

# Rural-Urban Differences in Adverse and Positive Childhood Experiences

March 15, 2022

- ✓ All attendees are muted
- ✓ Today's session will be recorded
- ✓ Submit questions using the chat function
- ✓ Q&A will follow the presentation



## About Per Ostmo

Per Ostmo is the Program Director of the Rural Health Research Gateway (Gateway), housed at the Center for Rural Health at the University of North Dakota School of Medicine & Health Sciences. Gateway is funded by the Federal Office of Rural Health Policy (FORHP) to disseminate research conducted by the FORHP funded Rural Health Research Centers. Per earned his Master of Public Administration degree from the University of North Dakota with focus areas in grant writing and health care administration. He is originally from rural North Dakota.

**Likes:** equitable healthcare, bicycling, punk rock

**Dislikes:** Health Professional Shortage Areas



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# Rural Health Research Gateway

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- Students
- Rural health researchers
- Health care providers
- Rural health organizations, professionals, associations, and more

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The screenshot shows the homepage of the Rural Health Research Gateway. At the top, there is a logo for the Rural Health Research Gateway and social media icons for Facebook, Twitter, and YouTube. A search bar is located on the right side of the header. Below the header is a navigation menu with links for Home, About Us, Browse Research, Webinars, Research Alerts, and Other Resources. The main content area features a large banner for a webinar with the text "WEBINAR" and a video player. To the right of the banner is a text block titled "Rural Health Research Gateway" that describes the service and provides links for "Gateway flyer" and "Learn more". Below the banner and text are five featured sections: "Rural Health Research Recaps", "Research Alerts", "Research Products", "Research Centers", and "Dissemination Toolkit", each with a small image and a list of key features or benefits.

**Rural Health Research Gateway**

The Rural Health Research Gateway provides 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, including policymakers, educators, public health employees, hospital staff, and more.

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**Rural Health Research Recaps**

- Access brief summaries on key rural health issues
- Key findings from the work of the Rural Health Research Centers

**Research Alerts**

- Email notifications when new research products are completed
- See five most recent alerts

**Research Products**

- Access policy briefs, chartbooks, journal publications, and other products developed under the Centers' [Research Projects](#)

**Research Centers**

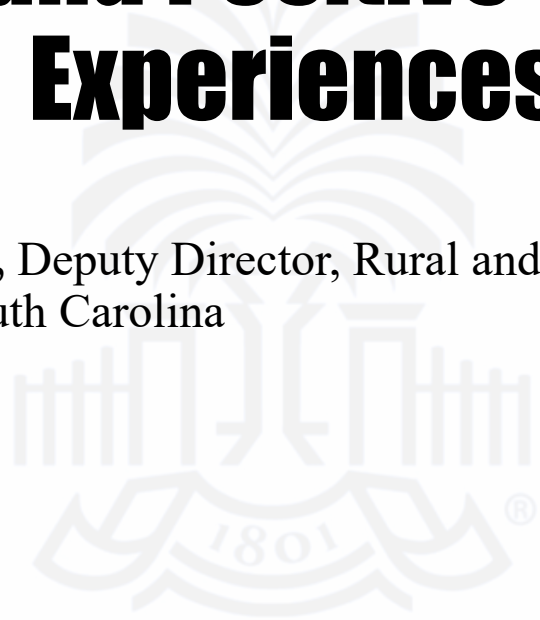
- Learn about the Rural Health Research Centers Program
- View list of currently funded research centers
- Learn about their areas of

**Dissemination Toolkit**

- Learn how to create health research products
- Tips for developing policy briefs, fact sheets, journal articles and more

# **Rural-Urban Differences in Adverse and Positive Childhood Experiences**

**Elizabeth Crouch, PhD**, Deputy Director, Rural and Minority Health Research Center, University of South Carolina



# RURAL AND MINORITY HEALTH RESEARCH CENTER

*Our mission is to illuminate and address the problems experienced by rural and minority populations in order to guide research, policy, and related advocacy.*



# HEALTH DISPARITY POPULATIONS

- Rural
- Racial/Ethnic Minorities
- Low SES
- Sexual and Gender Minorities
- Sex/Gender
- Disability
- Nativity
- Geographic Region



Source: National Institute on Minority Health and Health Disparities

# RURAL CHILDREN'S HEALTH

- Nationally, 12 million children live in rural areas.
- Rural children versus urban (Probst et al, 2018):
  - Higher percent Medicaid covered
  - More likely to miss 1 or more days of school
  - Higher rates of obesity
  - Lower rates of preventive medical and oral health services
  - Higher mortality rates, largely associated with unintentional injuries

# **WHAT ARE ACES AND WHY ARE THEY IMPORTANT?**



# WHAT ARE ACES?

- Adverse Childhood Experiences
- ACEs are traumatic events that occur in a child's life.
  - Abuse
  - Neglect,
  - Household dysfunction.
- Traumatic experiences as a child are associated with negative health and well-being outcomes as an adult.

# CHILDREN IN RURAL AREAS: CHILDHOOD ADVERSITY

## NSCH ACES

### NSCH: Parent/guardian reporting current experience

- Someone in home suicidal or mentally ill
- Alcohol or drugs in home
- Parent in jail
- Divorce
- Witness to domestic violence

### NSCH but not BRFSS

- Parental death
- Racial discrimination
- Low income

## CDC/BRFSS ACES

### BRFSS: Adult reporting remembered experience

- Household mental illness
- Household substance abuse (alcohol)
- Household substance abuse (drugs)
- Household incarceration
- Parental separation/divorce
- Household domestic violence

### BRFSS but not NSCH

- Emotional abuse
- Physical Abuse
- Sexual abuse



## National Advisory Committee on Rural Health and Human Services

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### Exploring the Rural Context for Adverse Childhood Experiences (ACEs)

### August 2018 Recommendations

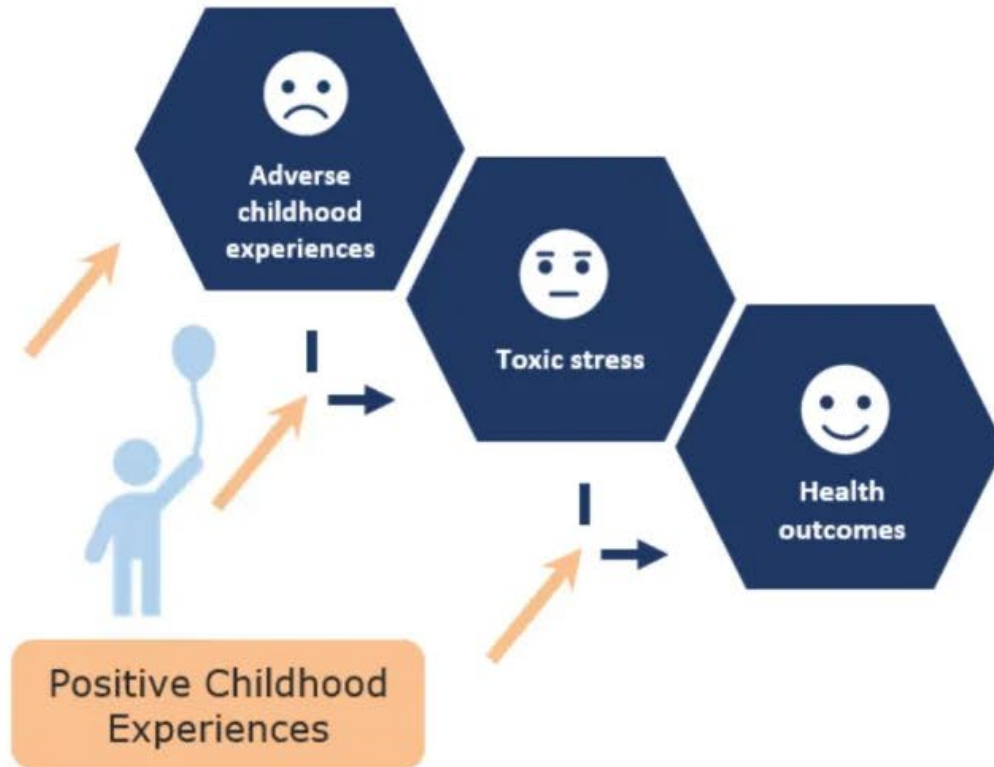
1. “...develop and implement a comprehensive prevention strategy that identifies priority outreach/awareness, programming, research and policy areas to address toxic stress, trauma and the health consequences of ACEs for rural, tribal and other at-risk populations.”
2. “... support research that evaluates long-term economic costs resulting from ACEs and benefits gained from federal investments in ACE-related prevention programming.”
3. HRSA’s MCH should “... establish and include a predefined variable for “Rural-Urban Status” in the National Survey on Children’s Health to allow for standardized analyses of ACE prevalence.”
4. “... seek additional funding for telehealth-supported school-based health centers in rural areas as a way of increasing access to integrated primary and behavioral health care services.”

# **WHAT ARE PCES AND WHY ARE THEY IMPORTANT?**

# THE ROLE OF POSITIVE CHILDHOOD EXPERIENCES (PCEs)

- Positive Childhood Experiences (PCEs) are positive life events such as having a mentor, or a safe, stable relationship with a caregiver.
- Both positive and traumatic experiences as a child are associated with health and well-being outcomes as an adult.





## Positive Childhood Experiences

- Prevent ACEs
- Reduce toxic stress
- Promote Healing

## **WE KNOW THAT:**

- **Identifying positive experiences** allows people to use their own life experiences to heal and recover.
- **Programs** that support positive childhood experiences promote health development – while avoiding stigma and labeling.
- **Health equity** serves as the foundation for HOPE: Healthy Outcomes from Positive Experiences. It invites us to think of each other's strengths and connections in ways that go beyond labeling individuals as helpless victims of historical trauma and institutional racism.
- **Policies** that promote positive childhood experiences make life better for all of us and promote our long-term health and well-being.

# 4

## Building Blocks of **HOPE**

1



### Relationships

- ...with other children
- ...with other adults
- ...through interactive activities



# 4

## Building Blocks of **HOPE**

2



### Environment

- Safe, equitable, & stable
- Living, playing, & learning
- Positive school & home environments

# 4

## Building Blocks of HOPE

3



### Engagement

- Develop a sense of connectedness
- Social/civic activities

# 4

## Building Blocks of **HOPE**

4



### Opportunities for Social Emotional Development

- Playing with peers
- Learning self-reflection
- Collaboration in art, sports, drama, & music

# **PRIOR RESEARCH**

# NATIONAL SURVEY OF CHILDREN'S HEALTH

## Asks about ACEs (Crouch 2019)

THE JOURNAL OF **RURAL HEALTH**



ORIGINAL ARTICLE

### **Rural-Urban Differences in Adverse Childhood Experiences Across a National Sample of Children**

Elizabeth Crouch, PhD;<sup>1</sup> Elizabeth Radcliff, PhD;<sup>1</sup> Janice C. Probst, PhD;<sup>1</sup> Kevin J. Bennett, PhD <sup>2</sup> & Selina Hunt McKinney, PhD, APRN<sup>3</sup>

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## Asks about seven PCES (Crouch 2020)

THE JOURNAL OF **RURAL HEALTH**



ORIGINAL ARTICLE

### **Rural-Urban Differences in Positive Childhood Experiences Across a National Sample**

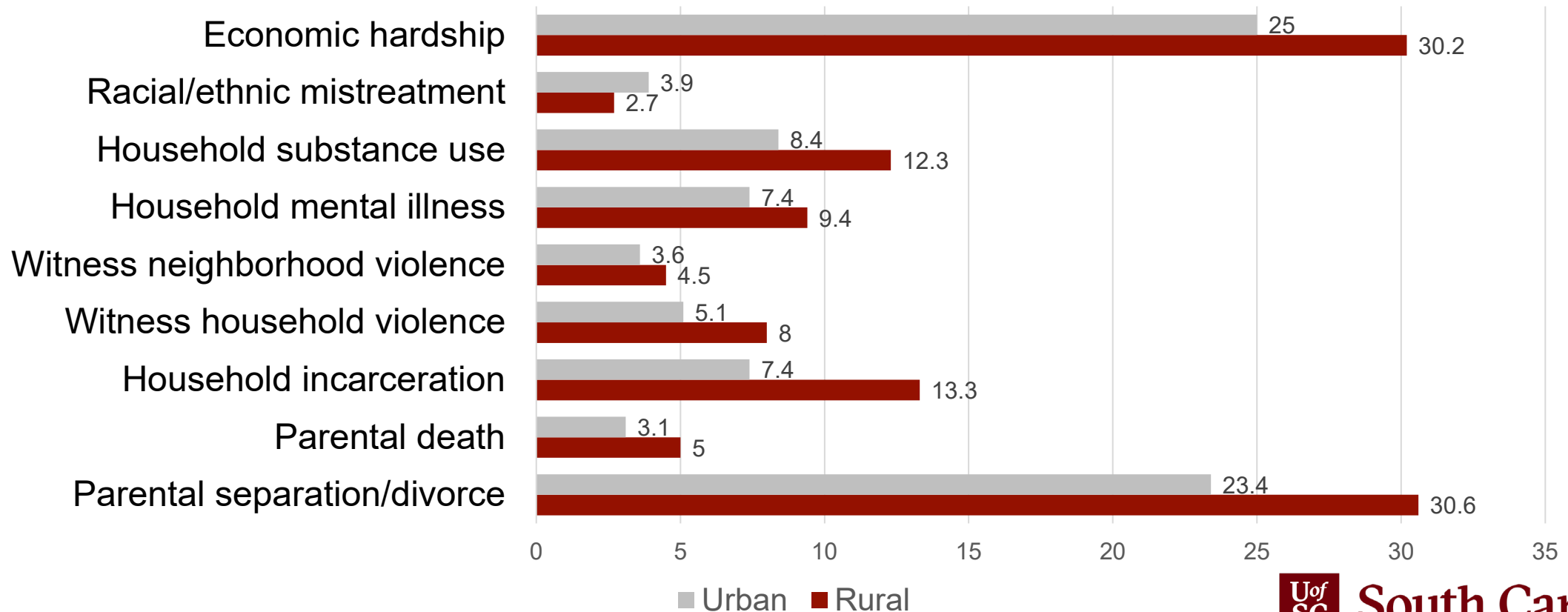
Elizabeth Crouch, PhD <sup>1</sup>; Elizabeth Radcliff, PhD;<sup>1</sup> Melinda A. Merrell, PhD, MPH <sup>1</sup> & Kevin J. Bennett, PhD <sup>2</sup>

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# RURAL CHILDREN MORE LIKELY TO EXPERIENCE NEARLY ALL ACEs

## ACEs among rural and urban children, 2016 NSCH, 35 states

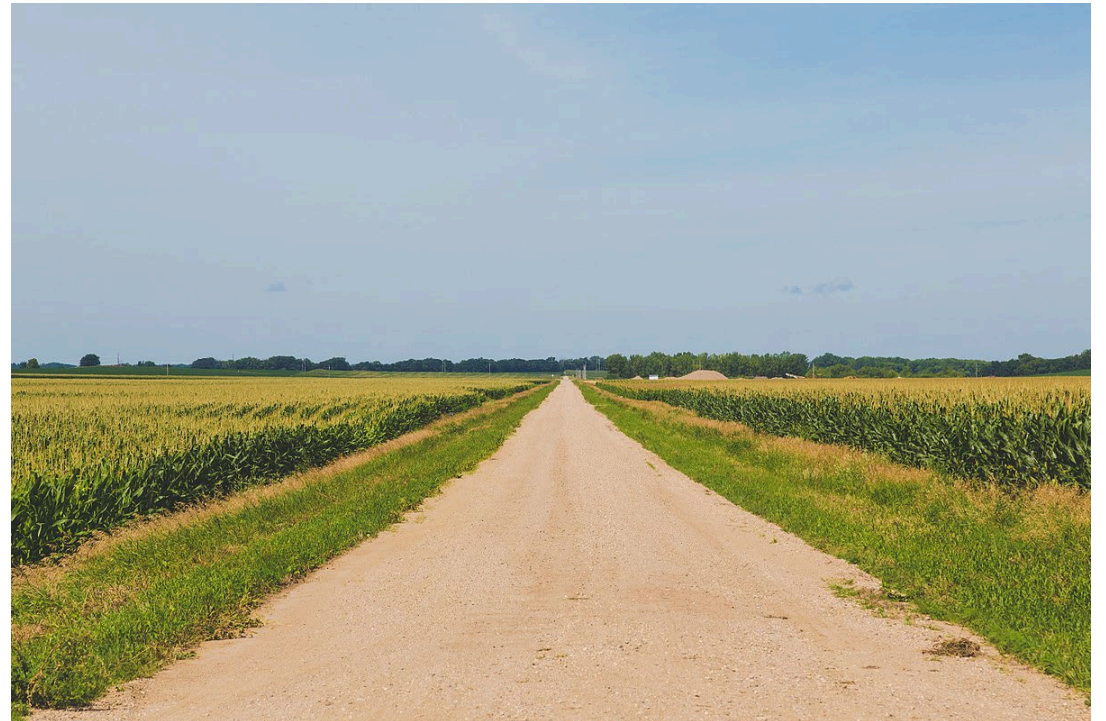


All comparisons except neighborhood violence significant at  $p < 0.001$ .

# DIFFERENCES IN TOTAL EXPOSURE

ACEs have a dose-response relationship. Compared to urban children:

- Rural children more likely to have one to three ACEs (33.3% versus 30.1%,  $p < 0.0001$ )
- Rural children more likely to have four or more ACEs (6.9% versus 3.8%,  $p < 0.0001$ )
- Rural children less likely to have zero ACEs (59.9% versus 66.1%,  $p < 0.0001$ )



# 2017-2018 STUDY OF PCES



- Rural children, while having higher rates of ACEs, also were more likely to have at least two of the PCEs measured in our adjusted analyses.
- Rural children were more likely to **volunteer** in their community, school, or church, a measure of an opportunity for constructive social engagement.
- Rural children were more likely to have a **mentor** outside of their home (school, neighborhood, or community), a measure of being in nurturing, supportive relationships.



# FILLING A LITERATURE GAP

- Previous study results on ACEs and PCEs have been limited due to differences in: 1) geographic coverage of studied datasets, 2) measurement of ACEs, and 3) sampling methodologies, as well as limited examination of intra-rural differences among American Indian/Alaska Native (AI/AN) populations.
- Furthermore, rural-urban differences in PCEs have not yet been examined using all fifty states. Previous studies were conducted using data from only 31 states and the District of Columbia (34 states and the District of Columbia for ACEs) due to potential disclosure issues.
- States with relatively few responses in a particular category were not included in analyses and these suppressed states tended to be either highly urban or highly rural.

# PURPOSE OF THE STUDY

- Ascertain whether ACE and PCE exposure differs between rural and urban children, by type and by count. This is the first study to estimate rural-urban differences in ACEs and PCEs using all fifty states and the District of Columbia.
- Examine racial/ethnic differences in ACEs and PCEs among rural children
- Focus on the degree to which children exposed to ACEs also have potentially strengthening PCEs.

# **METHODS**

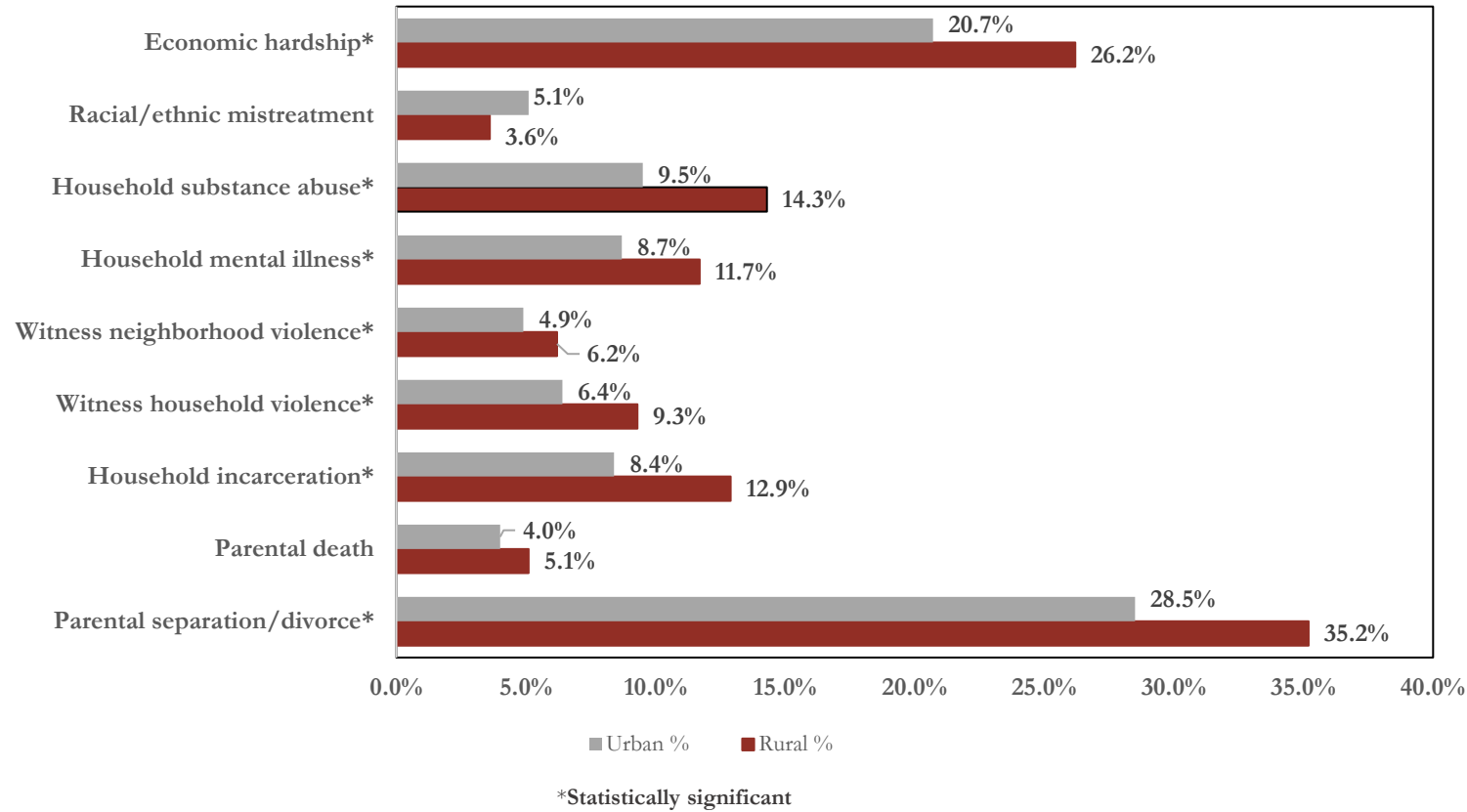
# DATA

- 2016-2018 National Survey of Children's Health (NSCH), using the Research Data Center (RDC) access to obtain geographic information.
- The NSCH is an online and mail survey of U.S. households with children ages 0-17 years; parents or guardians answer questions regarding the child's physical and emotional health.
- A total of 102,341 samples were collected including 50,212 interviews in 2016, 21,599 in 2017 and 30,530 in 2018.
- Our sample was limited to children who were six years of age or older, as many PCEs are only measured at school age.
- It was further restricted to respondents who had completed the ACE and PCE questions and had complete demographic information.
- The final unweighted rounded sample size was 63,000 children, per the United States Census Bureau Data Review Board (data are rounded for confidentiality purposes). 11% of our sample was rural.

# FINDINGS

# ACE EXPOSURE

Adverse Childhood Experiences by Type  
Among children ages 6-17, National Survey of Children's Health

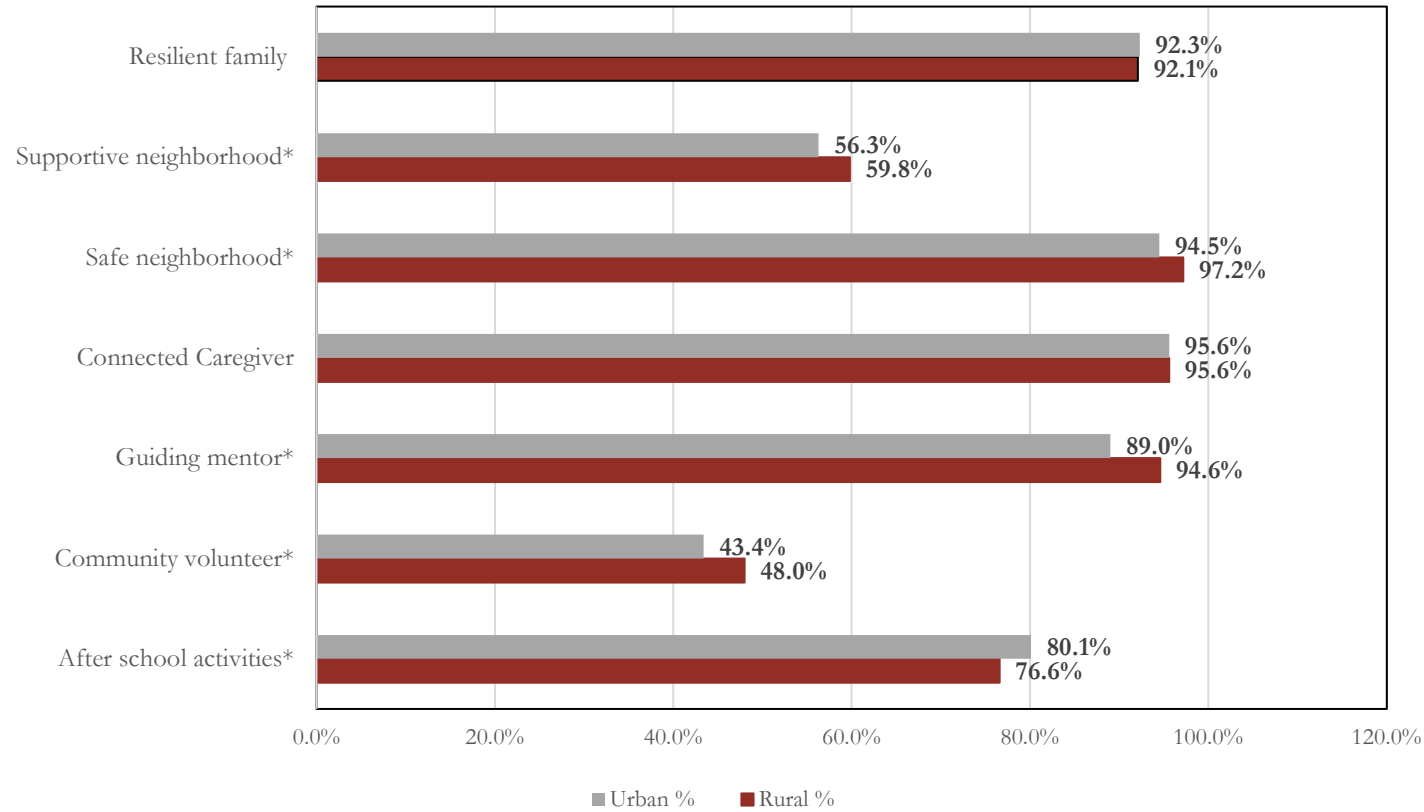


# ACES AMONG CHILDREN, BY COUNT

	Rural (%)	Urban (%)	All (%)
ACE Summary Score			
0	44.1	52.5	51.5
1-3	45.2	40.7	41.3
≥4	10.7	6.8	7.3

# PCE EXPOSURE

Figure 2: Positive Childhood Experiences by Type  
Among children ages 6-17, National Survey of Children's Health



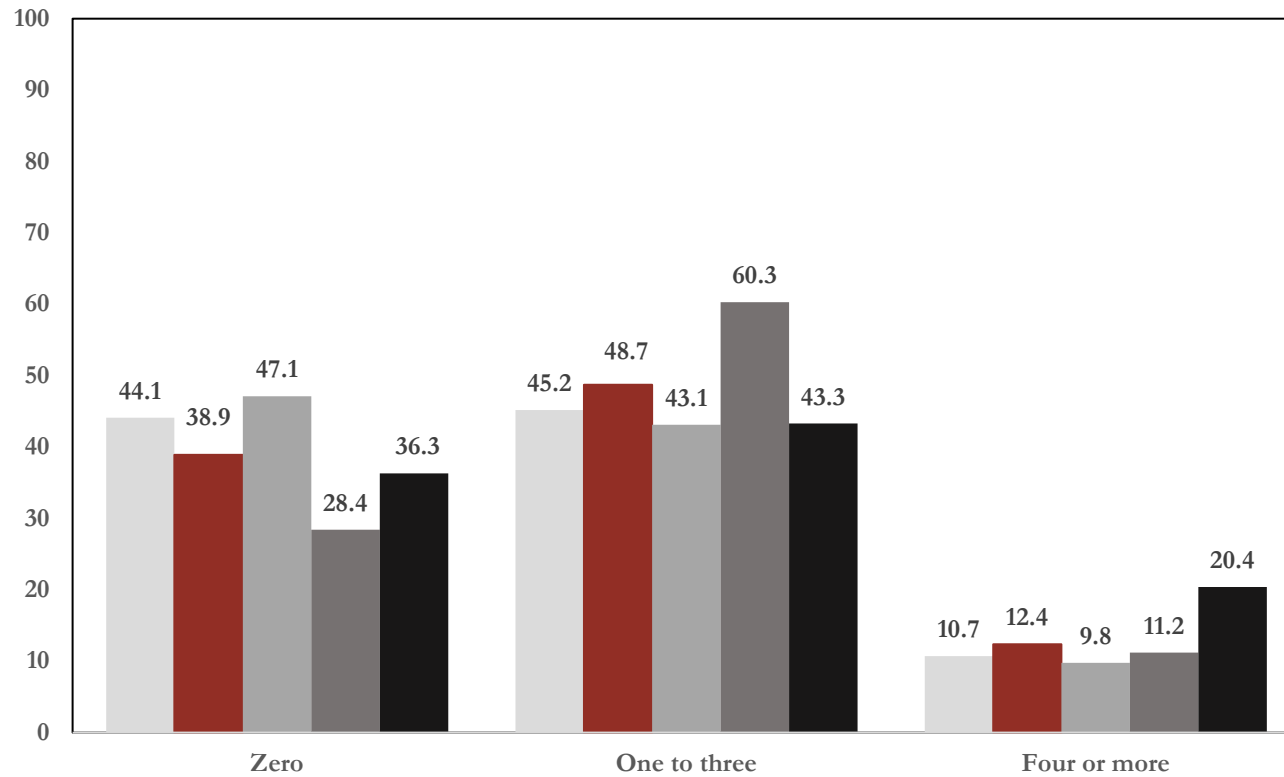
\*Statistically significant



# **RACIAL/ETHNIC DIFFERENCES IN ACES AND PCES**

# ACE EXPOSURE, BY RACE/ETHNICITY

Proportion (%) of Adverse Childhood Experiences, by count, among rural children ages 6-17, National Survey of Children's Health



■ All Rural Children ■ Hispanic ■ White ■ Black ■ Other, American Indian/Alaska Native, Asian/Pacific Islander



South Carolina

Adverse Childhood Experiences among <u>rural</u> children ages 6-17, National Survey of Children's Health, in Total and stratified by race/ethnicity								
	Total	Hispanic	White	Black	AI/AN	API	Other	P-value
	%	%	%	%	%	%	%	
<b>ACE Types</b>								
Parental separation/divorce	35.2	37.5	34.6	36.6	11.0	45.6	38.2	0.0690
Parental death	5.1	7.2	4.3	7.3	4.4	9.8	7.3	<b>0.0393</b>
Household incarceration	12.9	17.2	11.6	13.9	D	D	22.9	<b>&lt;.0001</b>
Witness household violence	9.3	10.9	8.7	10.3	1.1	19.2	11.9	0.0740
Witness neighborhood violence	6.2	7.7	5.5	8.6	0.5	13.0	10.0	<b>0.0098</b>
Household mental illness	11.7	12.5	11.5	9.2	8.8	12.7	17.2	0.3433
Household substance misuse	14.3	12.6	14.3	9.6	7.2	20.3	26.1	<b>0.0004</b>
Racial/ethnic mistreatment	3.6	7.8	1.0	14.2	12.3	10.2	15.8	<b>&lt;.0001</b>
Economic hardship	26.2	20.9	24.8	40.1	17.7	42.7	36.8	<b>&lt;.0001</b>

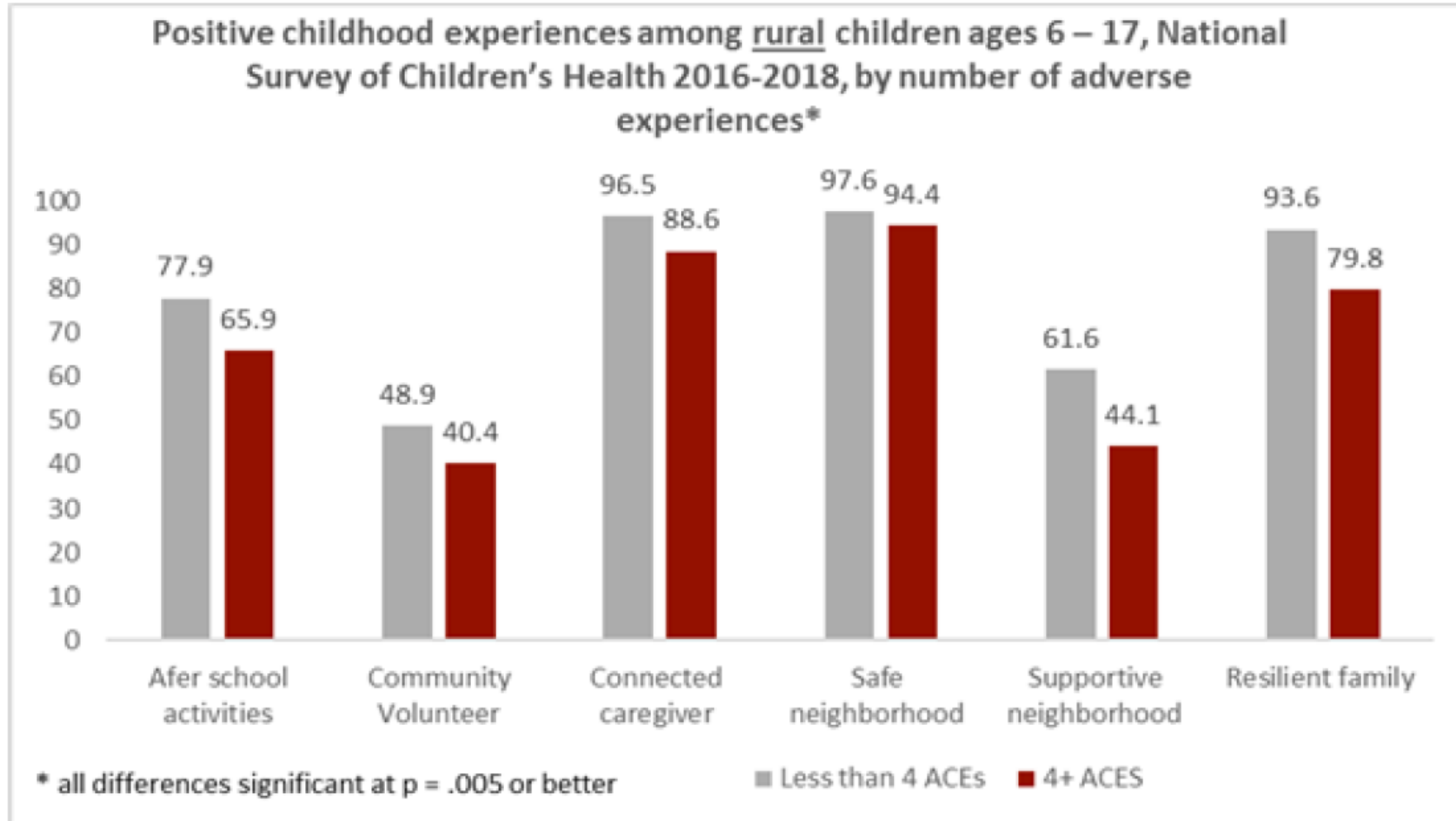
Positive Childhood Experiences among rural children ages 6-17, National Survey of Children's Health, overall and stratified by race/ethnicity

	Total	Hispanic	White	Black	AI/AN	API	Other	P-value
	%	%	%	%	%	%	%	
<b>PCE Types</b>								
After school activities	76.6	68.5	78.3	72.5	77.9	60.5	78.3	<b>0.0004</b>
Community volunteer	48.0	38.2	49.7	44.0	41.8	33.4	45.4	<b>0.0003</b>
Guiding mentor	94.6	87.8	96.1	91.0	90.3	85.7	94.6	<b>&lt;.0001</b>
Connected caregiver	95.6	92.6	96.9	92.1	D	D	89.4	<b>&lt;.0001</b>
Safe neighborhood	97.2	95.5	97.9	93.0	D	D	97.5	<b>&lt;.0001</b>
Supportive neighborhood	59.8	50.6	63.3	47.8	49.4	34.8	52.3	<b>&lt;.0001</b>
Resilient family	92.1	91.3	92.9	90.0	91.6	80.4	88.0	<b>0.0176</b>

# **RURAL CHILDREN WITH 4+ ACES OFTEN LACK PCES**

## RESULTS

- Nearly all rural children are reported to have a guiding mentor (94.6%), with no difference between children with a high level of ACEs exposure and other children.
- Unfortunately, however, children with high ACE exposure were less likely to be reported to have each of the six categories of positive experience shown below.



# CONCLUSIONS

# FILLING THE GAP IN THE LITERATURE

- Examining the prevalence of ACEs and PCEs in rural communities can provide insight on areas for possible improvement to help mitigate the long-term health and wellness impacts of ACEs.
- This study examined whether ACE and PCE exposure differs between rural and urban children, finding a mix of advantages and disadvantages facing rural families.
- Focusing first on threats to children's health and growth, our results confirm previous findings that rural children consistently have higher rates of exposure to nearly all the ACEs that were assessed, with the exceptions of parental death and racial/ethnic mistreatment, which were not statistically significant different from urban rates.



# RECOMMENDATIONS FROM THE CDC FOR REDUCING ACE TYPES AND BUILDING PCES

Strategy	Approaches	
<b>Strengthen economic supports to families</b>	<ul style="list-style-type: none"> <li>• Strengthening household financial security</li> </ul>	<ul style="list-style-type: none"> <li>• Family-friendly work policies</li> </ul>
<b>Promote social norms that protect against violence and adversity</b>	<ul style="list-style-type: none"> <li>• Public education campaigns</li> <li>• Legislative approaches to reduce corporal punishment</li> </ul>	<ul style="list-style-type: none"> <li>• Bystander approaches</li> <li>• Men and boys as allies in prevention</li> </ul>
<b>Ensure a strong start for children</b>	<ul style="list-style-type: none"> <li>• Early childhood home visitation</li> <li>• High-quality child care</li> </ul>	<ul style="list-style-type: none"> <li>• Preschool enrichment with family engagement</li> </ul>
<b>Teach skills</b>	<ul style="list-style-type: none"> <li>• Social-emotional learning</li> <li>• Safe dating and healthy relationship skill programs</li> </ul>	<ul style="list-style-type: none"> <li>• Parenting skills and family relationship approaches</li> </ul>
<b>Connect youth to caring adults and activities</b>	<ul style="list-style-type: none"> <li>• Mentoring programs</li> </ul>	<ul style="list-style-type: none"> <li>• After-school programs</li> </ul>
<b>Intervene to lessen immediate and long-term harms</b>	<ul style="list-style-type: none"> <li>• Enhanced primary care</li> <li>• Victim-centered services</li> <li>• Treatment to lessen the harms of ACEs</li> </ul>	<ul style="list-style-type: none"> <li>• Treatment to prevent problem behavior and future involvement in violence</li> <li>• Family-centered treatment for substance use disorders</li> </ul>

# HEALTH SECTOR SOLUTIONS

- Rural children disproportionately live in homes affected by current substance misuse or mental illness.
- Rural communities, however, are more likely than urban areas to lack effective treatment programs for alcohol and opioid misuse<sup>1</sup> and nearly all rural counties are health professions shortage areas for mental health care.
- Development of programs that can extend treatment capability through modalities such as telehealth may help address local service shortfalls.

# **BUILDING OPPORTUNITIES WITHIN THE FAMILY: PARENT AND HOME-BASED INTERVENTIONS**

- **Home visiting programs**

- Particularly important as ACEs can repeat across generations
- Early childhood interventions

- **Parent education and support**

- Address secure attachment in parent child relationship; help parents and caregivers tune in to their children
- Referral to parenting programs such as Strengthening Families and Empowering Families

- **Parent mental health and substance misuse care**



# **BUILDING OPPORTUNITIES OUTSIDE THE FAMILY: COMMUNITY INITIATIVES**

- Community level initiatives can help link families with services. One such example is the SEEK program (Safe Environment for Every Kid), which connects families, through their primary health care providers, to community supports.
- Family-based resource centers may help community programs connect directly with neighborhoods and families.

# CONTINUED PUBLIC HEALTH SURVEILLANCE IS NEEDED

- Continued monitoring of rural children's ACEs exposure will be needed, both to monitor the effectiveness of community interventions and, unfortunately, to assess the effect of the current public health emergency.
- Estimates of family disruption due to COVID-19 vary, and no studies specifically examining rural children's experience of family disruption have yet been published. At the national level, researchers have estimated that for every 100 COVID deaths, 7.8 children experience parental death, with an estimated 43,000 parental deaths through February 2021.
- A different research group, studying loss of a primary caregiver, whether parent or grandparent, estimated that 120,630 children faced this loss across the 15-month period from April 2020 through June 2021, with the burden falling more heavily on non-white children, due to the racial/ethnic disparities seen with COVID morbidity and mortality.
- Given the trajectory of the epidemic over time, the COVID-19 pandemic may have placed rural children at increased risk for parental loss, as rural vaccination rates have been lower, and rural death rates higher, for this disease.

# NATIONAL RESOURCES



**KIDS COUNT data center**  
A PROJECT OF THE ANNIE E. CASEY FOUNDATION



**NCTSN**  The National Child  
Traumatic Stress Network





thank  
you



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The Rural and Minority Health Research Center receives funding from a variety of federal, state, and local grants and contracts including a cooperative agreement with the **Federal Office of Rural Health Policy**.

# REFERENCES + USEFUL RESOURCES

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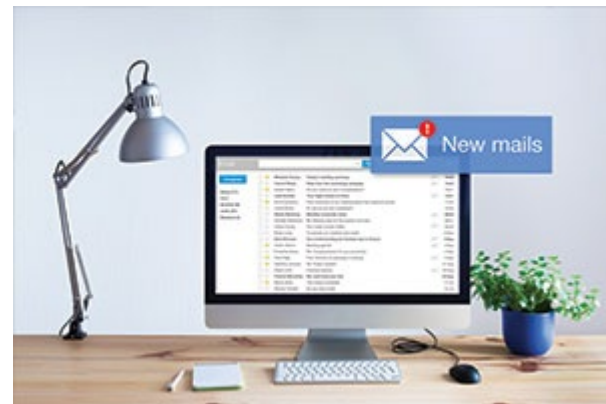
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- **January 5, 2022**  
[An Enhanced Method for Identifying Hospital-Based Obstetric Unit Status](#)  
New Research Product
- **January 3, 2022**  
[Upcoming Webinar: Aging in Place in Rural America - Challenges, Opportunities, and Policy Initiatives](#)  
Upcoming Webinar
- **December 3, 2021**  
[Rural Urban Variation in Travel Burdens for Care: Findings from the 2017 National Household Travel Survey \(executive summary\)](#)  
New Research Product
- **November 30, 2021**  
[New Articles Published on Telehealth, Tobacco, Suicide, and Cancer Screening and Treatment](#)  
Published Journal Articles
- **November 17, 2021**  
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