

## Using Data Analytics to Better Understand Adult Medicaid Beneficiaries with Serious Mental Illness

The Centers for Medicare & Medicaid Services' (CMS) Medicaid Innovation Accelerator Program (IAP) is a collaboration between the Center for Medicaid and Children's Health Insurance Program Services (CMCS) and the Center for Medicare & Medicaid Innovation that is designed to build state capacity and support ongoing innovation in Medicaid. The goals of IAP are to improve health and health care for Medicaid beneficiaries and to reduce associated costs by supporting Medicaid agencies in their ongoing payment and delivery system reforms. IAP provides targeted technical assistance and resources to Medicaid agencies across four program areas. Beginning in 2015, IAP offered support to Medicaid agencies seeking to design, plan, and implement strategies to improve care coordination for beneficiaries with complex care needs and high costs (BCN). As part of this program area, IAP focused on data analytics for adult Medicaid beneficiaries with serious mental illness (SMI). IAP developed and posted [two technical resources](#) for Medicaid agencies to use in better understanding their population with SMI through data analytics and data integration.

### Technical Assistance for Medicaid Agencies



Building on the SMI resources previously developed, IAP provided technical assistance to a cohort of five Medicaid agencies in 2020 in working toward three component goals to: (1) build a SMI population profile using Medicaid claims and encounters data, (2) augment SMI population profiles with external data sources (e.g. housing, food insecurity, corrections), and (3) consider SMI data-informed delivery system reform. This technical assistance opportunity included access to a range of resources, including one-on-one coaching from data analytics and SMI subject matter experts and webinars focused on each of the three component goals.

As this cohort was launching, states began shifting resources to focus on the Coronavirus Disease 2019 (COVID-19) pandemic thus limiting their ability to engage fully in IAP across all of the three technical assistance components. A summary of the five Medicaid agencies' technical assistance activities during this opportunity follows.

#### HAWAII

Hawaii identified the development of a SMI profile as a priority for helping to plan, implement, and monitor several already established behavioral health initiatives. The IAP SMI data analytics technical assistance provided an opportunity to assist the state in developing this profile by engaging staff from both the Department of Health and the MedQUEST Division within the Department of Human Services (the Medicaid agency) in the process. The Hawaii team was also developing methods to distinguish between individuals with mild, moderate, and severe mental illness. Early in the process, IAP engaged the state in work to develop an operational (claims-based) definition for SMI and criteria for mild, moderate and severe mental illness. Using these criteria (which included indicators of service utilization, specific diagnoses, and specific medications), the state team pulled and analyzed claims data to

develop their SMI profile. Moving forward, Hawaii intends to augment their SMI profile by adding additional data points related to homelessness, incarceration and other social determinants of health.

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## INDIANA

Indiana joined this IAP SMI data analytics technical assistance opportunity with an overarching goal to better leverage data to inform multiple behavioral health projects and policy discussions. The state sought a cross-initiative use of their SMI profile. As a result, IAP provided technical assistance to Indiana in developing their definition of SMI, and shared examples of the benefits of using a comparison group. The IAP also assisted the Indiana team by providing a forum to hear from their state peers on the data sets others were accessing. The Indiana team's SMI population definition now reflects the broadest consensus of all the Indiana Family Social Services Administration's (FSSA) agencies that participated in this IAP opportunity. After confirming their analytic definition for SMI, Indiana's team then developed queries that included demographic and expenditure information. Initial data analysis stirred questions regarding where members were seeking services as well as under which eligibility categories were adults with SMI most likely to be served. As part of IAP Component 2, Indiana sought additional FSSA data sources and ways to link these data sets with Medicaid claims and encounter data. DMHA collected data specific to social determinants of health, such as employment status and housing stability, that are being integrated into their SMI profile and has taken initial steps towards including Department of Corrections data. Indiana plans to continue to analyze and add to their SMI population profile as they develop and implement initiatives focused on integrated care, improved access to evidence-based practices, and improved coordination of care for enrollees with complex needs.

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## IOWA

The Iowa team initially focused on developing a standardized definition of the population with SMI that could be used to discuss data, trends, and potential opportunities for outreach across different audiences. The IAP provided the state with research on existing definitions used by other states and programs. The Iowa team ultimately decided to use the set of diagnosis codes identified by the Substance Abuse and Mental Health Services Administration (SAMHSA) to define their SMI population and for developing their initial queries. This approach allowed the state to capture a broad view of Iowa's SMI population which could then be filtered as needed for various sub-populations and programs. After the Iowa team compiled diagnostic data based on Medicaid claims and encounter information, the IAP team then worked with Iowa in reviewing output and making suggestions on where to refine their analytics. The Iowa team is continuing to run additional queries to sharpen their SMI profile and plan to use the resulting data set as the foundation for future demographic profiles, clinical utilization and cost analyses, and may eventually phase in external data such as corrections and housing.

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## NEW JERSEY

New Jersey approached the IAP SMI data analytics technical assistance as an opportunity to better understand the population and to identify cost drivers based on their Medicaid SMI data. The state would then use this enhanced knowledge to consider potential service delivery changes that could lead to cost savings and improved care. The IAP provided the state with methodologies other states used in approaching SMI data analytics and discussed which approaches would work best to meet New Jersey's needs. By focusing on the highest utilizers in its data, New Jersey identified the services that account for the greatest overall cost to the Medicaid budget, many of which are adult

mental health rehab services, partial care and hospital-based care. The IAP? team also supported the state in looking at service utilization in counties that had an Early Intervention Support Services (EISS) to understand if the availability of such behavioral health crisis intervention services leads to lower utilization of inpatient or hospital services, which would in turn lead to lower costs to the program.

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## VIRGINIA

As the state plans for enhancement of its behavioral health system, the Virginia team wanted to better understand their adult Medicaid SMI population's service utilization and the implication of where these services are delivered. As part of its IAP work, the Virginia team opted to look at SMI diagnoses and relevant services by demographics. In addition, the Virginia team chose to include in this analysis their managed care organizations' provider network needs and geographic trends. The Virginia team was also interested in how these data might help to complement existing substance use disorder (SUD) data to understand both the elements of dual diagnoses and associated services. The IAP team worked with Virginia as they refined their data analytic approach to focus on specific utilization patterns that drive cost or indicate potential gaps in service. The output of these analytics will be used to inform future program design. In addition, the state team also leveraged this IAP activity to help link housing and Medicaid data in order to support a recent federally approved provision of Virginia's Medicaid expansion that directs the development of housing support services for the SMI and SUD populations covered under expansion.,. Virginia plans continue to develop an approach to data sharing among several state agencies including housing, behavioral health, and Medicaid.

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Additional information on the BCN SMI program area is available on the [Medicaid IAP BCN web page](#) including the technical resources [Using Data Analytics to Better Understand Medicaid Populations with Serious Mental Illness](#) and [Using Data Analytics to Better Understand Medicaid Populations with Serious Mental Illness: Additional Data Sources](#)