Per Ostmo: Hello, and thank you for joining us. Today's webinar is titled rural-urban differences in adverse and positive childhood experiences. And it features Dr. Elizabeth, excuse me, features Dr. Elizabeth Crouch from the Rural and Minority Health Research Center. Today's webinar is brought to you by the Rural Health Research Gateway, funded by the Federal Office of Rural Health Policy.

Per Ostmo: Please note that all attendees have been muted, but you may submit questions for our speaker using the chat function. Today's session will be recorded and posted to the Gateway website for later viewing, and a brief Q&A will follow today's presentation. Next slide, please.

Per Ostmo: All right. My name is Per Ostmo and I am the program director for the Rural Health Research Gateway. My contact email is per.ostmo@und.edu, and I will drop that email into the chat box. So if any of you have any questions about the Gateway program, please reach out to me. Next slide, please.

Per Ostmo: So what does Gateway do? Well, we provide easy and timely access to research conducted by the Rural Health Research Centers funded by the Federal Office of Rural Health Policy. Gateway efficiently puts new findings and information in the hands of our subscribers, which include policymakers, educators, public health employees, hospital staff and more. Gateway is timely, relevant and 100% free.

Per Ostmo: You can stay up to date on the latest Rural Health Research by subscribing to Gateway's research alerts emails or by following gateway on both Twitter and Facebook @RHRGateway, and I will drop links to those in the chat box. Next slide, please. So now, I will hand things off to our presenter, Dr. Elizabeth Crouch, the deputy director of the Rural and Minority Health Research Center.

Elizabeth Crouc...: Per, thank you so much for having me. So today we're going to be talking about rural-urban differences in adverse and positive childhood experiences. Just Matt's name listed on here, but we have a huge team that's helped with this project and their named there all on the first policy brief which is already on the Gateway. So many thanks to the Gateway for supporting us.

Elizabeth Crouc...: I and again, represent the Rural Minority Health Research Center. We have been a federal office of policy funded center since 2000. Our mission is to eliminate and address the problems experience by rural and minority populations in order to guide research policy and related advocacy. Just pictures of our team, this is pre-COVID. As you can see everyone's smiling faces. And we're looking forward being with everyone at NRHA again in May. Let me get back to this.

Elizabeth Crouc...: Okay. So couple of the bold areas of health disparity populations will focus on today, including rural and racial ethnic minorities. We recognize though there are more than that, but these are the two we're going to focus on today's talk. Again, today's talk is focused on kids and children and adults, I mean children

and adolescents. Before they get to adulthood, what happens in their early childhood? Why we care about kids?

Elizabeth Crouc...: Nationally, 12 million children live in rural areas. Rural children compared their urban counterparts have been more likely to have Medicaid health coverage, but just is likely to be insurers as urban children. Rural children are more likely to miss one or more days of school. They experience higher rates of obesity and lower rates of preventative medical and oral healthcare among rural children compared to their urban counterparts. And lastly, under work from our work center we've shown that rural children have higher mortality rates, which is largely associated with unintentional injuries. So the meat of the topic, that's all we care.

Elizabeth Crouc...: What are ACES and why are they important? So ACES is an acronym for adverse childhood experiences. These are traumatic events that occur in a child's life, encompass many different things, but generally the broad categories include abuse, neglect and household dysfunction. These experiences matter because we know that they're associated with negative health and wellbeing outcomes as an adult and may affect outcomes for both physical and mental health, as well as risky behaviors into adulthood. So how do we measure these?

Elizabeth Crouc...: There's been two ways to measure. One is, and these are symbols here, National Surveyed Children's Health, but we have NSCH, which we'll focus on today. So we're asking caregivers to describe what the child has experienced. So gets caregivers asking about the child. So for example, has someone in the household been suicidal or mentally ill, alcohol or drugs in the home, parent in jail, divorce, domestic violence. They also ask about parental death, racial discrimination in low income versus what you've typically seen in earlier literature starting from 1999 on with the original A study where these more specific questions about emotional, physical and sexual abuse, where we have adults answering the questions about their childhood. So we're able to ask about, again, more sensitive topics than if we ask caregivers about their kids.

Elizabeth Crouc...: So you may have seen it measured two different ways, we've published on both. Today, we'll be focusing on the ACES quantified by the National Survey of Children's Health, how we measure those. Okay. So main did a study on ACES a few years ago. We've done some work since, so I really appreciate the Federal Office of Rural Health Policy continually to fund work on ACES with both the main Rural Health Research Center in the South Carolina Rural Health Research Center.

Elizabeth Crouc...: In 2019 or 2018, I went to Saratoga Springs and gave a talk for the National Advisor Committee, great committee on Rural Health and Human Services on our original paper on rural-urban differences and ACES at the national level. And some recommendations came out of that. One was to more comprehensive prevention strategies, second was research. Third was including a predefined rural-urban variable. Some of these things have occurred than they think have not. Forth is in this past funding cycle did fund a project on ACES and PCES,

which we're going to focus on today, looking at the full data set, which we'll get into in just a second.

Elizabeth Crouc...: A point of note is having the rural-urban status at the public National Survey Children's Health has not yet been done. So some of the work we do today required going to the research data center, which I'll get, I'm jumping ahead of myself, which we'll get into. Okay. So that's what ACES are. What are PCES? PCES are positive childhood experiences. So these are the flip of the coin.

Elizabeth Crouc...: So for 20 years, since 1990 with the original ACES study by doctors at Kaiser Permanente [inaudible 00:07:02] looked at these traumatic experiences and said, "How do these traumatic experiences, how do they impact children into [inaudible 00:07:10]" The point is how do we build resilience and mitigate, moderate or ameliorate ACES, do the experiences of positive of childhood experiences? So these are events that just having a mentor, a safe and stable relationship with a caregiver, participation after school activities, all kinds of things.

Elizabeth Crouc...: And both these positive and traumatic experiences at child are associated with health and wellbeing outcomes as an adult. So we know that traumatic experiences, for example, may lead to riskier behaviors in adulthood to unintended pregnancy, alcohol misuse, lots of things, right? But we also know that positive experiences can reduce, ameliorate or mitigate these experiences. So positive experiences, we know that adverse experiences mainly to toxic stress.

Elizabeth Crouc...: So Jack Shonkoff at Harvard talked about how toxic stress in the brain affected why these outcomes occur in early childhood development. Positive experiences can intervene at any of these points to improve health outcomes and promote healing. So the positive experiences guy, if you will, has been Dr. Bob Sege at Tufts, who's had a lot of work on the healthy outcomes, positive experience we'll talk about in just a second, is the framework we use to talk about positive experiences.

Elizabeth Crouc...: So what do we know? We know that positive experiences help people use their own life experience to help them recover. There's programs that may promote these, we talk about those at the end of the session. Health equity serve as the foundation for hope. So it helps us to invite each other to think about the strengths and connections that go beyond labeling individuals as helpful as victims of historical trauma and racism. So just because someone's experienced negative outcomes necessarily mean they're going to have negative outcomes into adulthood. We have ways to help people and to recognize their strengths and connections.

Elizabeth Crouc...: And finally, we know that policies that promote positive experiences make life better off for all of us. So what are the building blocks of hope? Dr. Sege's healthy outcomes positive experiences framework. The first is relationships. So what we're talking about relationships with other kids. So peer relationships,

healthy relationships with adults. So close, positive relationships with peers, adults take a genuine interest in the child and support the child. Parents and caregivers that interact with the child and help with developmental activities.

Elizabeth Crouc...: The negative environment, so safe, stable and equitable environment. So it's crucial to ask caregivers about the environments our kids are experiencing. A home where a child is safe and secure. They get proper nutrition, enough sleep. An environment where we can promote high quality learning and a safe place to interact and observe other children such as a positive school and learning environment.

Elizabeth Crouc...: Engagement. So participating in family cultural activities, organized music, sports. Just ways in which children can feel connected to their communities, whether that's through civic activities, social activities, all these can help children develop into becoming more of a secure and healthy adult.

Elizabeth Crouc...: And opportunities. So children need ample opportunity to develop their own self-awareness, learn how to do self emotional regulation. A lot of this can come from child center play. Some children may pick this up, others may need adults to help them name their own feelings. This helps develop social-emotional regulation. So those are the four building blocks of hope developed by Dr. Sege and and his team. And here's how we use them to quantify positive experiences.

Elizabeth Crouc...: Before we get into what the meat of the topic we did for this study, let's look at prior research. So prior research in 2019, we published in The Journal of Rural Health, rural-urban differences in adverse experiences cross sample of national public children. This was a talk that I gave in Saratoga Springs, the National Advisory Committee on Rural Health and Human Services. In 2020, we published about positive experiences where they're the first people in the country to quantify these positive experiences using National Survey of Children's Health. That was in 2020.

Elizabeth Crouc...: There's some caveats to these studies. So using the public youth dataset, we miss several states. So we only have about 35 states that have rural geographic information. So here's what we found with using this dataset without the full information for residents. So in order to figure out what the full information for residents would be for all states, you have to go to use the Research Data Triangle, which we'll go to in a second, Research Data Triangle center which did the census, but for now let's look what happened to public use data set.

Elizabeth Crouc...: So we found that economic hardship, household substance use, mental illness, well, let's get neighborhood violence that was not significant, but household violence, incarceration, death and divorce, all were experienced at higher rates among rural children. So in general, rural children experience nearly all of these ACES at higher levels, it's for racial ethnic mistreatment and witnessing neighborhood violence. So ACES are worse in general.

Elizabeth Crouc...: Dosing matters. We know there's a tipping point where more ACES are associated with higher likelihood of poor outcomes. The tipping point, the literature is usually about four. Rural children are more likely to have four more ACES and less likely to have zero ACES. So they're more likely to have more of that tipping point where it matters more, okay? We use the National Survey Children's Health 2017, 2018 data set to look at positive experiences. What do children have?

Elizabeth Crouc...: We found that children were more likely to have at least two of the PCES measuring our dose analysis than we're likely to volunteer in their community as well as have a mentor. So rural has social assets, which we all came about negative parts of rural. We're having these gaps, [inaudible 00:13:08] fill. We also know a lot of assets and strengths. We know that as rural health researchers and rural health advocates, but that often needs to be articulated outside of our rural health community, so that's a positive. Okay.

Elizabeth Crouc...: So filling a gap in the literature. So previous studies of ours results on ACES and PCES were limited. So we had only 35 states, so geographic coverage of datasets were limited because we didn't have geographic information for all states. The measurement of ACES, sampling methodology. So we had limited nomination of subset, race, ethnicity, groups that may be smaller, which is American, Indian, Alaska Native. It's one of the main differences. Again, they've not been used in all 50 states and states with relatively few responses in a category were not included in analysis. And these were intended to be highly urban or highly rural states.

Elizabeth Crouc...: So our gap was let's go use the restricted data set and figure out with all 50 states, what are the differences in urban and rural differences in ACES and PCES? And can we examine those racial, ethnic differences at a more granial level, using more categories than we would've previously used? So for example, American, Indian, Alaska Native. There was a huge gap. And if you look at the, in our original paper that was in Journal of Rural Health of the ACES and see which states were used for this.

Elizabeth Crouc...: There was a huge gap in the Midwest. For example, of states that may have a lot of tribal communities, but the American Indian population was not able to be studied because we didn't have the access to the data. So this fill some of those niches and gaps in literature. And we also want to look at the degree to which children who were exposed to ACES also have potentially strengthening PCES that overlap, which is important because we know that PCES can mitigate the effects of ACES.

Elizabeth Crouc...: So methods. So for the current study we're talking about, we used the 2016 to 2018 National Survey to Children's Health. Just used their research data center access obtain geographic information. A little about the survey, you've seen our prior work with an online and male survey, children ages zero to 17. Parents or, again, to answer questions regarding the child's physical, emotional health. Total of a little 102 children, and then we ask caregivers about their kids. The

way the sampling has worked for the states that used, we're supposed to talk about this in terms of the child. So our sample was limited to children who were six years of age or older, just because those kids would've had opportunity to use the PCES measured such as after school activities, volunteering, et cetera.

Elizabeth Crouc...: We further restricted the data set to the children who had completed the ACE and PCE questions and had complete demographic information. Okay. And then the caveat is we had an unweighted rounded sample, with deliminated at six years old, those with clean information, et cetera. The 63,000 children, we don't have an exact in that's unweighted in because the United States Census Bureau rounded our data for confidentiality purposes, and 11% of our total sample was rural.

Elizabeth Crouc...: So fundings. So rural children were more likely than their urban counterparts to be exposed to several types of ACES. Compared to urban children, rural children were all had experienced economic hardship, parental separation or divorce, household incarceration, witnessing household violence, witnessing neighborhood violence, household mental illness, and household substance abuse. These are all the ones that were significant. The only one that was not significant was racial-ethnic mistreatment. This is likely due to lower percentages of non-white children in rural areas compared to urban and rural and urban children were equally like to experience the death of a parent, which is quite tragic.

Elizabeth Crouc...: Okay. Look at this dosing we mentioned earlier, we know that research has found the total number of ACES that burden individual can affect subsequent outcomes into adulthood. We know that individuals who've experienced multiple ACES and that discussed earlier in my talk are more likely to experience poor physical, mental health into adulthood, such as risky behaviors such as binge drinking. Therefore this cutoff point of four is often used where children who live in a rural area we're less likely to have no ACE exposure than children living in urban areas. And rural children had higher exposure of rates to one to three ACES and four more than their urban counterparts. So again, that tipping point rural has been higher for those ACE counts.

Elizabeth Crouc...: Positive childhood experiences, let's look at this. The range of positive elements in a child's life reported by their parent or guardian is shown in this figure. On two important metrics, both resilient family and connected caregivers, their values for urban and rural children were not significantly different. And that's encouraging because they're both above 90%, so that's great news.

Elizabeth Crouc...: Other findings were mixed with rural children faring slightly better or slightly worse across different exposures. So for example, compared to their urban counterparts, rural children were more likely to have reported engaging with a guiding mentor which is a great indication of having a nurturing, supportive relationships. Whilst we found rural children were less likely than their urban counterpart to participate in after school activities, a measure of constructive

social engagement. But they were also more likely to volunteer in their school, community or church.

Elizabeth Crouc...: I do want to say that some of these are limited. One of the limitations of how we measure these by the National Survey of Children Health is the cultural stuff, right? We know that some things are more important in certain cultures than other, and so we can't deem the means that need to have a cultural context put in which we can't always do with the national data set.

Elizabeth Crouc...: Also rural caregivers were more likely to report living in a safe neighborhood than urban parents and more likely to live in a supportive neighborhood than urban children. This was different from our previous findings. There were no differences for family resilience or ability to share and talk about things through the caregiver between rural and urban. So there's some positive, there's higher ACES, but also positive ways and more ways to build resilience, which I think is a very crucial thing to talk about with assets in rural, which is very, very positive because it's not often discussed. So racial-ethnic differences in ACES and PCES.

Per Ostmo: Dr. Crouch, I think this is a good moment to pause for a second and answer a couple of questions.

Elizabeth Crouc...: Sure.

Per Ostmo: First of all, how was racial and ethnic mistreatment quantified? What was asked?

Elizabeth Crouc...: Sure. Yeah, it asked has a child experienced any racial-ethnic discrimination?

Per Ostmo: Okay. The next question is, were there regional differences observed in the distribution of ACES and PCES in rural settings, so other variations by subpopulation?

Elizabeth Crouc...: Yeah. No, that's a great question. So that was originally proposed in our original study. The census bureau after much back and forth between our research center and the census bureau, the census region was not approved. They were worried about disclosure, which I'm not sure how that would've come out, but we were not able to get that data released.

Elizabeth Crouc...: So in prior work we have looked at that, but again, there's huge swarts of parts of our country missing using the public use data set. That's a great question, and I wish that output had been released to us because that would've been very informative. So for all our rural health advocates, if you could advocate in the census release full rural-urban information, as well as region, that'd be wonderful for researchers.

Per Ostmo: All right. We've got two more quick questions and we'll move on. What was the sample size for the urban versus rural comparison?

Elizabeth Crouc...: So rural was 11%, so it's unweighted 11% of what that 63,000 would be.

Per Ostmo: Okay. And then how was family resilience quantified.

Elizabeth Crouc...: Oh, good question. There are four questions they asked about family resilience is how well, and that came on top of my head, but it's how much, it's in our original study. It's in the Gateway policy brief, you can look up it's how does your family handle challenges, can you all talk about them? Basically, do you have a conversation? Do you not talk about it? How do you engage with your family when you encounter a problem? So the specifics on that need to look up but from off recollection, it's a four question survey at where they, the National Survey of Children's Health creates this variable family resilience. It's about how well your family can communicate when they think challenges [inaudible 00:22:14] rating. So very good, good, not good, not good at all.

Per Ostmo: Perfect. Thank you.

Elizabeth Crouc...: No, those were great questions. So yeah. Plug for the census regions be released. Thank you all. So racial/ethnic differences in ACES and PCES. I was really excited about this because we know that rural individuals though, there's often a rural disparity in health outcomes. It's also a racial-ethnic disparity often in outcome. We know that the intersection of rural and race can grade in higher levels of disparity, but often these national data sets when we have rural suppress, we may also have subcategories of ethnicity combined into other, which is sad. So we don't always get to know what these differences are.

Elizabeth Crouc...: So we are finally able to look at some of these other categories, so let's go into it. So ACE exposure by race-ethnicity. So we first sought to quantify ACE exposure to disparity by race ethnic groups among rural children. So as you see, we were able to look at by Hispanic, White, Black and other. On this one, we weren't able to separate out, but we will later on just a second because of again, data suppression by the census. But the next slide over, you'll see what these are. Whether we broken out by American, Indian, Alaska Native versus the Asian Pacific Islander that's coming.

Elizabeth Crouc...: Just over 10% of all rural children had experienced four more ACES. ACE counts differ significantly by race ethnicity with other which included American, Indian, Alaskan Native, which we'll hear in a second. And Asian Pacific Islander were grouped together for this chart due data suppression from the census. This group had the greatest percentage of exposure to form races compared to their peers, followed by Hispanic rural children and Black rural children. A little over 60% of black rural children had exposure to one to three ACES followed by just over 48% of Hispanic rural children.

Elizabeth Crouc...: So while we know that White rural children had the highest percentage of respondent to had not experienced any ACES during their lifetime, so we are seeing racial-ethnic disparities in counts of ACES, where we're seeing minorities

have higher rates of four or more ACES. And this disparity is obviously bias. You can see by the racial-racial ethnic group, but these disparities do exist.

Elizabeth Crouc...: So now we're looking at ACE exposure among rural children. And here we get to break out some of these categories a little bit more where we have Hispanic, White, Black, American, Indian, Alaska Native and Asian Pacific Islanders, API. And then we have other, maybe those that didn't disclose their race or ethnicity. So among children in rural communities, there were statistically significant differences between racial ethnic groups for parental death, which you'll see here. Household incarceration and economic hardship, which is down here below here.

Elizabeth Crouc...: Here other, sorry, I missed this. Parental death, household incarceration, neighborhood violence, substance misuse, racial ethnic mistreatment and economic hardship. So what we see is other includes multiracial or unspecified race ethnicity. So we're able to break it out into a little more categories this time. Over 5% of rural children had experienced the death of a parent, I don't think that's notable because I think it's high.

Elizabeth Crouc...: Among rural children, parental death was highest among Asian Pacific Islander rural children at 9.8%, with Black rural children at 7.3%, other rural children at 7.3% and Hispanic rural children at 7.2. So you're seeing that again, Asian Pacific Islanders are leading in this. Nearly 13% of rural children had experienced a member of their household being incarcerated, that's also high, 12.9%. Other rural children you see had extremely high rates is this, 22.9%, followed by Hispanic rural children at 17.2%. Black rural children at 13.9% and White rural children at 11.6%.

Elizabeth Crouc...: So again, variation among race ethnicity for household incarceration. When you skip down in neighborhood violence, which we're down here. Just over 6% of children had experienced neighborhood violence with rates highest among Asian Pacific Islanders and other rural children. Black rural children at 8.6% and Hispanic rural children at 7.7%.

Elizabeth Crouc...: If you go into substance misuse, over 14% of rural kids have experienced this. Again, rates differing with high rates of exposure among other at 26.1%. Again, these Asian Pacific Islanders see a lot of these popping up some of the highest rates at 20.3% and then at White children at 14.3%. Less than 4% of rural children had experienced racial-ethnic mistreatment. But again, those rates differed. Other at 15.8%, Black rural children at 14.2%, American, Indian Alaska Native at 10.2%. So you see some variation here.

Elizabeth Crouc...: Finally, economic hardship was prevalent among rural children. In our prior work, we discussed this a lot about rural children facing poverty and higher rates of insecurity for food and housing. So just over a quarter experienced economic hardship, which is a lot had been very high. Asian Pacific Islander rural children, look at this 42.7% of Asian Pacific Islander rural children experienced economic hardship, which is outstanding amount. And 41.1% of Black rural

children, other rural children at 36.8%. So we were never able to get this granularity of what we saw for ACES among racial ethnic group until we were able to get funded to use the data center. So for that I'm very appreciative. I think it shows some things that we could continue to do some programming to work on or get to that in the policy implication section.

Elizabeth Crouc...: PCES. So among rural children, PCES vary significantly for each category. As you might see again, what's going with the Asian Pacific Islanders. They had the lowest proportion of each of the following PCES. So after school activities over the lowest, community volunteer, got a mentor, supporting neighborhood and resilient family compared to their counterparts. So that's telling. They also had higher levels of many ACES, as you all saw in the previous slide. More than three out of every four White children reported participating at school activities, which was greater than their racial-ethnic minority counterparts.

Elizabeth Crouc...: Additionally, nearly 97%, 96.9% of White children indicated having a caregiver, there's nice of who they could share thoughts on feelings with while other race children had the lowest indications of having be able to connect with the caregiver. Black children had the lowest proportion of living in a neighborhood that was characterized as feeling safe at 93% compared to children of other race ethnicities. So again, I think you're saying again, while we saw ACES different among these groups, we also saw PCES differ. And this, I want to make a particular note about the Asian Pacific Islanders who we're seeing disparities in ACES and disparities of PCES at the highest rates.

Elizabeth Crouc...: Okay. What we previously had not been able to really get either is what happens among the kids if you have high ACES but also do you have low PCES? What's the overlap there? So what we found with this is that rural children with four or more ACES often lack PCES. So nearly all rural children are reported be having a guiding mentor with no difference between children with high levels of ACES and other children. Unfortunately though, children with high ACE exposure were less likely to be reported to have each of the six categories of positive experiences below, sorry, this is more fuzzy than I realized when we first did it. So less likely to experience after school activities with you four more ACES.

Elizabeth Crouc...: Again, this is among rural children likely to experience community volunteer. And to caregivers, safe neighborhood, supportive neighborhood and resilient family. And these were all significant, it's all significant, so the ones that are shown. So this leads us into, okay, what do we do about this? So we know that rural kids have higher levels of ACES and higher levels of some PCES, but often lower in most categories than their urban counterparts, what do we do about this? And among the rural children that have four more ACES, which is a tipping point for worse outcomes. They're all so likely to have some of these PCES.

Elizabeth Crouc...: So how do we develop PCES? So conclusions. So hopefully this gives some lens into, and we know the prevalence of exposure to these various experiences that kids can have with but the ACES and PCES, hopefully this provides insight into

possible areas for improvement. We'll get into programs and solutions here in a second, but this could be a way to help target interventions and efforts.

Elizabeth Crouc...: Focusing first on threats to children's health and growth, we confirm previous fines at rural children had higher rates of nearly exposure to all the ACES that were assessed with the exception of death and racial-ethnic mistreatment, which were not significant from the urban rates. So there's a mix of advantages and disadvantages facing rural families. Okay.

Elizabeth Crouc...: So CDC he has put out on their balance and prevention and child abuse and neglect area. They put out lots of different ways and recommendations for reducing ACES and building PCES. These can include strengthening economic support, so how do we do that? Family friendly work policies maybe one example, household financial security. The child tax credit that came out last fall, did not have bad partisan support for the most part, but some of these can help to build support economic support families, which can improve parenting stress.

Elizabeth Crouc...: So we also have had done some research our group has on parenting stress and rural families and looking at those difference, not the topic of today's discussion, but one way to reduce parenting stress is to improve these economic resources, whether it be time or resource constraints, that's one thing. And then the second would be, and the promotion of social norms. So public programming, it talks about how do we reduce corporal punishment? How do we educate people on what's safe discipline? How do we use men and boys as allies and prevention? How do we use bystander approaches? So education about how we improve balance within the home, as well as outside of the home in neighborhoods and schools and communities. So that's also important.

Elizabeth Crouc...: Another recommendation. CDC ensuring a strong start for children. So headstart high quality childcare, I gave the example of the childcare tax credit. Early childhood home visitation. So in South Carolina where I live, I'm in one of the evaluators for the MIECHV, which is the Maternal Infant Early Childhood Home Visiting Program, which is the maternal infant early childhood home visiting program.

Elizabeth Crouc...: This program's been shown to improve some of these outcomes for kids or teaching parents how to safely discipline, how to connect with their kids, how to put their kids to sleep safely, all kinds of things, right, that would help with parenting skills and family relationship, which gets to the next thing. So parenting classes, so strengthening families programs, some of that stuff gets into, okay, here's how we have healthy family relationships, here's how we improve social emotional learning. That's was nothing else teaching those skills.

Elizabeth Crouc...: Next, connecting youth to caring adults and activities, so mentoring programs. There's a lot of those starting here. And then child abuse and neglect, Child Abuse Prevention America is great for again, finding some of these resources.

After school programs, that those can help get kids engaged, especially into peer to peer healthy relationships and then interventions to less and immediate and long-term harm. So a sick program, and we use primary care providers to connect them with social support services can be really helpful. Victim center support services, treatment for substance use and problem behavior. Some of those because of hipsters or less like to be available in rural areas. But those things matter as well for preventing ACES.

Elizabeth Crouc...: So let's go to health sector solutions. So prior researches, SONUS and as well as the research today has shown us that rural children disproportionate live in homes affected by current substance misuse or mental illness in children development study. However, they're more likely to these communities and rural are more likely to lack effective treatment programs for alcohol and opioid misuse, and nearly all these rural counties are health professional shortage areas for mental healthcare. So programming and funding to help improve these would be necessary.

Elizabeth Crouc...: And finally, development of programs that can extend treatment capability through modalities such as telehealth may help address local shortfalls. This is some of our potential solutions. I personally would love to people on this call. We've got a lot of participants who know of a lot more knowledge for the solutions than I do. So you haven't put on ways to improve this, I would love to hear it, especially when we talk about the dissemination of these materials and reaching out to help improve these outcomes. I want to hear from you all about what you all think is really important for improving outcomes with this. These are just some of our ideas as a team.

Elizabeth Crouc...: Building opportunities within the family, so parent and home-based interventions. I think home visiting programs are absolutely outstanding. This is one of the things that I help evaluate. They are particularly important for reducing intergenerational trauma. So we know that ACES, and we at the National Advisory Committee on Rural Health Human Services, that meeting in Saratoga Springs in 2018, we had a lady stand up in the audience and said, "Okay, I had seven ACES and my child only has three." So she understood the importance of reducing the intergenerational trauma to improve outcomes for families and including her own.

Elizabeth Crouc...: That has stuck with me because I found it to be so remarkable that if you can help people by help discussing how this works and how outcomes going to be improved, people want to make these steps but they want the support to do so. So as well, parent education to support. So the strengthening families and empowering families program. These are programs that encourage safe and stable relationships. So example, school and community mentoring, and they reduce both the counter impacted ACE exposure for rural children.

Elizabeth Crouc...: But all these programs, I'm going to mention parent mental health services. All these programs require interdisciplinary, integrated response, particularly in rural communities. So caregivers, I mentioned an example of the lady that

spoke. Need to understand ACE is toxic stress. You also need to understand how it impacts their kids and adolescents and how they can help tune in to know the child, get past the behavior, help the child, get to learn and grow.

Elizabeth Crouc...: One of the best things I've been to you was compassionate schools training. So before the world shut down in March of 2020, the Friday before everything closed on Monday. Dr. Merrill who's with Officer of Rural Health that's now USC,, University of Carolina who's great. She and I went to Spartanburg's, South Carolina. Was two hours of the road and we went to what's called the passionate schools training. And this is programs being implemented in multiple states, but we've got to train the trainer in South Carolina and we learn about, okay, how do we, and they mostly teach pediatricians, primary care providers and teachers how do we help children social emotional regulation? How do we help them calm down? We tell them meditation, how do we help them calm down when the toxic stress they've experienced?

Elizabeth Crouc...: It was one of the most impactful programs I've been to. So to learn about again, how do we help families address these issues and how do help kids in school and in their communities deal with trauma. And so this compassionate schools training was really, I got really impactful for us to learn how to do this on our own.

Elizabeth Crouc...: The safe program, I mentioned this earlier. Safe environment for every kid, again, using primary care providers to link families to community supports. As well as family based resource centers. Again, I gave you the example from compassionate schools, how do we help families and how we help teachers, educators and physicians and other kinds of providers, just nurse practitioners and PAs, how do we help them help families deal with trauma? And how we help them help children and adults with social emotional regulations?

Elizabeth Crouc...: So I make the pitch that continued public health service surveillance is needed. So both to monitor the effectiveness of community interventions, which has helped being some with the home visiting evaluation, but also to assess the effect of the current public health emergency. One of my biggest concerns as a researcher right now, and I think child advocate I'll call myself as a rural health advocate, as well as a child advocate is COVID-19 caused a lot of family disruption.

Elizabeth Crouc...: So our center was recently funded by the Federal Office of Rural Health Policy. And I mean to say again, thank you to the Federal Office of Rural Health Policy because these are really important issues that need to be studied that I feel really passionately about. I know people many people across the country do as well. What's happened with kids and their mental health and what's happened before COVID and during COVID? So we'll be studying that using National Survey Children's Health here this spring, but no studies of children's experience at family disruption have yet not yet been published.

Elizabeth Crouc...: We can't study this part, but we do know that the national level researchers have estimated that for every 100 COVID death, 7.8 children experience parental death. So absolutely tragic through February 2021, 43,000 parental death. So Of children have experienced not only disruption of lack of school or being in and out of school, but an exposure to being sick but knowing a loved one that died. But a lot of them have experienced caregiver death as well, which is absolutely tragic.

Elizabeth Crouc...: So a different research group and the loss of a primary caregiver, that's a parent or guardian estimate that as 20,000 children faced this loss through June 21. And this is primarily the burden of this on non-White children. And so the pandemic may have placed rural children at increased risk for parent loss. As we know that rural vaccination rates have been lower and rural death rates higher for this disease. So COVID is one thing, we need to continue to say this forward, especially for mental health among kids.

Elizabeth Crouc...: The other thing is kids have experienced probably my own children included parents are more stressed, parenting stress has gone up. Less time with your child. You're trying to work with your child. All these things have had probably some mixed results with how these impacted children. I want to give you all some resources to look up and further information.

Elizabeth Crouc...: Prevent Child Abuse America is awesome. CDC has great work. HRSA obviously is a great resource, we're starting to see funding coming out of the HRSA and the CDC on a surveillance. In May of 2020, there was an ACE surveillance grant put out. Annie Casey Foundation does a lot, National Child Traumatic Stress Network. A lot of these PCES and ACES connection have a lot of stuff. So we personally work a lot in our state with the Children's Trust of South Carolina.

Elizabeth Crouc...: I now have [inaudible 00:42:34] with the Wisconsin Children's Trust as well for some of this ACE data, but there's a lot of in the State Office of Rural Health. Our State Office of Rural Health has worked closely with the Children's Trust of South Carolina, as well as us as a research group within the University of South Carolina to work on programming and intervention efforts for children. So I encourage such outstanding state partnerships to all other states. We've been glad to have these partnerships and I do also want to thank again, you all for coming and our funder, the Federal Officer Health Policy for encouraging this work, which I hopefully impacts lives and tells us where we can target interventions. And then I've got some references at the end and the Gateway link.

Per Ostmo: Thank you, Dr. Crouch. We have a couple questions we want to answer here. So several slides back, you had I believe the six PCES in a graph. And the question was-

Elizabeth Crouc...: Go back to that.

Per Ostmo: Yeah. The question is, can you explain what a community volunteer is exactly? That one is a little bit ambiguous.

Elizabeth Crouc...: Yeah. Does the child adolescence have the experience to volunteer in their school community or any other after school or outside organization? So just have they had that chance to volunteer in a community organization? Whether that a church, a nonprofit, harvest to whatever it is. Have they been able to get out in their community and volunteer? And some of these, again, this data set was pre-COVID, all this will be interesting to see what's happened since then because people will not have the opportunity to be out and about, but were they able to volunteer outside of their own home?

Per Ostmo: So then you're measuring their ability to volunteer or their opportunity?

Elizabeth Crouc...: Have they done so, yeah.

Per Ostmo: Okay.

Elizabeth Crouc...: Have they had the opportunity to do something done so, yeah. Sorry. Thank you, Per.

Per Ostmo: Okay. Our next question and Elizabeth, you might want to just pull up the chat box, but this question from Kenny is, "Within the study, how is racial variation discussed or analyzed or contextualized and how do you navigate the possibility that the results may be used to cast blame on Black or indigenous or other people of color for what amounts to be the structural racism?"

Elizabeth Crouc...: Okay. I can fully agree. So we are very cognizant of structural racism in our center, and that's what I would say. We read the conclusions already redeem our brief papers. One of the main issues facing that it's a compounding effect of disparities in rural and this aggravating effect of racism on minorities living in rural, which compound these negative effects of that we may see, [inaudible 00:45:13]you can see, remember what its racial I think differences, why these may be compounded among rural kids. So why you may see much worse off.

Elizabeth Crouc...: I don't think it's blame at all. I think it is showing where there's been less opportunity due to many issues with structural racism. So one of the things to always like to discuss, I didn't get out due to the length of the presentation today was PCES and ACES, they all occur within community settings. And so due to historical, for example, redlining. So we know where mortgages were given, not given to African Americans in our community, other minor mortgages versus other in the community. We know that certain communities may not have equal distribution or exposure to PCS.

Elizabeth Crouc...: So I would argue there's no blame, but more of looking at where should we be helping communities and schools have funding to do some of these things because they were not able to use it before due to compounding historical

social racism. So the history of structural racism I think is pervasive. And I think it's shown in all these tables and figures we've shown with racial-ethnic disparities. Right question.

Per Ostmo: We're going to go back a little bit further. There was a question about you had referred to defining resilience. Do have any resources that we can link to that would define resilience?

Elizabeth Crouc...: Yes. Yes. Again, the only resilience is in our policy brief it's on the Gateway and I will look that up or I can look it up now but not joined on the internet right now, but those four questions on how they define it, yes.

Per Ostmo: Okay. That is in the policy brief. Okay. All right. The policy brief is in the chat, so if anyone is looking for that, it is posted in the chat. And we have another comment from Barbara. I'm sorry, I haven't read it yet.

Elizabeth Crouc...: Oh, Barbara. I'm with you. We need to put money in while the baby's in the belly. Yes. She's saying, "We need to do something preventative versus doing it later on." Absolutely, that's part of the reason we talk about home visit is getting people for example, in family partnership gets caregivers connected with families while the mother is pregnant. So it helps with linking families to economic supports, parental education, all kinds of things before the baby is delivered.

Elizabeth Crouc...: So a hundred percent Barbara, I can agree with that for the child advocate. Getting people support early on versus later on. Barbara, thank you. Thank you all for answering these questions. And I apologize, I couldn't think of the family resilience questions. Four questions, I couldn't think of right top of my head, but we'll put that in the, you've got the link to the brief now.

Per Ostmo: All right. Dr. Crouch, you want to advance that Gateway slide with the-

Elizabeth Crouc...: Oh, sure. My apologies.

Per Ostmo: Alert info. So while everyone is thinking of any last questions you might want to ask, I'd like to remind you that you can sign up for Gateways research alerts at ruralhealthresearch.org/alerts. If you are signed up for the alerts, then you will be notified when this webinar is archived online. And we anticipate this will be on our website by Friday, but if you're subscribed to our alerts, you'll be sure not to miss that.

Per Ostmo: Now, you can also follow Gateway on social media on Facebook and Twitter @RHRGateway, and you can see our research alerts and you can see key findings from all of our policy briefs as you scroll through social media. And we're going to check the chat box one last time, but I don't see any other questions. Jessica, I know you're keeping track of the chat. Do we miss any questions?

Jessica Rosencr...: Nope. We've covered everything that I saw.

Per Ostmo: All right. Perfect. Well, then would like to thank everyone for attending today. Thank you to Dr. Crouch for being here. Thank you for all the great questions and I hope to see everyone at future Gateway webinars.