therapy medications is looking for patients with intravenous or intra-arterial from a lytic therapy administered within 24 hours prior to arrival. As you can see, there are two method definitions in order to build the final expression. We have the thrombolytic therapy medication or procedures and thrombolytic medication. Beginning with the thrombolytic medication, we are looking to see if CPA was given. In this next definition, it also allows from lytic therapy to be captured as a procedure performed, which does allow for more flexibility in the EH are configurations, which I will come back in a minute. Now in the final population definition, we pull in the thrombolytic medication or procedures definition and alias it as a thrombolytic therapy. Then we add timing criteria. This is saying that the thrombolytic therapy must occur 24 hours or less before the start of the hospitalization. So now going back to the ER configurations I mentioned, this procedure performed is to account for a request and workflow. Within the value set, we included a code of administration of CPA in a different facility within the last four hours prior to admission to the current facility. It was included to allow for this code to be added to the patient's diagnosis list. But as we have learned some challenges, we are working on a better way of representing this intent during the 2019 and he will update for the 2020 reporting year. I want to dive deeper into the CQL function of hospitalization. By definition, hospitalization means admission to a hospital for treatment. This function carries that same intent. It defines the start and end time for a given hospitalization. Here is the logic for the hospitalization function. Here is a picture to help illustrate the hospitalization timeframe. The hospitalization is defined as the start of a visit to the end of the patient encounter. That goes through discharge. The purpose of this coverage is to take into account if something was done while the patient was in the ED. If an ED visit exist, the discharge must be one hour or less before the start of the inpatient admission. If no ED visit exists, the hospitalization begins at the admission start date time. As a side, we have gotten several questions about observation patients. I want to address that here since you are not seeing that time coverage illustrated. If the patient was admitted as observation but was not inverted, they are not included.

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Where we see the gaps are for patients who start as an observation and become an inpatient. These patients are falling out of the measure because we do not have a clear-cut way of identifying observation status in the coding. Some vendors have configured a way to alleviate this gap, but more importantly, we are currently working on a solution in the logic to account for observations during this annual update for the 2020 reporting year.

Going back to the exclusion, this logic is allowing for TPA to occur 24 hours or less prior to arrival. I use air quotes with arrival because as I noted, arrival is referring to the admission start date time or the encounter, whichever the portal of entry the patient gets admitted to the hospital. In this next expression, union and counter with it from lytic medication, we use the same medication administered data type and hospitalization function. Again, the same timeframe is inclusive of an ED visit if it exists. But this logic is looking for the TVA to be administered during the hospitalization. This does include if TPA was given in CED. Moving onto the final exclusion encounter with comfort measure, beginning with the intervention measures, this logic is combining two datatypes, intervention order and intervention reforms using the union operator. Union is combining their attributes. Date time is a time attribute for intervention order and intervention performed. It is a timestamp of when the documentation or the order was entered. However relevant period is only associated to the intervention performed. If you recall, relevant period refers to the start and end date time. This is also a time attribute. Coalesce is a CQL operator that allows for if then logic, meaning it is conditional. This applies that conditional logic to those two time attributes we talked about. Bringing that into the context of the logic, it first looks for relevant periods from interventions. If relevant period does not exist, then the logic is for daytime of the intervention order or the intervention performed documentation. So then we are looking for measures to occur one day or less on or after the start of the hospitalization. I know it sounds like a lot, so I want to break that down and we have already reviewed the hospitalization and what that covers. So that is not going to change regardless of where it is used in the logic. One day or less on means any time on the day of the hospitalization. In the next part of the expression, I highlighted day of and date of is a CQL operator that accounts for a calendar day. Putting it all together, measures would count anytime the date of the hospitalization and one calendar day after hospitalization. If the patient was admitted at 7 AM this morning, they would have until 11:59 PM to meet the exclusion since it is looking at the calendar day and not a 24 hour period. So I want to move on to the numerator and the numerator is looking for patients who have entered robotic therapy administered the day of or day after hospital arrival. We are using that same timing operator we just reviewed. So the medication can be given at any time until 11:59 PM the following day. With the denominator exception, it is important to note the difference between an exclusion and an exception. Simply put, it differentiates in the way it processes. An exclusion is processed before the numerator. The patient is excluded and it never in the numerator. An exception is processed after the numerator. In this case we have a patient that has a principal diagnosis of stroke, but they do not receive antithrombotic therapy the day of or day after hospital arrivals and other process flows to the denominator and it checks for reasons why the medication was not given. This is also called a negation rationale. A negation rationale looks for a reason why something was not done. In this expression, we are looking for either a medical reason or a patient refusal for the antithrombotic therapy medication not given. In the next expression, we are looking for a reason the medication was not ordered using the same medical reason or patient refusal value set. In this definition, this is to combine the antithrombotic order and the

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administration reasons for not done one definition. This gives organizations the flexibility on how this data is captured in their EH are. To either through an order or through the administration. Now in the population definition, we have no antithrombotic order during hospitalization. Here where we use author date time of the documentation to occur, one day or less on or after start of the hospitalization. We are using the same timing language that we have previously reviewed.

Thank you. We are now going to turn it over to Lynn to go over AMI-8. If you are talking, you might be muted.

Lynn Perrine

Thank you for that introduction. Now we will go over AMI-8. Before I start going over the specific logic changes, I want to mention some general changes throughout the logic with this version. As you are aware, starting with January 21st, the logic switched to CQ L based logic. Supplemental timing attributes were added to facilitate accurate retrieval of time -related information within the CQL logic. Information has specific versions for recording periods as well as the user guides. They can be found at the resource Center. Things are included for you on the slides at the end of the presentation. In the header, we revised the wording within the meta-description to make the language concise. We removed the guidance statement related to the intervention because CQ L allows us to express that using the first operator. We updated the numerator statement to align with the logic updates. We added value sets to add new code and delete inactive codes as part of the maintenance process. In the value set, we added three procedural codes. We added codes and deleted three others. These changes were made to all of the measures, not just AMI-8.

This measure is described as acute myocardial infarction patients with a diagnostic cardiogram and ST segment obligation to receive a primary coronary intervention during the hospital stay. The initial population narrative is comprised of inpatient encounters of 120 days or less and ending within the measurement period for patients who are 18 years or older at the time of hospital admission and to have a principal diagnosis and of an infarction. Shown here is the initial population that contains two building blocks. Inpatient encounters and AMI encounters. Let's look at each block. The inpatient encounters are the building blocks for the initial population. Starting from the top, the first block determines the counter stay was less than or equal to 120 days and it was during the measurement period. This is done by using another building block that is a function that calculates the difference between the start and end date of the encounter. Relevant period addresses the time between the start of an action to the end. Each datatype using relevant period uses specific definitions. Global proceeds the calendar age. That is because they are in the functions library. Using the global common library helps to reduce duplication and maintains consistency. The alias global is used from the library. The second definition used to build the initial logic is the AMI and counter. Like the inpatient encounters, this uses a global common function. You can see the global calendar function. This function is used to calculate the patient's age at the time of the start of the encounter since the patient needs to be 18 or older to meet the population criteria. The patient should also have a principal diagnosis. The inpatient encounters logic intersects with the encounter logic meeting the case would need to be both the criteria to qualify. The patient must have been discharged within

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the measurement period, had a stay of 120 days or less, be 18 years or older and have a diagnosis of acute or evolving AMI.

Once an encounter qualifies for the initial population, it moves to the denominator. The criteria further constraints the population by looking for inpatient encounters where a primary procedure was performed. This procedure is to be the closest to admissions but does not start after therapy. We are also looking for inpatient encounters.

The denominator begins by reusing the initial population definition and gives it the alias of qualifying and counter. Next, we group several pieces of logic that we call first PCI. These statements are useful because you can make a statement to break it into smaller definitions and put them together into a smaller statement. Procedures analyzed must be primary. Primary includes urgent procedures and not those described by the clinician as secondary or nonurgent. During the conversion, we removed the most recent operator and I use first to capture the intent. You can see the first PCI is determined by calculating the relevant period. If its retrieve produces more than one result, the list is boarded in the first instance is used. In addition to determining the first PCI, the logic assesses if an electrocardiogram was performed either within one hour of arrival time or during hospital encounter. The logic assesses if the first procedure was done within 1440 minutes or less from the hospital arrival time and whether therapy was initiated. This therapy assesses if it was after the hospital arrival time and if it started before the first procedure. Note the use of global hospitalization and arrival times from the library. We will break down each of these building blocks. I denominator is made up of the initial population covered in the proceeding slide. PCI procedure, diagnostic electrocardiogram and for analytic. Data elements that meet criteria using the performed datatype should document the completion of the procedure and the corresponding value set. The value set is a grouping of procedures and codes that identifies patients. Let's look at the previous slide. On the third line, we see the first relevant period. This addresses the start time, which is the time the procedure begins in the time the procedure is preceded. This refers to a single instance. The diagnostic electrocardiogram definition is made up of diagnostic datatype. The value set contains codes that describe a standard electrocardiogram and is used to identify patients with an ECG. Online seven, we see the relevant period addresses the start time when the diagnostic study is initiated and the stop time which is when the study is completed. The fibrinolytic definition is made up of the administered datatype and the therapeutic value set which contains codes that identify describable agent medications prescribed for therapy in patients with an episode of acute MI. Elements that meet criteria should document the medication indicated by the category and its corresponding value set was administered to the patient. On the second to last line, you see the therapy relevant period addresses the start time, which is when a single event starts in the stop time, which is when a single event ends. In a nutshell, if the first PCI procedure was after therapy was started, the case does not meet the criteria. If the procedure was before therapy was initiated or if there was no therapy during the hospital encounter, the logic moves on to the denominator exclusions criteria. The denominator exclusions criteria is used to identify a subset of the denominator population by excluding counters for patients who transferred emergency department or from a surgery center. In this version, we replaced the datatype used in the previous versions. This is an attribute of the encounter performed. This is done to confirm the changes. For our denominator exclusion, we begin by pulling in the denominator logic, which is a list of encounters we want to use for the solution and we give this the alias

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denominator encounter. We take these and use codes to identify the exclusion criteria. More value sets are used. Transfer from emergency department location and transfer from inpatient. We use the “or.” Any code from any of these values that will meet the exclusion criteria. As I mentioned, the denominator exclusions logic uses codes from the value set. This is a snapshot of the terminology section of their human readable. All value sets listed are used in the measure. Is highlighted in yellow are used to identify the exclusion criteria and include the value set which includes codes to identify a surgical center environment. The transfer from outpatient values that includes the codes to indicate outpatient facility environments. Transfer from emergency department locations value set contains codes to indicate an emergency department environment and the transfer from inpatient values that contains codes identifying inpatient or acute care hospitals. These values have continued to include transfer even though the attribute was changed.

I want to let you know there is an issue with the logic. And version 6, the exclusions were identified by the admissions source for the inpatient counter. And version 7 for the 2019 reporting period, a piece of logic for the counter admissions were missing from the exclusion. Cases are still excluded if the admissions source meets the criteria of a transfer from another hospital's emergency department from an ambulatory surgery center. The patient being admitted should not result in the patient being excluded because this is not a transfer. The logic should have minimal impact because the source would need to be missing from the encounter for a case to not be excluded. Since the 2019 reporting period, AMI-8 is available.

There are no plans for revisions to the measure. Now we will move to the numerator. The numerator is described as the initial population whose time from hospital arrival to ECI is 90 minutes or less. The numerator criteria identified a subset of the denominator population that did not meet the exclusions criteria. This would include inpatient encounters for patients 18 and older with a state of 120 days or less, the principal diagnosis of AMI-8, the procedure performed within 140 minutes of arrival time and before it therapy was initiated and who were not admitted from another healthcare facility. Since these blocks of logic are reused and build upon one another, you may recall we already used procedure definitions in the denominator. In the numerator, this is constrained to identify if the procedure was done within 90 minutes of the hospital arrival time. As we just said, the numerator reuses the initial population and goes on to further refine the population by determining if the PCI was performed within 90 minutes of the hospital arrival time. This is done through the use of the user definition in the hospital arrival time function. The PCI procedure definition determines if there is a value set code that indicates a PCI. It determines if a PCI or Cedar was performed in the relevant period is used to determine the start and stop time. To determine the hospital arrival time, the CQL function returns the earliest arrival time for an encounter including any prior ED visits. The timing starts from the hospital location. Using the location period attribute provides the time the patient arrived and departed. In conformance with 5.3, we modeled the location attribute to allow for the patient's presence during an individual encounter. If the patient was in more than one location, the logic will result in the first location start at that time. Denominator encounters that do not meet the exclusions criteria or the numerator criteria move on to the exceptions criteria. The denominator exceptions criteria identifies patients who did not receive a PCI with a 90 minutes and have a documented reason. These include a diagnosis of pulmonary arrest and intubation procedures performed and insertion procedures were performed.

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This is determined by using two definitions with the exceptions criteria. The exceptions within 90 minutes of arrival definition. Union means or, so any of these conditions will meet the criteria. We will explore the use of these definitions in the next slide. The diagnosis exception definition begins by pulling in the encounters definition used in the initial population and looks for cardiopulmonary diagnosis.

The QDM does not prescribe the source of the diagnosis data in the EHR and diagnoses may be found in the patient's problem list, encounter diagnosis list, claims data or other EHR sources. The preferred terminology is known as CT. It may also be encoded using nine or 10. The pulmonary arrest value set is a group that does include ICD 10. If the code indicating a cardiopulmonary arrest is found, the logic determines the cardiac arrest occurred within 90 minutes of the encounter by looking at the period of the time of the onset date time to the date time. The exception procedures definition is built using several different data sets. Data elements that meet criteria using the procedure performed to document the completion of the procedure indicated by the QDM category. This refers to a single instance of Cedar. The relevant period addresses the start time, which is the time the procedure begins and the time the procedure is completed. The value sets used in this definition includes a grouping of 10 procedure known as code that identify patients receiving an airway inserted into the trachea. The aortic balloon pump includes CP codes that describe insertion of a balloon pump. The placement value set contains codes that identify patients with device placement. Union means or, so any code with these value sets meet the criteria. Continuing to build up, the exceptions with it 90 minutes of arrival definition also pull in the definitions used in the initial population and brings in the procedures definition we just assessed. The exceptions within 90 minutes of arrival definition unions the diagnosis exceptions definition, meaning these are combined to create a single list. If a list is not emptied, meaning there was an encounter, then it was qualified for the denominator exception. You can see how we reused previous building blocks of logic and how the logic criteria is built using smaller chunks of logic to compile the expression. We try to cover many of the questions about this measure. I had a couple of other slides with some commonly asked questions. In the interest of time, I will let you read those slides in the slide deck. That concludes our measure overview and I will turn it back over to Mia.

Mia Nievera:

Before we conclude here, I want to show you that we do have resources that are available on the slide deck. I highly recommend you use the resource center. There are some quick links that point you to the resource center, but this is our one-stop shop for all things related to CQL. You can get the specifications, the notices of any changes we have done, code system changes and links to many educational resources to look at the standards, any previous education, presentations and also, we have links to the replays and slide decks. This is a valuable slide. I highly recommend you peruse this.

We would like to remind you the slides are available for download. Please see their location noted on the slide. We are at time. We did answer some questions via the chat functionality. Any questions that were unanswered will be addressed in a follow-up document that will be posted to the page.

You can see the previous recordings as well as the future upcoming events. Before we close this session, please visit the expert to expert series page. This includes links for future sessions, a link to the replay of this session along with the slide presentation and email will be sent to all registered participants in

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January 29, 2019

February when the items are available. Please note due to the overwhelming demand and positive response to the series, we exceeded capacity for the initial session. In response to numerous requests, we have migrated the February and March 2019 session to a new webinar platform with a higher participant capacity to accommodate additional participants. Our next session addresses ED one and two. Please join us for that session. General information about practices can be found at this link.

If you qualify for credit, please click on the survey link provided as you exit the webinar or in the email you will receive tomorrow. You will be redirected to the evaluations survey. It will close two weeks from today. All participants to complete the survey will receive an email at the time with a certificate available to download. Thank you to everyone who took the time to present at today's webinar and thank you to all of you who listened in. Have a good day.