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Please stand by for realtime captions.Good afternoon Mrs. Paik Gilbert I am the task lead for the Great Plains Quality Innovation Network. Welcome to our webinar today what's good with all of this data. I would like to think Jean Roland from North Dakota. This topic is one that is very special to me. I am one of those odd people that really enjoys statistic. I have really enjoyed the journey over the last six years, since there has been mandatory reporting a national healthcare safety network database. We have been gathering all of this rich data, that is very usable for quality improvement and for trending for our facilities. I have been encouraging the last couple of years, to use this data for quality improvement and to help prevent infections. I want to show you some of the reports that I have found to be especially helpful. In doing the work of quality improvement. To start out today, I will mute the lines. At the end, as we have time, we will take questions. If you do have a question today, please do not hesitate to put that into the chat. It will be monitored. Let's get into the analysis feature that is on the blue bar from the homepage there are a lot of slides in the presentation. We will not be spending a lot of time on them O but I wanted to make sure you could use these slides as a reference. Of course you have to sign in. One of the key things you have to do to use this analysis section of the and as each and database -- the first step is to generate data that. That is why it is the first step under analysis. It pulls your information on the CDC servers, so that it is available on your computer, in order to generate reports. This can take anywhere from a few minutes to half an hour. It all depends on how much data you have entered. Once that is done you then go to the section called output options. This is where you find the reports that are available for your analysis feature. This is just what the main page, or what they call the tree looks like you will open up the tree depending on what type of report you want to do it is all formatted on the different modules in HSN. When you click on the folder next to devices, that is where you will find the reports on what you expect. Procedure associated module, that is where you find your SSI reports etc. You keep clicking until you find the report that you want. There are two options when you click on the report, when you get to the one you want run -- if you click on that, it gives you all of the data for that particular area, for the last 3 years. The button next to it is called modify. That allows you to tailor that report, with certain time periods that you want. I almost always use modify. Let's go through when you click on modify, how you can change your report, so that it is most meaningful. And you are not waiting through more data than what you want to do. At the very top of the screen, you are going to find -- I am using as an example, the line listing report. There are two different areas where you can export the data for your report. At the top, is where you can export all of the data that is used that is relevant to that particular measure. You rarely want to use that particular export feature. In the second section, it allows you to modify your output characteristics, such as the title you want to get to the report. And what format you want to do. We will go into more detail on these different areas. Middle section allows you to specify which data to consider and how to filter it. You can filter the output that time and by lots of different criteria. The bottom section allows you to specify how the data will be displaced -- displayed in organized. Came back to the export data feature, if you click on export top of the screen, it gives you the option of what method you want it exported to. I frequently use Excel. I think that is personal preference. I am comfortable with Excel. This gives you a lot of data. There is an export button at the bottom of the screen. That will only export -- if you use the filtering options I mentioned, it will only export those columns rather than pages of data this is a quick thing. In the middle of it one of the things I think it is important to check. It says use variable label's. That is because your headings will come out to something you might recognize. Otherwise it will use things, rather than the CMP. It says record of incomplete admission readmission module. Date of birth. The other thing I like to use -- a lot of times from these reports, I simply copy and paste them into a PowerPoint slide. And I do not have to redo my headings. It is something understandable. When you select a time period for the analysis section you have to put it in the way they want it. By year is simple. When you want to put in a quarter you have to put the year first. The system will fill in other information. As you can see, for half a year it is this way. I see in the chat that we are not acting found -- sound. Could someone enter into the chat whether they are hearing me or not? Hopefully that is an isolated problem after you put in the date you want to specify other selection criteria. You may want to and you may not want to. I want to show you how to if you want to. The thing that is important is that you do have to use the top column. Then that further filters it by putting what you want in the particular cell. We will look at that closer. What you would use in that area is defined by the section here where it says click variable reference list. You will get a lot of shorthand in the list. It is hard to know what they are using. If you click on this and open it up, it will give you a reference guide as to what all the labels mean I would encourage you to not actually rent this. Because it is pages long and they do update it regularly. To click on the top cell you will get the variable list and you choose what it is. And what you want with that list. I want to look at a particular CDC location. And I need to select what the location is. I want to look at my critical care. You can further, operationalize that. I specifically wanted just that one area. There are different operators that you can use. If you use and, you have to put in a specific value. In order to make this work, you have to use CAPS only . I use In a lot. If I wanted to select all of my different medical surgical locations, I would select In in a drop-down of my locations would come up . I could select what I want. If I just want my Ed dealt ones or pediatric ones, or what the report is about here is an example of how this might be filtered. I filtered it by date, I want it by quarter and I wanted displayed first quarter through fourth quarter. Only want my different medical searchable critical care areas. What do I want to know about them? What variables do I want included in my list X this is where I can choose those things. Modify variables to displayed by clicking modify list. You click on modify list and you're going to get this huge list of variables. When you click on your task, you get an option for CDC defined. The CDC picks out some variables for you that they think might be usable in your report. Sometimes they use them and sometimes I do not want them. Sometimes you click on all and it takes them out of the box. Then I hand pick and select them over to the side only the variables from this side are the things that will be in my report. Again, all of the variables -- you can see what they mean on the variable list. I can move further on how do I want them sorted? I can choose what column I want first by highlighting and moving it up. If I want something displayed on the left side I can move it down. I can organize it that way. You can further support -- if you want things grouped together -- together by one variable, the last page allows you to do that. I told you a lots of information on how you can change your reports and make them specific to your organization. Let's practice one. I probably made it sound more complicated than what it is. What good is this data? Let's look at a scenario your infection prevention committee wants to know the most frequent pathogens causing CLABSI's in 2015 and if there were any mucosal barrier injury cases that will be excluded? Those types of pay-for-performance programs. What do I want to look at?. To get that information for your infection control committee, that you use a line list it is the most customizable report. Since we want to know about CLABSI's we would go under device associated module. Click on that and go under blood infections and choose line listing all CLAB events . Because I want a particular timeframe, I click modify. I modify the time for admit date and put in 2015. The ending date is 2015. I want to use my variable label. What they have asked me for is a specific event. They want to know about the injuries and what are the types of pathogens. And then, for quality improvement, the variable I use -- because a lot of things like CLABSI's, give me a better idea of are we having insurgent issues or maintenance issues? I frequently do that. It tends to be something of interest. A lot of times the length of stay is 55 days and those are ones that are pretty tough to prevent. Select order in your line listing and defined my pathogens I want them grouped together. We want to know how many different types of organisms there were. This is what my line list ended up looking like. The event was LCB I. The next column was the barrier. You could export this two XL and sort it by this column. Easily count your yes and no to get the question answered for your committee. Then it lists by the primary organism. Just a question of counting. There were not very many. Some had a secondary pathogen. Most do not. Then, to answer, especially on the injury patients, admit. Have this information for your infection control. How many, which ones will be thrown out, what is your primary organism? Facetiously I put clapping people on the slide. Most people are not clapping when I start to talk about this. I happen to like them and it took hours to pull to help understand. I think it is important when you are doing reports that you understand the statistics that has generated I do want to go through these particular statistics and what they mean and how they should be used for quality improvement. Let's talk about what incidents density rates. It is a statistic that is generated whenever you do a type of rate report at NHSN. The numerator that is used to calculate and IDR is the number of new cases during a period of time. That is going to be you number of infections. Your denominator is the persontime during that same period of time, the population at risk most of the time the population at risk is the person who has a catheter, ventilator etc. a catheter, ventilator etc. What makes it it a IDR is that it uses a multiplier for interpretation. What that multiplier is in NHSN is the location and the module. It is the numerator, the denominator, usually your line date, and then a multiplier for interpretation. Let talk about why we use rates. Rates are generated by a set time period and can be changed at any time. It will always be calculated. This is good for small facilities, who do not have a big enough volume and SIR is calculate it. Rates are more easily updated annually and a lot of times are used as benchmarks and quality improvement because they can be generated and followed month to month and quarter to quarter. Whereas other statistics are more difficult to follow. During those time periods. Rates, a big caution, is they should not be combined for locations to get an overall rate. I get that question a lot. My committee wants to know what RSS I rate was for 2015. Are committee wants to know our rate for 2015. Rates cannot be combined together I will show you the statistics that can be used that way. Going back to the rate report, one important part of it is we are walking down the report a little bit we talked about the numerator. We talked about the denominator. How it calculate. What is your facilities instanced density rate compared to know whether it is good or bad? What is compared to is the pooled mean, it is not an average mean. It pulls the data within that particular location type. I know we talked a lot over the years about making sure you match your locations correct -- correctly picked this is one main area where it is important to know that you have done that. Because otherwise, that pulled mean -- you will not be comparing it to the correct type. What is being compared is your facilities rate, by location, to the NHSN pulled mean for that same location type. This box, anything yellow on the report means coming from NHSN . And where does that pull come from it comes from the NHS in data reports that are published. You can get those online. For medical critical care unit the pulled mean is one point to you can get the NHSN pooled mean for all locations. It is letting you know the statistical significance. Whether it is different than what would be expected. NHSN uses a p-value -- NHSN -- p<0.05 . It is a cutpoint that is considered significant. Next to that is an important statistic. Is probably underused. That is the percentile. It is the exact percentile of where your rate falls on a published distribution list. This has been a meaningful statistic. When I have gone in front of infection control committee's and I have been invited to help them recognize that they really have gone outside the box. If you are at an incident density percentile of 100, that means you are in the highest distribution that you can possibly be an. You do not want to be there. Nobody wants to be at the top of the list when it comes to having the most infections. The percentile provides a value of where your distribution falls at or below. More weight decision should be given to the results of percentile distribution, as they are not subject % -- potential waiting to show where you are at in comparison to the destination. The other thing I like about rate reports is that it also gives you device utilization ratios. This assesses a portion of days in which a patient was at risk for device associated infection. A good process measure. And what it is in numerator is the line date over your patient days. What good is all of this data? You can report off of this report that you have done, here on the rate table for this intensive care unit, is during the first quarter, there were six central line infections. 730 central line days, dividing the number of events by the central line days, the Clancy rates was a point to nine. Our classy rate is statistically higher than that in H then central mean the p-value is p<0.05 in the NHSN pooled mean is less than the 100th percentile. We are at the 30th percentile amongst all ICUs. Request root analysis by the cloud team as they reach an acceptable level. Are infection rate is high. That would be one way this could be used. What do we just learned? We learned device associated models show density rate as a statistic ticket is a good monitor for quality improvement and it calculate even in small volumes. You can get any designated time period. Incident per percentile is a better comparison for quality improvement. NHSN pooled mean are not an average. How do we run a rate table. --? Output option, choose rate table for the type of device associated module that you want. Modify it, for whatever time period you want and then you can get your facilities rate against the NHSN value , to know whether it is significant or not. You can get your device utilization and find out where you are falling against the rest of the nation. However, everybody talks about standardized infection ratios. They do not talk about rates, because those are the things that are used in public reporting so let's talk about those for just a minute standardized infection ratios are the number of observed associated infections over those that are expected. They are known for a number of measures that we evaluate. This is a statistic that you can combine for an overall rate. Standardized infection ratio for your facility lots of things affect your M IR, so when you change your data, you can change anything within the database it can affect your SAR. SAR interpretation, one equals the same number of infections that will be predicted given the US baseline data. I want to caution you -- expect that what is in the system now is based on old data. We are in a period of three baselining. The national standard says for SAR for Clancy is no longer one. What is expected as much lower than that. We will see how that changed dramatically when they released statistics this fall. Right now, greater than one is more infection reported that what would be predicted. If you have an SIR greater than one, say 1.25, you would report that as 25% more infections than expected. If it is less than one, such as SAR .5, that would be 50% fewer infections than expected. The next statistic next to it is the comparable used 95%. Both p-value is calculated on SAR report, along with confidence interval. That is showing you that if our confidence interval numbers, upper and lower cross the one line, and it is not different. If it does not cross the line either lower or higher than it is statistically significant. Let's look at an SIR report. Is a click option, I will click the type of report. Using our device associated module, and their different kind of SIR reports, it is a risk-adjusted summary measure and you want it to be under one. It will not be calculated at the expected number of infection is not at least 1. Otherwise you will not get a report. That will be changing with three baselining, I am told. You only have to have an expected of point 2. Which will be great. It will make the SIR ratio a lot more useful. Especially for smaller facilities. Let's look at a SIR report. I have the gear, the month and the number of events in infections. The number of its acted, .1. This is the number of central line days. SIR of a point 19. P-value 104. Confidence interval 1.012 1.0122 1.012 2.0312. Is a significant or not? How do we know? We look at the p-value which is less than .015 -- p<0.05 . We can see that it is high and it is significantly high. Again it is used in our pay-for-performance program. This is the statistic that is used in CMS reporting and is also used to give you your star rating on hospital compare. This is just a little function within the analysis action. I wanted to mention because I am finding it increasingly useful. As we look at our data, I get asked, are we better or worse than last year? Statistics calculator can tell you that. Let's say that in 2014, this was our SIR report for our facility. In 2015, there were center line infections on this report. What we can do is compared to standardized infection ratio's. Click on statistics calculator and put in that data in data source one. And data source to ditch. Click calculate and it generates a little report it tells you the things are looking up before. 95% confidence interval. .8 .82 2.2. What do we say if it crosses through one, and p<0.05 . With confidence, we can say our cloud see rate -- are CLABSI rate did not significantly increase in the time range. Again, this is a way we can say that when we want to report. I wanted to give you some words to use, so that you will feel comfortable to share this data to your committee and to your administration. Use the statistics calculator to compare one year to the other. One quarter to another. If you are within a multi-facility system. You do need to keep common variables involved. Let's talk a minute about surgical site infections in a standardized infection ratio in the difference. If SIR is with summary measure -- the procedure risk is calculated by risk module. It is based on fairly old data and we're anxious about the re-baselining to occur. The risk factors are listed on this site here. I will not read them. There are three types of SSI SIR reports. There is a professional one. This complex readmission one has the most variables. It has all the variables that they found when they did the research for which ones are statistically significant. The complex 30 day SSI model is the one that is used for CMS reporting. It only includes in plan greater than 18 years old and only includes primary and organ SSI and risk adjustment age and ASA. That is why you can get lots of numbers. There are exclusions from the SSI SAR reports surgical site infections are excluded. Then there are some specific variables that would make a case be excluded here are universal ones that would exclude a case from an SIR. What good is all this data? This really helps us evaluate trends in SSI gives us a national benchmark. It also gives you good reports for your board. If you put in the searching code when you put in your denominator data, it will also help you generate report cards for your surgeon. Let's do an example of one. Doctor Lu ribbon does all the easy cases and Dr. Placement Trophy complains why his numbers do not look as good as because he does all the hard one. What would you do to evaluate this complaint. What you could do is go to procedure level because that's where your SSI reports will be held at. All your surgical site data. Then look at a line listing of all your procedures. The risk model -- I told you there were three different types. You could evaluate them by all three. You would then select those three from the variable list pull up the variable list and pull them over to that side. Then you run it by surgeon code and you can see the surgical risks for each of their procedures. And look at the summary of those. And easier way of doing that would be an SIR report with the summary year, number of counts, to see where the number is expected for each of them. By the three different types. And you could see the difference between the three different types. P-value -- p<0.05 for either one. Not statistically different. You could use your statistics calculator to put one against the other. I really like frequency chart and I use them quite a bit when I'm sharing data with my hospital. They are a nice way of knowing, for example, if you have a large enough facility where you have reported several different types of SSI's, hundred different codes, you can show what the number is of each one. Where you that most frequently is with C Diff reports to show how many are community required, how many are onset, how many are health onset. You can look at them by year or by quarter. Frequency charts are really simple to do because NHSN does a lot of the work for you. You choose a frequency table , what type of your you want. I wanted 2014 and I wanted to end in 2015. I wanted the row by year. We saw that. The row is by year. I wanted the column I onset. It is them by facility. You can see the column is by onset. And then total. You can see how many you have each year pick it is a good way of evaluating the ongoing issue of C Diff once you've figured out a report, you look at it and see this is one I can keep doing and giving back to my committee work you can save what you did that. At the bottom of the page there is a save as. All you have to do is at the top, give it a new name. You cannot give it the same name that NHSN gives it . That is their name only work you need to say frequency report for C Diff event or whatever you want. Give it a new title. Then, you want to click underneath the date modification area, enter date variability time at the time you click a button at the time you go to save it. Because what that will allow you to do -- it will place that reports with the new title underneath my custom output. When you modify, you will just change the date and click run. You will do the report done the same way each time. It will be really good for trending from one quarter to the next quarter etc. etc. This is an area that I am encouraging our hospitals to do. Make sure they are validating their CMS custom. You are held responsible for your CMS submission. You want to check your data prior to the quarterly date -- deadline. We have on August 15. Print the data. After that point in time, it can change. What those two CMS at midnight on the deadline date does not change. Even if you change cases within the grouping. How you do CMS reports is on the report tree, click on CMS reports. Depending on the type of facility you are, such as in acute care hospital, you click on that. Then you would click on what type of report you are going to do. We are looking at first quarter 2016. I would modify it. Put in that timeframe rather than putting in first quarter 2016, always put in -- you do it by month. Do it for 2016, put January 2016 through March 2016. You make sure that your data submission is in there for every single month. Otherwise, if you just put in first quarter, it may show that you have data, but you might not realize that one month of data is missing. I have seen that very frequently as I checked data over the years. Then, you would do that for each of the different measures that you report. To make sure that they are there. On the SSI report, it is important to scroll down clear to the bottom of that report. To see if there is any incomplete procedures not been included in your SSI -- SIR. If so, you need to investigate. There will only -- they will only show you on the reports, certain information. If one is being excluded, you want to make sure it is meeting one of the accepted exclusion criteria. That it was not a data entry issue. This particular facility has an excluded: procedure. How would I know what that case is all about Rex under your procedure associated SSI, look at a line listing for incomplete procedures and click modify to your timeframe it will bring up your incomplete procedure mine list. You can see, look at the duration. They are wait outside. They are accepted exclusions. Check your NHSN checklist and make sure you are getting everything that was in there.

The next couple of report are TAP reports. I am going to quickly refute these. There are online instructions on how to rent them. TAP reports are helpful for setting your benchmarks at the beginning. Especially at the beginning of the calendar year. You want a large time frame in order to make these the most beneficial. What is needed about the TAP reports, you can set what your goal value is. At the bottom of the screen when you put in your time, and in your source, you can choose between using the HHS goal, the national -- SIR or a custom value. You can put in a custom value. If you have a system goal of having a SIR below .7 you can use that. The statistic for the TAP report is the cumulative difference. It gives you the number of infections that you have to decrease over that period of time in order to meet the goal value that you set. There is a lot of information on the fly. I do not have time to go through all of it. This is the community attribute difference. This facility has lower than expected CAUTI. And also that you put in targeted values. The final thought on valuing your data, we withdrew a lot of information. If you have to do it you may as well use it. Do not be afraid to practice these reports. You cannot damage the system. This gives you valuable information. It can help with national benchmarks for your hospital type and your location. And we are using standardized definitions. Think about, as we add on more things, and we do not take away other things, what can these new reports replace that you are currently doing? And who would benefit from seeing them? Most of all celebrate your success for continuous improvement. I believe you with the slide of references and resources that are available online on the NHSN website. Next, I want you to know what good is all of this data? My granddaughter will tell you, it is very, very good. As always if you have any questions about running reports, please do not hesitate to ask any of your leads or email me at any time. Thank you for listening today.

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