RMOMS Program: Highlights and Lessons Learned from the Planning Year (2019 – 2020) – 7/21/2021

Kristine Sande:　Hi, everyone and thanks for joining us today. I'm Kristine Sande and I'm the Program Director for the Rural Health Information Hub. And I'd like to welcome you to today's webinar where we'll be featuring highlights and lessons learned from the Rural Maternity and Obstetrics Management Strategies or RMOMS program. And now it's my pleasure to introduce our speakers today. Our first speaker is Ellie Coombs. She is an Associate a Senior Associate at Mission Analytics Group, where she directs projects, conducts quantitative and qualitative research and provides training and technical assistance. Her areas of expertise include HIV care delivery, hepatitis C treatment and access policy, data management and reporting, paid family leave policy and maternal health. She has a master's in Public Policy degree from the Harvard Kennedy School.

Liz Crane is a Senior Research Analyst at Mission Analytics Group. She focuses on qualitative and quantitative research, program evaluation, project management and technical assistance for federal clients. Her primary research interests include, women's health, maternal health and mortality and hepatitis C treatment access and policy. She has a master's in Public Health degree in maternal and child health from the University of California, Berkeley. Claire Wilson is the Director of Human Services Research at Insight Policy Research, where she directs mixed-methods research studies and develops qualitative data collection plans. Her research focuses on health disparities and nutrition assistance. She has a PhD in Social Psychology from the George Washington University. And with that, I will turn it over to Ellie.

Ellie Coombs:　Hi, everyone. Thanks so much for joining us today. As the host said, my name is Ellie Coombs, I'm with Mission Analytics Group. We're leading the evaluation of the RMOMS effort along with Insight Policy Research, and I'm here today with my colleagues, Liz Crane and Claire Wilson. So, I'll start with an overview of the RMOMS Program and then hand the presentation off to Liz who's going to talk about maternal health, the maternal health landscape in rural areas.

Claire will then present the evaluation methodology and then we'll all dive into the findings from the planning year, discussing network structure strategies that networks have been planning and implementing. And then we'll also summarize the patient-level data that the awardees submitted for the planning year. And these data will serve as a baseline to help us assess changes in healthcare utilization and outcomes over time. And Liz, Claire and I will be taking turns during this part of the presentation because we each have a different awardee that we're leading the evaluation for. And then finally, I'll end the presentation with our next steps.

The RMOMS Program is a collaboration between the Federal Office of Rural Health Policy and the Maternal Child Health Bureau, two agencies within the Health Resources and Services Administration or HRSA. So, these agencies funded three awardees or rural health networks for four years an initial planning year and then three implementation years. RMOMS aims to improve maternal and infant health outcomes through network models and networks hope to do this through better care coordination across their partners, increased access to care and part through telehealth and by reducing barriers to care, and also through improved financial sustainability. This could be done by reducing the need for high-cost services, providing services more efficiently and through different payment models.

So this map has the three awardees, we have the Bootheel Perinatal Network or BPN in Missouri, the New Mexico Rural Obstetrics Access and Maternal Services or ROAMS, and then the Texas-RMOMS Comprehensive Maternal Care Network. And as you can see by this map, these three networks really have quite a large geographic reach. So, my company, Mission

Analytics Group, was contracted by HRSA to evaluate RMOMS and we have several partners on this initiative, Insight Policy Research, Summit Consulting, Dr. Marian Jarlenski, from the University of Pittsburgh and Dr. Elliot Main from University Stanford. And so now I'll hand the presentation off to Liz to talk about the maternal health care landscape in rural areas and why this initiative is so important.

Liz Crane: Hi everyone. As Ellie said, my name is Liz Crane and I'm the Project Manager for the RMOMS evaluation and the awardee lead for the ROAMS network in New Mexico. I'm just going to spend a few minutes describing the maternal health landscape in rural areas and some of the major challenges facing the three RMOMS awardees that we drew on to inform our evaluation design. We conducted research to inform the evaluation and learn more about the challenges facing women in rural areas, as well as specific challenges facing the three RMOMS awardees and their clinical and support services providers.

We found that overall, rural populations face significant social and structural barriers to health and healthcare. Not only do they have higher rates of housing insecurity, poverty and food insecurity compared to urban populations, they also have lower life expectancy and higher mortality rates from all leading causes of death. In our research, we found that hospital closures which we know have increased dramatically in recent years, are more likely to occur in low-income rural areas and in rural areas with higher proportions of people of color. And we found that this further compounds the known access to care challenges that women and people in rural areas face.

Now when it comes to maternal health challenges specifically, we found that women in rural areas face numerous overlapping challenges and that there are huge disparities for women of color, especially for black women. An emerging challenge that we've been seeing is increasing rates of opioid use disorder among pregnant women, and this is an acute problem in areas where there tend to be few treatment options and services. We also found that women living in rural areas have higher rates of unplanned pregnancies compared to urban women, and that they often face really long driving times to access both their routine prenatal care as well as labor and delivery services.

In addition to these barriers, we found that rural women typically have higher rates of preterm birth and other negative health outcomes and that the rates tend to be worse for black women. Our research also found significant disparities in the most severe maternal health outcome, maternal mortality. And according to one recent report from the Government Accountability Office, we found pregnancy-related deaths are higher in rural areas compared to metropolitan areas and that there are significant disparities. American Indian, Alaskan Native women and black women have the highest rates of pregnancy-related mortality.

And using data from another source, we found that severe maternal morbidity rates were higher in rural hospitals compared to urban hospitals for the three RMOMS states, which were Texas, Missouri and New Mexico. And examining these disparities in detail remains a challenge for the evaluation due to data quality and sample size issues, especially in rural areas. Now returning to the overall problem of access to care barriers, many rural hospitals have closed their obstetric units in recent years, partially in response to low reimbursement rates for their care and the challenges in staffing specialists in the most remote areas, among other challenges.

Medicaid reimbursement rates are typically low, they don't cover the entire cost of care for routine delivery and many rural hospitals have low volumes for deliveries due to their

population sizes. This not only affects financial viability, but also reduces opportunities for obstetric staff to prepare for and treat obstetric emergencies. Our research has found that many rural hospitals feel unprepared to handle emergencies and the emergencies still do occur in the emergency room, even the hospitals that have closed their obstetric units. Many hospitals including some of the hospitals found within the RMOMS Program have few options for quickly transferring those patients to higher levels of care.

Building on our overall findings, we found that Texas has experienced the most rural hospital closures of any state, and that about a quarter of rural hospitals in Missouri and New Mexico are at high-financial risk and this could jeopardize their ability to provide lasting prenatal care and services to women in their areas. In our analysis of national level birth certificate data which we got from the National Vital Statistics System, we found that the awardee regions tend to have higher poverty and unemployment levels compared to their states overall, but also compared to other rural areas within their states. This suggests a higher level of need for women living in the RMOMS counties specifically.

Consistent with our overall findings, we observed that women of color typically experienced worse maternal and infant health outcomes compared to other racial groups in our RMOMS service counties, and we detail this more in our first annual report. Now I'd like to launch a quick poll to learn more about what our viewers see as the top maternal health challenges in your area. Whether you're a clinician, policymaker, or in another role entirely, we'd love to hear what you think. Right, so it looks like about two thirds of voters found that social barriers to health and disparities are at the top issues, but we also have a lot of votes for hospital closures and panel emergencies, and we'll look forward to reviewing the chat later to see any other answers that were put in there. So now I'm going to turn it over to Claire, she's going to go over the evaluation design.

Claire Wilson: So, BTN, ROAMS and Texas-RMOMS share common goals that are central to the RMOMS Program, but their target populations and their service delivery models differ. So because of those differences, we're conducting separate evaluations for each program. We'll also look across the three models for any shared findings so that we can disseminate lessons learned and best practices. We'll be gathering data from several sources for these evaluations as you can see in the top row. We're using qualitative data from interviews, site visits, and awardee documents to learn about each models network approach to care coordination, their plans for improving access to services and their strategies for ensuring the models' sustainability.

Our quantitative data sources include de-identified patient-level data and network-level data submitted by the awardees. And we also plan to conduct an analysis of Medicaid claims data if that activity is authorized. Okay, so while evaluation is collecting many different types of data from awardees, the patient-level data will offer us the most complete overview of maternal health access utilization and outcomes for women served by the RMOMS program. So awardees report the data for their maternal clinical populations which broadly includes women who receive maternal health solutions from network providers during the reporting period.

However, awardees do have the flexibility to further refine their populations in line with their interventions and we plan to collect de-identified data in five main categories: Patient demographics, risk factors, health behaviors, clinical services and outcomes and support services. Some key data elements like gestational age, the number of prenatal visits, are required to be recorded for grant by the awardees and that will allow for comparisons across awardees, it will also allow us to assess their…assess performance against national benchmarks.

Other data elements such as those related to social services are optional. So awardees can select the data elements that align most closely with their programmatic goals. And over time, we use these data to track how the RMOMS Program models affect maternal health care and outcomes. So zooming out for a minute from the patient-level data, the RMOMS population, we look at it as though it falls into three groups, and those are the three groups shown in the three concentric circles. So the outermost circle with the target population. So that includes individuals who are intended to receive any service that's funded or coordinated by RMOMS whether or not they actually receive their services.

And then within that group, we've got the direct-services population. So that's women who are not only targeted, but who actually do receive clinical or other services from an RMOMS network provider or facility. And then in the center, we've got the maternal clinical population, and this is the subset of women in the direct-services population who receive a prenatal, labor and delivery or postpartum clinical service funded or coordinated by the RMOMS Program.

So unlike the direct-services population, the maternal clinical population specifically focuses on women who are receiving clinical care related to pregnancy from a network participant. So there are some methodological challenges worth noting before we launch into some of our findings. First, collecting patient-level data did prove difficult for many reasons and it's part of the reason why we have the baseline period not only to have that data, but also to give awardees little time to get their systems up and running before collecting data-hunting intervention.

Also, although we can compare maternal outcomes before and after awardees implement their models, we are limited to this pre-post analysis, also because we're focused on rural populations, we're dealing with small sample sizes and we're also dealing with rare events like severe maternal mortality. So it's hard to assess improvements when an event happens so rarely. All right, let's go on to some of our findings. Before that, let me tell you that the... I just want to review again that the three awardees have these different network models.

So in Texas, the network lead the large urban hospital coordinates with two rural health systems on referrals and capacity-building activities. BPN in Missouri has the largest network with referrals across all clinical and support service partners. And then the ROAMS network covers the largest area, it's also the most rural area. Its network promotes telehealth patient navigation across these three critical access hospitals and their affiliated outpatient clinics.

So let me tell you a little bit more about the Texas-RMOMS network structure. So University Health or UH, is the lead agency for the Texas-RMOMS network. UH is located in and primarily serves San Antonio, the San Antonio metropolitan area. But the hospital also serves as the nearest social specialty care for residents of geographically-isolated counties in southwestern Texas and two rural service areas encompassing the six counties that you see highlighted in blue are partnered with UH to form the Texas-RMOMS network.

The Val Verde service region is the one farthest west on the US Mexico border. Its hospital, Val Verde Regional Medical Center, is the only inpatient hospital serving the city of Del Rio, Val Verde County and several surrounding counties. An affiliated rural health clinic is located just a mile from the hospital. Most of the providers that this clinic practice family medicine or general internal medicine, so at the start of RMOMS Program in Texas, the clinic had just one part-time OB provider. So really at that point, prenatal services included little more than pregnancy testing. And the other service area is Uvalde and its network partners include a critical access hospital and a federally-qualified health center.

So whereas BPN and ROAMS brought outside behavioral health agencies and support service agencies into their networks, Texas-RMOMS offers these services through their network clinics. So each clinic hired a behavioral health specialist and a care manager to support women throughout their pregnancies and postpartum period. Additionally, University Health hired a patient navigator who is in charge of coordinating services for women who have high-risk pregnancies and require care from a maternal-fetal medicine specialist.

So, Texas-RMOMS is implementing three main strategies to meet the RMOMS Program goals. First, they hired additional health care professionals to meet local demand for services, including the behavioral health counselors and the care managers that I just described. They're also expanding capacity through training, for example, training technicians to do Level II ultrasounds. Telemedicine is a big part of the Texas-RMOMS model. So consultations with the maternal-fetal medicine specialist from UH, allow women with high-risk pregnancies to access advanced levels of care from their local providers office. This is a big deal for these women because I think it's 160 miles from Val Verde to San Antonio where they probably otherwise would go for such care.

Also, in Val Verde, they purchased a telemedicine car which allows technicians to consult with MFM specialists in real-time as they're performing sonograms and interpreting the images. And finally as I mentioned earlier, telehealth trainings are available for network providers. Finally, Texas-RMOMS implemented enhanced case management services to make sure that women are getting comprehensive services throughout the prenatal and postpartum periods. So this includes screening for mental or behavioral health services, screening to see whether women who are uninsured are eligible for Medicaid and starting really early with education about breastfeeding because that it is so much less common in this area compared to metropolitan or less rural areas.

So at the close of baseline year, we discovered there were several facilitators and barriers, they characterized the models getting up and running. So, one facilitator has increased communication and collaboration among providers and partners. So, facilities in close proximity to each other are now actually working together rather than competing with each other for patients. And in some cases, the clinics weren't even. . .they just did not interact with other providers in their own community.

Telehealth has allowed higher levels of care to be delivered locally. Previously, someone would forego services or travel because they didn't have transportation, they couldn't take time off work, so telehealth has been very important. Also, process improvements like screening have really increased early identification of women at risk for pregnancy-related complications. Then the barriers, COVID of course, I'm sure this is across the board, but there were number of delays and just a number...

I remember speaking with clinicians at some of the sites who said, "As a prenatal provider or as a person care, who's normally in the labor and delivery ward, there were times when we had to be reassigned because there were just so many people checking into the hospital." So that was a huge issue. There are multiple EHR systems in place in these facilities that had caused some challenges. On that staffing challenges, early on there was some turnover at the leadership level, it just made things… it just caused delays but once they got those…the right people in place, they were able to move forward.

Liz Crane: Thank you, Claire. Now I'll provide an overview of the ROAMS network structure in New Mexico. So ROAMS is led by Holy Cross Medical Center, which is a critical access hospital located in Taos and the network overall covers five mountainous remote counties in northeastern New Mexico.

It's anchored by three critical access hospitals in total, but only two of them offer labor and delivery services. The network also has four participating prenatal clinics, including a new clinic that opened up the one critical access hospital that does not offer labor delivery services and another new clinic opened at an existing FQHC north of Taos.

ROAMS has active participation from a lot of different support services agencies as well, including organizations that offer lactation consultation and other family supports. And the network also maintains a partnership with the University of New Mexico to support data collection and evaluation activities. In addition, ROAMS has a really unique system of collaborative work groups and oversight entities that participate in the network and that includes an overarching governing council, a mother's council and other councils to help oversee and run the network.

So ROAMS serves a remote and very sparsely-populated area overall. There just about 9,500 women of reproductive age residing in the entire five counties service region, none of the network's hospitals have any NICUs and prior to the RMOMS program, women with high-risk pregnancies in the region have frequently faced extremely long drives to their regular prenatal care as well as to delivery. More than half of residents in the service region are Hispanic and over a third live below 150% of the federal poverty level, indicating some of the challenges facing the network overall.

In response to these regional maternal health challenges, ROAMS has pursued several distinct maternal health strategies and these are in three main areas beginning with expanding access to care. ROAMS sought to expand access to care by opening two new prenatal clinics and obtaining new equipment for existing clinics to help promote standardization. They're also working on expanding telehealth throughout the network and contracting the maternal-fetal medicine provider for high-risk pregnancies.

One of the two new clinics as I mentioned, is housed at an FQHC that previously did not offer any prenatal care and the other is located at the critical access hospital which had previously stopped providing obstetric services long before joining the RMOMS Program. ROAMS clinical providers from the two network hospitals that do offer labor and delivery services are collaborating to staff these two new prenatal clinics, and to do this, they're using a combined in-person and telehealth model.

There's a greater focus on telehealth at the prenatal clinic at the critical access hospital in Platin New Mexico, which is located over 80 miles away from its partnering hospital. In addition to this new telehealth prenatal visit model, ROAMS is working with a telehealth vendor to ensure standardized care and systems across all four of the prenatal clinics. They're also creating home telehealth kits for mothers to use during their telehealth visits with their providers, and the network as a whole is also working on telehealth grand rounds for both clinical providers and social services partners to participate in.

And importantly, ROAMS' telehealth strategy includes a new telehealth maternal-fetal medicine provider, and this strategy was developed in response to feedback from mothers through the mothers' council and surveys, because many of these women had to drive four or five hours one way over scary mountainous terrain to access their high-risk pregnancy appointments. While many women with high-risk pregnancies will still ultimately need to deliver at hospitals that are outside of the network, ROAMS aims to reduce the number of long drives throughout the entire pregnancy and reduce the number of fatal car accidents which are a leading cause of pregnancy associated-death in the state.

Another major goal area for ROAMS is improving connections to social services for women in the community. Within this goal, ROAMS' biggest initiative is probably the new pathways patient navigation pilot program. This is an external patient navigation model that offers insurance reimbursement for eligible patient navigation activities, and these activities follow specific pathways and hit pre-determined clinical targets. ROAMS joined this as a pilot program and expects to become certified later this year, which will ultimately help the network secure Medicaid and private insurance reimbursement for its regular patient navigation activities.

The idea here is to promote long-term sustainability for patient navigation and to support these goals, the network has already hired three patient navigators one for each of the three most populous ROAMS counties. In addition, ROAMS has a special focus on increasing access to lactation consultation services which are in demand but were not consistently available prior to the program's launch. ROAMS has already hired two consultants and the network aims to complete at least one consultation for 75% of women receiving pregnancy-related clinical services within the network.

And finally, ROAMS is working closely with its other social services partners to promote advertising and public awareness of the network's maternal health offerings. These activities include operating a website, mailing informational letters and postcards to local women and pursuing a formal advertising campaign with an advertising agency. These activities will continue throughout the entire life of the ROAMS Program.

Finally, the ROAMS network has a major goal of planning for sustainability. The network's activities in this area include addressing market loss and learning about why some women leave the service area for care or why they opt to deliver with other local providers such as midwives. ROAMS is using data from the state's surveillance system to help answer these questions and is also engaging in discussions with network hospitals and obtaining data from local mothers via those surveys that I mentioned to help fill in gaps in understanding and ultimately promote more births within the network.

ROAMS also hopes to secure higher reimbursement rates for deliveries covered by Medicaid and pursue an expansion of Medicaid coverage in the postpartum period. It's currently set at 60 days and the network is hoping to get that increase to 365 days or a year, and this would help expand access to postpartum care for the approximately 75% of women in the network who have Medicaid insurance during pregnancy. To support these efforts, ROAMS participates in a New Mexico postpartum care legislation work group, and the network has also collaborated with the state Medicaid agency one-on-one to help identify and address challenges and new opportunities for changes.

Finally, ROAMS completes an annual cost analysis and the goal is to capture cost savings estimates from network initiatives, particularly from the telehealth initiatives, as well as new uses of mid-level providers across different clinical sites. These activities aim to sustain the ROAMS Program initiatives even after the RMOMS Program performance period comes to an end. So like the other two awardees, ROAMS has experienced both successes and challenges throughout the planning year.

The network really benefited from strong leadership and engagement throughout this entire process, including from the network's director, the different councils and work groups and clinical providers at the network's hospitals, who all provided an essential input on the program's design and clinical offerings. And the network also did a great job engaging mothers

in the community through those surveys, which helped identify the need for a high-risk MFM provider as a top priority for women with high-risk pregnancies.

Finally, the network saw a greater acceptance and readiness to adopt telehealth during COVID which helped further its fairly robust telehealth initiative. However, ROAMS also faced several barriers during the planning year like all awardees, COVID was a mixed bag. ROAMS was forced to adopt its usual practices of care and deal with declining utilization of services at the start of the pandemic, although people that we interviewed in the ROAMS network reported that the safety measures and masking ultimately helped restore women's confidence in attending the in-person services.

The network also worked really hard to gain clinician buy-in on some of these initiatives, especially telehealth, which is new for many clinicians, and ROAMS has had to adapt to the evaluations data requirements as well, some of which have been fairly intensive. Some specific challenges associated with the data collection included staff turnover, use of different EHR systems at different sites, not all of which cooperate well together, and also the need for some manual data preparation to meet the evaluations requirements. Despite that, ROAMS is ultimately able to submit really high-quality data covering the planning year. So now I'm going to turn it over to Ellie to provide an overview of the Bootheel's Network.

Ellie Coombs: Thanks, Liz. So the woman in the Bootheel region of Missouri face numerous challenges in accessing high-quality maternal health services. And Liz talked quite a bit about these challenges in her section, but I want to talk specifically about Bootheel. So according to BPN staff that we interviewed, two major hospitals discontinued OB services in 2014 and 2018, and that left many women in the region with no local services. So these women either have to leave the state or travel more than an hour to receive services elsewhere in Missouri. The Bootheel also experiences worse infant and maternal health outcomes than women in the state and the nation overall, and also in the state of Missouri women of color and their babies face worse health outcomes than their white counterparts.

So BPN hopes to address these issues through multiple interventions implemented by a large and robust network of partners. So the leader is the St. Francis Medical Center, which is the region's largest tertiary center. And the network also has three other hospital systems all of which provide prenatal care, labor and delivery services and postpartum care, and a pretty large FQHC network is also participating in the network and that FQHC has multiple clinics throughout the Bootheel, not all of them provide prenatal care, but quite a few do. The network also includes multiple behavioral health agencies, two support service agencies that provide home visitation and then six county health departments.

So BPN has three main strategies. For one, the network established a standardized process to assess risk and support women in receiving the clinical care they need. So BPN contracted with a system care coordinator who conducts risk assessments, reduces immediate barriers to care, especially related to transportation and insurance and who also facilitates referrals to those home visitation programs and behavioral health partners in the network. So this system care coordination strategy started in January 2021, with women specifically referred to the St. Francis maternal-fetal medicine or MFM provider from other OBs in the area and then more recently, the initiative expanded to another population to include women receiving MFM services via telehealth. And then eventually, the program is going to expand to women with other high risk conditions like substance use or food or housing insecurity.

BPN also is aiming to use telehealth to expand access to clinical care and reduce transportation barriers. So in this model, a county health department is going to host the telehealth clinic and they selected that specific health department based on its central location within the Bootheel and willingness of the leadership to participate. So women will go visit that health department clinic and then with the support of a nurse and a sonographer, connect to an OB or specialist, either in the Bootheel or potentially in St. Louis and sonogram images will be transferred in real time to that attending OB provider.

So the telehealth is not quite up and running yet, but BPN has been busy educating OB providers so they're aware of the service and can set up processes and connect to their patients via telehealth instead of through in-person visits, and BPN is also working with external partners on this effort. So the SSM health perinatal center which is in St. Louis, is supporting them in terms of identifying a technology to use and then other partners are supporting in terms of funding. So BPN helped community partners obtain blood pressure cuff kits through the Preeclampsia Foundation Program, which is offered through the Missouri's perinatal AIM initiative. And with these cuff kits, women can take their blood pressure at home and transmit the results to their OBs for follow-up. And so that's been a real major success in the first implementation year of the program.

And the final BPN strategy is related to provider training and outreach. So one major issue has been women who deliver their babies in an ambulance because they face transportation barriers. So BPN incorporated emergency medical services or EMS into their work groups to better engage them and train them on how to deal with these emergency force. And also the SSM perinatal outreach program is planning to provide simulations on high-risk conditions and births with their partner agencies.

BPN also developed a virtual tour of the Bootheel using provider and patient experiences to describe the challenges that the area faces and also the resources that are available in the community. And this type of tour actually was done in person, but they shifted to a virtual platform and they think they're going to get a much wider reach with that…with that video. And really the goal of the video is to support workforce development efforts, so folks onboarding into rural healthcare can get a sense of the kind of challenges that folks face and then also to share information about these challenges to policymakers. And then finally, BPN leadership is leveraging its participation in the state's maternal health ECHO telementoring program and really encouraging its partners to participate as well.

So like the other awardees, the BPN is managing its network through regular work group meetings on topics such as education, data and technology and these regular meetings have really helped keep partners engaged. Also, one facilitator is at the BPN leadership, really have decades of experience providing care in the Bootheel region of Missouri. So this means that they have really extensive knowledge of the challenges that the maternal population faces and they also have professional and personal relationships with members of the network partners which really have kind of served as the glue of the network.

And then these…the BPN leadership also has a really good sense or really a focus on social determinants of health, and this has been important given that a lot of the challenges that women face in receiving care are related more to the social determinants of health and less to the availability of clinical care, and we saw that in the poll that that Liz launched. And so this kind of focus that the leadership has, I think it's helped develop related strategies. So in terms of barriers, COVID-19 clearly is out there, not only in terms of hurting access to maternal care, but also just launching these efforts as all these work groups have to be virtual instead of in person.

And also, the BPN has had to shift some of its strategies due to changing priorities of their partners. So this is just the nature of having a network where you have lots of partners at the table and their priorities might shift which may shift the focus of the network. So for example, when BPN started off, they wanted to establish a health information exchange across partners and to create shared patient records. So partners could all access the same clinical information for women regardless of who provided the service. But partners worried about the long-term costs and sustainability of the effort which is understandable given it's a large IT effort, but that was a disappointment to quite a few other partners who really were looking forward to having access to that comprehensive medical chart.

And then one thing that BPN has really learned it had to do was communicate with partners. Now the purpose of RMOMS was not to create another service or another service provider that could potentially compete with the partners, but instead, the goal of RMOMS is to coordinate better the existing services and make sure that they're fully utilized. So they've done a lot of that communication to keep partners on board. So just a quick wrap up, despite the differences in these models, all awardees are implementing to various degrees, four main strategies, patient navigation, telehealth service expansion, and provider capacity. And we've seen some really great progress over this first year and a half.

And I'm not going to go…I'm not going to talk through this slide now because we're running a little bit late on time, so I'm going to go ahead and ask Lexie to launch our second poll. Okay, so 45% of you feel like connecting women to social services and supports is the most impactful strategy. And that's aligned with results from our first poll and also aligned with what we're hearing from the field, from the RMOMS awardees. All right, so now I'm going to turn the presentation back over to Liz who's going to talk through our patient-level data.

Liz Crane: Yes, thank you, Ellie. I'm now going to review initial results, more descriptive analysis of patient-level data prior to RMOMS Program implementation. So these data correlate to the baseline period which spans from September 2019 to August 2020, and it will serve as a starting point for understanding the rural maternal health context in each of the three awardee regions. So I'll start by briefly reviewing the different populations for which awardees submitted patient-level data. Awardees submitted data for women in what we call their maternal clinical populations which Claire reviewed earlier. And within that framework, both Texas-RMOMS and Bootheel, Missouri narrowed the focus slightly.

Texas-RMOMS focused on providing data for women who received maternal services at the network's rural hospitals and Bootheel only included a specific subset of women with high-risk pregnancies who had been referred to the MFM provider at St. Francis Medical Center. Bootheel had plans to expand this definition and include more women in future data submissions. Finally, we have ROAMS which included data for all women who received any pregnancy-related clinical services at sites throughout the network.

This slide compares the awarding maternal clinical populations prior to implementation using the data reflected during the baseline period. As you can see, BPN in Missouri had the smallest overall population at 106 women which reflects the network's focus on that specific subset of high-risk women. And of these 106 women, 87 had its delivery during the reporting period. ROAMS in New Mexico provide a patient-level data for all women who received maternal health services and of these 467 women in total, 264 had a delivery during the reporting period.

Texas-RMOMS had the largest total population of over 1,600 women, 1,230 of whom delivered in the reporting period at the two rural hospitals in the network. So most of the women served

at all three awardees were between the ages of 21 and 35, but both ROAMS and Texas-RMOMS had higher proportions of pregnancies to women aged 20 or younger compared to Bootheel. ROAMS, are the only state…awardee state that has expanded Medicaid, have the highest level of women covered by Medicaid at 71% compared to just 39% in Texas. Texas-RMOMS also had the highest share of uninsured women at 24%.

We're going to track how these demographic characteristics and state policy context change over time for women served by the RMOMS Program. I'll now provide a few examples of data submitted by ROAMS in New Mexico. ROAMS reported the most data elements of any awardee during the baseline period, including data on severe maternal morbidity. We measure this by examining whether women experienced a blood transfusion during delivery and or ICU admission during delivery and or a hospital readmission within two weeks of delivery.

Using this measure, we saw that 16 women or 6% of the delivery population experienced one or more types of severe maternal morbidity in the baseline period. We plan to monitor this rate over time and assess whether the RMOMS intervention may reduce the risk of SMM. We'll also continue to examine how the rates compared to state and national rates although the definition of SMM that we use is unique, and this was structured to improve feasibility of recording this complex outcome for our awardees.

ROAMS is also the only awardee to report data on substance use, although these data were recorded by just one of the network's two hospitals that offer delivery services. And these data showed that significant minorities of women served by the hospital experienced alcohol abuse or dependence, tobacco use during pregnancy and or other substance use disorder. These rates are a little bit higher than we expected to see based on our research, but they're consistent with what we heard during the evaluations, qualitative interviews. A lot of our interviewees reported that substance use during pregnancy is a major problem throughout New Mexico and in the ROAMS service region specifically, and that treatment services are typically very limited. They hope that RMOMS Program can promote better care and services for these women before, during and after pregnancy.

Claire Wilson: All right, so for Texas-RMOMS, we observed that women served in the baseline period had relatively high rates of C-section deliveries. Women with high-risk pregnancies were more likely to have C-section deliveries which we expected, but the total share of births delivered by C-section was also higher than the national benchmark of no more than 23.6%, and that's as listed in the Healthy People 2030 goals. So we plan to monitor delivery method throughout the course of the evaluation to see how if at all, the RMOMS interventions in practice are first delivered by C-section. We'll also assess related outcomes, including costs for all of these deliveries.

Ellie Coombs: So, I will chime in about the baseline data for BPN. So as Liz indicated, BPN recorded the most targeted populations. So just high-risk women who received MFM care at the lead network hospital, so they had a pretty narrow population. And among this population, 70% received a prenatal visit in the first trimester. We did see that most births…most births of these women were preterm and the babies had a low birth weight. And that's not surprising, because it reflects the high nature…high risk nature of this population, we saw that many of these women had twins and even triplets.

We also saw in the data that there were racial disparities and certain measures of care utilization. So Hispanic and black women were more likely to have hospital stays longer than five days, which could reflect challenging and negative outcomes related to the birth, and they were less likely to receive timely postpartum visits, and also postpartum depression screenings. So we

do plan to monitor these outcomes over time to get a sense of whether RMOMS is having an impact on improving some of these measures and reducing some of these disparities.

And we have highlighted more information about the patient-level data in our annual report which should be made public very soon on the HRSA website. So now, I'm just going to very quickly wrap up our presentation so we can get to the Q&A. So just next steps, we are now following the awardees in their first year of implementation which is very exciting. That year began September 1, 2020, although, really awardees didn't launch most of their initiatives until January 2021.

Awardees submitted their first batch of implementation year data in June 2021, so that reflected the first six months of that implementation year. And as Liz mentioned, we did find, I think it was Claire, sorry, we did find they continue to face challenges in submitting complete and comprehensive data. What we have found is that limitations in EHR systems mean that it's really challenging for them to get comprehensive data extracts from those systems. And so oftentimes, they rely on manual extraction from a medical record. And while that leads to more comprehensive and complete data, unfortunately, it's very time-consuming and not a very realistic strategy for providers that have hundreds of patients. So we're currently working with awardees to try to find the best way to get the most comprehensive data for these key measures that we want to focus on.

We also began a new evaluation task related to the Medicaid claims analysis. So we are hoping to interview Medicaid officials within each awardee state to get a sense of the feasibility of accessing some of that data. And we really hope that we can conduct that analysis because given that many of these women participating in RMOMS are insured through Medicaid, we think it could be quite meaningful. And then finally, we'll start collecting network-level measures to help assess network strength related to referral patterns and partnerships with social service organizations. So, in find…in closing, just want to encourage everyone to access more information about the RMOMS Program through this link on the HRSA website. And I want to thank everyone for joining and I will hand it back to our host to facilitate a short Q&A period.

Kristine Sande: All right, thank you. Thanks to all of our speakers for those great presentations and we will open it up for questions at this point. And the question is: What makes the populations high-risk. Is it if they have higher rates of poverty or lack of access to care? What is the determining factors there?

Ellie Coombs: Yeah, and I can talk about high risk in terms of the definition that BPN is using and then I'll hand it off to Liz and she can give a little bit more detail in general about high risk. So BPN wanted to implement its patient navigation program in phases, and that in a way is a best practice because it helped them start with a small population and then get some early lessons learned, and then expand to additional high-risk populations. So they started their definition of high risk was, women in need of MFM services and now they are expanding to additional high-risk women.

And they actually have a list of about 10 factors and that's something that I could potentially connect with a person or connect them BPN to learn more, but some of the factors are related to substance use, housing insecurity, food insecurity. And in order to identify those needs, they've actually adopted two risk assessments, and so that's something that they've lacked in the network is a standardized risk assessment. And so that's been part of their process and that's something I could share more information on what those assessments are and how they chose that. Maybe I could connect separately with the woman who asked the question. And Liz, I don't know if you want to add something else about high risk.

Liz Crane:	And just in general, in terms of the question about whether higher rates of poverty are impacting access to care, we're definitely seeing that that's true, especially for the RMOMS awardee states. And some of the access to care challenges that I mentioned earlier such as hospitals closing or obstetric units closing, really make it very challenging for women to receive all their recommended prenatal care and delivery services during pregnancy. And in cases where problems are identified such as substance use during pregnancy, it's very common for services to be completely inaccessible. And that's part of the reason why these networks are trying these innovative approaches using telehealth and patient navigators and so on, to try to help those women receive the care that's recommended, but that is just out of reach right now.
Kristine Sande:	All right, thank you. Another question, it says: On the slide, baseline data from Texas-RMOMS prior to implementation, why was there such a high rate of missing from the delivery method? And what does that portend for the data?
Claire Wilson:	I can address that. So there were several factors that contributed to missing data for Texas-RMOMS, one of them had to do with the fact that, I think I've mentioned initially, the clinics that were affiliated with the hospitals in the rural service areas had such limited prenatal care that they started to…were referring women to other clinics locally that were providing more prenatal services. So these clinics that they were referring women to were not officially part of the network. Now the awardee has actually taken steps to include those clinics in the network, but initially, because they weren't part of the network, they were not getting prenatal data on those women.
	And they are now hoping that they can get retroactive data dating back to December 2020, for at least some of the new clinics that has joined network. And the other issue is, I…I believe that the clinics expected that they could provide the data but when it came down to it, some of the variables required manual extraction, they…even with the additional people, they're still a little bit strict in terms of having the capacity to do manual…to get data manually from the patient records. So those are two reasons why there was missing data on many women.
Kristine Sande:	Are there any gaps in the national research around these various topics that you've identified in this work?
Liz Crane:	Yes, so there are definitely a lot of gaps, and we've seen this particularly with data on maternal mortality and severe maternal morbidity. And that problem is especially tricky in rural areas with small sample sizes, small numbers of women who experience these fortunately rare events, and compounding that, when we want to look at disparities, we've seen that it can be very challenging to get data on important disparities related to mortality and morbidity in these areas. For example, the ROAMS network in New Mexico has a substantial population of women of American Indian and Alaskan Native, but often, data are not collected for these women or if they are collected specifically for that racial subgroup, the data will not be reported, they will be either suppressed or combined in other racial group category.
	So not only do we see that there are these data limitations, data collection and reporting, but we also see data lags, inability to actually use the data and that leads to a poor understanding of some of the challenges in these rural areas that we're working with. There are lots of other challenges as well, and I think disparities will be an important area of research, where we hope to see some improvements, but that's definitely been an issue that we've identified throughout the evaluation and through some of our other work.

Kristine Sande: Right, thank you. It looks like we have one final question and it…I think is for Ellie. So are the are RMOMS teams able to access or link patient-level data to Medicaid claims? Or is it only the evaluation that will be attempting to use that data?

Ellie Coombs: Yeah, that is a great question. As of now, it's just the evaluation team that's aiming to use the data, but I think it's something that we could definitely consider and discuss with awardees. And just to provide a quick overview of that analysis, one approach is to link the patient-level data to the Medicaid claims and we have asked the awardees to pull the Medicaid ID for their…the women that participate in the program and store that and we could potentially use that file as a finder file to link claims.

We're…we're just capturing de-identified data, so we don't want to have access to that Medicaid ID of the evaluators, but we could set up a process where the awardee submits the Medicaid ID to the Medicaid program, Medicaid identifies those women, puts a flag on the file that is then submitted to the evaluation team. Otherwise if we don't do that linkage, then we would just look at the overall rates of some of these measures for RMOMS counties and compare them to similar counties that are not RMOMS counties. So we're going to explore both of those approaches with awardees and with the Medicaid programs in the states.

Kristine Sande: All right, thank you. And at this point, I think we will wrap up. Thanks again to our speakers for this great information, and thank you to all of our participants for joining us today. The slides used in today's webinar are currently available at www.ruralhealthinfo.org/webinars.