Per Ostmo: Hello, and thank you for joining us. Today's webinar is titled Aging in Place in Rural America: Challenges, Opportunities and Policy Initiatives, and is featuring Dr. Carrie Henning-Smith and Megan Lahr from the University of Minnesota Rural 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. Please note that all attendees have been muted, but you may submit questions for our speakers using the chat box 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.

Per Ostmo: Next slide please. 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'll drop that email into the chat box. So if you have any questions about the Gateway program, please feel free to reach out to me.

Per Ostmo: Next slide please. So what does Gateway do? We provide easy and timely access to research conducted by the rural health research centers, which are 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. And you can stay up to date on the latest rural health research by subscribing to Gateway's research alert emails, or by following Gateway on both Twitter and Facebook at RHR Gateway. And I will drop those links into the chat as well.

Per Ostmo: Next slide please. So now I would like to introduce to you Dr. Carrie Henning-Smith and Megan Lahr from the University of Minnesota Rural Health Research Center.

Carrie Henning-...: Thank you, Per. I'm really delighted to be here today. This is one of my favorite topics. There's no way to cover everything involved in aging in place in rural America in one short hour. So consider this a highlights reel of some of the work that we've done at the University of Minnesota Rural Health Research Center on this topic. We are still actively working in this area and so expect that more research and more results will be coming out in the coming months and years. But today, we're going to highlight some of the challenges and opportunities and policy initiatives related to supporting older adults to remain in their homes and communities across the rural United States.

Carrie Henning-...: I want to start by acknowledging our incredible team of collaborators at the Rural Health Research Center, and also much like the Gateway, I want to acknowledge our funders, the Federal Office of Rural Health Policy within HRSA for supporting all of the work that we'll be sharing today.

Carrie Henning-...: So I want to start pretty broadly by talking about why we need to think about rural aging in context at all. Why not just talk about aging in place generally or older adults generally, and what their needs are? I know I'm preaching to the choir here if I'm on a rural health Gateway webinar, I know a lot of you are rural

health researchers or you live and breathe rural health in your work and in your daily lives. So forgive me for preaching to the choir, but I do think it's important that I ground us in some of the key fundamental facts about why rural areas need to be thought about and looked at differently.

Carrie Henning-...: First, this tired refrain that we hear all of the time, rural residents are older, poorer and sicker. And I always give this refrain with a lot of caveats. It's true. All of these things are true on average. And yet we see a lot of exceptions and a lot of diversity across rural areas. Rural areas are also really different from urban areas in terms of infrastructure, physical environment, sociodemographic characteristics, access to resources and just about any other measure that you can dream up. Because of these differences, because the people and the places are different between rural and urban areas, it's really important to consider the unique impact of the rural context on the health of rural older adults. And before we dive right in to aging in place, I want to continue providing a little bit of background to ground why we might see some unique challenges.

Carrie Henning-...: And again, I know I'm preaching to the choir, so forgive me here, but just like I said, I give that refrain that rural areas are older, poorer and sicker with a lot of caveats. I find it really, really important to point out that rural areas are diverse across the United States, diverse on every measure we could possibly imagine in age structure, risk factors, community resources, and also in race and ethnicity. I think too much of our popular narrative, our media narrative, our societal narrative about rural areas focuses on white rural residents and often has too limited a frame. And so I think it's important to remember that rural areas have always been diverse racially and ethnically, and they are increasingly so today.

Carrie Henning-...: This map here is a really nice one from my colleagues at University of South Carolina and University of Iowa. And it shows where we have rural areas that are more than 20% any different racial or ethnic group. I'm not going to read all of the different groups and the caption here, but suffice it to say, we have a lot of diversity across the country. And it's important to acknowledge that you can look at this map and you can see the impact of centuries and decades of history right on this map. In the orange, we have rural places that are more than 20% black. In the purple, we have rural places that are more than 20% Hispanic. In both cases, you can see the impact of where we've drawn borders, the lasting impact of slavery and structural racism alive and well in rural areas today. And this matters for older adults. The needs of older adults in rural areas are going to differ considerably, depending on what region of the country they're in and depending on their own personal characteristics and history.

Carrie Henning-...: Rural areas are also really, really different when it comes to infrastructure and physical environment. And you can't talk about aging in place without talking about infrastructure and physical environment. They are key to supporting older adults. Rural areas differ from urban in terms of their natural and built environments, population density, just how close are you to your neighbors? How close are you to your resources, to your community? And they obviously differ in terms of access to resources and amenities like healthcare,

transportation, housing, broadband internet, and cellular connectivity and water and air quality. To age in place, to age in place successfully and safely and comfortably, you need access to all of these resources and they need to be not only available, but high quality.

Carrie Henning-...: This is going to look familiar to many of you on the webinar today. This is from my colleagues at the University of North Carolina, looking at access to healthcare with hospital closures. In particular, each of these little dots shows a rural hospital that has closed in the past couple of decades. Obviously, to age in place well requires access to healthcare, access to timely care when you need it. That includes hospital care. And so each of these communities that's experienced a hospital closure presents barriers to aging in place for the rural older adults and their families living there. And again, it's worth pointing out that these hospital closures are not randomly distributed. If you overlay this map with the map on race and ethnicity that I showed earlier, you will see some very troubling correlations, especially in the southeast and states that have not expanded Medicaid.

Carrie Henning-...: In addition to hospital closures, we also see nursing home deserts across rural America and nursing home closures. This is research from my colleagues at RURPI. All of these different colleagues I'm calling out have their work showcased on the Rural Health Research Gateway. So it's worth looking there if you're not already familiar with their work. And here, the shaded areas in brown are those that are rural and do not have a nursing home or formal long term care available in their county.

Carrie Henning-...: Moving into a nursing home defies the definition of aging in place, and yet having those resources, having that type of healthcare and infrastructure available in your community is really important to maintain some continuity and some sense of community with the people that you're used to living near or around in these communities where people do not have access to a nursing home. If they need that formal long term care for an acute period of time, or for longer, they may end up needing to move further away, really disrupting the social cohesion in their community. And we have done some research a few years ago, the University of Minnesota Rural Health Research Center, looking at barriers to nursing home care for people who need it and finding horrific stories, really stories that continue to haunt me to this day of people needing to go four or five, nine hours away to find the nursing home care that they need and that's appropriate for them. That's exactly the opposite of aging in place and exactly the opposite of what we want to see to support the health and wellbeing of older adults in rural areas.

Carrie Henning-...: Coming back to infrastructure a little bit, this map shows places across the country that do not have access to reliable broadband. Those in yellow have fewer than 20%, less than 20% of the population has fixed broadband availability in yellow here. This matters for aging in place because to age in place, well, you also need to be able to connect with others, perhaps with friends, family loved ones who don't live near you. You need to have access to

all of the resources that continue to move online. It's not lost on me that we do these sorts of webinars online, and that's not available to people in many of these yellow shaded areas. And I think that sometimes, we talk about broadband or hospital closures or any of these other things without connecting it with things like aging in place with supporting older adults in the community. And that's especially important to do.

Carrie Henning-...: We are seeing an influx of resources to address broadband availability. And I think that will have widespread implications for the health and wellbeing of rural residents, including older adults. And at our rural health research center, we have spent quite a bit of time looking at social connectedness, at social isolation and loneliness, especially for older adults. And so just to summarize years worth of research that we've done into one slide here, we found that compared to urban older adults, rural older adults are more likely to live alone. This has huge implications for aging and place. If someone is living by themselves, are they getting what they need in terms of social support, in terms of instrumental support with all of the daily activities of life? Are they feeling well connected?

Carrie Henning-...: We have found though that rural older adults have larger social networks, and this lines up with other research showing rural people have larger families. We've also found that rural older adults report having more friends, more connections in their life, which is really a good news story. And despite that, we've also found that older adults in rural areas are more likely than older adults in urban areas to report feeling lonely. And I think that signals more than anything else that disconnect in infrastructure. You might have people in your life, but you don't have a way to connect with them in a meaningful way. That might be because of transportation barriers or lack of access to broadband internet, lack of cellular connectivity or any number of things that prevent connecting with that larger social network that you might have. All of these things and more are important to aging in place. And I promise that's where we're headed next after this long-winded introduction about why we should think about rural places.

Carrie Henning-...: So I've been talking it, but let's talk about what it actually is. And here, I think I'm preaching to the choir for those of you who study aging, who study gerontology, but to get us all on the same page, what is aging in place? What have I been talking about this whole time? I like this definition from the CDC, and they define aging in place as the ability to live in one's own home and community safely, independently and comfortably, regardless of age, income or ability level. This is important. It highlights the home setting and the community setting. They are both important to stay within one's home, where you might be most familiar, where you might have spent decades of your life and invested a lot of your financial and physical resources, but also to stay within your community where you may have social connections. You may be familiar with the resources there.

Carrie Henning-...: Both are important. I would not say one is more important than the other, and to do so requires high quality on multiple dimensions. Can you do it safely? Can you feel safe? Is your health and wellbeing at risk by staying in your home and community? Can you live independently? Can you function? Perhaps you need a little extra resources. You need some extra support if your health or functional ability changes, but can you maintain that independence? And importantly, can you live comfortably? I think sometimes we focus too much on the safety or on the independence, and we miss that quality of life piece, that comfort piece and what people actually want in their lives. We'll come back to that in just a minute.

Carrie Henning-...: But why does it matter? Why do we look at aging in place at all? Again, it matters for quality of life. It matters because to be moved from your home, from your community is disruptive, is difficult and can be really, really hard for some people where, especially that's not their preference. Aging in place is associated with increased independence. You're able to maintain your independence, moving to a new setting or moving to a long term care setting where people may be doing things for you, cooking meals, helping you get dressed, helping you get around is often associated with a decline in independence.

Carrie Henning-...: Aging in place matters for all of the reasons of community and relationships and social cohesion that I mentioned already. Maintaining those bonds and those ties within community is really important. And this is particularly salient in rural communities without institutional or formal long-term care. If someone needs that level of care and they're not able to stay in their home and community and receive it there, it's very disruptive to the entire social fabric of the community for them to need to leave and move.

Carrie Henning-...: Aging in place can obviously minimize disruptions for the older adults, but also for their family and friends and loved ones. And for the economists in the room, if nothing else persuades you, aging in place matters because it saves money. It saves money for individuals and it saves money to our public programs, especially Medicaid, our largest payer of long term care.

Carrie Henning-...: So that's all well and good, but do older adults actually want to age in place? It's important to ask them. It's important to know people's preferences. Here is a policy brief that we published last May using data from the National Health and Aging Trends survey. This is a survey of Medicare beneficiaries across the country. It's nationally representative of Medicare beneficiaries and their spouses. And the survey asks a lot of wonderful questions. One of the questions it asks is about what older adults perceive to be the optimal setting for receiving long term care. If someone needs that level of care, where do older adults think is the best setting for them to get that care? And we found that most older adults, but not everyone, think that the optimal setting is to receive help, receive that level of care in their own home, either from a family member or a friend or from someone you pay for that help.

Carrie Henning-...: But really importantly, we found that approximately a third of all older adults said that they think the optimal setting, at least for someone else who needs long term care, is to live in assisted living or a nursing home. This tells me a couple of things. It tells me that our focus needs to continue to be on how we can keep older adults in their homes and communities as long as possible, because it's what the majority of older adults want. It's what they prefer. But it also tells me that we need to have a suite of options available, that maintaining all of the focus on keeping people in their homes and communities is also not the right answer and not appropriate. We need to have options, and those options need to include formal long term care.

Carrie Henning-...: So think back to that map of nursing home deserts that I showed earlier, those are rural communities that are not giving people both of these options. It's not the community's fault, but that are under resourced, those options are not available. And we looked to see if there were differences by rurality, in where people thought the optimal setting was. And we didn't find that there were. Rural and urban older adults were really the same or mostly the same when they were asked what the optimal setting was. Again, most thought the optimal setting was to receive care in one's own home, but nearly a third of both rural and urban older adults said the optimal setting would be to receive that care in an assisted living or nursing home setting.

Carrie Henning-...: I want to mention this though. And then I will go into some differences by rural and urban older adults who are aging in place. It's really important to recognize that aging in place does not produce equitable or equal outcomes for all older adults. This is a paper that I published a few years ago now, and in it, I show that the risk of increased disability or worsening disability is highest for low income, older adults aging in place, compared with the highest income older adults aging in place.

Carrie Henning-...: This should hopefully feel like common sense to you. It's not a big surprise, but it's really important to know that for older adults who don't have the financial resources to afford to modify their home, to bring in the resources that they need, their health, their wellbeing and their functional status may deteriorate and may deteriorate more quickly than older adults who are the most affluent and who are able to modify their home to be what they want it to be, or choose their home setting to be one that supports them well in aging in place. And then going back to the older, poorer, sicker refrain that I mentioned earlier, rural older adults on average have fewer financial resources and are more likely to fall into this lower income bucket. It's important to note that those outcomes are not always as good.

Carrie Henning-...: So given that, do we see differences between rural and urban older adults who are aging in place? We did a lot of data crunching here, again using the National Health and Aging Trends survey. We limited the sample this time to respondents who had not moved since baselines, since they were enrolled in the study either five or 10 years prior, depending on which cohort they were in. That left us with just over 3,300 respondents who had lived in their homes for an average of 27

years. We use survey weights in our analyses, so these are nationally representative estimates of these individuals that I will show you here.

Carrie Henning-...: We found lower educational attainment for rural older adults aging in place. They were less likely to have any college education, a bachelor's degree or a graduate degree, and more likely to have a high school degree or less. We also found lower household income for rural older adults. These will not surprise any of you who are rural health researchers on the webinar today, but this is important when we're considering what people can afford if they are aging in place. And again, this is comparing people who are living in their own home, who have not moved for an average of 27 years, and we find lower socioeconomic status for rural older adults.

Carrie Henning-...: We also find that rural older adults aging in place are more likely to say that they had a fall in the past year, and that they're worried about having another fall or having a first fall. Falling is one of the leading risk factors for frailty and mortality. It's one of the reasons people end up needing to leave their homes and move into an institutional long term care setting for either an acute period of time or a longer period of time. And so it's, in some ways, a canary in the coal mine and something we need to pay attention to. The fact that rural older adults aging in place have more fall history and more fall concern should be a red flag for all of us. We also found differences in the types of housing that people are living in. This isn't surprising if you've been to an urban area and you've been to a rural area, you know with your own eyes that many of the houses and the housing options are different.

Carrie Henning-...: But just to confirm that, we find that rural older adults aging in place are more likely to be living in a single family home, less likely to be living in a duplex or a multi-unit apartment building, and also more likely to be living in a mobile home. This is important when you think about who is responsible for the maintenance and the upkeep of their house, of where they live and what those accessibility features might be. Many multi-unit apartment buildings might have an elevator. They might also be a walk up. Each of those presents very different circumstances for the people living within them. But single family homes are almost by definition, unlikely to have some of those accessibility features unless they're added later.

Carrie Henning-...: On top of that, we find that rural older adults aging in place are more likely to own their home or apartment rather than rent it. That's nearly 90% of them. And they're more likely to have finished paying off their mortgage. In some ways, this is really a good news story. This tells us that they have more financial security when it comes to housing, that they have paid off their house more often than urban older adults aging in place, and yet, this is again a signal that we need to pay attention to because this tells us that rural older adults aging in place are more likely to be entirely responsible for the maintenance and upkeep of the home that they live in. Any modifications, any accessibility features that need to be added are things that they need to figure out how to resource, how to pay for, or how to access funds for.

Carrie Henning-...: And then looking at the characteristics of the homes people live in, we found that rural older adults aging in place are more likely to have stairs in their entries, stairs to get in. And then when they're asked whether or not they have a ramp and stairs or stairs with no ramp, rural older adults aging in place are more likely to say they have stairs and they have stairs without a ramp. Not everyone needs a ramp and stairs can be great for maintaining health and independence. And yet when we think about that fall history, that fall worry, stairs can be a fall risk. They can present a fall risk and stairs can also be difficult if someone does develop functional or mobility limitations.

Carrie Henning-...: Along those lines, we find that rural older adults aging in place are more likely to say that they have mobility limitations that prevent them from moving around outside their home or in their community, around their immediate home environment, that they are more likely to say they need help moving around inside their home from room to room, from floor to floor, and that they are not getting those help needs met. So rural older adults are significantly more likely to say that they have an unmet need for help with any mobility limitations around their home. This tells us that those folks who are aging in place may not always be getting the resources and the support and the accessibility features that they need.

Carrie Henning-...: And just briefly, we look to see whether we could adjust a way for that, whether we could account for those differences in unmet mobility need with sociographic characteristics and housing characteristics, and they remain significant. Rural older adults aging in place continue to have significantly higher odds of unmet mobility needs even after adjusting for all of those characteristics.

Carrie Henning-...: And finally, just a couple of slides on social cohesion and social participation among those older adults aging in place, we found that rural older adults aging in place are more likely than urban older adults aging in place to say that people in their community know each other well, and rural and urban older adults aging in place had similar levels of saying that people in their community were willing to help other, and that people can be trusted. Across the board, these are really high numbers. We see 94% of rural older adults aging in place say people in their community are willing to help each other. 89% say people know each other well. These are wonderful and very high numbers showing a lot of social cohesion in the communities where these older adults live and are aging in place. And this for me reinforces the importance of not disrupting the community, not pulling people out to receive the care they need, but instead bringing care in if it's needed and ensuring that people are able to remain in their community, if that's what they prefer.

Carrie Henning-...: And lastly, just a quick slide on social participation. We have a policy brief that will be coming out on this very soon. So if you want all of the details, stay tuned for that. But across the board, we found pretty high rates of participation in all different sorts of activities for rural and/or urban older adults, aging in place in their communities. And we found that rural older adults were slightly more

likely to say that they'd been able to visit a family member or a friend in the past month, that they've attended religious services, or that they've done some volunteer work in the past month. Again, these are people who are vitally important members of their community. They are active and involved, and they are a big part of the social fabric. Now, I'm going to pass this over to my colleague, Megan, for the next part of our webinar.

Megan Lahr: Thank you, Carrie. I'm going to talk about a couple of additional components of our work related to aging in place that look a little bit at some of the policies across the country. And so the first component is we fielded a survey of all 50 state offices of rural health, or source.

Per Ostmo: Megan, I'm sorry. Can I interject just briefly?

Megan Lahr: Yeah, no problem.

Per Ostmo: There's so many great questions and comments in the chat. If we could just take one minute to try and get through a couple of these.

Megan Lahr: No problem.

Per Ostmo: So there's been maps of nursing home, desert counties and ambulance desert counties. Is there anything similar for home health agencies, closures or availability status?

Carrie Henning-...: I don't know, there may be, and I don't know of any good maps on that. Those are so important to measure and in some ways, so much harder to measure. The tricky part about home health agencies is that many are located in urban areas and serve rural areas. They're traveling out to them or they have satellite branches. And so in some ways, it's a much trickier puzzle to untangle. We are doing work right now at the University of Minnesota Rural Health Research Center, looking at the direct care workforce. So that includes home health agency staff and CNAs and all of the direct care workforce, whether it's long term care in institutional settings or home settings. And we're finding big differences between rural and urban. We're finding a much lower supply of the direct care workforce in rural areas compared with urban. Those results aren't out yet. We hope they will be in the next few months, but in terms of a map or something just perfectly succinct, like what we showed earlier. I think it's just a lot messier. I haven't seen a good one. If someone on the call knows of one, I'd love to see it.

Per Ostmo: Thanks, Carrie. I have one more question for now, and then we'll save the rest of the end, but do you ever come across statistics for internet access in congregate housing, which might be more difficult to capture than individual households?

Carrie Henning-...: Oh, yeah. I don't know the answer off the top of my head of what that would look like, but you could do it using the Census data. The American Community Survey through the Census allows you to see the type of housing that someone lives in, including group housing and congregate housing and gives measures of whether or not people have access to the internet. So it could be done. I don't know offhand what you would find. I suspect that people in congregate housing would have better access because they're better able to pool resources for that kind of thing. But I don't know that.

Per Ostmo: Okay. Thanks, Carrie. We'll save the rest of the questions for the end. So Megan, apologies for interrupting.

Megan Lahr: No problem at all. So looking at another component of our work, we did a survey of the state offices of rural health. Each state has an office of rural health. We reached out to all 50 of them and received responses from 49 of the 50. And so we asked several things in the survey. First, we asked about age friendly initiatives. Do they have age friendly initiatives in their state? Do they have aging in place initiatives in their states? And for both, if they did, we asked, do you have any rural specific initiatives or components of those? Then we asked a little bit about what they saw as the biggest barrier to aging in place for older adults living in rural communities in their states. And then we also had them indicate how much they agreed or disagreed with several statements, such as housing issues present a barrier to older adults aging in place in rural areas of my state.

Megan Lahr: We asked this about several topics. So housing was one them, transportation, food insecurity, social isolation, access to formal healthcare, home healthcare, home care services, access to informal caregivers. So several different components that are kind of known barriers to care and asked how much they agreed or disagreed with those. And we also asked them to explain those responses, and collecting qualitative data on that. And finally, we asked them about policies or programs that would be beneficial to supporting older adults aging in place in rural areas of their state. And so that's kind of an overview of what we looked at. So this is actually showing us the barriers that we asked folks to respond to. And so those are those categories I walked through. Obviously, when you look at this transportation was the topic where respondents were unanimous, that this was a barrier.

Megan Lahr: None of them said they disagreed or strongly disagreed there. And they also had the highest percentage of state office of rural health respondents who strongly agreed. Transportation, as I'm sure many of you know, this is something we see time and again when we're looking at all sorts of things, but especially in rural areas, when folks are aging in place, transportation, the state offices of rural health agreed that that was the biggest barrier. Overall, there were very few respondents that disagreed or strongly disagreed. Here, you'll see they're combined in the category, and at least 89% or more of the state office of rural health respondents agreed that all of these were problems. And so this just kind of indicates how big these issues are, especially seen by the folks in the states.

Megan Lahr: Next slide, please. And then we also took a look at this by region. These are the top two barriers that were rated strongly agreed by region. And as you can see, obviously transportation again is across the board, the top barrier that was found. And there are also differences though for the second barriers. These included social isolation in the Midwest and Northeast, housing in the south and food insecurity in the west. And as Carrie talked a little bit about earlier, some of these social isolation issues, especially in housing, there are different barriers and different components of those barriers that we've seen in other parts of our work that are just really big issues, but they differ across the country. And so those are things that folks should keep in mind. Again, there's not one thing that should be invested in. It really does depend kind of where folks are and what their needs are.

Megan Lahr: Next slide. Thank you. And then these are some examples of the descriptions that our respondents provided, the state office of rural health folks, as explanations for the specific barriers in their states. For this first one, rural communities lack public transportation out to remote homes and for all services, especially services other than healthcare appointments. Again, transportation being shown as the most common barrier, especially for aging in place in rural areas. No public transportation, everyone, there's a need to be able to get to doctor's appointments, but also there are needs to get to the grocery store, to church, to social events, other all sorts of things. And so without transportation to get there, it makes aging in place in rural communities particularly difficult.

Megan Lahr: Adding onto that, in rural areas, the great distance to needed services, healthcare providers, grocery stores is a challenge. This gets to the remoteness of services from individuals' homes, especially. And another component that kind of just builds on this transportation piece is that weather and geography make it difficult to access resources for long periods of the year. And so, there may be some or mountains, dirt roads, all sorts of different components that make access to necessary services even more difficult for folks.

Megan Lahr: Next slide. So we also did ask the state offices of rural health about their recommendations for improving policies or programs to help older adults aging in place in rural communities. The most common recommendation was to increase funding. That kind of hits at all of the barriers really, but this is funding for resources that can help support folks to be able to age in place successfully.

Megan Lahr: Expanding transportation services, like we've talked about, that was also a common response and also improving access to healthcare. Obviously, transportation might address some of this, but there are other ways to improve access to that we've kind of touched on. There's home health. Telehealth, as Carrie talked about is something that's just a great possibility, but the issues with broadband still remained, and additional providers in rural areas. That's something that we heard a little bit about as well, that there aren't some of these home health providers, or there aren't some of these care services providers in these rural communities is just lacking. And so providing an

improving access to healthcare would be great. And all of these recommendations as well are on a policy brief on our website.

Megan Lahr: Next slide. And then one other component I wanted to talk about is we completed an environmental scan of all 50 states, and this was to identify statewide aging in place for age friendly initiatives. And so we found 33 initiatives across 22 states, and there were six of those that were explicitly rural focused or they had rural as a priority area.

Megan Lahr: Next slide. So this first table shows the focus area of the 27 statewide initiatives without overall focus that we identified. For these, they're related to aging in place or age friendly initiatives. So it's a range of topics, but you'll see many of them relate back to other components of our study and things that we've looked at, especially the barriers that we discussed kind of in that last section. There's transportation, housing, caregiving, health and social services, but at the top is kind of that general aging and health and education and resource development. Those are components that more of the states had as focus areas for their aging in place initiatives.

Megan Lahr: Next slide. And so this kind of captures the topics of the state initiatives with a rural focus. Here, obviously again at the top is transportation, which is a great component, especially in these rural areas that we've really seen that there's the need for. Provider training and education, that was something that we hadn't heard as much about. It was really interesting to see that some of these rural areas, this is what they thought was needed and had assessed to provide this for the specific age friendly or aging in place initiatives. And then also some in workforce development, dementia friendly communities, and underserved communities for other issues.

Megan Lahr: Next slide. And so lastly, I wanted to highlight another product that we have available on our website, but this provides a whole table dedicated to listing and describing examples of age friendly initiatives. Again, this isn't complete. This was just as a result of what we found in our environmental scan. But this table includes national initiatives. It includes state initiatives with a rural specific focus and other statewide initiatives. So hopefully this can be a good resource for folks if you're going to learn, you're looking to learn more about specific initiatives. That might be interesting to you. We have kind of where they're located, the description and a little bit of a rural focus area when that's applicable. And now I will turn it back to Carrie.

Carrie Henning-...: Thanks, Megan. So just to summarize our huge whirlwind tour, that hopefully feels somewhat unsatisfying, because there are so many elements of this that we could talk about for hours and hours. I had a chance to peek at some of the questions in the chat and I think that they get at some of the diversity between rural areas, some of the different issues that we haven't even touched on today, but to summarize what we did touch on, just in general, we find that most older adults in rural areas would prefer to age in place. Again, that preference is so important for ensuring quality of life, for ensuring that people are able to live

their older adulthood where and how they want to live. Those findings are also really important for thinking about this social fabric and the social cohesion of the rural communities where those older adults live.

Carrie Henning-...: But we find that rural older adults, aging in place have fewer financial resources, greater housing burden and more unmet needs for mobility. This tells us that we need additional resources to ensure that they can safely and comfortably and independently remain in their homes and communities. Some solutions could include increasing rural specific funding. That could be a solution for just about anything that we study, but it is worth mentioning here, expanding transportation options and reducing barriers to care. And I think there's really interesting work happening on that latter point as COVID has disrupted so many parts of our lives, but also led to so much innovation around telemedicine and telehealth. And yet, as that broadband map from earlier showed, there are lots of people who are still going to be left out and that's especially going to include older adults in rural areas who are the least likely to have broadband access and also the least likely to have the technological devices to be able to use it like iPads, iPhones, laptops, however you might be connecting.

Carrie Henning-...: Before I wind down our presentation today, I just want to give a little plug for a resource that might be useful or interesting to some of you this lives on the Rural Health Information hub website. And it's a toolkit that's focused entirely on supporting rural aging in place. For those of you who aren't familiar, the Rural Health Information hub or RHI hub is also funded by the Federal Office of Rural Health Policy within HRSA. And it's meant to be a clearing house of resources to support rural health writ large. It includes more resources than I could possibly talk about today. But one of my favorite sets of resources on there are evidence based and promising model tool kits, and they focus on a bunch of different topics, suicide prevention, mental health, access to care for people with disabilities, substance use and on and on and on. But rural aging in place is one of the tool kits on there.

Carrie Henning-...: This was developed by our team at the University of Minnesota Rural Health Research Center in collaboration with folks at NORC and RHI hub a few years ago. It includes some general background on rural aging in place, some promising and evidence based models from around the country, examples of success and guidance for funding, implementation and evaluation for community based groups who are interested in supporting older adults in remaining in their communities. This is what it looks like. You can see on the left hand side, there are modules that are easy to navigate around, or at least I think they're easy to get you to each of those different sections. There's also a wealth of other resources on this page. So in addition to spending time on the Rural Health Research Gateway to find some of our research results, I would encourage you to visit RHI hub and see some of the practical examples of how this is working in rural areas across the country. And so with that, I will close out our formal presentation, but I think that we have some time now for more Q&A, and I see questions keep coming into the chat too, which I'm excited for.

Per Ostmo: Yes, it's been a very participative chat box. So we'll try and get through as many of these questions as we can. And the first one I would like to address is considering older adults' preference to age in place, do you know what the literature is saying about older adults' views on telemedicine as a secure method to receive care, presuming that they have access to telemedicine?

Carrie Henning-...: I think we need, this is such a typical researcher answer, but I think we need more research in this space. I think that telemedicine has changed so dramatically in the past couple of years and it's really made its way into our popular lexicon in a way that I don't think it was. Before, the percentages of people who had actually used telemedicine pre-COVID were so minuscule. And I think that that has changed so dramatically that I really think we don't have a very good answer on this. And I think we need more research to understand older adults' views and to make sure they're comfortable. I will say we have done some work on access to care, not specific to telemedicine, but access to care broadly for rural Medicare beneficiaries. And as part of that, we have a policy brief out that looks at differences in attitudes toward care seeking for rural and urban Medicare beneficiaries using the Medicare current beneficiary survey.

Carrie Henning-...: And in that, we found that rural older adults are significantly about 10 percentage points less likely to say that they will seek care. They are more likely to say that they will wait until the last possible moment to get care. They are just a little more reluctant to seek care in the first place. And I think that we need some follow up work there to see if that translates to the telemedicine setting. I think that there might be some general resistance to seeking care, but there are also so many structural barriers for individuals who would face more transportation barriers getting to care, or are less likely to have paid time off or say, they're working on a farm or otherwise self-employed, leaving to seek care can be a really costly endeavor. And so if telemedicine is able to reduce some of those barriers, we actually might see differences in attitudes toward care, even out a little bit between rural and urban older adults. So that's a lot of me just saying, I think we need more research in this space. I think we need to better understand how older adults feel. We can't just assume that they're going to be excited about this. We need to ask them directly.

Per Ostmo: Thank you, Carrie. We've got a couple questions about rural definitions. I'd like to ask first, do you differentiate between rural and frontier? Second, presenting the distinction between rural and urban as like a binary choice, you're missing this continuous range of virality. So as researchers, how do you combat the challenges that that presents?

Carrie Henning-...: Yeah, it wouldn't be a rural webinar without getting to talk about rural definitions at least a little bit. We are so hampered by the data that we have access to. And so a lot of the information that we were sharing today comes from the survey, which is a rich and wonderful survey, and I think one of the best national surveys out there that ask questions on aging in place, on use of care, on health status, on functional ability and on housing characteristics. And

it gives us a binary rural urban variable. And so we're able to do a lot with that. It's great they released that binary variable on their public use files, which a lot of data sets don't do. And so we find it to be a wonderful resource and a resource with significant limitations because we can't dig further.

Carrie Henning-...: We can't see what state or region someone is in. We can't see if they are urban adjacent, if they are far code four. There are such enormous differences across rural areas. That's part of why I started our webinar with some basic reminders of how diverse rural areas are in terms of the people who live there, but also in terms of the geography and the challenges, depending on where in the country you happen to live. We do focus a lot on state and federal policy and the work that we do. And so Megan presented our state level results here and some of our regional differences, but there are so many more good questions that should be asked. I would love to see others on the webinar or others in general, doing more work here. I think that there's a lot of room for qualitative work in this space and for better data collection that gives us more levels of rurality. We just don't have enough good data that gives us the good survey data that we need and the levels of rurality that we would love to be using.

Per Ostmo: Thank you. Next question, Megan, I think this was from your segment of the presentation, but the state offices of rural health were identifying barriers to aging in place, but how do the barriers that the state offices that have identified, how do those compare with what rural older adults identify as barriers themselves? Is there a disconnect between older adults and the state offices and how they think?

Megan Lahr: Yeah, and I don't know that we, I mean in what we've done, we haven't directly compared the two. I think a lot of the things that we see in our state offices of rural health survey are similar to what we've heard in kind of a larger data about barriers. Transportation is always a really, really big one and kind of an issue you look at in rural communities. And so I think that's a big one. And Carrie, can I hear you? Are there other places where we think that that folks are saying in our research, we don't particularly ask those. So I think it comes a lot more from the survey data usually.

Carrie Henning-...: Yeah, yeah. We can't compare apples to apples with that. It's such a good question though. Transportation, absolutely. I think social isolation, social cohesion, the flip side of isolation and that importance of being in social relationships is something that we see show up on both their survey data and the state office of rural health data, but certainly, state offices of rural health have a very particular vantage point. And I think we need both. I think we need to hear from them because they are really important when we think about how program and resources are administered and delivered across states. I think they're really important for understanding that state level perspective on rural health issues. And we still need to hear the voices of older adults in rural communities.

Per Ostmo: Okay, thank you. Earlier on, there was a thought provoking question and someone asked, I wonder if anyone else takes issue with the CDC's definition of sorry, aging in place because this implies that no one with dementia can age in place given their independently statement.

Carrie Henning-...: Mm-hmm (affirmative). Yeah, I think it's a really good point. I think it's a great point and I appreciate it being raised. I think that there's a whole world of important work that is being done and we need more work being done on what it means to age in place with dementia and particularly in rural communities. And I agree. I think some of the terms that we use around aging in general can be problematic and are things where I know there's really active debate that's been happening for decades and that I suspect will continue to happen. Independent is one. Safely is another. Whose definition of safe? A family member might think that, I saw lots of chats about people building their own ramps, for example. So an inspector or an adult child might come over and say, "That ramp does not look safe." And the older adult who might have built it themselves says, "No, it is. It's good. It works. It's safe for me."

Carrie Henning-...: And so I think many of these terms we take as a given, but there's so much subjectivity in what it means to be independent, what it means to be safe, what it means to be comfortable. And I appreciate the participant bringing up the point about people with dementia. I think that we need to keep that ever-growing population in mind in the work that we do. And certainly, the CDC definition is not perfect and there are many out there and I think we need to continue to finesse them to make sure they're as inclusive as possible.