Using Dashboards to Pulse Check Your CoC

00:02 Colin Sorensen: Joining us today for our virtual conference for the NHSDC on the HUD-combined conference. I'm excited to talk to you guys today about the dashboards that were created for... To visualize the System Performance Measures across all CoCs and how you can use them in your communities. The title is "Using Dashboards to Pulse Check Your CoC", and that is based off of my work as a technical assistance provider. It was a request on behalf of some of our clients, they wanna know how they're doing as a CoC.

00:37 CS: So our goals for today, we'll dive right in, is to learn how to use this new SPM dashboard tool that compares SPM outcomes across CoCs, to see where your CoC is standing and how it's doing, especially in regard to trends. You're gonna hear me say that over and over and over today, that our focus is on trends and not on hard numbers that's on the trends. And then also, understanding how you can potentially present some of this information to community stakeholders. Because a lot of... Like I said, a lot of my communities that I'm working with requested this information because they think that it's what their communities would like to learn more about.

01:19 CS: So to give you an introduction of who I am, my name is Colin Sorensen. I am a policy analyst with the technical assistance provider, Homebase. We are based in San Francisco and we work in over 20 states and countless CoCs since our founding. We really started with the grant writing process, but we have really evolved into working on strategic planning, and gaps analysis, and systems implementation. We're really all about bringing our different stakeholders together to try to come up with community-wide responses to homelessness. Because as you all know, homelessness is not a problem that can be solved on its own by one... By any individual agency or any individual organization. So that's what we're here to do.

02:11 CS: And through my work, I've heard several questions from communities. They are always really interested in using data and improving their data practices and how can they use that data to improve as a community and improve their outcomes. And so obviously, one of the first places that they turn is the System Performance Measures. And the System Performance Measures are great, we really use them a lot as a firm to track progress. When it comes down to it, they are key performance indicators, they are our metric. Just as businesses use KPIs, we use the System Performance Measures to see how our CoCs are doing over time. And so, it's a great tool, we're glad that it was released starting 2015, and we're glad that CoCs have continued to use them over the past several years.

03:04 CS: Some of the questions that we've heard, that I hear frequently, if I had a nickel, I hear, "What do our System Performance Measures look like and how they change over time?" So those are the really obvious ones is, "What is our... What are our trends since 2015?" But some other ones that are a little bit harder to answer, but communities are always pretty interested in is, "How is our system actually performing compared to similarly-sized CoCs? Whether that's other urban CoCs or rural CoCs or suburban, etcetera?" or "How are other CoCs in our state doing?"

03:40 CS: Because a lot of the time people are interested in knowing, "What are our outcomes as a result of our system and what our outcomes as a result of maybe some economic changes or some state policies?" For example, if other CoCs in our state are trending in the same way, maybe there's some other outside factors that we should think about, versus if our trends are vastly different than other CoCs, that's likely results of our own systems performance. It is related to our policies and procedures and related to what we're doing here. And so, that's what we're trying to answer today is being able to do parse out, "What is our system doing?" versus "What are some of those outside

factors that might have a result... Or that might have an effect on this?"

04:34 CS: How do we do this? I just realized, my apologies, Cherita, I have been changing slides on my slide deck on PowerPoint and not in the Adobe Connect. So that is why the slides haven't been changing, but we will fix that from here on out. So these are the questions that I was trying to get at, "How do they change over time? What do our System Performance Measures look like? How is it... How is our system performing compared to similarly sized CoCs?"

05:03 CS: So there is a dashboard for that and I've worked countless hours to try to put this together for you all. It's two-fold. Number one, I found myself creating the same visualizations over and over again and pulling data from a bunch of disparate sources and coming up with the same dashboards or the same graphs over and over. So I realized rather than doing that over and over and copying and pasting in Excel, let's just make the dashboards so people can do this easily. And then also, it's for that second purpose of actually being able to compare your CoCs data to other CoCs, as I've now talked about with those trends.

05:43 CS: So these dashboards which we are gonna talk about at the very end, that we're gonna... I'm actually gonna pull it up on my screen and we can look through them, we're gonna look through... There are six dashboards of the NHSDC descriptions, that nine has changed since then. We're just... I decided to just focus on six. That's SPMs one through five and seven. So that is Length of Time Homeless, that's Returns to Homelessness, that's Total Number of Individuals Experiencing Homelessness, that's Changes in Income for Stayers and Leavers, that's First-time Homelessness, and finally, that's Exits and Retention of Permanent Housing.

06:28 CS: So we'll start... As Daryl wrote in the chat box, if you have any questions, you can start writing those in. Hopefully, I can answer some of them as we go along.

06:40 CS: So where did all this data come from? What was the source? Obviously, I didn't hack into a bunch of HDSs. This luckily, HUD publishes data set on a yearly basis that includes all of the CoC and SPM information that started in 2015. However, the original data set is in four different files and four different sheets. So it's like I was saying, it's kind of disparate, you're having to look at your CoC on four different places. So I was able to combine and restructure all of those data sets to merge them all in one. So you can look at your CoC across the four years, 2015, '16, '17, '18, all in four different rows. And you don't have to toggle between a bunch different places. The data set also, I decided to merge in HIC information as well as PIT information. So it's all in one place, if you... And also a few other metrics that I decided to include just for funsies, if you would like that, I can also send that out. Please include this in the chat, as my slide says.

08:00 CS: So next, then the main purpose is I just wanted to explain where we're getting the data from. And also, that there's an easier way, and you don't have to keep on going through so many different sheets. Here's a question that people are going to bring up is, HUD already has SPM dashboard; if you click on this link, you will see this beautiful Tableau Public, it's right here, it has all of the different dashboards available for several of the different SPMs. Not all of the sub-measures because some SPMs like four has sub-measures so they only highlighted the most important ones. And they're great, they're great, if you love and especially if you love box plots. They are gonna be your jam because they give you all that information, they give you the whiskers, they give you the medians, the outliers, etcetera.

09:04 CS: However, the challenge with these is, one second... There we go. The challenge with these box plots, and they're great is it's clear that they are focused on the aggregate information of the CoCs in general as opposed to one individual CoC, you can potentially click on any one of these little dots to find your CoC and see how it compares to other CoCs. And you can even filter up here, you can't really see it because it's a little blur on your screen but there's a filter for categories, the different types of categories, whether it's suburban, or urban or rural. And then here you can also select which CoCs you're wanting to look at, but you can't highlight your specific CoC. You could potentially say, "Oh I wanna look at these five CoCs" and these dots will only show these five CoCs, but there's no way to actually just color your CoC and how it stands versus the rest of them.

10:19 CS: So, as I was saying, it's more intended for HUD aggregate look at all the CoCs and not really intended for a specific CoC to look at where they stand. And also box plots can be a little challenging, they're not accessible necessarily to everybody. So I was trying to think of a better way that's just a little bit more accessible to the everyday user and that is what prompted this admittedly a side project for the dashboards.

10:53 CS: So, I'm gonna pause just to make sure that I'm not missing any questions. It looks like most of the chat is focused on the data set. Someone said, if I'm not mistaken, they are online. Yes, that is correct. I built my data set from HUD data set. I found that I wanted to make something that's a little bit more intuitive, that's not on four different sheets, and you didn't have to click around to get all that information and it's all in one place, and it's your CoC across four rows for each of the four years. So that is the difference and I also added in PIT and HIC data as well. So Cherita, I'm hoping that the chat saves so that I can send this out afterwards because obviously, I can't post the data set in this slide deck.

11:53 CS: So looking at, we're gonna just dive right in to what does this dashboard, what do these dashboards actually look like that I talked about? Like I said there's six of them. This is a little preview and it's actually changed just slightly, I added some features in the eleventh hour last night for usability. But what you'll be able to do is you can toggle between the six SPMs that we're talking about here, at the top. One through five and seven. One thing to note, you'll see is that this only actually covers 2016, 2017 and 2018 data. It doesn't cover 2015 because I've heard in a lot of feedback that 2015 was a baseline year, and that's when we were rolling out SPMs, so we should just... We shouldn't include it and we should just focus on 2016, 2017, and '18. So that is what these dashboards do.

13:09 CS: Next, you can choose on your left. You're gonna choose your CoC which one you're interested in looking at the data. So, how this is structured is on the left, these are your CoC... That's your CoC data. On the right, is the CoCs that you would like to compare against. So remember that it separated along the columned line. So on the left is your CoC, on the right, it's the CoCs you'd like to compare against. And to make that a little bit easier, I actually switched the color in the normal data set. On the top, you have one sub-measure, on the bottom, you have a second sub-measure because as I was saying, every CoC has... Or every System Performance Measure has multiple sub-measures, so that's what you can see. This is a sub-measure, this is a sub-measure.

14:08 CS: You can also... Not only can you change the category that you would like to compare against, but also the state. And what it's showing here on this slide is always gonna be the median of those parameters that you set up. So we're seeing 30 days that means that all CoCs that are located, it's... I didn't actually put a state parameter right here, this is all CoCs across the nation that are a

major city. And on the left, you can see we're comparing against Miami-Dade because they have some really strong data so I decided to highlight them. As I said already, the top is gonna be your first sub-measure and the bottom is gonna be your second sub-measure and it's a little redundant; this is the median, this is the median.

15:03 CS: And then finally, there's an arrow which shows which direction you would like, you want that particular System Performance Measure to be trending. As I said before, this isn't focused on the raw numbers, it's not focused on 70 days or 71 days versus 30 days and 38 days, that isn't what's important here. What's important here is whether we're going up or whether we're going down. And that is the arrow is trying to highlight, over in the final dashboard, this arrow has been moved to the top left corner. So those are the main features and rather than continuing to look at these screen shots which are outdated as of yesterday, we'll actually just pull up the actual dashboards as they are shown on Tableau Public. I'm gonna take a moment to look at questions. We have, how do you differentiate between a CoC that has strong data versus not strong data? That is purely subjective.

16:16 CS: That is... No, it's not subjective. It's based off the fact that as I was going through CoCs yesterday, I saw that Miami was actually trending fairly drastically differently compared to other major cities' CoCs. For example on the top of my head, one of the SPMs was dropping at a much steeper slope than major cities were on that same SPM. So that is where the value-add is here is the goal is to look at... And we're gonna actually talk about that right here. How do we use this? The goal is to focus on the trends, where are they increasing, where are they decreasing, focus on those hard numbers. When you're presenting... When I'm presenting this to clients, some get really focused on the hard numbers. They say, "Well of course X CoC has better numbers, they're smaller than us." Or others get really focused on methodologies. They say, "Oh, well that CoC is doing data differently." But that's really not the point, the point is, trends, trends, trends. It doesn't matter whether their numbers are... Or methods are different, because assuming each CoC has generally maintained the same methods, their trends should be accurate.

17:42 CS: So going back to this question from Doug, if a CoC... If their slope is dropping at a much more dramatic rate than other urban CoCs, which is a much more steady rate or maybe in that same SPM that rate is actually increasing then it means that, that CoC is likely doing something right. So that is how you can identify how a CoC is performing very well, is if their trends are trending differently, as long it's in the correct direction for that particular SPM, then the median of their comparison CoCs. So then how can you use that? You can look at which SPMs showed the least aligned trends to our comparison CoCs. Which one showed the most aligned trends to our comparison CoCs? Can we explain why this might be the case? Is this a result of our own policies and procedures? Is it a result of what is happening at the statewide level? Maybe new funding coming down, maybe a loss of funding, etcetera. So I'll pause. Also again, just gonna look through. Okay. And I think this is gonna make a little bit more sense once we actually look at the dashboard themselves.

19:26 CS: Finally, I'll just say that when you're presenting these, if you do choose to present to communities, you just really wanna make sure that you get away from the conversation of getting in the weeds about numbers and methods. Because that is... It really don't drive the conversation when the focus should just be on whether things are going up or down. It's pretty simple as that. It can be summarized with an arrow. Next, we'll talk about some limitations, because we definitely need to talk about some limitations. Number one, as always, we've all been in Homelessness for a little bit of time. We know that data quality can be a challenge. It is inputted by our case managers, it's

manually inputted, sometimes it isn't inputted and data quality will always be an issue. However, I'm really impressed with a lot of my communities and their efforts to increase their data quality. It is always on the top of their mind. They are focused on improving it. And so I think that over time, these System Performance Measures are only getting better and only more reliable.

20:35 CS: A second thing that we should note is that every CoC has their own programs and needs. I've worked with several different programs and communities, both rural and very urban. And I've seen that depending on funding sources, they have different project types. Sometimes project types that don't even fit into the HUD standard project types. So, this has to be considered that sometimes it can be difficult to compare CoC because of their differences in these different setups. But I think overall, the universal data elements exist and everybody... Most communities get technical assistance. So for the most part, communities are aligned when it comes to inputting this data and SPMs. A third one that is probably more significant, is that bed coverage rates can vary widely across CoCs. Which means that even though you have your SPM information, if only 50% of your beds are covered, then we're only seeing 50% of the picture, which can be a challenge here versus other communities that have a 90% to 100% bed utilization. Not bed utilization, bed coverage rate.

21:52 CS: Next, this I will acknowledge this one, that dashboards only show the median in comparison CoCs. That's one benefit of HUD's box plots, because they show the range and the max and minimum. The reason I chose only to do the median is because, again, we're focused not on hard numbers, we're focused on trends and the median does a good job of showing those trends. And number two, because I didn't wanna convolute it with too much. There's already plenty of... There's already multiple sub-measures for each measure and there's already just a lot of information going on. So I wanted to just focus and make it as clean as possible.

22:30 CS: And then finally, we should all just acknowledge that COVID-19 will have changed so many of these numbers and unfortunately, the data that I have only goes through 2018. And HUD will not be publishing the 2019 numbers until likely January of 2020. And we probably won't get the January, the 2020 numbers, which will show COVID-19 impacts until January 2021. So unfortunately, there is a year lag when it comes to the SPM data. Hopefully, as data quality improves and HUD's processes improve, hopefully we might start getting SPMs a little bit quicker than that. So before we go into the online dashboard, I'll just take a moment, if there's any preemptive questions and then we can talk about the dashboards themselves.

23:27 CS: Other than HUD categories, is there a way to determine which CoCs are comparable? So, the two parameters that you choose are states. And so I gave you the option of choosing multiple states, for example, if you were interested in doing a region, maybe you wanted to do the entire West Coast and you wanted to include Washington, Oregon and California. So that's an option. Or you can do the HUD CoC categories. I have heard some feedback that people were maybe interested in having an option to compare against specific CoCs, but I didn't think that this was completely useful. And that would be oddly competitive, and that's not what the goal here is. The goal is to see how we're doing in the CoC versus state-wide trends, or category-wide trends. It's not, are we doing better than this other CoC or combination of CoCs? CoC, okay. And then we have another... Yes.

24:37 CS: And William that was correct. The CoC level file identifies all of that information, and going back to that combined aggregated data set, I also included the CoC award dollars in there as well. So, it's a one-stop shop for all the information you could need. So I'm sure there's gonna be

more questions as we go through the dashboards themselves. So we will get into that. Cherita, if you could please hold that up.

[pause]

25:35 CS: Thanks for your patience as we get this pivoted. [chuckle]

[pause]

25:50 CS: Okay, so I think you'll see that those screenshots, that the actual dashboards themselves are a little bit more user-friendly based off some final revisions that I made yesterday. This is the intro page, it gives you some directions. As I've already said, the rows on the top, you see one sub-measure, on the bottom, you'll see a second sub-measure. Columns on the left, that's where you'll choose the CoC you are interested in. On the right, you will choose both the state and the states, and the CoC categories to which you would like to compare your CoC data. And then for each dashboard, you'll be able to see your CoC's data versus the median. Again median, remember that, of all the CoCs, not the average. I guess I didn't explain that, chose median because there are a few CoCs that really have some outliers and I didn't want to throw that off or I didn't want to throw information off because of those outliers. For example, a classic outlier would be New York City, obviously, which just has so many people. So for example, on the right, what you would do if you wanted to look at the state Texas and the category Rural CoCs, you will then see the median data of all rural CoCs in Texas for that particular SPM.

27:19 CS: And then finally arrows in the top left indicate whether that SPM should be increasing or decreasing over time. Most of them, our goal is for it to be decreasing, except for a few SPMs. I've had a bunch of stakeholders ask, "Okay, well, how does HUD actually categorize each of these different CoCs?" And that is what we include at the bottom. You can actually click and see, these are all the urban CoCs and here's all the rural CoCs. And that is just helpful because sometimes you might not know who you're comparing against when you actually choose Florida and rural. So it's good to see actually what are our peer comparison CoCs that we're looking at.

28:10 CS: So as I said before, across the top, you'll see your six System Performance Measures. And so you can toggle between them. Again, here's Miami-Dade, but it's easy to switch between any of the CoCs that you'd be interested in. Here's Anchorage, for example, we obviously would not compare Anchorage versus rural CoCs. You would want to change that to be Other Urban because actually Anchorage is classified as as Other Urban. I found that most major cities, it's around 350, 400K and above, and Other Urban is 350 to a little bit smaller than that. So that's kind of the threshold that HUD has used.

29:00 CS: I'm not sure that that is their actual method for classifying Other Urban versus Major City, but that is what I found when I was looking through the different types of categories. So 350 and above is Major City. So again, we'll look at Miami-Dade and if you want, you can just type at the top that makes that a lot easier. And what I noticed yesterday as I was going through is this is just so much information to take in. We're looking at two different sub-measures, we're looking at our data versus the comparison. So, I realized we needed to add a hide button, so you could just focus on one sub-measure or the other. So if you only wanted to look at sub-measure 1.1, just hide the second one or if you wanted to do that with the second one, then you just hide the first one and that certainly makes it less of a visual, too much going on. So tried to add that for usability. As I was

saying before, the arrow in the top left corner, as I said, it's moved, now shows you which direction we want our CoC to be trending, so for the number of days in the system is what I like to call it the actual word is, the actual name is Length of Time Homeless.

30:15 CS: And we want that to be going down. Versus Changes in Income, obviously, we want our participants to be increasing their income, so the arrow is pointing up for that one. And so for Miami-Dade, for example, just going back to that original question of how do we know what data is good, this is a perfect example. Miami-Dade has their trends, remember wanting to go up? They are trending, their slope is pretty significant compared to other major cities nationwide, which is a much steadier increase over time. And you can for each of these, put your cursor over the different bars, as its the tool tip to see additional information. You can see here that in 2018, there was 1,622 individuals that stayed in the system, and 50% increased their total income. I got a lot of feedback from clients that because previously I only had percentages and they really were interested in knowing the counts, so that's why I added back the tool tip feature. On the side when we go to the right, you can see once again, the median and it reminds you that this is the median. One big difference on the right is it will also show you the number of records that we're pulling for that specific year. So based off those parameters.

31:48 CS: So for example, there are 48 major CoC, 48 major city CoCs that contributed information for 2016 and that number holds true across all three years, 48 major cities. However, if we changed our parameter and we made this so that maybe, let's say we wanted to take out Maryland. Then you'll see that that record has now changed. Now, it's only 47 because now Baltimore has been removed from that set of comparison CoCs. So now we're only looking at the median of the remaining CoCs within those parameters. But I'll put Maryland back in there because no reason to disclude that. So you'll see that those tool tips are across each of the different System Performance Measures. Here the tool tip, it's actually just saying the number of days, but again, this one shows you the number of records for those medians. Finally and we're gonna wrap up a little bit early because when I originally proposed this for NHSDC the plan was for it to be very interactive. You bring your laptop, look through your trends, talk about it in a discussion group and we obviously can't do that over a webinar where everybody is muted.

33:24 CS: But some other things that you should know is people have brought up, "Oh, well, you can't compare SPM 3 and 5 because those are hard numbers, that is literally the total number of homelessness by PIT count and HMIS count and SPM 5 is First Time Homelessness, which is again, a hard number of, this is just the number of people that entered the system. It's not a percentage, it's hard to compare, especially when CoCs have very different populations, ergo, they have different levels of homelessness based off those populations." So in order to get around that and make this comparable, by originally debating... One second.

[pause]

34:26 CS: I'm gonna refresh. I don't know what happened there. I originally debated converting all PIT counts to per capita homelessness by looking at the CoC-wide population versus the PIT count and I was really appreciative of a study that actually did a lot of this work for me that was published by HUD back in 2018. But it still was too complicated and unfortunately, their total CoC-wide numbers on which to base these per capita numbers only went through 2017, so I didn't have 2018 data as well. So I decided instead, we wouldn't do per capita, we would just look at percentages once again. So that's what this line is trying to highlight. That's why I've converted to a line graph

instead of a bar because these are percentages and this is a negative number, and I really cannot stand negative bars. So that is why it is a line graph. However, in order to give clients what they're looking for and make sure we know exactly how many people we're talking about at least at the very beginning, I highlighted with this annotation.

35:43 CS: You can see that Miami-Dade's PIT count was 4,235 in 2016. However, it has decreased 18%, which is awesome, since 2016, and you'll see, I actually also added 2019 numbers in because that PIT information is available even if the SPM information is not. So you can see that their PIT count has dropped from 4,235 to 3,472 which equates to an 18% decrease, which is just amazing, especially when compared to other major cities across the country where the median there started at 2,350, again, across 48 different major city CoCs, and their decline has only been negative or a -3.2% in that same time period. So Miami is really crushing it when it comes to SPM 3.1. And the same can be said, nevermind, the same can't be said here for HMIS count. We can see that their HMIS count has trended down negative, it's lost... It's gone down -2.7% versus -12.1%. But again, something really important to remember about the SPM 3.2 is this really, this number is populated based off of your HMIS, which is directly reliant on the number of beds you actually have, your bed coverage rate.

37:25 CS: So if one CoC has a really high bed coverage rate and these other CoCs don't necessarily have that high bed coverage rate, then the HMIS count, this might look drastically different than reality. Whereas here with the PIT count, assuming they're using the same method the entire time, then that one has, it's not affected by a bed coverage rate. I would say that the bed coverage rate affects both SPM 3 and 5 the most, because it's so focused on hard count and numbers. So that is... And once again, this is First Time Homelessness, which does the exact same thing, instead of reporting the hard number of 5,000, we're reporting in percentages. However, if you do want those hard numbers, you can use the tool tip and drag it over and use your cursor and it will show you.

38:25 CS: And then finally, here is SPM 7, which and as always, I love seeing the SPM 7B.2. I need to change that to 7B.2. The retention is always so high, which is such a good thing to see because it's not just about ending homelessness or getting people into housing, it's also about keeping them in housing and so it's always great to see CoCs across the nation really doing very well with that particular System Performance Measure. So I'm gonna go back out of full screen, so that I can look at some of the questions.

39:13 CS: So some questions. I see Mr. Garver. I prefer median versus average. I absolutely do too. Outliers can really cause problems in averages and that is, it's definitely true when it comes to SPMs, given that our CoCs, especially since, we only have four categories, so they're pretty broad and include a fair amount of... A major city can be anything from Sacramento to New York City. So if we had a wider variety of categories, to get at the more granular level of population size, maybe you could use averages, but in this case we're using medians for that reason. The next one, is the median CoC calculated within each sub-measure and year... So potentially different for CoCs each year in one of those longitudinal... Yes, that's correct. This median is the median of, is the median of whatever that number is reported. So if five CoCs had a certain percentage, it is taking the median of those five CoCs' percentages. So I think that's alright, just that.

40:34 CS: The next question is, what did Miami-Dade do to drive that reduction? Great question for Miami-Dade. Thanks for responding, it's apparently very well-funded. So those are... Please, if you have any other questions, otherwise, I'm really excited to be able to share these with you. I hope

you can find them useful and you can find any other insights that might be relevant for your particular community. I would recommend just playing around with them. I appreciate, Zee, thank you for so much for posting the link actually in the chat, so you can use it right after this if you would like. If there are any suggestions or any additional feedback or potentially maybe additional parameters that you think could be useful, I would love to hear them and please just send me an email or you can write them in the chat right now.

41:30 CS: Someone just asked, James just asked, "Will you post the calculations?" I will go back into full screen. Luckily, I don't have to post the calculations because it's all included here. These are the original HUD SPM data sets that I referenced a while back. And here is a beautiful introductory guide that really lays out all of the SPMs and how they are calculated. Just click on this link, it really goes into depth. Step by step, you could calculate them manually, you wouldn't even have to rely on your HMIS if you wanted to. So thanks, shoutout to HUD for having a really good guide for how those SPMs are created. I see James said, "Maybe it would be helpful to add demographics." Ooh, I would love to do that one, that might be fairly challenging. I guess I could do it based off of PIT demographics, which certainly is an option; if SPMs aren't reported by demographics, they're just reported as numbers in general, so can't do demographics for the... So the demographics wouldn't be coming from the SPMs, but they could be coming from the PIT count, that is definitely an option.

42:53 CS: Shanna asks, "What did you use to classify major city?" And these come from HUD. You can actually see on the very front page, it goes through each of the different types of CoC categories and it'll tell you for each state how many or which CoCs are a part of that category. So we can see that for Alabama, 502, 505 and 507 are all rural CoCs. How did I classify them? I didn't. The HUD already did a great job of classifying and so I just used theirs. Mr. Snow is commenting that "Major cities equal the top 50 cities in the country". So that answers some of that. And as I was saying previously, that at least in my experience, what I found was, it was generally 350K and above. Though there were a few within the range of 300 to 400 that fell into Other Urban. Thank you, Fred, I'm glad that you will... Hopefully you can find them helpful.

44:07 CS: And also, for people who aren't interested in comparing, that's totally fine. My hope is that you could potentially use them just on their own. This visualization, it's already been made for you. All you have to do is screenshot this quadrant and you will have SPM 1.1 for Miami-Dade, or if you wanna screenshot this quadrant, you'll have 1.2 and you can do that for all of the SPMs. I tried to focus only on the sub-measures that I typically use, because since there are so many different sub-measures. But you want to avoid, especially with communities and presenting them, you want to avoid data fatigue and giving them too much information or giving them the same informations like 80,000 different ways, isn't useful.

44:56 CS: So I would typically just focus on one of the two sub-measures. This one includes transitional housing. This one doesn't include transitional housing. So these SPMs have been made for you, and if that's all that you take away from this, that you can just, you have a tool to, and you don't have to make these on your own, then I hope that that is a value to you. Was this dashboard the result of a funded project or simply created by you? Hey, this is a side project. It was a result of so many... Of having to make the same visualizations over and over and over again, pulling information from HDX or hunting them down in these HUD dashboards and pulling them into Excel and making another bar chart. So, I decided let's just do it all at once. So, and I work for Home Base. They didn't necessarily fund it, but they're happy to have them made. Are there any

other questions? This is the opportunity.

[pause]

46:18 CS: While people are typing, I just wanna note that while states, you have the option of selecting multiple states, in case you wanted to do a region, I did not give that option for the categories because I can't visualize a situation where it makes sense to include multiple categories. You would never compare a major city to a rural CoC or a suburban CoC etcetera. So these are all you only can choose one option as opposed to the multi-options with the states.

47:06 CS: Thanks so much for the positive feedback. It has been a fun passion project and I'm glad to see that people could potentially find it helpful.

47:21 CS: Have you ever thought about making a visualization using Geography [47:24] _____? That could be a new passion project that would be really interesting. One difficulty... If you're talking about using a map or making a map, one difficulty there is CoC boundaries, but there are options certainly.

47:47 CS: Awesome tool share, thanks for the presentation, da da da da. Can you show a multi-state demo? Denise, could you clarify what you mean there?

[pause]

48:23 CS: Okay. We've done it for the state of Florida, went playing around, would love to show you the basis. That would be great. Yeah, would love to connect. Okay, yeah, I can definitely show what I was talking about if you wanted to do regions, and since I'm most familiar with California, we'll do California. We'll do San Francisco, that's where I live. If you wanted to, you could... I need to... What you do is you unclick all and then you would click California, and you would click... Where are you? Oregon. You would click Oregon and you would click Washington, sorry for the lag. And so there we go, we could call this the West Coast region, and then we could see regionally, how does that... What's the difference there? And you can see, in this case, we're only pulling 12 records because there's only 12 major CoCs or major cities... Oh this is comparing with rural. So that is an important thing, make sure you're comparing against the right category. Here, we can see that we have 10 records, that means that we are comparing against 10 other major city CoCs only in those three...