

Medicaid Innovation Accelerator Program Webinar

Using Data Analytics to Better Understand Medicaid Populations with Serious Mental Illness: Additional Data Sources

May 16, 2019

The webinar moderator opened the webinar and provided instructions on how to participate; she also explained how polls will be taken and how questions will be accepted (Slides 1 and 2).

KATHERINE VEDETE: (Slides 3, 4, 5, and 6) We are excited to introduce a new resource we have developed for state Medicaid agencies and their partners to use data analytics to better understand Medicaid populations with serious mental illness (SMI). This is the second resource we have created on this topic. The first was released last year on using Medicaid data as the primary source, and during today's webinar we will talk about other data sources you could consider analyzing to better understand the SMI population in your state. We will hear from colleagues at Health Management Associates (HMA) who will provide an overview of the resource. We will then hear from Minnesota and Arizona Medicaid agency representatives about how they have done similar analyses in their states as examples. The presenters are Matt Roan and Izanne Leonard-Haak from HMA, Dr. Jeffery Schiff from Minnesota Medicaid and Michal Rudnick from Arizona Medicaid.

(Slide 7) The Medicaid Innovation Accelerator Program (IAP) is an initiative at CMS dedicated to improving health and health care of Medicaid beneficiaries to reduce costs by supporting states in ongoing payment and delivery system reforms. And as part of that, we support state Medicaid agencies as they build capacity in key program and functional areas, including data analytics such as this resource. We also provide support in other ways, such as providing one-on-one technical assistance and cross-state learning opportunities, including webinars.

MATT ROAN: (Slides 8 and 9) I am very excited to introduce you to this new resource that has been developed as part of the IAP. Before we start talking about what is in the resource, we wanted to find out more about our audience today. We have two poll questions, on slides 9 and 10. First, we are interested in knowing what type of organization you represent. Our audience for the resource is primarily state Medicaid agencies but we know the information may be useful to others. So, moving to the poll, if participants could select the most applicable option that describes the type of organization you represent, this will give us an idea of our audience. [Pause for responses] It seems that the majority of our audience is from state Medicaid agencies, and we have some providers joining us also, which is exciting. I am really happy to see representatives from other state agencies. We will be talking about how Medicaid agencies can use data from other agencies within the state. It is good to see them represented on the call as well, along with some managed care plans and behavioral health providers.

(Slide 10) The second poll question asks how you would describe your primary area of responsibility within the organization. We are interested in knowing if you are at the management level, a policymaker, focused more on programs and operations, a data analyst and involved hands-on with data analytics, or in finance or some other area. This will help us frame how we explain this resource as it is useful to any of these audiences, but we are interested in knowing which areas are most represented on the call today. [Pause for responses] We have good representation from the data management and analysis area. Hopefully this new resource will provide ideas about how you could structure your analysis using new data sources from outside the Medicaid agency.

(Slide 11) Moving to slide 11, we want to remind ourselves why understanding populations with SMI would be important to a Medicaid agency, and to let you know this is part of the IAP efforts around beneficiaries with complex needs and high costs, which we sometimes refer to as the Beneficiaries with Complex Needs and High Costs population or BCN population. Within the BCN group, certainly a large number of these beneficiaries are living with SMI. Beyond that, Medicaid is covering a good portion of adults that have mental illness and 26 percent of all adults with SMI. The literature has shown us that healthcare-related factors, such as poverty, homelessness, and emotional trauma, may have impacts on outcomes and costs to Medicaid. The way we are focusing this presentation and discussion of the new resource is on how states can pull in data sources that capture some of that information, marry it with their Medicaid data and gain insights to better understand their SMI population.

(Slide 12) As Katherine mentioned, this is the second resource on this topic we have released. Last year we released a similar resource focused on how state Medicaid agencies can use their own data to answer questions to gain insights into the population with SMI. This new resource takes the concepts a step further to include data sets that come from outside the state Medicaid agency. It may be useful for states to use this new resource in conjunction with the resource issued last year but is not required. The concepts we describe in this new resource will make sense regardless of whether you have reviewed that prior resource. But together the two resources provide a good view of what is possible with Medicaid data, meaning claims and encounters and other Medicaid administrative data, when adding to that the data state Medicaid agencies can obtain from partners external to their program.

(Slide 13) The objectives for the new technical resource, the one we are introducing today, are three-fold, as shown on slide 13.

- First, we want the resource to help states identify pathways to acquire data from data-sharing partners that is non-Medicaid data related to factors that impact the Medicaid population with SMI.
- Second, we want to identify examples of the types of analytic questions state Medicaid agencies could answer with that additional data.
- Third, we hope to give some direction around approaches states may consider for using those data sources to conduct analyses and gain actionable insights.

(Slide 14) In terms of how to use the resource, hopefully this will be fairly intuitive. We have targeted the resource to state Medicaid agency policy and program staff with the assumption that policy, program and data analytic staff within the Medicaid agency would work together to figure out how to implement and use the suggestions and recommendations in this resource tool. We include step-by-step instructions for sample analyses that provide a high-level description of an analytic process. This is meant to describe a general approach. We understand that the specific data landscapes in a given state may make some tweaking necessary, but the instructions included for the sample analyses in the resource should provide enough detail for a data analyst to figure out how to conduct something very similar within your state's data environment.

(Slide 15) In the resource and on slide 15, we present a framework for approaching analysis that uses external data, starting with identifying data sources, engaging data-sharing partners, and then developing the analytic questions that could be answered with the data obtained from external partners, establishing the data-sharing agreements, doing the data exchange, and checking data quality. We have a discussion of data matching with Medicaid data. Finally, we discuss stratifying the data to identify beneficiaries with SMI within these external data sets and leveraging other sorting criteria to unlock the insights from the data when it is combined with what you know about your beneficiaries based on Medicaid data.

(Slide 16) The types of external data sharing we are discussing in this resource come from partnering with other state agencies to identify data they have available that is relevant to Medicaid beneficiaries with SMI. These state agencies may include a behavioral health authority, office of mental health and substance abuse, office for children and youth services, or even the education or labor department as you look at health-related social factors.

In addition to state level agencies, at the county and local level there are agencies potentially willing to share data, so county and local governments are discussed in the resource as well as community-based organizations. Data may also be available from managed care organizations (MCOs), and the data sharing we discuss related to MCOs goes beyond encounters that they are already submitting to other data MCOs may be collecting that could be useful to a state Medicaid agency—such as data collected through health risk assessments or other data that is not available on claims and encounters.

Within those data sets we are focused on demographic data, which is important for matching with Medicaid data sets, as well as service and program level data, so you can see what types of services are being provided by those other stakeholder groups. We also mention outcomes data to see if there is an opportunity to match outcomes for those services external to Medicaid with Medicaid outcomes.

(Slide 17) As noted on slide 17, in the resource we suggest starting with a baseline, and this basically means starting with an understanding of your Medicaid data. Running some analyses based on Medicaid claims and encounters provides an important first step. You can use that as your foundational data and layer on top of those analyses the questions that factor in external data sets. For example, if looking at emergency department (ED) utilization for beneficiaries with SMI, you can do that with Medicaid data and then if you have an external data set related to housing, for example, you can layer this data on top of your ED utilization analysis to see if there are differences based on factors identified within your housing data set. We talk about that extensively in the resource as well.

(Slide 18) We are going to hear from Dr. Jeffery Schiff, from the Minnesota Medicaid agency in a moment. After Dr. Schiff's comments, we will go through some examples highlighted in the resource related to data that reflect food insecurity, housing challenges, corrections and involvement in the justice system. We will also highlight states that are conducting analyses cutting across multiple data sources.

(Slides 19 and 20) Minnesota has conducted a lot of analyses in the context of looking at disparities that leverage Medicaid data with data sets from outside the Medicaid agency. Dr. Schiff will tell us what Minnesota has done. We will then take questions.

DR. JEFFERY SCHIFF: (Slide 21) I would like to first walk through a little bit of how and why we got to what we did and then share a high-level part of our analytic plan, and there is a lot of resources underneath that. I am glad to see a number of folks from the state data structures listening in because I think a lot of this relates to that. I want to thank Justine Nelson, the other researcher on my team who set this up, as well as staff at HMA and the Disability Policy Consortium (DPC), who did this work with us.

(Slide 22) First, I want to talk about how we started to think about the disparities in our population. We feel like part of our charge at the Medicaid program is to reduce disparities and improve outcomes. We have a lot of good health outcomes in Minnesota, but a very large amount of disparity between different populations. Historically we have always looked at this in terms of individual risk factors and identified them, but we really have not done a great job of correlating those risk factors with actual health outcomes. That is really what this is about.

I want to talk about risk factors first because we have called them social risk factors instead of social determinants. We have heard from some of our communities that determinant seems like people are

stuck in those risk factors and we like to think differently. But this is how we have classified our social risk factors. There are risk factors around family structure, composition, single parent versus not, and how many kids in the home. The next set of risk factors are really risk factors around socioeconomic indicators: income, neighborhood, and homelessness. Sometimes we have looked at transportation and other things like that, factors that you need money specifically to get over. The next set of factors are really around adult and parental functioning. Those are things like mental health, substance use, involvement in child protection, and incarceration. We think all those risk factors could be impacted by programs we provide. There are other social determinants or social risk factors that are things we absolutely do not want to change and want to celebrate, things like immigration status, ethnicity, language, and LGBT status. We could also put veteran status in this list. We classify the factors as impactable, non-impactable and under-impactable; we classify family functioning and parental functioning and also economic indicators.

(Slide 23) We were asked by our legislature to do a bit of work and the work is really around analysis of our social risk. We worked across divisions in our agency and across agencies to look at interventions that could help those populations and then made recommendations. All this work has been funded by our legislature to get the pump primed around this.

Our agency, the Minnesota Department of Human Services, is a big agency that includes cash assistance, SNAP, child welfare, mental health, and long-term care. It includes a lot of components besides straight Medicaid. But when we did this analysis, looking at all enrollment claims and cash assistance, we came up with these risk factors that were most associated with poor health, as shown on slide 23:

- Substance use disorder
- Serious and persistent mental illness (SPMI), which is different from SMI
- Deep poverty, less than 50 percent of the federal poverty level
- Homelessness
- Prison incarceration
- Child protection involvement

We had all of this data at our own agency with the exception of prison incarceration data, which is publicly available.

(Slide 24) To focus a little more on SPMI, we chose for our analysis a smaller group of people who have more significant trouble with mental illness, and that is the SPMI group. As shown on slide 24, to meet the criteria for this, they had to have schizoaffective disorder, borderline personality disorder, major depression disorder or bipolar disorder. In addition, they had to have received a high level of mental health care, often inpatient or residential treatment. They represent in Minnesota six percent of our population. Our SMI group, which is really identified through a diagnosis-based set of criteria without any specific relationship to looking at services, represents 20 percent of our population.

(Slide 25) I will talk a little bit at a high level about the analytic plan. We looked for the prevalence of the SMI and SPMI risk factor and at the prevalence of other risk factors in those with this risk factor; for example, how many people with SMI are homeless. We also looked at the prevalence of health conditions, and I think that is where we started to do something hopefully unique and helpful, such as how many of those people had chronic disease, early death, or preventable hospitalizations. We looked at mortality and morbidity prevalence, such as did they have diabetes or pass away sooner. Then we looked at some actual health care quality measures we routinely run and could separate out.

We also looked at the prevalence of those risk factors in the children of those individuals. That was all important to us because we all live in family units and we wanted to take the time to make sure we matched everything correctly in our analysis. We looked at this by race, ethnicity and immigration status to get a better sense of our disparities.

(Slide 26) I want to share a few of the results. On slide 26, you will see on the left-hand side something really striking; during the two-and-a-half years we measured it, people with SPMI died at over twice the rate of people without SPMI in the adult Medicaid population. There are other important findings as well. We found that people with SPMI were 50 percent more likely to have asthma and diabetes and 20 percent more likely to have hypertension and chronic obstructive pulmonary disease. And the children of parents with SPMI – I am a pediatrician, so this is where I think it is also really important that this analysis extend to the next generation – are more likely to have asthma, attention deficit disorder, or substance use disorder as teenagers compared to children whose parents do not have SPMI.

(Slide 27) On slide 27, we show a bit of that analysis. The asthma in adults with SPMI was 23 percent versus 9 percent, and in the children, it was 17 percent versus 11 percent. So, the children of the people with SPMI are at a significantly higher risk for that one condition.

(Slide 28) I could obviously talk about this for a very long time. Hopefully this is enough to have you go and click on the resources provided on slide 28. In the resources you will see our big report along with some of the technical report prepared with HMA and DPC support. This should give you some sense of how this analysis can get done. Contact information for myself and Justine is also there. Also, we had extra slides that go into more detail, but we decided we did not have time to discuss them during the webinar, but they are provided in the appendix to the slide deck for today's webinar.

MATT ROAN: (Slide 29) Thank you. As Dr. Schiff mentioned, there are additional slides included in the slide deck appendix that will show you some data that came out of this analysis in Minnesota. We have time for questions.

IZANNE LEONARD-HAAK: We do have some questions. For Dr. Schiff: *Could you explain a little bit more why you focused on the SPMI rather than the SMI population?*

DR. JEFFERY SCHIFF: We started this project wanting to link social risk factors to bad health outcomes, so we did a regression analysis to look at a lot of risk factors. One of the appendix slides has all of these factors. We also looked at a lot of health outcomes, including prevalence of disease. We found that SPMI was one of the most significant contributors to this. As a result, we thought we would rather focus first on this higher-risk population to make the point about needing interventions for a more complex population to make sure we provided a higher level of service for these individuals.

Izanne: *What is Minnesota doing for care coordination for this vulnerable population?*

DR. JEFFERY SCHIFF: We have implemented a number of things; I will mention two. We started a behavioral health home program, the Affordable Care Act's 2703 program, and we have a large number of individuals being cared for through a behavioral health home model at our community-based behavioral health clinics. We are also one of the pilot states for the Certified Community Behavioral Health Clinic model, which is analogous to the Federally Qualified Health Centers for behavioral health where there is an encounter rate. We have done that in both of these programs. And in both programs, there

are specific quality measures being assessed, some for mental health and some related to these individuals' physical health.

IZANNE LEONARD-HAAK: There seems a lot of interest in making the distinction between SPMI and SMI. *Could you explain a little more how you differentiate SPMI from SMI?*

MATT ROAN: *Part of that question is also how did you narrow down to the diagnoses that you selected to define SPMI?*

DR. JEFFERY SCHIFF: Probably one of the biggest distinctions was when we looked at the individuals with SPMI, we could see that they met a disability definition of care, both as to their diagnoses and their need for additional services. The SMI population, as we defined it, covers a broad swath of mental health diagnoses. We can certainly send the definitions we have used if people are interested. The SMI list could include a number of mental health diagnoses, including depression and anxiety, which would be a very large population – it is 20 percent of our population. We felt if we were going to look for and implement interventions for individuals, we had to first look at those who were most severely affected. You will see on some appendix slides the relationship of the SPMI population to a lot of the health conditions. I think it was because of that that we focused on them.

MATT ROAN: While we are talking about the SMI definition, I just wanted to note that SMI is one of those conditions that does not seem to have a uniform definition. In our first resource on data analytics, looking at beneficiaries with SMI, we included some discussion around how states can think about defining SMI for the purpose of analysis. There are some suggestions on resources you might look to as you're considering at the state level what criteria to use and the scope of your analysis when thinking about SMI. We recognize there is a definitional question that will need to be taken on as part of an analytic approach and we are leaving that up to the states to figure out how best to do that.

DR. JEFFERY SCHIFF: One of the things with the SMI is there are a lot of diagnoses that can have a broad spectrum of severity, and that is one of the challenges with picking an SMI diagnosis, because sometimes the severity does not show up easily in the code, which is why the SPMI added to it the need for complex services. That is part of the issue. It gave us a narrower focus about higher severity.

MATT ROAN: (Slide 30) Now we will discuss examples in our resource related to other health-related social factors and data sets external to the Medicaid agency that may be obtainable. These relate to food insecurity, housing, and corrections, and we will also share an example of a state that is looking across domains.

(Slide 31) As shown on slide 31, within the resource we are providing the following information for each of the domains that I just referenced. First, the resource provides a high-level data landscape, that is a discussion of what data sources may be out there and available to Medicaid agencies for analysis. As I mentioned before, we give examples of analysis questions that could be answered; then we walk through a sample analytics question with the data required to answer that question, a proposed analysis approach, and some sample output. We will show you that for food insecurity and give highlights for all the domains of the data landscape and the questions included in the resource.

(Slide 32 and 33) Starting with food insecurity, in the data landscape as we discuss it in the resource, we include information about federal programs, so Supplemental Nutrition Assistance Program, or SNAP, and the data associated with the SNAP program could be a source of information. This could also include

national data sets provided by organizations that look at hunger, access to food, food deserts and food insecurity, such as the federal Department of Agriculture's data on food deserts in its Food Access Resource Atlas and census-level data. Within state Medicaid programs there may be access to data from health risk assessments potentially from your Medicaid MCOs, if you have them, and if they are asking questions about access to food, as part of their health risk assessments. There could be data about services related to food, like nutritionist services, and other data from care management systems and care management approaches.

(Slide 33) Within the resource we have highlighted some examples on slide 33 of analysis questions that could be answered with data.

The first example relates to whether beneficiaries with SMI that are eligible for SNAP benefits are receiving those benefits at rates comparable to beneficiaries without SMI. This really gets at whether a beneficiary with SMI has a potential barrier to accessing that support service and if that then may have impact on their health outcomes. You will see the required data listed: SNAP data, Medicaid beneficiary data related to eligibility, and Medicaid beneficiary data that would enable identification of those beneficiaries with SMI based on your state's scope of analysis for SMI.

The second example looks at beneficiaries with SMI that receive SNAP benefits and whether they have better medication adherence. That is just one example of a health outcome that could potentially be tied to SNAP utilization. This example also requires the use of SNAP beneficiary data along with the Medicaid data sets.

The third example looks at Medicaid beneficiaries with SMI that live in food deserts and whether they have a higher rate of chronic disease than Medicaid beneficiaries with SMI that do not live in areas with poor access to food. Again, the rate of chronic disease is just one of many health outcomes, or metrics, that could be layered on top of the geographies where SMI beneficiaries are living that may be characterized by the Department of Agriculture as food deserts.

(Slide 34) The sample analysis we include in the resource relates to SNAP and Medicaid and is a fairly simple example. In this example we are comparing SNAP eligibility and Medicaid eligibility to see if there are people on Medicaid likely to be eligible for SNAP but not receiving those benefits. Then we are comparing the Medicaid population without SMI to a Medicaid population with SMI. We are matching the enrollment data from the SNAP files to the Medicaid data. We have here in our approach some of the identifiers that could be useful in matching and just a high-level step-by-step of calculating a percentage.

(Slide 35) Some hypothetical output from this type of analysis appears on slide 35. The sample analysis questions and all the sample output we have in the resource are based on mock data. They are meant to be illustrative, but not based on actual data experience. Obviously, the results will vary depending on actual data, but if you were to run this analysis, these are the types of results you may see. This bar graph shows that among Medicaid beneficiaries that do not have SMI, most of them are enrolled in SNAP benefits, which makes sense since the Medicaid eligibility criteria and the SNAP eligibility criteria in many cases overlap significantly. In this example, Medicaid beneficiaries that have SMI were receiving SNAP benefits less often, so only about 82 percent or 83 percent of those beneficiaries were enrolled in SNAP and receiving benefits.

So, if these were the results of an analysis that you ran at the state level, this could indicate a barrier that beneficiaries with SMI are facing when accessing SNAP benefits, and there may be an opportunity to deploy an intervention designed to connect those beneficiaries to SNAP benefits. This intervention could address a food insecurity issue they have that is exacerbating their health conditions, as well as behavioral or physical health outcomes.

(Slide 36) An example of a state that has done Medicaid SNAP data matches is Maryland. A study of Maryland's data was completed by Benefits Data Trust and was published in *Population Health Management*, a peer reviewed journal. For this study, they linked Medicaid eligibility and utilization data to SNAP eligibility data, and they focused on Medicaid beneficiaries dually eligible for Medicare (duals) and on SNAP-eligible beneficiaries age 65 and older. It is conceivable that if a state wanted to understand their SMI population, they could run a similar analysis on the beneficiaries they have identified as having SMI in place of the duals. This study looked at whether SNAP benefits were associated with reduced hospital and emergency department (ED) utilization, and the researchers found that there was a relationship: 14 percent lower odds of hospitalization and 10 percent lower odds of ED visits for the duals enrolled in SNAP as compared to those who were not. This gives you a sense of the kind of analysis you could run when you compare SNAP data with your Medicaid data.

(Slide 37) We also cover housing in the resource, so the second domain we discuss is housing. From a housing data landscape, I know a lot of work has been done. I am going to jump to the second bullet on slide 37 with Homeless Management Information Systems (HMIS). These are part of the federal Housing and Urban Development (HUD) continuum of care program in place in communities and states across the country where there is an entity tasked with managing data from the continuum of housing services sponsored by HUD. States are beginning to look at data they can get out of the HMIS, bumping it up against their Medicaid data to gain insights into the barriers experienced by their Medicaid beneficiaries. A similar analysis could be conducted related to beneficiaries with SMI.

Barring external data related to housing, some states have also started creating proxy criteria for housing instability. You may be able to look within your own Medicaid administrative data for indicators that a beneficiary has a housing challenge. An indicator might be if someone has three or more addresses in a single year; this may reflect that they are moving around a lot and there could be a housing instability issue. Similarly, states have identified specific addresses known to be homeless shelters, and if a beneficiary has that address listed as their address in the data, this may be an indicator of a housing challenge. As previously discussed, MCOs can also share data they collect through risk assessments, which might identify housing instability. There is also a potential opportunity to look at Medicaid-funded services related to housing through various waiver programs or other supports that are part of a care coordination approach, such as connecting individuals to resources that can help them find affordable housing or tenancy supports.

(Slide 38) On slide 38, we show questions and data required for the examples. One example looks at the prevalence of homelessness among Medicaid beneficiaries with SMI compared to Medicaid beneficiaries that do not have SMI. That analysis would leverage the HMIS data or other administrative data to indicate a history of homelessness, like the homeless shelter address example previously given. You could also look at any number of health metrics and bump them up against housing status, hospital ED utilization, or inpatient hospital admissions specific to the SMI population; looking at psychiatric admissions might be interesting and useful. Looking at whether beneficiaries with SMI are accessing services related to

housing, whether they are part of a Medicaid care coordination program or receiving a support service could also be informative. A state could also look at services the SMI population is receiving from outside the Medicaid agency if the Medicaid data is compared with data sets from data sharing partners.

We are not going to run through a sample analysis on housing but there is one in the resource, which has been posted online and we will post a link to that resource in the chat box. There is a sample analysis with a step-by-step approach for housing-related questions.

(Slide 39) On slide 39, we present a state example, using New Jersey. A study done by Rutgers University leveraged the HMIS data with state Medicaid data and focused on opportunities to generate savings based on Medicaid beneficiaries who were identified as accessing services because they were homeless. The researchers found that the linked populations were more likely to have substance use, more likely to have a mental health diagnosis or SMI, and were higher users of hospital inpatient and ER care. This just speaks to the fact that there is a strong likelihood of overlap between both data sets for Medicaid beneficiaries with SMI.

(Slide 40) I am next going to cover what is in our resource related to the corrections domain. We will then take questions after which we will hear from Michal Rudnick of the Arizona Medicaid program on the work they are doing with the corrections system. In the corrections domain, from a data landscape perspective, the data sources are corrections agencies at the state level, but also county jails. Based on what we heard while developing the resource, state correctional data may be easier to work with since it is a single data set. County-level jail data may be more challenging given the decentralized nature of that data. In working with corrections data, state Medicaid agencies should consider eligibility rules around Medicaid. Some states suspend Medicaid eligibility and resume coverage as soon as a beneficiary is released from a correctional setting. Other states may terminate the Medicaid eligibility and require a re-application upon release, so there are some local landscape considerations that would need to be considered. There are also some national data sets available, which we have included in an appendix to the technical resource.

(Slide 41) On slide 41, we show the questions we are highlighting related to corrections, looking at the percentage of Medicaid beneficiaries with SMI that had been in a correctional facility. Question two looks at the amount of time between release from a correctional facility and when a beneficiary accesses a Medicaid service. You can also look at what type of service they are accessing. Executing that transition smoothly may prevent more acute utilization. The third question speaks to what I was just talking about, the most common initial services accessed by beneficiaries with SMI when they come out of the correctional system.

IZANNE LEONARD-HAAK: (Slide 42) We have a number of questions: *Would SNAP data really just be a proxy variable for deep poverty?*

MATT ROAN: It is fair to say that it probably can be a proxy for deep poverty. You may have seen in Dr. Schiff's slides that deep poverty was a factor Minnesota looked at. I think that based on the eligibility criteria for all these public assistance programs, if deep poverty was a criterion you wanted to look at, you could use SNAP eligibility or Medicaid eligibility depending on your state's rules as an indicator of deep poverty.

IZANNE LEONARD-HAAK: In a similar vein, although our tool is really focused on the adult population, this question asks about children. *Can you apply the same kind of principles to look at measuring food insecurity issues for children?*

MATT ROAN: The answer is yes. As Izanne mentioned, we are focusing our analysis on adult beneficiaries with SMI, but as Dr. Schiff highlighted there is often a multi-generational impact in some of these factors. In Minnesota, they looked at children of beneficiaries with SPMI and some of the outcomes there. With food insecurity, I suggest looking at the data sets for SNAP eligibility and, since SNAP eligibility is determined at the household level, if you are able to tie children on Medicaid to those households, you may be able to unlock some insights related to their food insecurity based on the SNAP data. Of course, the children have access to additional programs offering food, such as school lunch programs, that may be a little more difficult to factor in.

IZANNE LEONARD-HAAK: In the housing arena, we have the following question: *Have researchers used ICD-10 Z codes to identify housing instability?* Matt or Jeff, could one or both of you speak to this?

MATT ROAN: Yes, we have identified this as an emerging practice. People who follow health care news may have seen a renewed push to leverage ICD-10 Z codes. We reference in our resource the use of Z codes, so you will see that as a potential method to capture those. Obviously, Z code data is only as good as the providers are at using the codes to report those factors. So, if as a state Medicaid agency, you feel you are collecting sufficient and reliable data through Z code submissions, that data certainly would be a source of information you might consider using.

DR. JEFFERY SCHIFF: I think the challenge is that unless there is some incentive for providers to complete this level of coding, the reliability will be really low. An incentive may be required. My suggestion is if you do have some incentive for providers to submit this coding, you ask for a code whether affirmative or negative (if there is such a Z code), so you know the providers are actually thinking about it and using the codes. Otherwise, I do not think the prevalence will be very high. Even our homeless data, which we did by part of our enrollment, we think significantly undercounts homelessness and housing insecurity.

MATT ROAN: A related question came in around whether Minnesota has incentives related to Z codes. *Is that something you are doing in Minnesota?*

DR. JEFFERY SCHIFF: No, not yet.

IZANNE LEONARD-HAAK: Another question: *Is there any differentiation made between transitional homelessness and persistent homelessness?*

MATT ROAN: Yes. That is a great question for the HMIS data set. As state Medicaid agencies are starting to work with HMIS data, it is important to know that continuum includes transitional housing services and homeless services. As such, you very well may be able to differentiate between the two types of homelessness in the HMIS data. But, it is important to work with the local data sharing partners that manage those data systems to understand what is in those data sets and figure out how best to use the data based on the analytics questions you want to answer.

IZANNE LEONARD-HAAK: We should move on to Michal's presentation because one of the other questions that came in relates to sharing information between agencies and she gets at some of that in her presentation.

MATT ROAN: (Slide 43) At this point we will bring in Michal Rudnick from Arizona Medicaid. She will talk about a project that has been going on in Arizona related to sharing data between the Medicaid agency and the correctional system, both at the state and county levels. We are on slide 44.

MICHAL RUDNICK: (Slides 44 and 45) I am a project manager at our Arizona Medicaid agency, which we call AHCCCS (Arizona Health Care Cost Containment System), a pretty long acronym. We have been doing a lot of work in the space of criminal justice. It is interesting that several years ago we partnered with the Maricopa County Sheriff's Office on identifying those individuals with SMI in their jails to work on strategies to address better care coordination and the sharing of data to help support those individuals.

(Slide 46) Maricopa County is our largest county in Arizona and you can see on slide 45 that in 2017 there were roughly 67,571 individuals booked into the jails. Those numbers are upwards of 100,000 in 2019. However, of that total incarcerated population in 2017, about five percent was identified as living with a SMI. But if we move to the next slide, what you probably will not find surprising is that of those individuals living with a SMI, the percentage that recidivate or return multiple times to incarceration is significantly higher than the percentage without that designation, 60 percent versus 31 percent in 2015. You can see similar rates in 2016 – 54 percent versus 33 percent. This is a snapshot of recidivism for all groups. You can see that 5 percent equates to roughly 54 percent of people returning to incarceration.

(Slide 47) You might think the information on slide 47 originated from Medicaid, but in fact the Maricopa County Correctional Health Services unit worked with us to identify prevalent health conditions for their population; this is a snapshot for individuals housed in their facilities in May 2018. The fifth bullet shows a count of SMI individuals that were active and inactive, with inactive meant to reflect those not necessarily utilizing services or identifying with an SMI designation at the time. These 621 individuals, 8.3 percent of the total population of 7,494 housed on May 18, 2018, had an SMI designation. Other chronic conditions are also listed, but SMI reflects a significant percentage. Notice as well that the count of individuals with a need for mental health chronic care was also significantly high.

(Slide 48) I next want to address the value to the jails of sharing data with AHCCCS. The types of data we recognized that we needed to share from the Medicaid agency with the jails addressed protocols to optimize the use of services for mental health and substance use disorder courts. It was to help with the coordination of care for individuals with an SMI designation, both when they become incarcerated and the jails needed to identify the types of care and supports to offer those individuals, and when the individuals were being released to the community. What we have done is created reach-in activities where we have our community providers reaching in to the jails prior to an individual's release to start coordination of care so when they are released they are able to easily and more quickly access the services they need in the community.

The types of data shared are listed on slide 48. The AHCCCS Complete Care Plans, shown in the list, are the integrated health plans we offer in Arizona under our Medicaid program. We provide that information to the jails so they can better help coordinate where individuals will seek care upon their release.

(Slide 49) Slide 49 is a snapshot of what we believe is a best practice around information sharing if a state is interested in implementing this sort of arrangement. As you can imagine, when you are trying to release an individual from a jail or prison and want to make sure they can get connected to a provider that will serve them in their community, the release of information can be a major challenge. It is important to identify exactly who that Medicaid beneficiary was working with prior to incarceration so to make the

reconnection at the time of release. There is not a lot of data available to the jail about which providers these individuals were or should be served by.

This form was created by Maricopa County in partnership with the Medicaid plans here in Arizona. It is a way to identify the providers that may be serving these individuals when they are released into the community. It is a voluntary form the inmate can complete that authorizes Maricopa County Correctional Health Services to disclose and share health care information with specified providers to help them access needed services upon release. This authorization form basically avoids several different forms and lots of legwork for Maricopa County staff as they try to figure out which provider the individuals have been or will be served by.

(Slide 50) What is in it for corrections? We get that question quite a bit. Why would Maricopa County Corrections and the jails reach out to the Medicaid agency and ask to partner on this? They actually have a shared commitment to improving health and reducing recidivism. We found that here in Arizona all our counties have a commitment to improving health outcomes. They do not like to see individuals with a SMI cycle in and out of their jails multiple times throughout the year. We all recognize this problem. As a result, it is a shared goal of helping to reduce recidivism.

The jails and prisons are also responsible for providing special care to those inmates with a SMI. It is to their benefit, once they receive an individual booked into their jail, to know if an individual has a SMI designation. This allows the jail or prison to identify the right housing unit where the individual should be served while incarcerated, the medications they should be receiving, and that sort of information. Again, having this information is critical to the jail's ability to provide care while the individuals are incarcerated.

There are also cost savings. As you all are probably aware, Title XIX funds, our federal Medicaid matching dollars, are not available to pay for services for inmates residing in a public institution. As such, it also benefits the jails, counties and the state to do their best, when individuals eligible for Medicaid are released into the community, to connect them to services funded by federal dollars through Medicaid. The incentive for the jails, counties and the state is to help reduce recidivism and ultimately help reduce state and local government costs.

(Slide 51) Moving to slide 51, Arizona has several initiatives that have resulted from activities like the sharing of data for individuals with a SMI. There is a long list on our website and you are welcome to visit that. I want to touch only on a few policies and initiatives that have occurred either directly or indirectly as a result of our data sharing efforts. We are able to offer a pre-release Medicaid application to any inmate in any county in Arizona as well as any Department of Corrections prison. The inmates are able to work with a correctional officer or other individuals identified within the county jails that assist with applying for Medicaid up to 30 days prior to their release from incarceration so they will have coverage upon release.

Arizona also does enrollment suspends. Matt mentioned that earlier. We do not terminate coverage for individuals that have Medicaid upon incarceration and can lift the suspension upon their release. For inmates that did not have Medicaid prior to incarceration, they are able to apply and get those benefits started on the day of their release.

The slide has a hyperlink to information about our Second Chance Re-entry Centers. Through this initiative, a partnership between the Governor's office and multiple state agencies, individuals being

released from prisons go to a special unit 60 days before their release where they are offered some intense re-integration and return to the community supports. They are also able to make sure they have their health care coverage in place. There are job fairs and in many cases the individuals are hired to take a job upon their release. Individuals with a SMI are among the several groups able to participate in this initiative.

Arizona receives targeted investment funding through our 1115 Medicaid waiver, and a big portion of the \$300 million received over five years has gone toward standing up 13 fully integrated health clinics that are co-located with probation and parole offices. Through this initiative, individuals that have to report to a probation or parole officer come to the same building and space where they can receive their acute care services and medication-assisted treatment when appropriate. They can receive a full range of physical and behavioral health services in that one space. We also have some wonderful partnerships to serve specifically the SMI individuals at those locations. Forensic peers and peers who are individuals with lived SMI experience are available to partner with these individuals and help them through the process as they re-integrate into the community.

(Slide 52) Slide 52 addresses best practices and lessons learned—this is an elephant. I have been with Medicaid in Arizona for 20 years and since 2005 have been actively involved in trying to work on supports for this population, so it does not happen quickly. We began with smaller groups. We started with one county and then expanded to others when we were able to identify success and establish some standardized work. There was a lot of collaboration. We spent the first six months to a year learning from each other and learning each other's language.

When we first heard someone on the corrections side talk about risk, those of us with a health perspective were thinking of a medical risk, a risk of having a poor health outcome. In reality they were talking about the risk of potential recidivism, of the individual being incarcerated again. We learned from those types of differences, for example, that a probation or parole officer has a case plan for the individuals assigned to them. Since there are also case plans that are medical, or clinical in nature, we wanted to make sure we were coordinating with the corrections staff to ensure we were not giving an individual too many things they had to comply with between their criminal and medical case plans. We have done a lot to coordinate that and assist individuals with that process.

There needs to be a regular cadence of meetings. Get buy-in from your upper leadership on that. We have had that benefit in Arizona; it is been wonderful. Learn each other's language as I mentioned. Identify champions and key stakeholders and then the key points of contact within the jurisdiction and at Medicaid. For data sharing purposes, you will not necessarily be working directly with a sheriff, but the sheriff should have someone working on the jail management system that you will want to make sure you are connected with, and of course the lawyers typically need to be involved and county manager boards are involved here in Arizona when we are at the county level to get approval for these types of data sharing agreements.

(Slide 53) On slide 53, we identify resources available on the AHCCCS website. If you search 'Justice' you will find a dedicated page to criminal justice and a lot of information about what we are doing to support this population. One interesting thing that Medicaid agencies hear from us is that we require our Medicaid health plans to do reach-in for individuals coming out of jails and prisons with a complex health need. If you are interested in that contract language, which many folks are, there is a link on this slide. You can see how we were able to establish that requirement.

MATT ROAN: (Slide 54) Thank you. I see a question that was answered through the course of Michal's presentation around best practices for sharing data across state agencies and how that sometimes is a barrier. We heard Michal talk about fostering champions, getting buy-in from senior leadership, and a high level of collaboration across the agencies, which I think are all important components of that.

The other thing that states often run into when sharing data across agencies are technological compatibility issues where it can be hard to have data sets match together, and those are certainly challenges. Some advice there would be to not let the perfect get in the way of the good. Looking at the available data and at how you could match those data sets and what you could potentially accomplish even if it is a lesser scope than what you had hoped at least gets you started. Working collaboratively to make those data sets more compatible going forward would be a good idea and part of that best practice. Other questions for Michal?

IZANNE LEONARD-HAAK: *Yes. Were there any barriers to getting data sharing agreements between the Medicaid managed care organizations and the correctional entities?*

MICHAL RUDNICK: Two things come to mind, which I suppose could be called barriers. Participants on the call are probably well aware that Part 2 data related to substance use disorder can be a challenge. We have had to work quite a bit with our Health Information Exchange and on release of information protocols appropriate for this data. We still do not have all the answers as this can be a very cumbersome process.

The other thing that comes to mind relates to multiple health plans. In Arizona, and specifically in Maricopa County, which I have been talking mostly about, we have seven different health plans. As you may imagine, with multiple health plans serving our population, coordination can be a challenge for the jails/prisons. To help address that, we have established coalitions and work groups that meet. There are justice liaisons at each of the health plans that meet with the correctional staff to come up with unified and uniform practices to assist members and share data.

IZANNE LEONARD-HAAK: *How do you overcome some of the barriers on sharing Protected Health Information?*

MICHAL RUDNICK: It would be helpful to get more information on what in particular. I mentioned Part 2 around substance use. As far as protected health information goes, we did look at the slide created in Maricopa County about the form an individual can sign if they are allowing a release of their medical information from the jail to the providers and health plans in their community. They have the option to sign that, or not, but in most cases it is in their best interest to do so if they are interested in making sure they can access services upon their release. This said, creating a release of information form is one option, but it would need to be reviewed by the state's attorneys to make sure it passes the sniff test. I would have to know a little bit more about which protected health information is prompting the question and for what purpose to comment further.

IZANNE LEONARD-HAAK: And we probably need to distinguish between what we are suggesting in this technical resource, which is really focused on analyzing the impact as more of a population health management focus. It is more likely that it would not be until you start to develop your interventions that you would get into more specific issues with respect to sharing information on individuals.

MICHAL RUDNICK: Yes, and every one of our health plans has to create and establish a business agreement with the counties to do this work. In addition, we as the Medicaid agency have intergovernmental agreements in many cases for data sharing that we are pushing back and forth. There are many legal documents associated with the ability to share protected health information.

MATT ROAN: On that data sharing agreement piece, we do address securing data sharing agreements in the resource and we link to additional resources. Through that step of the process you can ensure that any issues related to sharing protected health information are addressed appropriately. I see that our questioner clarified that he was talking about substance use disorder treatment information, mental health service records, etc. We would expect all of that to be laid out and defined in the data sharing agreement and in appropriate other agreements, whether a business associate agreement or other agreements related to data sharing. Then at the individual level, as Michal mentioned, there is the authorization form developed in Arizona by Maricopa County.

IZANNE LEONARD-HAAK: Another question relates to efforts required to work with jails and prisons. *Did you find it more effective working with the prisons or with the jails in Arizona?*

MICHAL RUDNICK: This is an interesting question. Earlier in the slide deck, the suggestion on best practices was that it can be easier to get the state-level prison data than it would be at the county level, although getting county level data is not impossible. That said, from Arizona's experience it took us much longer to engage the Department of Corrections around really trying to come up with some practices for care coordination and to look more closely at this population. They are fully engaged now but part of that is just the nature of the type of setting. Unlike county jails where individuals are incarcerated often for short periods, prisons are dealing with incarcerations of 5-10 years in some cases. There is less of an incentive to try to closely monitor those cycling in and out. Remember that individuals with a SMI are higher recidivators, so they are going to be cycling in and out. Just the nature of the prison system where at least half are incarcerated 12 months or more, results in less need to really closely coordinate. We do a lot of that with them now, but it is just a matter of demonstrating where it worked and getting those champions to buy in on the collaborative process.

IZANNE LEONARD-HAAK: You also mentioned that in Arizona you focused on your larger counties with larger populations first.

MICHAL RUDNICK: Exactly right. About 95 percent of individuals incarcerated in our state at the jail level are in Maricopa County. Another benefit is we have a total of 15 counties in Arizona, so we are lucky we do not have to deal with as many jurisdictions.

MATT ROAN: (Slide 55) We have a few more slides; then we will take more questions. We want to highlight that although we presented these analyses in domains—we talked about housing, corrections, food insecurity separately, we are not suggesting you need to conduct these analyses in silos. In fact, there are examples of states that have brought together data sets across various domains to get an even fuller picture of the factors impacting their Medicaid beneficiaries, which could be applied to Medicaid beneficiaries with SMI.

(Slide 56) An example we highlight in the resource, and on slide 56, is in Utah, where there has been a multi-agency data match between Medicaid, housing, and behavioral health. They brought in the HMIS data we referenced earlier with their Medicaid eligibility data. They brought in county jail information,

similar to what has been happening in Arizona, but they combined it with HMIS data and Medicaid eligibility data. They then layered on top of that county behavioral health provider data with HMIS data. Bringing in the county behavioral health data sets gets at some of the behavioral health services occurring outside the Medicaid system, services that may not be reimbursed by Medicaid but are being provided at the county level through other funding streams.

Through those efforts they have achieved a cross-system integrated data capacity that helps them better understand at the system level where there are opportunities for improvement in terms of operation effectiveness and efficiency. This is all part of a goal Utah has set for itself to be more data-driven in their decision-making. We link to a report posted through HUD that discusses that Utah initiative.

We encourage states while thinking about external data sources to bring in and leverage alongside your Medicaid data to keep in mind that although you can certainly target the analysis and answer specific questions related to a specific domain, it is also good to think about how the end-to-end picture can start to come into focus if you fold into your analytics approach data sources that get at a variety of factors.

(Slides 57 and 58) On slide 58, we cover some key takeaways. As state Medicaid agencies are looking for additional data to understand the needs of their Medicaid population generally and their Medicaid beneficiaries with SMI specifically, it is worth looking at external data sets to bring into that analysis. Engaging with data sharing partners includes identifying the joint benefit of sharing data. This is something that Michal covered in talking about Arizona, sort of the what is in it for the correctional system. This should be a consideration in any discussion you have with an external data sharing partner; it is important to figure out where the mutual benefit is. This applies to data sharing across state agencies. There needs to be, for lack of a better term, a value proposition for the other agency to engage in the data sharing. The same need applies to working with county-level organizations and community-based organizations. There is a not insignificant amount of effort required to work through some of these data analytics issues, so getting all the stakeholders engaged with a clear reason for why they should do so is really important.

Occasionally it may not be practical to match data. I spoke before about how data sets sometimes may be technologically or technically incompatible or less compatible, and there are other approaches that can be used in the interim while you work to make data more compatible, such as using proxy measures that leverage Medicaid administrative data in ways you might not have thought about.

Finally, the analyses can build on one another as new data sets become available. To borrow again from Michal about eating the elephant, an incremental approach may be useful here. You can identify a single data set to bring in and learn about how you can leverage that data in your Medicaid data analytics. You can then bring in a second data set, and a third. In this manner, you are gradually building a richer data environment from which to conduct analytics to better understand this high needs population of beneficiaries with SMI.

IZANNE LEONARD-HAAK: We are getting a number of questions related to taking information and using it at the provider level. We should emphasize that this particular technical resource is focusing more on doing the data analytics to better understand the SMI population and states can use that information to work with stakeholders to develop interventions. Obviously, a lot of the data you get can be used further downstream, but that was not the emphasis of this particular technical resource.

MATT ROAN: That is right. This is really about doing analytics at the program level to figure out what targeted interventions or initiatives can take place. That being said, we heard some things relevant to providers during the course of today's discussion. One was that it is important for providers to have a sense of how Medicaid agencies are using data and how critical it is that the data the providers are generating, whether through claims they submit or other reporting, or information they are sharing with the Medicaid program or Medicaid MCOs, is of good quality and complete. This is really important for this kind of program-level analytics. Providers definitely have a role to play when it comes to making this all work.

IZANNE LEONARD-HAAK: Where we were not able to answer everyone's questions we will follow up with them after the webinar.

MATT ROAN: (Slide 59) We have one final poll, on slide 59. We hope this presentation was useful and you are going to look at the resource online. We would like to know what types of non-Medicaid data you might be interested in using now after hearing the discussion today. We are interested in knowing where states are in their thinking and priorities around one or many of these domains, or around data sets we did not discuss today to which some of the concepts we discussed today could be applied.

We can see from the poll results that there are a lot of participants buying into this multi-factor concept, which is awesome, to build out your data and get the deepest and broadest understanding of Medicaid beneficiaries with SMI. Obviously, the domains we discussed today are important to Medicaid health outcomes and there is an increasing recognition of the connection between these domains and health outcomes. It is great to see states interested in looking at these data sets. Thank you to those as well who entered comments in the "other" category. We will look at those.

KATHERINE VEDETE: (Slides 60 and 61) The resource is posted on the Medicaid Innovation Accelerator Program website on our Beneficiaries with Complex Care Needs and High Costs page. This is also where the slides and recording from today's event will be posted in the next few weeks. Thank you for joining today's call.

[end]

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