Webinar Transcript

The 2014 Update of the Rural-Urban Chartbook

Presented by Alana Knudson, PhD on December 9, 2014

{Shawnda Schroeder:}

Thank you and good afternoon. Today we are going to be hosting a webinar entitled the 2014 Update of the Rural-Urban Chartbook. For those of you not familiar with the Rural Health Research Gateway, Gateway is a website that provides easy and timely access to research and findings of ORHP-funded Rural Health Research Centers from 1997 to the present. Our goal at the research Gateway is to move new research from the rural health research centers to various end-users as quickly and efficiently as possible. The website can be used to find abstracts of current and completed research projects, publications resulting from those projects, and information about the research centers themselves as well as individual researchers.

Following today's presentation, the webinar will be posted to the Rural Health Research Gateway website. You can find Gateway at www.ruralhealthresearch.org. You can also join our Alerts to receive periodic e-mail updates when new publications become available, including the archive of today's webinar. The link to sign up for the Alerts is also on the left-hand side of your screen. We have muted all lines but I encourage you to use the question-and-answer chat box at the bottom of your screen to type any questions you may have for Dr. Knudson. At the end of today's presentation, we will open up the line for questions. If there are remaining questions in the chat box at the end of our meeting today, we will send out responses to those with the archived webinar. Again, I want to thank you all for joining us today and now I'd like to introduce our presenter.

Dr. Alana Knudson is a principal research scientist and deputy director of North Dakota and NORC Rural Health Reform Policy Research Center. Dr. Knudson has 20 years of experience implementing and directing public health programs. Dr. Knudson currently serves as deputy director for the Rural Health Reform Policy Research Center, which is a partnership with the University of North Dakota Center for Rural Health. It is one of seven Rural Health Research Centers funded by the federal Office of Rural Health Policy. This center conducts studies examining rural health disparities and tracking the impact of health reform on rural health and evaluation of the health care innovation award. The research and policy findings have informed state, tribal and federal health policy. She also has public health experience having worked at the North Dakota Department of Health and for the Association of State and Territorial Health Officials. Dr. Knudson earned a masters of education degree and a PhD from Oregon State University in Corvallis, Oregon.

While he will not be presenting today, I would also like to introduce Michael Meit. He has played a large role in the development of the Chartbook and he was invited to present with Dr. Knudson today. Michael Meit serves as co-director of the NORC Walsh Center for Rural Health Analysis and the program area director for NORC's public health research department. Mr. Meit studies rural public health systems and public health preparedness. He currently leads the

evaluation of the tribal health professions training programs and he studies the impact of the Affordable Care Act on state and local public health systems. Mr. Meit has experience working at both the state and national level, first with the Pennsylvania Department of Health and then with the National Association of County and City Health Officials in Washington DC. Mr. Meit served on the National Advisory Committee for Rural Health and Human Services from 2004 to 2008 and serves on the Board of Directors on the National Rural Health Association and the Maryland Rural Health Association. For today's presentation I would like to now turn over the lead to Dr. Knudson.

{Alana Knudson:}

Thank you so much. This is a great opportunity for us to be able to share some work that I think is very near and dear to many of us on today's call. This particular project involved a number of colleagues including Michael Meit and other folks to re-create a chartbook that was created in 2001 by the Centers for Disease Control and Prevention entitled: “Health, United States 2001 with Urban-Rural Health Chartbook.” For the purpose of our study, we updated that important piece of work. But also it provides us a baseline of rural and urban differences in health status and access to care to be able to help us examine a baseline prior to the implementation of the ACA.

The methods that we use in developing this chartbook included replicated in the analyses that were conducted in 2001 using the most data available and that recent data was between rather 2006 and 2011. It included on the slide on a number of the different data sources that we accessed in creating this chartbook. We also applied the same geographic definitions although some of the classifications have changed since 2001. Included in the metropolitan counties, are large central, large fringe and small metro. Whereas, nonmetro counties included micropolitan and non-core. We also stratified analyses by region. We use the four census regions as depicted in the slide. We used the West, Midwest, Northeast and South to stratify our counties.

For today's presentation, we will provide a brief overview of demographics, as well as mortality information, a look at some of the risk factors (access issues to different types of healthcare services and providers) and will include resources to help address and improve health status in rural communities.

First and foremost, when we start looking at the data, please look to see how the population has shifted over time. As this slide depicts, we have an increasing percent of the population in our rural counties (in the micropolitan and non-core counties) that are over the age of 65 and this trend has increased over the last 10 years. So in some of our most rural communities, sparsely populated communities, we have almost one in five residents who are now over the age of 65.

With regard to race and ethnicity, this slide shows how as counties become more sparsely populated, they also become less diverse. For example, the first bar on the left represents the largest of the metropolitan counties. You can see, the different colored bars indicate the different races represented in those communities. The white bar represents white or Caucasian with the red bar black or African American. The green bar Asian or Pacific Islander, followed by American Indian, or Alaska native which is the purple bar. Multiple races in blue and the orange

component for Hispanic and again you can see between the most densely populated in the bar on the far left “A” and as compared to the bar on the far right “E” that there's a great deal of difference with regard to diversity.

Likewise, we also continue to see a difference in poverty. It matters where people live. And unfortunately, the overall trend in our country, has a higher percent of residents residing in our country that are now living in poverty. If you will look at the large fringe-- the smallest percentage of people residing in poverty-- this is the area of our country where we most often refer to as suburban areas. This area usually has higher incomes, is more affluent, and has more access to large employers. You will see where you live actually makes a difference and there is great disparity between those who reside in very densely populated rural areas as compared with those who reside in these suburban areas or in some cases also in some of the larger central areas and the more metropolitan populations.

Again, this slide helps to illustrate where populations are distributed. The percentages on the left side represent all regions. As you go across, you we can see that the highest percent of population residing in poverty is located in the South and that is true for those who are living in micropolitan (those larger rural counties with at least 10,000 but less than 50,000 population) as well as those who live in the most closely populated counties of non-core with less than 10,000 people.

There's good news when we start looking at mortality, particularly for infant mortality. This slide depicts that overall, we have seen decreases in infant mortality over the past decade. However, we still have higher infant mortality rates among our micropolitan and non-core.

Again, when we look at mortality among children and young adults, those ages 1 to 24, we again see that the trend is going down slightly, however, when you look at what is occurring in our rural communities, we continue to see higher rates of mortality for this particular population.

When examining the differences among the regions, we see that those who reside in the most sparsely populated counties in the West, followed by the South, have the highest rates of mortality for children and young adults.

Likewise, when we look at mortality among working age adults, we also see those who reside in the most rural areas have the highest rates of mortality and these are due to cancer, heart disease, and unintentional injury. Overall, though we've seen a decrease in mortality among this population, we unfortunately continue to see disparities that persist in our micropolitan and non-core communities.

When examining these mortality rates by region, again, we see the Southern region of our country having the highest mortality rates among those who live in micropolitan as well as non-core counties.

This slide depicts the mortality rate among seniors- those persons 65 and older. We can see that the overall mortality rate has decreased, but again we continue to see that the rates among those who reside in our rural counties continue to be higher than those who reside in urban counties.

Likewise, when we look at heart disease, we also see an overall decrease during this past decade with regard to mortality rates from heart disease, however, we continue to see that same pattern where we have those folks residing in micropolitan or non-core counties experiencing higher rates of heart disease mortality.

This is a very interesting slide with regard to mortality rates for chronic obstructive pulmonary diseases. This slide depicts one of the few slides where we see the overall mortality rate for this particular classification of diseases increasing. But what's fascinating about this slide is that the increases are the most pronounced for those who reside in micropolitan or non-core. Again our rural residents are experiencing a higher rate of mortality for COPD than their counterparts who reside in urban counties.

Likewise, when we look a little bit more deeply, at the comparison among genders, you can see that for particularly females, the disparity among those who had died of COPD 10 years ago has greatly increased for our rural women who live in micropolitan and non-core communities. Likewise we do see that our males have increased, but not as quite of an increase that we experienced between the 1996 to 1998 data with the 2008 to 2010 data for females. This is one that we will definitely want to watch to see how these mortality rates continue over time.

Likewise, when we look at unintentional injuries, unfortunately some of the trends and this particular chart illustrate that they are going in the wrong direction. As you can see, the highest rate for unintentional injury for mortality from unintentional injuries is for those who reside in our micropolitan counties. Whereas the next highest rate is for those who reside in non-core. Just to be clear, these leading causes that fall under this category include poisons, motor vehicles, and firearms.

When looking across regions with regard to mortality for unintentional injuries, again, we see the highest rates popping up in the West and in the South. Rural communities within the micropolitan counties having the highest rates.

Overall there's good news with our motor vehicle injury mortality rate. In the past 10 years, and in the majority of our counties, we have seen a decrease. However, once again we are seeing highest death rates in our micropolitan counties. Because all of the other geographic classifications have decreased over the past decades, this again is another area that we want to continue to monitor but particularly look at targeting some of those micropolitan counties.

When looking at the regions of injuries, the highest mortality rates for motor vehicle injuries occurred in the South and in the West. As you can see there is a pattern with regard to not only the density or where people live, but also in what region people live in the country.

Overall homicide rates have decreased. The good news is the rural residents are not the most likely to have the highest rates. The highest rates for homicide occurred in the most densely populated urban areas in the large central counties.

When examining homicide by region and morality, again you can see that the large central really comes to the forefront in the Midwest and the South, but when you start looking at the rural areas, the South has the highest rate of death from homicide for rural dwellers.

Unfortunately this is another mortality slide that we would like to see from a trend standpoint going the other direction. Suicide is increasing for all classifications of geography except for those residing in the large central and once again, the highest rate of suicide are among those who live in our rural counties with those residing in the most isolated counties experiencing the highest rate of suicide.

Again, when you examine where the suicides occur in the country, unfortunately, you can see that the most isolated communities in the western part of the country are the most likely to experience suicide for persons 15 years of age or older followed by the micropolitan communities also located in the West.

Now let's shift our attention to risk factors. How are people's behaviors going to shape the next decade or the next few decades' mortality rates? When we look at adolescent smoking, there is also good news and bad news. Overall the good news is we have decreased the overall smoking rate or percentage of adolescents who report that they smoke. However, we continue to see the highest percentage of smokers in this population residing and micropolitan and non-core communities or in our rural communities. Adolescents residing in the Midwest and the most isolated rural counties or the non-core counties are the most likely to report smoking in the past month whereas the second most likely area is in the Northeast. Again, these are factors to monitor because we know that they have an influence on adult behavior and ultimately mortality rates going forward.

When we look at adult smoking, again there's good news and bad news. Unfortunately the bad news is in the rural areas. This chart showing over the past 10 years, smoking among persons 18 years of age or older by rurality. And that is pretty much comparable as well in our non-core areas of, although it is somewhat lower for non-core in 2010 than it was in 1997. Now I want to focus your attention over to the left side where you see that the urban numbers- the urban percentages have gone down. And so for those of us who work in rural public health, this particular slide is very telling in looking at what kinds of interventions and what kinds of support might be needed to help our rural adults quit smoking. And as you can see, we still have our work cut out for us. Likewise when you look at where this smoking is occurring, the highest percent of adults who are smoking are smoking in the most isolated or the non-metropolitan and rural communities located in the South, followed by those in the Northeast.

Alcohol consumption, particularly when we start looking at binge drinking, unfortunately, this one overall is going in the wrong direction. As you can see, the orange line is above the green line and although our people residing in rural communities are not the worst if you will for this particular indicator, it does give one pause that we are not making more ground and being able to reduce the percentage of adults who are engaging in binge drinking behavior.

Again, looking across the country at the different regions, the highest percentage of adults who report binge drinking are coming from our rural communities in the Midwest and as someone who has grown up in those communities, this is not a particular surprise. Again we are seeing some trends that we would like to see going in the opposite direction and unfortunately when we are looking at risk factors for obesity overall, our country is larger. Obesity among our adults is

increasing and you can see how obesity is much greater in our rural areas--for those adults residing in our most isolated counties in our country have the highest percentage of people who are obese.

One contributor to obesity is a lack of physical exercise. This particular slide shows physical inactivity among persons 18 years and older and unfortunately, we see once again that folks who reside in our rural counties are the most likely to have the least amount of physical activity -- again this is measured as part of their leisure time. And unfortunately, we are not improving too much of this particular category. When you look across the areas in our country were the physical inactivity is most reported, once again the rural in the South have the highest percentage of adults who indicated that there physically inactive followed by those who reside in the Midwest.

There are some other health status indicators that we like to keep a pulse on. This particular chart depicts birthrates among adolescents and as you can see overall this has decreased. Remember when I discussed the issue of the suburban phenomenon -- this particular slide illustrates that the lowest birthrate among adults occurs in our most affluent areas of the country -- both counties that are more suburban or labeled large fringe. Our highest birthrates are found in our most sparsely populated rural counties or followed by those who reside in micropolitan counties so again this is a trend that is you can see higher rates of births in some of our rural communities.

We also looked at activity limitations as a way to gauge health status and this particular slide looks at the limitation of activity, based on their health condition, and is experienced by those who reside in the noncore. The fact this has increased over the last 10 years for those who reside in the non-core areas gives us information about how we need to examine and provide services for people who are out there because when you start looking at these types of percentages, the adults and this is just over the age of 18 and over. This doesn't even look solely at the elderly populations who report some kind of limitation so we are really interested in monitoring this. Likewise, you look across the regions, those adults that limit their activities caused by chronic conditions.

Now shifting gears looking at health care access and utilization and use. Overall, looking at this uninsured information, the blue line for the triangle represents family incomes less than 200% of poverty and you can see that line kind of bounces up and down for the gray line that represents the percent of uninsured from 1997 to 1998. And for those who reside in the most sparsely populated areas or those non-core counties, those are the counties that experienced the highest percent of persons with no health insurance.

Likewise when you look at the bars below, the bright orange bar represents family incomes over 200% of poverty who were uninsured in 1997 and 1998 whereas the green bar with that axis on it represent the families who were uninsured who had incomes over 200% of poverty and unfortunately, the highest among that percentage of respondents were those who resided in the most sparsely populated areas or again non-core, so even health insurance has an rurality component. It is a greater challenge for those living in rural areas than it is for those residing in

urban. Again, looking at the insured by region of the country, those residing in the rural areas were followed by those residing in rural areas in the South, were the most likely to be uninsured. Again looking the populations of 65 years and younger, we can see that there is a higher percent of people in 2010 and in 1997 who were covered by Medicaid and as you can see, the highest percent of any of these populations were families who have dependent children. There's a protective factor to live in a suburban area.

Again, you can see on the lower bar for those families who have incomes even greater than 200% of poverty, the highest percentage of people in this category are those who reside in micropolitan and non-core areas. So again, the issue of a rurality also impacts the coverage for Medicaid.

When looking across the regions, the highest percentage of persons less than 65 who are covered by Medicaid reside in the South and followed by those who reside in the West.

Then when we start looking at private insurance you'll see that things slip. The last slide we had increases in the uninsured and increases in those who were covered by Medicaid. In this slide, we see that over time, we have fewer people covered or a smaller percentage of people covered by private insurance. Again, when you are looking at poverty and income levels, those with greater incomes-- those that have over 200% of poverty -- are most likely to be covered in that suburban area you can see even over time it still higher in that area. Unfortunately, those who reside in our most rural areas are the least likely to be covered by private insurance regardless of the family's income. One thing that's important to also remember is that a lot of our employers in our rural communities are mom-and-pop shops or small employers. Those who reside in more of the suburban or metro large central areas have much larger employers and they are more likely to provide health insurance to their employees.

On this slide it illustrates that phenomenon exactly. But even so, we can see over time there's also been a decrease in the coverage of employer-sponsored health insurance. Again the least likely of all of the people regardless of poverty -- again those top two lines represent the top orange line represents family incomes over 200% of poverty 1997 and 1998 and the green line represents people in that over 200% of poverty for 2010 and 2011 -- likewise the lower bars the dark bar represents family incomes less than 200% and the blue bar represents families less than 200% in 2010, 2011 and again you can see over time, that the employer-sponsored health insurance has eroded. It has eroded the most for those who live in the most sparsely populated areas.

When we look at access to employer-sponsored health insurance, we see that the Midwest and Northeast are pretty comparable in terms of having the highest percentage of adults covered under employer-sponsored coverage with the West being the least of the regions likely to have rural residents covered by employer-sponsored coverage.

Another important measure for us is to look at health care access and use. When we look at physician supply, overall for the vast majority of the country, especially for our urban dwellers, there is a higher patient per physician in 2010 illustrated by the orange bar than what was experienced in 1998. However, we still see not only smaller patient care physicians per 100,000

patients, the physician supply is smaller -- but you can see that there has not been an increase or an improvement overall in our rural communities with regard to increasing access to physicians. It's always a challenge and a struggle for many communities for recruiting.

This particular slide shows what kind of positions are providing care and as we can see, small metro has the highest patient or patient care physicians per 100,000 and primary care 34.2 or 100,000 population, and interestingly enough, our most rural areas are our most sparsely populated areas have approximately 31.6 or almost 32 for general in family practice and we know that that's often the physicians who provide care in those communities. But as you can see in as we look at different types of primary care physicians, for general internist, they are the least likely to provide care in rural communities as our general pediatricians, and OB/GYN. We can also see from this next slide that our dentist supply is not increasing in our rural communities in the same way that it is increasing in our urban communities. In micropolitan communities, it is somewhat less in 2007 than it was in 1998 and is just slightly higher at 30.4 at 30.44 the access to dentists in our non-core or our most sparsely populated counties.

This one is also an interesting slide in that overall, we see that dental visits have decreased as reported by adults 18 to 64 and given the lack of access to dentist, it is not surprising that adults who reside in micropolitan and non-core communities are the least likely to have a dental visit during the past year. Whereas those who reside in the suburban or the more affluent areas are the most likely to have a dental visit.

We also see some interesting trends with our inpatient hospital use. This particular slide indicates that in 2010, we saw increases for people who reside in large central, large fringe, and small metropolitan counties with regard to discharge rates per 1000 people. However, we see in our rural communities a decrease in the overall discharge rate among our non-elderly adult populations.

Shifting gears in looking at substance abuse treatment, this one bounces all over. Again recognizing that the orange bar is the experience of the respondents for 2010 versus the gray bar for alcohol and again we are looking at admissions per 100,000 population and even though admissions have decreased, for people who reside in our larger rural communities, it is still the highest rate among all admissions for substance abuse which is followed by the small metro community. There really hasn't been much change in the non-core communities for this particular admission rate.

When we look at opiates, again this is a trend we don't like to see -- the orange bar is 2010 and there's been increases across the board. You can see the disparity in the increase is greatest among those who reside in the micropolitan or the larger rural counties and also those who reside in the non-core. Although they aren't as high as the urban counterparts this is something to keep an eye on as we are looking at almost a fivefold increase for those who live in micropolitan areas over a period of about 12 years.

Marijuana is another trend that we see overall -- we see higher rates for admissions for treatment and again, the highest rate is experienced among those who reside in our larger rural or our micropolitan counties.

Stimulants also follows a similar pattern where we see again the highest rate seeking care for admission for stimulants is in those large rural or micropolitan counties.

When we look across at the types of care that it sought we find that overall, people residing in micropolitan counties or our large rural counties are most likely to be admitted for treatment for alcohol followed by marijuana. Again you can see how urban is most likely to experience admission rates for opiates but we are particularly interested in following these trends and now with a number of additional states and the District of Columbia passing marijuana laws, this will serve as an interesting baseline test to see how these admission rates change over time.

When we look at other types of mental health measures- these are in percentages of people who report in the past 30 days they've had a serious psychological distress- this is among adults- and the most likely population to report this is residents who reside in the South in the most sparsely populated or the non-core communities followed by those who live in large rural or micropolitan communities in the South.

But alas, there are resources to help address and examine the ways that rural communities can look at improving not only some of these outcomes and improving access to services but also looking at ways to improve the overall health status of rural communities. And the first one of course is looking at the Rural Health research Gateway, where Shawnda indicated at the beginning, has a whole host of different types of research studies that have been conducted and focusing on rural health and health care access issues.

The Rural Assistance Center, which is also housed at the University of North Dakota's Center for Rural Health, has tools for success in the Community Health Gateway and I will show you this page. So you can see when you click on the tools for success, you can go right into health models and innovation hubs and be able to identify if you're interested in looking at smoking cessation you can click by topic and find information about that, likewise, if you're interested in looking at different types of programs to address obesity, there is the evidence-based toolkits which are also housed on the Rural Community Health Gateway and these toolkits have been built in modular format so that you are able to play wherever your community is. If it's just the beginning process of looking at identifying a problem and started a needs assessment, there are resources to assist with that. There are different types of program models that have been tested and used in rural communities that you can look at in terms of either a school-based or community-based or a clinical-based approach to addressing, for example, obesity prevention.

Likewise you can look at tools that provide information on how to evaluate a program, how to sustain the program, and there's also a clearinghouse that identifies successful programs that have worked in rural communities because so many programs that are touted have often only been tested or used in urban settings -- this particular resource really focuses you to be able to find information and programs and contact people that have experience in the rural setting. Which is very important because of all the unique opportunities that rural communities bring in looking at how to improve their health and increase access to health services.

So with that I just want to leave you with the contact information for myself and the director of our Rural Health Reform Policy Research Center. If you have any questions, I'd be delighted to address those at this time. Thank you.

If you'd like to ask a question, please press *one and record your name clearly when prompted.

First question: Where can we get the slides in the Chartbook?

Answer: The Chartbook is available on the Rural Health Research Gateway website and I believe it was included in the information about this webinar. And we can also provide you with the slides. We are that our team is excited about this particular product because we have used the 2001 chartbooks extensively and we were just delighted to have an opportunity to be able to update it and particularly in light of the implementation of the ACA so we could establish some baselines and be able to track how these different efforts might impact access to care, and more specifically, health status.

This is Shawnda Schroeder with the Rural Health Research Gateway, the Chartbook itself and the archive of this webinar as well as the slides that were shared today will all be available on the Gateway website which is www.ruralhealthresearch.org. You can also see that on the left-hand side of your screen, if you sign up for our alerts, you will get an e-mail notification with the slides and the archived webinar are available.

Question: Could you clarify again and speak to these small metro definitions, etc.?

Answer: Certainly. Large central includes metropolitan areas -- 1 million or more people -- large fringe -- a large fringe includes the remaining counties in the metropolitan statistical areas with a population of at least 10 million residents and the small metro is counties and metropolitan statistical areas with a population of less than 1 million people -- when we look at nonmetropolitan counties or rural counties, we look at micropolitan as a large rural in those counties in the micropolitan statistical areas have a population of 10,000 to 49,999 people -- whereas non-core or our small rural are all those remaining at nonmetropolitan counties. So they are counties with certainly less than 10,000 people.

I want to thank Alana Knutson and Michael Meit for all the work that was done on the Chartbook and thank you to all those who called in today. I would like to remind you to sign up for our Gateway Alerts if you'd like to receive e-mail notifications. Thank you and have a great afternoon.