Company: **State Health Access Data Assistance Center**

Conference Title: **Exploring Inequities Using State Health Compare**

Conference ID: **5095321**

Moderator: **Carrie Au-Yeung**

Date: **February 6, 2019**

Operator: Ten, nine, eight, seven, six...

Carrie Au-Yeung: Thanks for joining us for today's presentation by SHADAC's Robert Hest and Brett Fried, who will be introducing two new measures of health outcomes and social determinants of health on SHADAC's State Health Compare Web tool—Unhealthy Days and Unaffordable Rents.

Robert and Brett will examine these new measures and highlight how the estimates can be used to explore disparities between states and among subpopulations. They will also provide a virtual tour of some of the more than 40 state-level measures currently available on State Health Compare, highlighting in particular, recently updated data.

Robert and Brett will demonstrate how users can employ State Health Compare to create maps, charts, and graphs, as well as to download the raw estimates to perform deeper analyses and statistical testing.

My name is Carrie Au-Yeung. I'm a Research Fellow here at SHADAC and I'll be moderating today's event.

Before we begin the presentation we'll cover a few technical details. Broadcast audio is available for today's webinar through your computer speakers. However, you can also listen today by telephone by dialing, 800-289-0462 and using passcode 657279. All phones will be muted for the duration of the event.

However, you can submit questions for the question and answer portion of the event at any time by using the chat feature or by sending a tweet to @shadac.

If you're having trouble accessing the online component of today's event, please call the ReadyTalk Helpline at 800-843-9166. Finally, if you're able to log into ReadyTalk but are still having technical problems, you can also ask for help using the chat feature.

Please note that slides for today's event are available at shadac.org\exploringedisparitieswebinar. You can also get to these slides from shadac.org home page. It's the first item listed there. Or in the news section of the State Health Compare home page if that's easier.

As mentioned, today's event is being recorded, and we will notify all attendees by email when the recording is available.

Today's Webinar and the State Health Compare data and features that we are highlighting are funded by the Robert Wood Johnson Foundation. We'd like to thank the foundation for its generous support. And for that I'll hand the call over to SHADAC Director, Lynn Blewett, who will say a few words.

Lynn Blewett: Thank you Carrie. Welcome to the SHADAC Webinar on Exploring Disparities Using our State Health Compare Website. I'm Lynn Blewett, Director of SHADAC, and a faculty member here at the University of Minnesota in the School of Public Health.

As many of you know, SHADAC is a health policy research center located at the University of Minnesota where our experts and policy analysts work with federal and state data to inform health policy. We specialize in health insurance coverage, cost of care, use and quality, with a particular focus on the use of data to inform policy decisions to improve the health of state and local populations.

Our State Health Compare website plays an important role in SHADAC's efforts to support data-informed decision making, by making sound data related to health and healthcare free and accessible to a wide variety of users.

I want to thank the Robert Wood Johnson for their ongoing support of both SHADAC and our State Health Compare data site. I encourage you to visit our site and explore the data that are available. In particular, the new and updated data that we'll be highlighting today.

I also encourage you to ask questions about these data and the functionality of our website during our Q&A session. Thanks again to the Robert Wood Johnson Foundation for supporting our work. Now I'll pass the call back to Carrie who will introduce today's speakers.

Carrie Au-Yeung: Thank you, Lynn. Our first speaker today, Robert Hest, is a Research Fellow at SHADAC where he manages SHADAC's State Health Compare. Robert also works on SHADAC's Minnesota Long-Term Care Projection Model, which projects future long-term care utilization and spending among older adults in Minnesota. In addition, Robert helps track 1332 Innovation Waivers for state-based reinsurance programs.

Before joining SHADAC staff as a Research Fellow in October 2017, Robert worked at SHADAC as a Graduate Research Assistant. He earned his Masters of Public Policy from the Humphrey School of Public Affairs, with an emphasis in policy analysis. And he received his Bachelor of Arts from Carlton College in Political Science.

Our second speaker, Brett Fried, is a Senior Research Fellow here at SHADAC, where he is the Project Director for SHADAC's work on State Health Compare and on the Robert Wood Johnson Foundation Culture of Health Updates Project.

Brett also provides technical expertise and analysis on researching, developing, and implementing states healthcare policy options, particularly with regards to designing and implementing quantitative models. He designs evaluation strategies, builds models, and runs analyses on a range of topics.

Brett has worked as a lead researcher and economist for 20 years, and at Health Services Research for over 11 years. Prior to joining SHADAC, Brett was the lead Minnesota Department of Health Analyst for all aspects of the Minnesota Health Access Survey. And before that he was the lead economist with State of Alaska Tax Division for developing the state's economic and revenue model.

And with that I'm going to hand the controls over to Robert who will prove an overview of State Health Compare.

Robert Hest: Thanks everyone for joining us today. I'm excited to give you a demonstration of SHADAC's State Health Compare Data Dissemination web tool, highlighting the new and updated measures we have available.

State Health Compare is SHADAC's web tool where we have state level estimates of more than 40 measures related to topics such as health insurance coverage, access, utilization costs and quality of care, health behaviors and outcomes, and public health and social and economic factors.

All of our measures are available as tables, maps, bar charts, trends, and state rankings, giving users the flexibility to visualize the data in multiple ways and perform different types of analyses.

In addition, for most measures, we provide policy relevant breakdowns by variables like age, race/ethnicity, coverage type, and education, among others. And, when available, we provide

margins of error in addition to point estimates, to give users the ability to compare estimates and perform statistical testing.

If you want more information about how to do significance testing using data from State Health Compare, you can check out a brief I wrote on that topic, linked on this slide. Finally, we also make it easy to download the data in a spreadsheet format for deeper analysis.

The estimates come from 16 data sources, some of which are listed on this slide. One of the criteria we use when deciding on data sources to include, was that estimates be potentially available for all states.

There is suppression for some measures. Either data small sample sizes or if the data isn't available for the state in a particular year.

Now I'll hand it off to my colleague Brett, who will introduce two of the new measures we've added to State Health Compare and show how they can be used to explore disparities.

Brett Fried: Thanks Robert. I'm now going to discuss the two new measures on State Health Compare, Unaffordable Rents and Unhealthy Days. I'm going to start with some background information on Unaffordable Rents.

So, why add the Unaffordable Rents measure to the State Health Compare? One reason is that there is a great deal of evidence that housing stability, quality, safety, and affordability affect health outcomes. In addition, there's evidence that individuals who spend more than a third of their income on rent are more likely to experience homelessness.

Also, the measure meets our technical criteria such as that it is available for all states, as well as for key subpopulations within states and allows for statistical testing.

Unaffordable Rents is a measure that is produced from the American Community Survey or ACS. The American Community Survey includes information that was previously in the long form of the decennial census such as income, rent, and housing characteristics.

It is administered by the Census Bureau and includes the entire population. It is also a very large sample size of over three million individuals.

The census includes three variables that we use to create the ACS measure. Housing tenure, gross rents, and household income. The estimates are created by first identifying which households pay rent. Then we divide gross rent, which includes utilities, by household income and identify all rental households that pay more than 30% of their household income on rent.

We then sum up the number of individuals that pay more than 30% of their household income in rent, and divide by the number of rental households.

So why do we use a 30% unaffordability rule? One reason is that it is the standard used by government agencies such as Department of Housing and Urban Development, to assess affordable housing. It is also commonly used across the housing literature and is calculated by the Census Bureau so it is readily and regularly available.

Of course, Unaffordable Rents is not a perfect measure of financial burden. For example, individuals who live in affordable housing may be trading off higher transportation costs or lower neighborhood quality for lower rent. And higher income individuals who pay over 30% of their income in rent may not be financially burdened because they could still have money left over for necessities. There is readily available research on the advantages and disadvantages of using this measure.

On this slide, we highlight a report by the Joint Center for Housing Studies that provides an assessment of using the 30% of income standard.

On State Health Compare we include four breakdowns for Unaffordable Rents - Medicaid enrollment, disability status, household income, and race/ethnicity. In this webinar I'm going to focus on the Medicaid enrollment breakdown and household income breakdown.

For the Medicaid enrollment breakdown I'm going to use the categories, rental households with a Medicaid enrollee, which I'm going to refer to in this webinar as Medicaid rental households. And rental households without a Medicaid enrollee, which I'm going to refer to as non-Medicaid rental households.

For the household income breakdowns, we're going to focus on rental households with incomes less than $25,000, and rental households with incomes of $50,000 or greater.

Before I discuss disparity in Unaffordable Rents by Medicaid rental households and non-Medicaid rental households, I will show how Unaffordable Rents varies by state. The percent of rental households that have Unaffordable Rents varies from 36% in North Dakota to 53.8% in Florida.

Nationally, there are differences in the percent of Medicaid rental households with Unaffordable Rents and the percent of non-Medicaid households with Unaffordable Rents. As can be seen in this slide, 59.7% of Medicaid rental households have Unaffordable Rents as compared to 39.4% of non-Medicaid rental households for a difference of 20.3 percentage points.

At the state level, there's also quite a bit of variation in the percentage point difference in Unaffordable Rents between Medicaid rental households and non-Medicaid rental households. For example in Nevada 63.5% of Medicaid rental households have Unaffordable Rents compared to 38.4% of non-Medicaid rental households, for a difference of 25.1 percentage points.

In comparison to Hawaii, 55.1% of Medicaid rental households have Unaffordable Rents as compared to 50.4% of non-Medicaid rental households, for a difference of 4.7 percentage points.

Nationally, there is a very large difference between Unaffordable Rents for households with incomes less than $25,000 than for households with household incomes greater than $50,000.

As shown in this slide, 81.4% of low income rental households have Unaffordable Rents as compared to 12.7% of higher rental income households, for a difference of 68.7 percentage points.

At the state level, there's quite a bit of variation in the percentage point difference in Unaffordable Rents between low income rental households and higher income rental households. For example, in Nevada 89.2% of low income households have Unaffordable Rents compared to 8.3% of higher income households, for a difference of 80.9 percentage points.

In comparison in Hawaii, 75.6% of low income rental households have Unaffordable Rents as compared to 31.9% of high income rental households, for a difference of 43.7 percentage points.

I'm now going to discuss the second new measure on State Health Compare, Unhealthy Days. I'm going to start with some background information on Unhealthy Days. We added the Unhealthy Days measure because it is both policy relevant and meets our technical criteria for inclusion on State Health Compare.

The Unhealthy Days measure moves beyond morbidity and mortality data to capture the individual's perspective on their own health, so that we obtain a more complete measure of population wellbeing and its movement over time.

The following are some examples of groups that are using healthy days to inform policy efforts. The Center for Medicare and Medicaid Services includes the Healthy Fays question in the Medicare Health Outcome Survey, a longitudinal patient reported outcomes tool used to measure the quality of care provided by Medicare Advantage organizations.

The National Women's Law Center uses the Healthy Days measure in its report card on women's health to advocate on behalf of women's health.

The University of Wisconsin Mobilizing Action Towards Community Health project uses the Healthy Days measure to implement programs and policies addressing community health needs.

The usefulness of Unhealthy Fays as a measure of population health change is attested to by Humana Chief Medical Officer Mary Caffrey who states, "It baffles me that not everyone is using this as a standard tool of measuring progress within communities."

In addition, this measure meets our technical criteria such as that it is available for all states in key subpopulations, allows for statistical testing, and is timely. Researchers should all find it useful as a summary measure for health outcomes with additional benefit over measures such as health status, in that it is available for both physical and mental health.

The Unhealthy Days questions were first added to the Behavioral Risk Factor Surveillance System Survey, or BRFSS, in 1993. The BRFSS is administered by the Centers for Disease Control and Prevention and is conducted annually in all states and D.C. Importantly, this is a survey that only includes the adult population which is defined as anyone 18 years of age or older. It has a relatively large sample size of over 400,000 individuals.

There are two Unhealthy Day questions on the BRFSS. The physical Unhealthy Days question which is, "Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?"

And, the mentally Unhealthy Days question which is, "Now, thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?

On State Health Compare we include estimates for three types of measures of Unhealthy Days - Physically Unhealthy Days, Mentally Unhealthy Days, and All Unhealthy Days. The All Unhealthy Days measure is a composite measure of Physically Unhealthy Days and Mentally Unhealthy Days.

For each state, we sum up the number of days of Physically and Mentally Unhealthy Days reported by all adult respondents, and then divide by the total number of adults to create the average number of physically and mentally Unhealthy Days. People can report from 0 to 30 Unhealthy Days.

For the composite measure, we sum the number of Physically Unhealthy Days and number of Mentally Unhealthy Days to create an All Unhealthy Days total for each adult. For example, if an adult had three Mentally Unhealthy Days and seven Physically Unhealthy Days, then we sum these two types of Unhealthy Days for a result of ten All Unhealthy Days. We then sum All Unhealthy Days across all adults in the state and divide the total by the number of adults in the state.

There are some limitations to the All Unhealthy Days measure. First, there could be overlap between the measures. That is, an individual could report the same number of Mentally and Physically Unhealthy Days.

Also, if we add both the Mentally Unhealthy Days and the Physically Unhealthy Days the total could exceed 30 days, but we only allow a maximum of 30 days. This is the method used by the CDC,

and they've done research on its validity and have found that the pattern of people's responses supports using this measure. We also provide all our breakdowns by all three measures, Mentally Unhealthy Days, Physically Unhealthy Days, and All Unhealthy Days. So that differences between estimates of Physically and Mentally Unhealthy Days are not obscured by the composite measure.

There are six breakdowns available for Unhealthy Days on State Health Compare - household income, age, coverage type, disability status, education, and race/ethnicity. In this webinar, I'm going to focus on two of the categories for household income - adults who have less than $15,000 in income, and adults who have greater than $50,000 in income.

Before I discuss the average number of Healthy Days, I will first show how this measure varies by state. As can be seen in these tables, there's quite a bit of variation by state in the average number of Unhealthy Days. The composite measure or Physically or Mentally Unhealthy Days varies from 5.3 days in Minnesota, to 9 days in West Virginia. Which means the average of the number of Unhealthy Days in West Virginia is 1.7 times greater than the average number of Unhealthy Days in Minnesota.

This difference is most dramatic for Physically Unhealthy Days, where the average number of Physically Unhealthy Days in West Virginia is 5.7 which is 2.2 times greater than the 2.6 average number of Unhealthy Days for the District of Columbia.

If we compare the average number of Unhealthy Days for adults with low income to the average number of Unhealthy Days for adults with high incomes, we find large differences at the national level. The differences are largest for Physically Unhealthy Days where the average number of Physically Unhealthy Days for adults with low incomes is over three times as high as the average number of Unhealthy Days for adults with high incomes.

If we compare the average number of Unhealthy Days for adults with low incomes to those with high incomes, we find large differences between states. For example in Idaho, low income adults have 3.5 times the average number of Unhealthy Days as high income adults. But in Nevada, low income adults have only 1.7 times the average number of Unhealthy Days as high income adults.

In Tennessee, low income adults have 5.3 times the average number of Physically Unhealthy Days as low income adults, compared to two times the average number of Physically Unhealthy Days in Nevada. For Mentally Unhealthy Days, low income adults in Idaho have 4.3 times the average number of Mentally Unhealthy Days as high income adults, but in California it is only 1.8 times larger.

Now I'm going to hand the presentation back to Robert, who's going to take you on a virtual tour of State Health Compare.

Robert Hest: Thanks, Brett, for the introduction of those new measures. Let's move to screen sharing and I'll walk you through how to find State Health Compare and access these new and updated measures.

The URL for State Health Compare is, statehealthcompare.shadac.org. You can also get to the site from the SHADAC homepage here, by clicking the State Health Compare icon in the upper right-hand corner. This takes us to the State Health Compare landing page.

Before I dive into the measures, I want to point out our data highlight, which we update regularly to point to new or interesting measure updates. And our one-pager with a list of all of the measures, data sources, and years of data available on State Health Compare.

Okay, let's go back to the top and select "Explore the Data" to access all the State Health Compare estimates. Here you can see all of the measures and topic areas that are available within each

topic area. As I mentioned, many of these measures are available by further breakdowns such as age, education, race/ethnicity, income, etc.

If you select "Show Available Breakdowns," you'll be able to see all of the breakdowns available for each measure. Under "Social and Economic Factors," you'll see our Unaffordable Rents measure. Let's look here at Unaffordable Rents.

As Brett mentioned, this measure shows the percent of rental households that are cost-burdened, meaning they spend more than 30% of their household monthly income on rent. When you select any measure on our site, you'll first see the most recent year of data displayed as a map. And if the measure has a breakdown for total, that will be the default breakdown. Let's open the breakdown menu to see the available breakdowns for this measure.

Here we can see that Unaffordable Rents can be viewed by disability status, household income categories, Medicaid enrollment, or a dichotomous race category of white versus non-white. If we select household income categories we can see the percent of cost-burdened rental households for all states among rental households with incomes less than $25,000.

If we open the "Household Income Categories" menu, we can see all of the available income categories, to see the state allover percentages among households in those categories.

Scrolling down the page, the slider below the map allows users to move between years of data. In this case we have estimates for 2012 all the way through 2017. If you hover your cursor over a state, you can see the estimate for that state. For example, we see that in 2017 in Texas, 85.3% of rental households with incomes less than $25,000 were considered cost-burdened.

Now let's select "Rank" to view our State Rank Chart. The State Rank Chart allows you to compare estimates among all states where data are available. The dropdown menus at the top of the screen

allow you to select the breakdown. Let's select "Medicaid enrollment." Select the category for that breakdown: "with a Medicaid enrollee" or "no Medicaid enrollee"; the timeframe: 2012 to 2017, let's select 2017; and the states you'd like to rank.

The State Rank Chart can be sorted alphabetically by state or it can be sorted by the state estimate, either ascending from the lowest value, or descending from the highest value. As you can see, in 2017 among rental households with a Medicaid enrollee, Florida had the highest percent of cost-burdened households at 65.3%. And South Dakota had the lowest percent of cost-burdened rental households at 45.6%.

Let's go back to sorting by state. We can also add the margins of error to the bars. The yellow bar is the 95% confidence interval around the estimate. Hovering over Alabama, we can see that that state has an estimate of 53.0% with a margin of error of 2.9 percentage points. This corresponds to a 95% confidence interval of 50.1% to 55.9%.

So, that's a demonstration of the map and State Rank Chart. Let's go back to "Explore Data" and look at Adult Unhealthy Days.

Adult Unhealthy Days measures the average number of days during the past 30 days when an adult's mental or physical health was not good. All right, let's select the Trend Chart. The Trend Chart, as its name implies, allows you to see trends over time, and it allows you to look at trends in two different ways.

First, the Trend Chart allows you to compare trends among multiple states. By selecting United States, Alaska, D.C., and West Virginia, we can compare the national trend in Unhealthy Days to the trends in these states. The Trend Chart can simultaneously display trends in up to seven states.

As you can see, while there has been little change nationally in the number of Unhealthy Days -- that's the dark blue line -- Alaska and West Virginia, the orange and the light blue line, experience increases in Unhealthy Days, while D.C., which is the yellow line, saw a decrease in the number of Unhealthy Days.

In addition to allowing us to compare multiple state trends, the trend visualization allows us to compare trends by breakdown within one state. Let's look at the "Education" breakdown for an example.

Selecting trend line "Show Education," allows us to see more than one education category at a time. Let's select "California" from the state menu, select "2011 through 2017" from the timeframe menus, and select "Mentally Unhealthy" from the type of unhealthy day menu.

Here we see trend lines in the number of Mentally Unhealthy Days in California for all four available education categories. The chart allows us to see that the number of Mentally Unhealthy Days have held relatively steady for adults with some college or an Associate's degree -- that's the yellow line -- and with a Bachelor's degree or higher -- that's the light blue line at the bottom.

But that adults with a high school education -- the orange line -- or less than a high school education -- the dark blue line -- have seen substantial decreases in the average number of Mentally Unhealthy Days since 2011.

Let's go back now to the "Explore Data" page so I can briefly highlight some of the other measures we've recently updated. First, let's look at our "Coverage Type" measure, which is our primary source of coverage hierarchy that we produce using data from the Census Bureau's American Community Survey.

The purpose of our "Coverage Type" hierarchy is to make sure that the coverage types all add to 100%, even when individuals may have multiple types of insurance coverage. We have available rates of health insurance coverage by type for all 50 states from 2008 to 2017. We measure coverage both in broad categories such as private, public, insured, and uninsured, but also more granular coverage types such as employer, individual, Medicaid or Chip, and Medicare.

If we open the breakdown menu, you can see all of the available breakdowns for this measure including age, citizenship, disability status, family income, among others. Hovering the cursor over Iowa, for example, we can see that 65.2% of Iowans had private coverage as their primary source of coverage in 2017.

Let's open up the State Rank Chart and select poverty level for the breakdown. We select "Uninsurance" for the coverage type, and 0 to 138% for the poverty level, and sort by the highest value. We can see that 28.2% of Texans in the 0 to 138% FPG category were uninsured in 2017 compared with only 4.2% in the 0 to 138% FPG category in D.C. This represents a 24 percentage point range in uninsurance between states for the population below 138% FPG.

So, that's our "Health Insurance Coverage by Type" measure. Next, I'll go back to the "Explore Data" page and show our measure "Had a Usual Source of Medical Care" under the "Access to Care" category.

We produce this measure and seven other measures of healthcare affordability access and utilization using data from the National Center for Health Statistics National Health Interview Survey.

State Health Compare is a unique source of state-level estimates for these measures which we're able to produce using state identifiers that we access through the University of Minnesota's Census

Research Data Center. We recently added 2016 estimates for this measure. This measure can be broken down by total, age, and coverage type.

Let's go to our State Rank Chart and look at disparities in usual source of care by state. If we select "Age" for the breakdown, and "19 through 64" from the "Age" menu, and sort by highest value, we can see that in 2016, 93.6% of adults in Vermont had a usual source of care. While on 70.5% of non-elderly adults in Nevada had a usual source of care.

This represents a 23.1 percentage point gap between states in the share of non-elderly adults who had a usual source of care.

Returning to the "Explore Data" page, I'm going to highlight our measure, "Adult Binge Drinking." We produced this measure using data from the CDC's Behavioral Risk Factor Surveillance System Survey. We recently added 2017 estimates for this measure.

Again, we have estimates here for all states, along with breakdowns for education and race/ethnicity. Let's look at the bar chart to examine disparities in rates of binge drinking. If we select "Education" from the breakdown menu, and select the "United States" and "Pennsylvania" from the states menu, we can compare the rate of adult binge drinking by educational attainment.

In Pennsylvania, we see a large difference in rates of binge drinking by educational attainment. With almost 20% of adults with a BA or higher reporting binge drinking, compared with 17.7% for adults with some college, 15.9% for adult - for a high school graduate, and only 10.4% for adults with less than a high school education.

As shown, at the national level we see much smaller differences in binge drinking by education. Going back once more to the "Explore Data" page, I'm going to spotlight one more recently updated measure, "People with a High Medical Care Cost Burden."

We produce this measure using data from the Census Bureau's Current Population Survey. If we scroll down to the measure definition, we can see that this measure shows the percent - the share of individuals and families where out-of-pocket healthcare spending accounted for more than 10% of annual income. Again, we recently updated this measure with estimates for 2017 for all states. And we have breakdowns for this measure for income and race/ethnicity.

Let's look at the bar chart to explore disparities by income. Here I'm going to select the "Income" breakdown and select "All Available States" from the "States" menu. This allows us to see disparities in medical costs care - medical care cost burden by income, either above or 200% FPG for the U.S., plus all 50 states and D.C.

At the national level, 28..8% of individuals with family incomes at or below 200% FPG had a medical care cost burden, compared with 17.0% for those with family incomes above 200% FPG. This represents an 11.8 percentage point disparity at the national level.

Scrolling down the page allows us to visually see this income disparity and do this analysis for all states. For example, in Massachusetts we see a difference of 22 percentage points in rates of high medical care cost burdens between these two income categories.

In addition to bar charts, we also give you the option to download any of our measures on State Health Compare in a spreadsheet format. This can be helpful if you want to do significance testing or create additional graphs or data visualizations using our estimates.

To download the estimates to a spreadsheet select "Download Data" and then either choose the "Currently Selected Data" or "Choose Data to Download." If we select "Choose Data to Download," we can select all the states we'd like estimates for. In this case we'll select, "All," for the U.S. and all states, the measures and breakdowns we'd like. In this case we'll scroll down and select our

Unhealthy Days measure by total and age. And then we'll select our timeframes. In this case, 2013 through 2017 for all measures. If we select "Download Data," that will download a CSV file of the selected data to our computer.

With that, I'm going to go back to the slides to show you some of the ways that State Health Compare data has been used by SHADAC and other groups.

First, this is one of our series of "Education Matters," two-page state profiles that we produced last year. These use this data from the BFRSS to show the importance of the link between educational attainment and healthcare access and affordability for all 50 states and D.C. The goal of these state profiles is to allow readers to examine disparities within their state, and to see how their state ranks nationally in these two measures of affordability and access.

Next, this is our "Housing Affordability Matters" infographic series that uses data from our Unaffordable Rents measure, focusing on the five states with the highest rates of Unaffordable Rents among rental households with a Medicaid enrollee.

These infographics show rates of cost-burdened rental households among different groups. Low income households, households with a person of color, with a Medicaid enrollee, or with a person with a disability. They also show how states can use the Medicaid program to help address beneficiaries housing insecurity.

Here is our forthcoming series of 50 two-page state profiles that use data on opioid-related drug overdose deaths from State Health Compare. These profiles show state trends in drug overdose deaths by drug type, and highlight how the evolution and nature of the opioid overdose crisis has varied substantially by region and state.

Again, these profiles aim to give readers a clear picture of how the opioid crisis has evolved in their state over time. And how the rate of different types of overdose deaths varies substantially across states.

These are just a few of the ways that SHADAC has used State Health Compare measures to produce informative state profiles and infographics. State Health Compare is also widely cited and used as a resource by more than 25 federal and state agencies, foundations and research organizations, state policy groups, associations, and colleges and universities.

I'm going to run through a few examples of how these organizations have used State Health Compare data and visualizations in their work.

First, the Milbank Memorial Fund Reforming States Group tapped State Health Compare and SHADAC to produce a series of 50-state health profiles to their fall meeting in 2018. These profiles used State Health Compare measures like SHADAC's "Primary Source of Coverage" indicator, "Per Capita Public Health Funding," "Unaffordable Rents," and a variety of measures related to health behaviors to give states a picture of health and healthcare in their state.

Next, New Mexico's Department of Human Services recently used State Health Compare's detailed "Primary Source of Coverage" measure to examine the fall in the state's uninsurance rate and increase in Medicaid coverage among the Medicaid-eligible population after that state's expansion of Medicaid eligibility.

Next, the Minnesota Department of Health's Office of Rural Health and Primary Care recently used State Health Compare data to highlight the large decrease in uninsurance among Minnesota's non-elderly population, and the role this decrease played in the context of Minnesota's rural communities.

Finally, Georgetown University Center for Children and Families recently highlighted State Health Compare as a key data source in its presentation on making effective use of data in advocacy work.

With that I'll hand the presentation back to my colleague Carrie, to moderate the question and answer portion of this webinar.

Carrie Au-Yeung: Thank you very much to both Robert and Brett for those presentations. As Robert indicated, we're going to move on to our question and answer portion of today's presentation. We have received a few questions already, and I encourage everyone to go ahead and continue to submit any questions you might have.

You can again use the chat feature or you can always send questions to us on Twitter using our handle @shadac. And I think what we'll do is start with a few general - some of the more high level questions that have come through.

The first question is for Robert. How do you choose which breakdowns to include in State Health Compare?

Robert Hest: We generally choose to include breakdowns that we find to be policy relevant and that are going to make these measures more relevant to our users -- people working in states. And we also make sure to choose breakdowns that are going to be available for as many states as possible. So that could mean choosing specific cuts and breakdowns to make sure that we maximize the available sample size that we have in each state to make sure that we have data that are able to produce state estimates for all 50 states.

Carrie Au-Yeung: Great. And what does someone do if they want a breakdown that is not currently included in State Health Compare?

Robert Hest: We are able to do one-off data runs thanks to a grant from the Robert Wood Johnson Foundation. So if there is a breakdown that you'd like to see on State Health Compare but that isn't available, I'd suggest you just email us at shadac@umn.edu and we'd be happy to work with you to find a way to get the estimate you're looking for.

Carrie Au-Yeung: Great. Next, this is slightly more technical. Can you talk about why State Health Compare uses margins of error instead of standard errors?

Robert Hest: We chose to use margins of error because it's really easy to quickly see the sort of variability around the estimate. Because the margin of error allows you to, as I showed, quickly construct a 95% confidence interval around the estimate. And having the standard error makes it a bit more difficult to do that.

If you do want to give a standard error, it's pretty easy to do that conversion. All you'd have to do is divide the margin of error we provide by 1.96. And there is more information about how to do that conversion in the technical brief I wrote on doing significance testing using State Health Compare data.

Carrie Au-Yeung: And I should mention that there's a link to that brief on the presentation page on SHADAC's website. So if you go on there to download the slides and you scroll down, we do link to that brief there, if you're wanting more detail on what Robert just discussed.

Now we'll move on to a few more general questions about the new measures, Unaffordable Rents as well as Unhealthy Days. The first question is kind of a combination question. Why should Unaffordable Housing be used as a key indicator of financial distress? Maybe we'll start with that part of it.

Robert Hest: And so generally housing is the largest single expenditure for most families. And it usually is the expenditure that takes precedence over other expenses. So that makes it a pretty good measure of how much financial distress families are under, looking at their housing costs.

There are other approaches, such as the residual income approach, where you would subtract the necessary non-housing expenditures from the household income, and then that would be the residual that you compare to the amount paid for housing.

But that measure would be a little bit more complicated and I think a little bit more difficult for folks to understand. So we stuck with the 30% unaffordable rent approach.

There's a really good comparison of this approach, of the residual income approach, to the 30% unaffordable rent approach in the publication, "Measuring Housing Affordability," assessing the 30% income standard that Brett mentioned in his portion of the webinar.

Carrie Au-Yeung: And could you elaborate a little bit on why we use the 30% standard? I know Brett touched on that a little bit or, you had, and I wonder if you could just elaborate on why we use that rather than other standards such as the 50% standard.

Robert Hest: Sure. I think that 30% standard is a pretty common rule of thumb for a recommendation for how much of your housing cost should be in relation to your income. And I know it's a standard that's used pretty widely in the literature. So that's the one we went with.

I know the 50% threshold is also used as a measure of a more extreme level of cost burden. But the other advantage of using that 30% standard is because a higher proportion of households meet that threshold, and it also ensures that we're able to produce estimates of cost burden for more states than we would be able to with that 50% standard. So it met our criteria for a number of reasons.

Carrie Au-Yeung: Thank you, Robert. Can you also talk about why we're using Unhealthy Days instead of Healthy days, and what's the difference between those two measures?

Robert Hest: So we take this Unhealthy Days measure from the BFRSS. And that's actually the way that question is worded in the BFRSS and we wanted to stay as close as we could to the way that the question was worded to take that from a validity perspective.

And the question in the BFRSS is about the number of days when an individual's mental or physical health is not good. And the way that we would switch this to Healthy Days would be to subtract the number of Unhealthy Days by 30. So if someone said they had 30 Unhealthy Days that would translate to 0 healthy days. And we thought it just made a bit more sense to stick with that Unhealthy Days measure.

And I think from my perspective it's just a little bit easier to understand the concept of an unhealthy day. When I had an unhealthy day, then what a healthy day would be.

Carrie Au-Yeung: Kind of as a follow-up there, why would you use both Physically and Mentally Unhealthy Days as a composite when there is overlap between the two?

Robert Hest: So first we wanted to look at the validation work that was done by the CDC when they were producing this measure. And they found that the large majority of adults reported substantially different number of Physically and Mentally Unhealthy Days. And the majority they found, also on the report, either Mentally Unhealthy or Physically Unhealthy Days, there's actually less than 5% who reported equal numbers for both questions.

So we thought it was useful to present that combined measure to give a more broad and general perspective of the, of overall population well-being. But we also thought it was good to include the

separating questions, the Physically Unhealthy Days and Mentally Unhealthy Days separately to see where states might differ in terms of the different types of population well-being physical versus mental.

Carrie Au-Yeung: Great thanks Robert. I'm now going to move on to some more specific questions about the new measures, and I'm going to start by pointing these to Brett. Can you talk about what percentage of households in the US rent, i.e., what is the denominator for Unaffordable Rents?

Brett Fried: So in 2017 it was about 36% and that I think is about - is over 40 million households. And then it, you know it also varies, you know, by state. So if we're looking at those states that, you know have the highest Unaffordable Rents, you know, so they – we're looking at the top five there's some 34.3% in Florida to about 46% in New York.

Carrie Au-Yeung: Great. Can you talk about why we limit housing costs analysis to rental housing only, since unaffordable mortgages are also a major issue in many places?

Brett Fried: So one reason why we just used the Unaffordable Rents is that, you know, people who have lower incomes are more likely to rent than own a home. And also they're less likely to have savings or, you know, have a lot of wealth, so in looking at disparities that's the one we chose but we understand that unaffordable mortgages are a major issue and we're certainly open to including unaffordable mortgages on State Health Compare.

Carrie Au-Yeung: All right, let's see, a question about the Unhealthy Days measure -- are reports of Unhealthy Days corroborated by clinical or diagnostic data?

Brett Fried: Yes there's a lot of research out there where they look at, you know, different, you know, health outcomes and, you know, whether, you know, how, whether healthy days is a good, you know, is

correlated with other types of health outcomes and, you know, and they find that that's true but there's some very good, you know, literature reviews of healthy days that corroborate that yes.

Carrie Au-Yeung: Okay and another person says they noticed that for the coverage distributions for Unhealthy Days we just look at insured and uninsured. And they're wondering why we don't include any entire health insurance coverage distribution in that measure?

Brett Fried: Yes, we use the measure from the BRFSS. And the BRFSS in its core survey only includes uninsured and insured. So if you want to get, you know, the types of coverage Medicaid, ESI, individual coverage, you have to go to one of their modules and that – and there's very little state participation in that particular module.

Carrie Au-Yeung: Okay. And now we have kind of a why question. Could the differences between Unhealthy Days in states be mostly about age?

Brett Fried: So that's one reason why we included age as one of the breakdowns. One thing that we found that was kind of surprising when we looked at that is when we looked at Mentally Unhealthy Days that you have the highest number of Mentally Unhealthy Days was in the population of 18 to 34 year-olds.

Carrie Au-Yeung: And then we had a question that looks at both one of our new measures or updated measures along with the Unhealthy Days measure. This person's understanding was that the number of Unhealthy Days is decreasing. If so, how did this matchup with the rates of opioid deaths and suicides rising so much that U.S. life expectancy is dropping?

Robert Hest: And I think the actual - the number of, the average number of Unhealthy Days on population-wide has actually been relatively stable across the U.S. We did do some significance testing on that and at least for the time frame where we have this measure available, which is 2011 to 2017,

there hasn't been a statistically significant change in the average number of Unhealthy Days among adults in the U.S. There are some changes at the national level if you look at different subpopulations, for example, by age where some of those age groups are seeing increases in the number of Unhealthy Days. So at least at the population, the general population level, we're not seeing a decrease in Unhealthy Days.

I'm not positive on how exactly that would be related, I mean, we haven't looked at, like, a statistical relationship between opioids deaths and opioid use disorder and suicide and Unhealthy Days. I think that'd be definitely something for future research and I think that's – that's one of the reasons that we put these data out there on State Health Compare, it often allows people to look at the data generate those sorts of questions that bear further investigation.

Carrie Au-Yeung: Right, thank you Robert. And we have another why question, and this might be a good one for Brett. Can you talk about why for Unaffordable Rents there are no states that appear in both the top five and the bottom five states for all rental health households and the top five and bottom five for disparities?

Brett Fried: Yes, I mean, I think it's very different when you're looking at the total population or you're looking at specifically within, you know, a higher income population or a lower income population because that's going to depend on the specific income distribution in the state and the distribution of housing costs in the state. I mean, actually one of those strange results in there, you know, that we looked at was that Hawaii appears both in the top in terms of Unaffordable Rents. But then it's, you know, the lowest in terms of disparities for Unaffordable Rents. And the real reason for that is that for people with high incomes have actually a relatively high level relative to other states in terms of Unaffordable Rents.

Carrie Au-Yeung: Okay, thanks. Some general questions - a general question about measuring Unaffordable Rents and Unhealthy Days. Are there other surveys besides the ACS that measure

Unaffordable Rents and are there other surveys besides the BRFSS that include the Unhealthy Days measure?

Brett Fried: Yes, there are and we're actually, you know, going to be doing a brief on at least on Unaffordable Rents and all the different surveys that have them and comparing them across the different federal surveys that include it. So here, you know, in State Health Compare we did it in the American Community Survey. There is a question in the BRFSS, you know, it's not like the ACS and its only available in their optional state modules. But still a lot of states, you know, choose to - those modules. The question is, like, during the last 12 months was there a time where you are not able to pay your mortgage, rent, or utility bills and plus there's another one in one of the other modules. It's also in the National Health Interview Survey which is a question more like the BRFSS question. And it's in the American Household Survey, you know, as well as in the Survey of Income and Program Participation, which that one we're really excited about because it's a longitudinal survey so you could sort of look at things like churning among renters. So anyway, you know, look for that brief. So, it's coming.

Carrie Au-Yeung: All right another high level question about State Health Compares, which I'll direct to Robert. How often is State Health Compare updated and are there any measures on the horizon that we're looking at to add to State Health Compare?

Robert Hest: So we update State Health Compare as soon as new data are available. So most of the data that we're using to produce our measures on State Health Compare are produced annually. And so we updates those measures as soon as those data become available on an annual basis. In terms of updates to the site, we're making updates throughout the year as data become available. But most of our measure updates tend to start in around mid-summer one we get estimates from the BRFSS continuing through the rest of the fall. So if you're checking back to the site to look for updated years of data, I would do that later in the year, but we are producing measure updates throughout the year.

In terms of new measures that might be on the horizon, we are looking at state rates of imprisonment as a measure that we are – we're thinking about putting on the site. We're still validating that measure and it's not quite ready for prime time but that's one we're considering. We also would welcome any ideas for new measures or breakdowns that you might have looking through the site. You know, we want to make sure the site is as relevant and useful to our users as it can be, so if you do have any suggestions for measures or breakdowns that you think would be useful please do email us at shadac@umn.edu or find us on Twitter @shadac.

Carrie Au-Yeung: All right, we are approaching the end of the hour so I'm going to go ahead and move on to closing remarks. First of all, we do, of course, after today encourage you to visit statehealthcompare.shadac.org to explore the data we've discussed today. As mentioned earlier our - all resources mentioned today will be available on the same webinar page where the slides are currently posted as well as on the link on the SHADAC homepage and State Health Compare homepage.

As mentioned earlier, we will also be reaching out to all attendees via email when the webinar recording is available. If you have any follow-up questions from today's event you can always feel free to reach out to Robert or Brett directly or you can contact them through main email account that Robert mentioned, shadac@umn.edu, and we'll get that email pointed to them.

To stay updated on SHADAC research including the upcoming products mentioned today -- the opioid two-pagers and the brief about Unaffordable Rents measures, oh, I'm sorry was that Unaffordable Rents measures? Yes. We encourage you to follow SHADAC on Twitter using the handle @shadac listed on the bottom of the slide here, and also follow our- us on our mailing list. You can sign up on the SHADAC homepage.

I want to think again Robert and Brett for taking the time to share their work with us and thanks again to the Robert Wood Johnson Foundation for supporting this work. Finally, thank you to everyone who joined us for today's event and we hope you have a great afternoon.