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

ED-1 and ED-2 eCQMs

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Lisa Anderson:

Hello, everyone. I'm Lisa Anderson, the Project Director for eClinical in the Department of Quality Measurement at the Joint Commission. I would like to thank you for joining us for our Pioneers in Quality 2018-2019 Expert to Expert Series. Today, we will be focusing on the ED-1 and ED-2 ECQM.

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.

The Joint Commission and CMS has designed the Pioneers in Quality Expert to Expert Series to support hospitals on their adoption of Electronic Clinical Quality Measures and its transition into the new Clinical Quality Language, or CQL. We first introduced this series with a CQL Basics webinar followed by sessions covering the Stroke and AMI ECQMs.

At the end of today's session, participants will be able to apply concepts learned about the new CQL expression language for ED-1 and ED-2, identify their common issues and questions, and prepare to implement CQL for the 2019 ECQM reporting year 2020 data submission.

Good news! The slides are available for download under the Event Resources pane. Click the triangle to open the list. Once selected, you will be able to download and print the slides.

This session is designed to be interactive. Participants can ask questions through the Questions pane throughout the presentation. We will try to answer any questions in real time. If possible, please indicate the slide number you are referencing in your question.

We will also hold a Q&A session after the presentation.

Additionally, you can visit links or resources that are noted in the slides.

Please note, a recording of today's presentation, the slide deck, and Q&A documents will be available on the Joint Commission website in March. All registered participants will receive an email that includes a link to the landing page. We hope you find this information helpful and share it with interested colleagues.

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I am now going to turn it over to Mia and Angela to begin the presentation. Take it away, Mia.

Mia Nievera:	Thank you, Lisa.

Before we dive into the measure specifications, I want to take a few minutes here to provide a framework for today's presentation.

CQL is the new Clinical Quality Language used to write the measure specifications. And the goal today isn't to teach you how to write CQL, but to familiarize you to the CQL terminology so that you're better equipped to read and understand the specifications to support your organization.

So, a forewarning to the clinicians out there, we will be somewhat technical in nature throughout the presentation, but with ECQM, the technical jargon impacts the clinical intent of a measure, so it is important to be acquainted with both of those aspects.

And with this being the fourth session in the series, for many of you this overview may be a repeat. But, as I said before, it gets easier to understand the more you're exposed to it.

So with that I want to start with a high-level overview of some of the CQL basics to set the foundation.

So this diagram shows the evolution of the standards to create ECQMs. ECQMs consist of three components. First we have the metadata, which uses the Health Quality Measure Format, the HQMF, which is the basic electronic specification for the measure.

Second, we have the data model. We use the Data – Quality Data Model, or QDM for short, which defines the relationship between patients and clinical concepts in a standardized way.

And lastly, we have the logic. So, as of January 1, 2019, we made the transition from QDM to CQL. And the transition to CQL was a big undertaking, but it does have its benefits.

So from a technical standpoint, CQL specifies – simplifies the logic making it easier for the system to compute. But more importantly, from a clinical perspective, CQL allows for more flexibility in the logic with better timing provisions so that the logic can be better aligned with the clinical intent of a measure.

This screenshot is of the Human Readable. And so for those that are new to ECQMs, a Human Readable is the file format of the measure specifications for a person to read versus a computer. And the first thing I want to point out is if you look under the initial population, it's only referring to a single line, TJC dot encounter with principal diagnosis and age. So, this is a major difference from the QDM version where there were lines and lines of logic. With CQL, the logic is simplified into what we call definitions. And we titled these definitions using more natural language to capture the meaning of the logic it represents.

The second thing to note are the Definitions and Functions sections. I've bracketed these two sections together as building blocks, which I'll talk about more here in a minute in the slide, but collectively, these are all the definitions used to build the population criteria here at the top of the page.

This diagram depicts a visual representation of a CQL definition. So if you can imagine with me for a moment that these blocks are like Legos. And if you've never played with Legos before, you're given a set of directions that instruct you on how to connect several Lego blocks together in order to build some sort of structure. Well, we can take that same concept into CQLs where we have the clinical specifications as the directions to build definitions. And each of those definitions are then like Lego blocks – Legos or building blocks, where we use one to build upon another until we have a complete definition.

So, looking at the diagram, the definition we're building here is the initial population, which we define as C. Now remember, each block represents a definition. And each definition has a name and logic to represent a population criteria. So here in block A, this is looking for a specific encounter type. So, for example, an inpatient or an ED encounter. You'll also want to note that A is the largest block to represent the largest patient population.

So the idea is as we start building the population criteria, we want to start narrowing down the scope of patients. So now in block B, rather than repeating the encounter logic again, with CQL, we can simply pull in definition A into the logic, and then add the next criteria we are looking for. So in this case, a diagnosis. This is how we connect the definition together, by nesting one into the other. So then definition B now includes the encounter type and the diagnosis.

Now to reference the Lego analogy, we need one more block to complete the structure. We need an age block. So, we follow that same pattern where we connect B with age to create C.

Hopefully this shows how we build off of a definition so that each successive definition helps to further constrain the logic.

So now here in C, we have all the criteria we've defined, the encounter type, the diagnosis, and the age of the patient, and that's how C becomes the initial population.

So looking at this concept using real, concrete terms, in this example, we have three definitions to build the initial population. Starting with TJC dot non-elective

inpatient encounter, it's looking for an inpatient encounter. Then in the next block, all stroke encounter, notice how it starts with the previous definition. And then, add diagnosis criteria.

And then in the next block of encounter with principal diagnosis and age, we start with the previous definition, and then add age criteria. So then finally encounter with principal diagnosis and age is directly used as the initial population.

Now you can see how using this methodology of building blocks makes it clearer to read and allows us to reuse the definitions throughout the measure's specifications.

In the next slides we'll review some of the basic terms used in CQL. So, as I mentioned, CQL uses definitions, and all definitions have a name. And we try to use a name that captures the meat of the expression. So an expression refers to the content of the definition, so the logic. Now remember, we can reuse definitions. And the way we pull them into the logic is by creating a library. And libraries can be created at the measure level. So each measure builds its own library of definitions, but we can also create global libraries that can be shared across all measures. So we use library aliases to identify which library the definition came from. And as you can see, it's denoted as a prefix in the definition name. However, some definitions may not come from a specific library, so you will not see that denotation.

Now, looking at a basic construct of an expression, expressions use data types. Data types describe a part of the clinical care process which refers to a specific category in QDM. So, for instance, the encounter performed data type is in the encounter category. A medication administered data type would belong to the medication category.

Each data type has their own set of attributes. An attribute provides specific details about their data types. So, an example, dot relevant period, is an attribute of encounter performed. Meaning, the relevant period defines the start and end time of the encounter.

Next, we have a value set which specifies the kinds of data or codes that we're looking for relative to the QDM category. Ultimately these are the codes that logic is looking for in the EHR. So in this example, the value set of non-elective inpatient encounters consists of a list of (inaudible) codes. So to satisfy the logic, we would expect to see that any one of those (inaudible) codes are in the patient's records.

Lastly we have an alias. Aliases in expressions are used to give a source a name so that bit of logic that it's referring to can be referred to easily within the expression to avoid restating.

And just briefly, there is a terminology section in the human readable where you can see all the value sets and direct reference codes used in the measure. The Value Set Authority Center is where you would go to verify these codes using the unique object identifier, the OID number, to search for it.

One of the most common questions we get is what does union mean? Union is a CQL operator that combines two or more lists together. So in the diagram, any element in list A or list B will satisfy the condition. So, anything in red.

From this you can understand why we related union to meaning or because anything from A or B will meet.

And, just to clarify what lists are, lists are the result of what the logic is looking for in the EHR. So, let's take a look at the example here. The logic is looking for a diagnosis code of either preparation of uterus, or uterine window, or uterine rupture, or ectopic pregnancy. So what union does is it combines all the diagnosis codes into one list so that if the patient encounter has any one of the diagnosis codes, it will satisfy the condition.

Intersect is another common operator in CQL. Which is only looking for the common elements between list A and list B. So, the red depicts the shared elements between the two lists.

To add some context, let's look at this example. If list A returns a list of all inpatient encounters with age 18 years and older, and list B returns a list of all encounters with a CBC level, then the result of this intersection is a list of all inpatient encounters with age 18 years and older and a CBC level.

So that takes us to the end of the CQL basics where I will hand the baton over to Angela.

Angela Flanagan: Thanks, Mia. That was a great overview of CQL

So, now we'll move on to the ED measures.

So, one might wonder why emergency department measures even exist. The rationale for this is that the ED – emergency departments have experienced significant overcrowding. Approximately one-third of hospitals in the U.S. report increases in ambulance diversion in a given year, whereas up to half have reported conditions – overcrowded conditions in the emergency department. Overcrowding and heavy emergency resource demand have led to a number of problems including ambulance refusals, prolonged patient wait times, increased suffering for those who wait, rushed and unpleasant treatment environments, and potentially poor patient outcomes.

When the EDs are overwhelmed, their ability to respond to the community emergencies and disasters may be compromised.

In this presentation, we're going to look at the changes specific to the ED measures, review the components of a continuous (inaudible), explain the logic changes to the specific – specific – specifications, sorry, related to the ED-1 and 2 measures, and share some of the most frequently asked questions, and then Q&A.

If you are familiar with the ED measures, you may have noticed these changes. We replaced the QDM logic with CQL logic. Replaced the word stratum with stratification to align with the Clinical Quality Language based Health Quality Measure format.

To conform with QDM 5.3 changes, we replaced the discharge status attribute with discharge disposition for encounter performed. Replaced transfer from with admission source, also for encounter performed. We removed the less than or equal to six hours timing constraint which had been used to ensure that the ED encounter and transfer from, where the patient had come from, occurred on the same day. But with CQL we can use logic to tie the admission source and the ED encounter.

We added supplemental timing attributes to most data sites in QDM 5.3 to facilitate accurate retrieval of time-related information within CQL logic. So timing attributes now include time intervals such as prevalence periods, and relevant periods, and actual time of documentation, the author, date, time.

Prevalence period is used with the data type diagnosis, allergy, and symptoms. These more accurately define the onset and abatement times.

And the relevant period is the general or the default method to describe the start and stop time. It is used with about 13 data types such as the encounter performed, procedure performed, and medication active.

Changes to the value sets include – include revising the name of psychiatric mental health patient value set to psychiatric mental health diagnosis, since that is what is included in the value set.

We also added six ICD-10 codes, deleted one ICD-10 code, and deleted five invalid SNOMEDCT codes.

The ED measures are about reducing the time the patient remains in the emergency department, which can improve access to care and increases the capability to provide additional treatment.

ED-1 is measuring the time from the ED arrival to the department to inpatient. ED-2 is measuring the time a decision to admit is made and the time of departure from the ED for those admitted to inpatient. Both measures are continuous variables.

Since both measures are continuous variables, we'll first look at the components of such. A continuous variable is a variable that may take on any value in an interval. The variable in ED-1 is the minutes between ED arrival and ED departure. This time will vary from encounter to encounter.

In a continuous variable measure, the initial population is roughly equivalent to the denominator in proportion measures. The measure population is a subset of initial population and is roughly equivalent to the numerator in proportion measures.

The measure observations describe the computation to be performed over the members of the measure population.

First, the episodes of care are classified using the initial population criteria, and those satisfying the criteria are included in initial population. Then the members of the initial population are classified using the measure population criteria. And those satisfying the criteria are included in the measure population.

Then, each member of the measure population is evaluated according to the criteria defined in the measure observations criteria. And all of these results are aggregated using the specified operator.

For example, a measure may compute the median for the difference between emergency department discharge and admission time for an individual encounter falling into the measure population and not in the measure population exclusions. And then, over all ED visits in the measure population.

So, we just mentioned that results are aggregated. What is an aggregated calculation? It is the combination of separate units or items. For example, an

aggregated calculation may calculate an encounter duration in minutes for each encounter in a measure population, and then report the median time for all calculations performed.

Another component of ED measures include stratification. Stratification is to place in strata, or to arrange or divide. It describes the strata for which the measure is being evaluated. It could evaluate measures based on any age group, a specific condition, a specific location, or even more than one of these. For the ED measures, stratification evaluates the ECQM based on a specific condition, those with and without primary mental health diagnosis.

So now we'll look at ED-1 in a little more detail. This is version seven that's used for the 2019 reporting period.

This measure is assessing the median time for emergency department arrival time of departure from the emergency room for patients admitted to inpatient status from the emergency department.

Initial population includes inpatient encounters ending during the measurement period with a length of stay that is the discharge date minus admission date, less than or equal to 120 days, and preceded within an hour by an emergency department visit.

So let's explore this logic.

We will look at the initial population logic one block at a time. But first let me bring a couple of things to your attention.

The first one is you may see the blue call out with the word Comment at the top in the upper right-hand corner. Comments can be used to explain what a block of logic is assessing or calculating. Comments are enclosed with a forward slash and asterisk at the start, and then an asterisk and forward slash at the end. Comments have no bearing on the logic.

And the second one is that each block of logic is given a name. The names are shown here in blue. Initial population, inpatient encounter, and global length in days.

So starting at the bottom of the slide with the block global length in days, this calculates the length of stay for a particular encounter. The difference in days between the start and the end of the encounter. You may recall Mia explaining the word – the TDC or the library. In this measure we use global, and it precedes the length in days. (Inaudible) that these are an alias, part of another library. Global is part of the map, global common functions library. That was a library that was developed for measure developers to have easy access to blocks of logic that are frequently reused throughout several measures. Global is the location of the logic it precedes. And in this case, it's the map global common library.

And the next block up is the inpatient encounter. This logic determines if the encounter stay was less than or equal to 120 days and during the measurement period. Below the comment, the encounter performs data type with this value set encounter inpatient is used to constrain the encounter to only what is in the value set.

The next line determines if the length in days of the encounter relevant period, the start and stop time, is less than or equal to 120 days. Since the length in days

provides the logic, the actual logic, for counting the number of days, it's used in this block of logic (inaudible) its name in yellow.

So only the name is needed. There's not – there's no reason to repeat the entire block of logic.

And then the last line in this block also uses the encounter relevant period to determine if the encounter ended during the measurement period.

And then moving up to the top block, initial population. This block uses the inpatient encounter block of logic, seen in yellow, followed by the alias encounter. This is the logic to determine if the encounter was 120 days or less and in the measurement period.

Then we add logic to determine if the inpatient encounter was preceded by an emergency department visit. The inpatient encounter with an encounter performed emergency department visit. We give the encounter performed emergency department visit the alias ED visit. That's seen in mauve. And use that alias with attribute relevant period, such that ED visit relevant period – ED admission time to ED discharge time – ends one hour or less before the start of the inpatient encounter relevant period. That's the inpatient admission to inpatient discharge time. So the one hour or less is calculated using the hospital admission time minus the ED discharge time.

So, putting it all together, the intent of this logic on this slide is to capture inpatient encounters that ended during the measurement period with a length of stay less than or equal to 120 days and is within one hour of the emergency department visit.

This is the measure population. And the measure population is the same as the initial population. So, initial population appears in this measure population section.

The measure population exclusion. The measure excludes admissions that came from another facility. This logic is constrained by the value set hospital setting, which aims to capture if the patient is transferred to your hospital from an outside hospital where he was considered an inpatient or outpatient. If so, this patient would be excluded.

The first part of this logic, inpatient encounter, is the same as the inpatient encounter that we discussed for the initial population. It is reused here. And is the logic that determines if the patient's stay was 120 days or less and during the measurement period.

For consistency, it is also given the alias encounter.

The next part starting with aims to constrain the inpatient encounters to those that had an ED visit within one hour of admission and had an admission source, the location or site from which the patient just left, from one of the settings as indicated in those value set hospital settings.

Measure observation. Measure observation is the time, in minutes, from ED arrival to ED departure for patients who were admitted to inpatient from the emergency department. This logic calculates the median time from arrival to departure for an ED encounter which aggregates the time in minutes. The median is the middle of the value set, not to be confused with an average.

This logic looks short and sweet here, but it includes several blocks of logic within it. Let's take a look.

Okay, this might look a bit intimidating, but we will look at each block one at a time, and hopefully this will ease any anxiety, and hopefully you'll begin to feel more comfortable with the CQL logic.

So, again, let's start at the bottom.

The bottom block is global hospitalization location encounter encounter performed function. This can be used to find encounters that were in any location of the hospital. But for this measure we are looking at – for those in the ED location. So, the logic assesses if there is a single, or singleton ED visit that occurred within one hour of an inpatient encounter. And if so, return that encounter location.

Moving up one block, this is the emergency department departure time function. This function uses the global hospitalization logic, the one we just discussed, that provides the hospital location to determine if it is in the location that is in the ED value set. And if so, what was the end time for that location. We use the (inaudible) location because the time period uses arrival and departure time.

So the logic determines if there was an ED encounter that was within one hour of an inpatient admission, and if so, what is the departure time from ED.

Okay, so let's look at the next block of logic, which the global hospitalization location encounter encounter performed function. This is the same name and logic as the one at the bottom of the slide. Exactly the same. Is there an ED visit that occurred within one hour of an inpatient encounter, and if so, return the location.

The fourth block of logic from the bottom, or the second one from the top, global emergency department arrival time encounter encounter performed, includes the same logic as the second-from-the-bottom, emergency department time, except, instead of using end of last, because for that one we were looking at the department time so we were looking at the end of the last encounter, ED encounter, departure time. For this one we're using the start of. This provides the start of the ED location arrival time.

Now that we have a block of logic that calculates the ED location arrival time, and another one that calculates the departure time, we use both blocks of logic, global emergency department arrival time, and the emergency department departure time, to create another function to calculate the interval. The amount of time from arrival to departure of the ED location. This block of logic is named arrival – arrival and departure time.

Okay. So now that we have logic to calculate the minutes from the ED arrival and for the departure for encounters of patients who were admitted inpatient from the emergency department, we need to ensure that the ED encounter that – ensure that it is the same ED encounter that preceded the inpatient stay.

So for the observation calculation, we need the median of the duration in minutes of arrival and departure times of an ED encounter, which is all the logic from the previous slide rolled into one block.

But we need to ensure that the encounters are related. That is, are we calculating the ED facility location encounter that was the last or most recent ED

encounter that ended within one hour of the start of the inpatient encounter. Of the encounter relevant period. To determine this, we add the related ED visit functions to do just that. This logic then sorts these encounters by the start of the relevant period.

And the last part of the logic for this measure is stratification. The total score should be recorded along with the strata.

Here we are determining if the encounter is meeting the measured population, and not the exclusion. Do not have a principal of psychiatric mental health diagnosis value set.

The inpatient encounter is the same logic discussed earlier, inpatient encounter less than or equal to 120 days during the measurement period. We are reusing it again and have given it the same alias of encounter and then constrain it to the encounters where either the principal diagnosis is null or not in the psychiatric mental health diagnosis value set.

Stratification two. And this one is the same logic except that we want to know who do have a principal diagnosis of psychiatric mental health diagnosis value set. Again, it is using the inpatient encounter, with the alias encounter, where the principal diagnosis and the psychiatric mental health diagnosis value set.

Here we have the value sets for ED-1. Value sets align with the measure intent. The psychiatric mental health diagnosis value set has more than 2,000 codes. Whereas the emergency department visit only has one code and is used in several measures. The encounter inpatient value set has three codes and is used in several measures.

Value sets may change with annual update based on terminology revision.

So it's known as CT, or ICD-10, or (inaudible), retire or make a code invalid, or create new codes, we need to modify the value sets.

Next we'll review ED-2, Median Admit Decision Time to ED Departure for Admitted Patients. This measure is assessing the median time in minutes from admit decision time to the time of departure from the emergency department for an emergency department patient admitted to inpatient status.

In ED-2, the initial population aims to capture inpatient encounters that ended during the measurement period with a length of stay, discharge date minus admission date, that is less than or equal to 120 days. And where the decision to admit was made during the preceding emergency department visit at the same physical facility.

Again, starting at the bottom, ED visit with admit order. This logic aims to capture ED visits with an encounter order, a decision to admit to the hospital inpatient. Looking at this block of logic, we start with the encounter performed emergency department visit, giving it the alias ED visit, and then using the operator with – with encounter order of decision to admit hospital inpatient, giving it the alias admit order. And saying (inaudible) the admit order author date time is during the ED visit relevant period. And that the admit order author date time is before or at the same time as the departure from the emergency department.

Moving up to the next piece of logic, global length in days, which we already know calculates the days between the start and end dates.

So moving up from here is also the logic that we have already discussed, which is the intake and encounter. That one calculates inpatient encounters that are 120 days or less and during the measurement period.

So now moving up to the top – top of the page, the initial population. This includes the inpatient encounter block of logic, with the ED visit, ED visit with admit order, which is given the alias ED admit order, and (inaudible) that the ED admit order, relevant period, is one hour or less before the start of the inpatient encounter relevant period.

The measured population for ED-2 is the same as the initial population.

ED-2 has the same exclusions as ED-1. That is, excluding admissions that came from another facility. This logic is constrained by the value set hospital setting, aimed to capture if the patient is transferred to your hospital from an outside hospital where he was considered an inpatient or outpatient. If so, this patient would be excluded.

The measure observation is the duration from the decision to admit to the departure from the emergency department. This logic assesses the interval or the length of time from the decision to admit to physically departing, or leaving, the emergency department. Of course, this is for those ED encounters that were followed by, within one hour, an inpatient admission.

Let's look at the admit decision logic first, and then the departure time.

At the bottom we see the related ED visit logic similar to the one we used in ED-1 measure observation logic. The only difference is that this one has logic to constrain the ED encounter to also include the admit order. So the last ED visit with a decision to admit to hospital inpatient, author, date, time, that was during the ED visit relevant period, and an ED visit that was within one hour of the inpatient admission.

Moving to the top, the admit decision is logic to constrain the admit order to the last or most recent decision to admit that was ordered during the related ED visit relevant period. Then sort by author, date, time.

Here we have the departure time logic. Same as the departure time logic in ED-1. It assesses the end, the departure time, of the last hospitalization location encounter where the logic – where the location code is emergency department visit from the emergency department visit value set. And, again, we need it to be an ED visit with a decision to admit order that preceded an inpatient encounter. The logic uses last to capture the most recent ED visit with a decision to admit that was prior to an inpatient encounter.

Stratification one. ED-1 and ED-2 have the same stratifications. Both of them are – for stratification one, we're looking to see if the patient did not have a principal diagnosis of psychiatric mental health from the psychiatric mental health value set.

Stratification two. My apologies, but it appears that I have duplicated stratification one logic on the slide for stratification two. As the narrative reads, stratification two are encounters with a principal diagnosis that is in the psychiatric mental health diagnosis value set. The stratification two beginning with where the logic should read – where – so if you look at the actual logic towards the bottom, and the part where – it's beginning with where – where. That logic should actually

read where encounter principal diagnosis psychiatric mental health diagnosis. And then there would be no third line.

These are the same value sets as ED-1 except decision to admit to hospital inpatient value set is included here. The decision to admit value set has four codes. And, again, value sets are primarily based on – those changes are based on terminology revisions.

So now we'll take a look at some frequently asked questions.

This question is asking if you have two data points for the ED end time, which one should you use, the earliest or the latest. So the encounter performed emergency department visit less than or equal to one hour ends before or concurrent with the start of the end patient encounter assesses the ED discharge date time. For this instance, the discharge date time is defined as the date and time that the patient was discharged from the emergency department encounter. If there is more than one discharge time, use the one closest to the end patient encounter admission. Please note that the discharge time and departure times are different as the departure time is the time the patient physically leaves the ED.

This one is asking about the documented decision to admit order. So, we do have a discrepancy between the narrative and the logic in version seven. The narrative reads the earliest, but the logic reads the last. And the last is meaning the most recent. The intent of the measure is to capture the time a decision to admit was made prior to an inpatient admission. However, with possible multiple ED encounters prior to being admitted inpatient, and possible multiple date times for decision to admit, we've determined that to answer the decision to admit is within the most recent ED encounter, it would be best to use the latest of both. The most recent, or last, ED encounter, and the most recent, or last, decision to admit. Let's look at some examples.

Here we have two ED encounters that include a decision to admit during the ED visit. Both decisions to admit are with one – within one hour of the inpatient admission. The intent of the measure is to capture the decision to admit that initiated the inpatient admission. Encounter one did not actually admit the patient to inpatient status because the patient refused to go. The second time the patient arrived at the ED, he decided it would be best to go to the hospital inpatient. This would be the 8:15 time decision to admit that is within the ED encounter prior to the inpatient admission. This would actually be the most recent or latest ED encounter with the decision to admit prior to inpatient admission.

This slide also demonstrates why the logic in the ECQM uses last for decision to admit. If the first decision to admit was used, and so first was used in the logic, then the first decision to admit that is within one hour of inpatient admission, that would be this time at 7:45 a.m. from encounter one. That would be the decision to admit that was used in the measure, but we need it to be the one from encounter two, so we use last.

This question asks what is acceptable for the decision to admit. The decision to admit order date time and bed request date time are acceptable. The guidance section in the header provides decision to admit, could be an admission order that is maybe an operational order rather than the hospital admission to inpatient status, or it could be a disposition order, but it must explicitly state that it was to admit. It could be documented bed request. Or documented acceptance from admitting physician. This is not bed assignment or the report call time.

So considering the guidance just mentioned, if we look at these events and timing, we see that the bed assignment would not qualify. Inpatient disposition order does not explicitly say to admit, so it does not qualify. The decision to admit unspecified as an order – if an order – if it was an order. The other decision to admit is after the ED departure. So the only qualifying decision to admit here is the decision to admit at 8:15.

This question is about the timing of the ED visit and inpatient admission. The ED visit relevant period is the admission discharge time from the ED. Therefore, the ED discharge time should be within one hour of the inpatient admission. The measure observation considers the facility location, arrival, and departure time. Let's take a look.

This is just a high-level overview of the encounter timing. Initial population assesses the length of stay using the inpatient discharge time minus the inpatient admission time. And it's looking for that less than or equal to 120 days.

The initial population is also assessing if the discharge date time to the inpatient admission time is less than one hour. And the difference is the measure observation assesses the facility location departure time minus the facility location arrival time.

The question here is asking why the decision to admit value set includes hospital admission for observation. Because the measure is looking for the time between when a decision is made to admit, essentially move the patient out of the ED, to when they actually leave the ED. A status that results in moving the patient out of the ED to a hospital bed is acceptable. So observation meets that criteria.

This question is about observation status and whether those patients are included in – if they are included in the observation. ED-1 and 2 assess those patients who were admitted to inpatients. Observation status is considered to be outpatient, and therefore it is not included when assessing inpatient status.

Just quickly here, this one – this – the initial population logic starts with determining an inpatient encounter with a length of stay of 120 days or less and ended during the measurement period. This part is performed first and does not include observation codes. Once that is captured, then determine which of these encounters have an admit order. The admit order value set does contain an observational code.

We are running out of time here, so I think we will skip so that we have an opportunity to answer some of your questions. We can go to the Q&A.

Lisa Anderson:	Yes, I'm sorry. We had a technical difficulty. Yes, thank you, Angela, for your great presentation. And we are running out of time, so we're actually going to skip the live Q&A. We did answer quite a few questions in the slide deck – or that were going on while we were going through the slides. We're going to skip through to the resources in the – just due to lack of time.

So, I've skipped forward to resource slide number 65. Sorry. And before – um, okay.

So, the ECQI Resource Center is a one-stop-shop for ECQM-related information. It houses the various tools and resources such as the measure specifications, the technical release notes which describe all changes made during the annual

updates process and the addendum. The measure flows to help understand how the data is processed. Links to the QDM NCQL standards. As well as previously-recorded webinars and slide presentations. There is also an event calendar where you can find additional educational sessions. The Value Set Authority Center is where we store all the value sets and direct reference codes used in the measures. It does require a license, but it's free to the public.

As we continue on slide 66 here, in number three, I just want to call this out. We are frequently asked about how to implement CQL from – from vendors and other implementers. There is a presentation from (inaudible) from 2018 called Getting Started with CQL Technical Implementation for Vendors that provides an overview of the CQL architecture, building a CQL execution engine, and using open source execution engines. A newer version will be coming out during the upcoming (inaudible), so more details to come.

Items four and five are quick links that will take you to the JIRA site to submit questions or comments specific to CQL or the ECQM measures.

And lastly, in six and seven, the links are to the Pioneers in Quality portal, where you can find all the previously-recorded presentations and slides and register for the upcoming educational sessions.

We – sorry. We are skipping the Q&A session, so like I said, we were able to answer some of those questions in the Q&A pane, and we will answer the rest of those in our final transcript.

The slides are available for download still, so to access the slides, see the Event Resources pane, click on the triangle to open the list of PDFs, and select the slides for todays' session. A new window will open permitting you to save or print to PDF.

Okay. Please visit the Expert to Expert Series landing page which includes the registration links for future sessions, presentation replays, slide decks, and Q&As. All registered participants will also receive an email to these links when items for the session are available.

Our next session addresses VT-1 and 2. Please register and join us on February 26.

Here is some general information about the Pioneers in Quality and proven practices which can be found at this link on this slide.

If you qualify for CE credit, please complete the survey you can access via an automated email you will receive tomorrow. The evaluation will close approximately two weeks from today. Once the survey closes, all those that complete the survey and are eligible for CEs will receive an email with a certificate for download or print.

Thank you to everyone who took the time to present at today's webinar, and thanks to all of you who listened in. Have a good day.