INTERIM EVALUATION OF INDIANA'S SECTION 1115 SUBSTANCE USE DISORDER WAIVER

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ABBREVIATIONS LIST

Abbreviation	Meaning	Abbreviation	Meaning
ANSA	Adult Needs and Strengths Assessment	IHCDA	Indiana Housing and Community Development Authority
AOD / AODD	Alcohol or Other Drug Dependence	IMD	Institution for Mental Diseases
APR-DRG	All Patient Refined Diagnostic Related Grouping	INSPECT	Indiana Prescription Drug Monitoring Program
ASAM	American Society of Addiction Medicine	IOP	Intensive Outpatient Program
Auth / PA	Prior Authorization	IOT	Intensive Outpatient Treatment
B&A	Burns & Associates, Inc.	IP	Inpatient
CANS	Child and Adolescent Needs and Strengths	ISDH	Indiana State Department of Health
CFR	Code of Federal Regulations	ITS	Interrupted Time Series
CMCS	Cooperative Managed Care Services	LOS	Length of Stay
CMS	Centers for Medicare and Medicaid Services	MAT	Medication assisted treatment
Core MMIS	Core Medicaid Management Information System	MCE	Managed Care Entity
CRG	Clinical Risk Group	MCG	Milliman Care Guidelines
CY	Calendar Year	MHS	Managed Health Services
Demo	Demonstration Population	Model	Model or Managed Care Population
DMHA	Division of Mental Health and Addiction	MRO	Medicaid Rehabilitation Option
DRG	Diagnosis-Related Group	NCQA	National Committee for Quality Assurance
DR	Desk Review	N-SSATS	National Survey of Substance Abuse Treatment Services
DOS	Dates of Service	OMPP	Office of Medicaid Policy and Planning
DS	Descriptive Statistics	OP	Outpatient
Dual	Dual Eligible for Medicare and Medicaid	OR	Onsite Reviews
ED	Emergency Department	OTP	Opioid Treatment Program
EDV	Emergency Department Visit	OUD	Opioid Use Disorder
EDW	Enterprise Data Warehouse	PH/PHP	Partial Hospitalization Progam
FFS	Fee-For-Service	PMP	Primary Medical Provider
FG	Focus Group	PS	Provider Surveys
FI	Facilitated Interview	Q	Research Questions
FSSA	Family and Social Services Administration	RTC	Residential Treatment Center
H	Hypotheses	SAMHSA	Substance Abuse and Mental Health Services Administration
HCC	Hoosier Care Connect	SBIRT	Screening, Brief Intervention, and Referral to Treatment
HCPCS	Healthcare Common Procedure Coding System	SPA	State Plan Amendment
HEDIS	Healthcare Effectiveness Data and Information Set	STC	Special Terms and Conditions
HHW	Hoosier Healthwise	SUD	Substance Use Disorder
HIP	Healthy Indiana Plan 2.0	SUPPORT	Substance Use Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities Act
IAC	Indiana Administrative Code		
ICD-9	International Statistical Classification of Diseases & Related Health Problems 9th Ed.		
ICD-10	International Statistical Classification of Diseases & Related Health Problems 10th Ed.		
IET	Initiation and Engagement of Alcohol & Drug Dependence Treatment		

EXECUTIVE SUMMARY

Background

On February 1, 2018, Indiana's Family and Social Services Administration (FSSA) received approval for an amendment to its section 1115 Healthy Indiana Plan (HIP) demonstration waiver to add new evidence-based substance use disorder (SUD) treatment services and to expand access to qualified providers through a waiver of the Institution for Mental Diseases (IMD) exclusion. The delivery of SUD-related services would be available to all Medicaid beneficiaries, not just those eligible as a result of the demonstration waiver. As set forth in the FSSA's Implementation Plan, Indiana is aligning the six goals for its SUD waiver component with the milestones outlined by CMS:

1. Increased rates of identification, initiation, and engagement in treatment;
2. Increased adherence to and retention in treatment;
3. Reductions in overdose deaths, particularly those due to opioids;
4. Reduced utilization of emergency departments and inpatient settings for treatment where the utilization is preventable or medically inappropriate through improved access to other continuum of care services;
5. Fewer readmissions to the same or higher level of care where the readmission is preventable or medically inappropriate; and
6. Improved access to care for physical health conditions among beneficiaries.

To accomplish these six goals, Indiana Medicaid is focusing on the three following areas:

- Expanded SUD treatment options for as many of its members as possible;
- Stronger, evidence-based certification standards for its SUD providers, particularly its residential addiction providers; and
- Consistency with prior authorization criteria and determinations among its health plans.

In support of these focus areas, the FSSA and CMS identified six key milestones, as described in the State's approved Implementation and Monitoring Plan, which include:

1. Access to critical levels of care for SUD treatment;
2. Use of evidence-based SUD-specific patient placement criteria; prior-authorization, providers, payers; matching need to capacity
3. Use of nationally recognized SUD-specific program standards to set provider qualifications for residential treatment facilities;
4. Sufficient provider capacity at critical levels of care, including medication assisted treatment for opioid use disorder (OUD);
5. Implementation of comprehensive treatment and prevention strategies to address opioid abuse and OUD; and
6. Improved care coordination and transition between levels of care.

Overview of Indiana's Medicaid Program

The FSSA's Office of Medicaid Policy and Planning (OMPP) has responsibility for the administration and oversight of Indiana's Medicaid program under waiver and state plan authorities. Nearly three out of four of the 1.41 million individuals enrolled in Medicaid at the end of Calendar Year (CY) 2018 were enrolled in one of the State's three risk-based managed care programs that each serves a targeted population—Hoosier Healthwise, Healthy Indiana Plan and Hoosier Care Connect.

- The *Hoosier Healthwise (HHW)* program began in 1994. For many years the enrollment included low income families, pregnant women and children. By the time of the SUD implementation, however, almost all adults have been migrated to the Healthy Indiana Plan and HHW is the program for most children in Medicaid. As of December 2018, HHW enrollment stood at 597,000 members.
- The *Healthy Indiana Plan (HIP)* was first created in January 2008 under a separate Section 1115 waiver authority. Changes to the program, including opening the marketplace to uninsured Hoosiers who meet enrollment criteria, became effective in February 2015 under what is now commonly called HIP 2.0. The program serves as a health insurance program for uninsured adults between the ages of 19 and 64. As of December 2018, HIP enrollment stood at 392,000 members.
- The *Hoosier Care Connect (HCC)* program was implemented April 1, 2015 under a 1915(b) waiver authority. The HCC is a risk-based program that contracts with MCEs to administer and to deliver services to aged, blind and disabled members. As of December 2018, HCC enrollment stood at 90,000 members.

Traditional Medicaid (FFS) is comprised of the remaining Medicaid enrollees who are not members of HHW, HIP or HCC. As of December 2018, enrollment in FFS was 334,000 individuals. The following populations are covered under Traditional Medicaid:

- Individuals dually enrolled receiving Medicare and Medicaid benefits;
- Individuals receiving home- and community-based waiver benefits;
- Individuals receiving care in a nursing facility or other State-operated facility;
- Individuals in specific aid categories (e.g., refugees); and
- Individuals awaiting an assignment to an MCE.

There are four managed care entities (MCEs) that are under contract with the OMPP to administer services to its managed care programs. The distribution of enrollment across the three managed care programs combined as of December 2018 is shown below:

- Anthem Insurance Companies, Inc. (Anthem) is under contract for the HHW, HIP and HCC programs (40% of managed care enrollment).
- CareSource is under contract for the HHW and HIP programs (9% of managed care enrollment).
- MDwise is under contract for the HHW and HIP programs (28% of managed care enrollment).
- Managed Health Services (MHS) is under contract for the HHW, HIP and HCC programs (23% of managed care enrollment).

All four MCEs serve managed care enrollees on a statewide basis. There is some variation in regional enrollment at the MCE level. MHS tends to have a higher percentage of the enrollment the northern regions, MDwise tends to have a higher percentage of the enrollment in the central regions, and Anthem tends to have a higher percentage of the enrollment in the southern regions.

Population Identified with SUD

Indiana's SUD population as of CY 2018 included 93,101 beneficiaries, or 6.4% of the enrolled Medicaid population. By nature of the fact that Medicaid adults are primarily enrolled in HIP, this program has most of the individuals identified with a SUD diagnosis (67.0% of the total). However, the percentage of members in HCC with a SUD diagnosis is a higher percentage than HCC's enrollment as a percent of total Medicaid enrollment (10.7% of the SUD total). Individuals with SUD in HHW is low (7.4% of the total). The remaining 14.9% of SUD beneficiaries identified are in FFS.

SUD System of Care

Indiana Medicaid provides coverage of SUD treatment services to its members based on standards outlined through the American Society of Addiction Medicine (ASAM). Many services that align with an ASAM level of care were covered prior to the implementation of the 1115 demonstration waiver. As part of the waiver implementation, Indiana is modifying coverage to move what had been Medicaid Rehabilitation Option (MRO) services to state plan services. These will be available to all Medicaid members. The MCEs are responsible for delivering the array of SUD services across the ASAM continuum of care.

Provider Base

As of the end of CY 2018, the providers under contract to deliver SUD services is still growing with the waiver implementation. There were 21 opioid treatment programs, 37 residential treatment centers and 24 community mental health center entities. It was observed that the distribution of these newly-enrolled providers is not proportional to the SUD population statewide yet. The licensure and qualification requirements to be enrolled under provider specialties was a specific activity conducted by the FSSA immediately upon waiver implementation. Hospitals, including IMDs, and other individual professionals were enrolled with the Medicaid program prior to the waiver.

Evaluation Questions and Hypotheses

Burns & Associates, Inc. (B&A) serves as the Independent Evaluator of Indiana's SUD waiver and is the author of this Interim Evaluation report. B&A examined the relationships between the CMS goals and Indiana Medicaid-delineated interventions included in the 1115 waiver and approved Implementation Plan. In its Evaluation Design, B&A constructed two driver diagrams identifying primary and secondary drivers of two principle aims: 1) reducing overdose deaths and 2) reducing costs. With respect to reducing overdose deaths, five primary drivers were identified. Additionally, 21 secondary drivers were identified and mapped to the primary drivers. With respect to reducing costs, three primary drivers were identified. From this, four secondary drivers were identified and mapped to the primary drivers. The driver diagrams are shown in Section II of this Interim Evaluation. The CMS-approved Evaluation Design appears in Appendix B.

Reporting in this Interim Evaluation is limited due to the submission due date and the length of the waiver thus far. Indiana's full SUD waiver will be limited to 35 months in totality (February 1, 2018 – December 31, 2020). In addition, Indiana is preparing to submit a waiver extension application. As a result, this Interim Evaluation is being prepared in advance of the originally-anticipated schedule to allow for the state to post the Interim Evaluation with its waiver extension application in accordance with 42 CFR 431 Subpart G. The study period for this Interim Evaluation, therefore, includes three years of pre-waiver data, but the timing restrictions only permit one year of post-waiver data.

Because of the limitations in time and advance preparation, the scope of the Independent Evaluation of Indiana's 1115 SUD waiver will be limited to a subset of the research questions under each of the hypotheses as identified in Section II.C. of this report, Hypotheses and Research Questions. The subset of research questions was chosen due to availability of reliable data at the time that this Interim Evaluation was drafted. The research questions selected, however, are in alignment with questions and studies as part of the CMS Monitoring Protocol Specifications and Reporting Templates.

The Summative Evaluation of Indiana's 1115 SUD waiver will not be limited in scope and will include all research questions as identified in the approved Evaluation Design Plan.

Methodology

The approved Evaluation Design Plan is a mixed-methods approach, drawing from a range of data sources, measures and analytics to best produce relevant and actionable study findings. B&A tailored the evaluation approach for each research question. Six analytic methods are proposed for use in the design. Due to the truncated time period of data available, all of these methods were not incorporated into the Interim Evaluation. The ones that are included are shown with an asterisk. All methods shown below, however, will be included in the Summative Evaluation:

1. single segment interrupted time series
2. descriptive statistics*
3. provider/MCE surveys*
4. onsite reviews*
5. desk reviews
6. facilitated interviews and/or focus groups

Target Population

The target population is any Indiana Medicaid beneficiary with a SUD diagnosis in the study period. B&A used the approved CMS specification for beneficiaries with any SUD diagnosis for identification of beneficiaries with SUD. This will serve as an indicator of exposure to the changes in the waiver. B&A also developed the following additional sub-populations for evaluation:

1. Managed Care Model: Includes target population in the managed care model
2. MCE: Includes target population enrolled in a particular MCE as of base date in the calendar year
3. Dual eligible: Includes target population who meet criteria for being dual-eligible with Medicare
4. OUD: Includes target population who meet the criteria for having an opioid use disorder (OUD) diagnosis
5. Pregnant: Includes target population who meet the criteria for having a pregnancy
6. Criminally Involved: Includes target population who meet the criteria for being criminally involved. B&A used Indiana Department of Correction data, matched with the SUD population data, to identify whether or not a person was incarcerated at any time in the calendar year.
7. MRO: Includes target population who meet the criteria for being in receipt of MRO services in the calendar year
8. Region: Eight regions were created that map the 92 counties in the state. Individuals based on their zip code on a base date in the calendar year are mapped to one region.

Evaluation Period

The Interim Evaluation collected data defined as enrollment, or dates of service, of January 1, 2015 through March 31, 2019 for all beneficiaries meeting the criteria as defined as being in the target population. However, upon review of the results, a range of data validity and completeness issues arose with respect to the CY 2015 and first quarter CY 2019 data. This data is presented in this report for transparency and to inform the final evaluation period chosen in the Summative Evaluation; however, data from these two periods was not considered valid with respect to drawing conclusions on the Interim Evaluation.

Therefore, B&A based its conclusions on the overall descriptive trends displayed in Section V Findings using the experience period for CYs 2016 through 2018. Our specific focus centered on changes between the first year of the demonstration (CY 2018) compared to the preceding year (CY 2017).

Metrics

B&A utilized a number of CMS-defined metrics that states report on in their quarterly and annual monitoring reports to CMS for SUD waivers. We also developed our own measures specific to this evaluation.

The list of measures included in the Interim Evaluation that use CMS-defined metrics are shown below (the number after each measure is what was assigned by CMS in state reporting documents).

Quality

- Medicaid Beneficiaries with SUD Diagnosis (#3)
- Medicaid Beneficiaries with Newly Initiated SUD Treatment/Diagnosis (#2)
- Initiation and Engagement of Alcohol and Other Drug (AOD) Dependence Treatment (IET)(#15a)
- Engagement of Alcohol and Other Drug (AOD) Dependence Treatment (IET) (#15b)
- Medicaid Beneficiaries Treated in an IMD (#5)
- Rate of Follow-Up 15 Days After EDV for Alcohol and Other Drug Abuse or Dependence (#17a)
- Rate of Follow-Up 30 Days After EDV for Alcohol and Other Drug Abuse or Dependence (#17b)
- Continuity of Pharmacotherapy for Opioid Use Disorder (#22)
- Concurrent Use of Opioids and Benzodiazepines (#21)
- Use of Opioids at High Dosage in Persons Without Cancer (#18)
- Use of Opioids from Multiple Providers in Persons Without Cancer (#19)

Financial

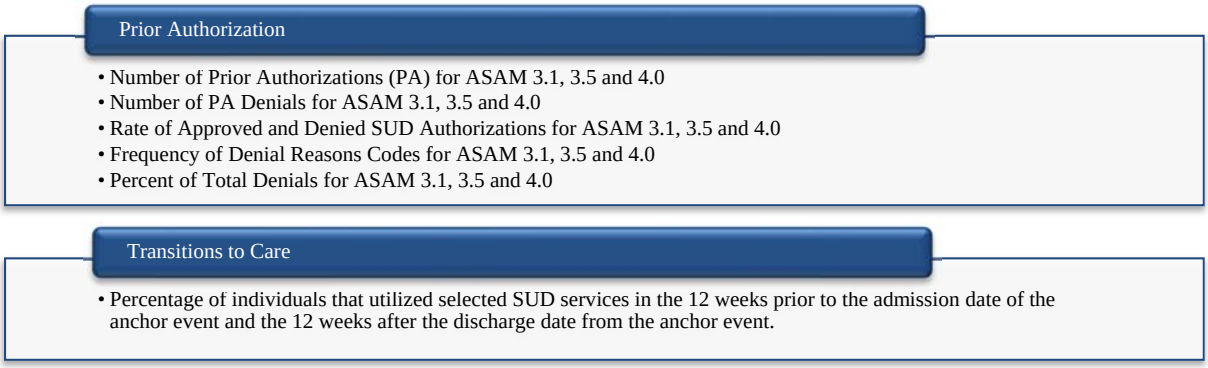
- SUD Spending (#28)
- Per Capita SUD Spending (#30)
- SUD Spending within IMDs (#29)
- Per Capita SUD Spending within IMDs (#31)
- Emergency Department Utilization for SUD per 1,000 Medicaid Beneficiaries (#23)
- Inpatient Stays for SUD per 1,000 Medicaid Beneficiaries (#24)
- Readmissions Among Beneficiaries with SUD (#25)

Access

- Count of All SUD Providers (#13)
- Count of Beneficiaries by Service Type (#6-#12)
- Average LOS in IMD

For each metric listed above, B&A is reporting on the demonstration population as a whole as well as each of the eight sub-populations identified.

The secondary driver metrics developed by B&A for this waiver evaluation are shown below.



Methodological Limitations

The greatest limitation known to date in reporting findings in this Interim Evaluation is the length of time of the evaluation period. It is not expected that a two-year evaluation period, assuming year one as the benchmark period, will be sufficient time to observe changes in all measures of interest. Due to the required delivery date of this Interim Evaluation, B&A is relying on descriptive statistics to show trends as opposed to stating findings that require the rigor of applying statistical significance tests. Even when these tests are applied in the Summative Evaluation, the time period in Indiana's waiver may be insufficient to observe statically significant differences for some outcomes in the SUD population. B&A does expect some process measures to show a change during this time frame.

Moreover, with any study focused on the SUD population and potentially rare outcome measures, such as overdose rates, insufficient statistical power to detect a difference is a concern. For any observational studies, especially if the exposures and the outcomes being assessed are rare, it is difficult to find statistically significant results. It is not unexpected, therefore, that many of the outcome measure sample sizes will be too small to observe statistically significant results.

Related to the issues mentioned above, many of the outcome measures are multi-dimensional and influenced by social determinants of health. While changes under the waiver related to access to care may be one dimension of various outcomes of interest and may contribute to improvements, it may be difficult to achieve statistically significant findings in the absence of data on other contributing dimensions such as social determinants of health (e.g., housing, employment and previous incarcerations).

With these caveats, it should be noted that although the waiver is new, there were no identified implementation delays or other outstanding concerns.

Conclusions to Date

In the 11 months since the waiver was implemented[1], early trends on metrics are encouraging but also provide evidence of areas where performance could improve. In the first annual period post-waiver, period (CY 2018) compared to the corresponding pre-waiver annual period (CY 2017), the state performed as expected on 64% of the metrics evaluated (18 out of 28).

[1] The effective date of Indiana's 1115 SUD waiver was February 1, 2018; however, to ensure comparable time periods, a full calendar year of CY 2017 and CY 2018 data were used to compute the pre- and post- waiver period. See Section III Methodology for more details.

B&A measured 28 metrics in this Interim Evaluation. Among quality metrics, eight out of 11 (73%) were as desired. Among cost metrics, four out of seven (57%) were as desired. Among access metrics, six out of ten (60%) were as desired.

Domain	Quality	Cost	Access	Total
# of Metrics	11	7	10	**28**
# Observed Trend=Desired	8	4	6	**18**
# Observed Trend=Not Desired	3	3	4	**10**

B&A built dashboards of the conclusions for the first three hypothesis questions investigated. The dashboards use a mix of red, yellow and green coloring to indicate whether the observed trend in the CY 2017 period compared to the CY 2018 is as desired for the demonstration population and sub-populations. Specifically, the green shading indicates that the observed trend between was as expected, yellow is neutral, and red is not as expected. The dashboards appear on the next two pages.

Conclusions from B&A's Focus Studies

Given that the experience period for this focus studied covered only the first 11 months of the waiver, final conclusions cannot yet be drawn. B&A was able to observe some findings, however, which will serve as benchmark data when results continue to be trended over the course of the waiver.

- The rates of inpatient authorization requests submitted, when controlled for volume, are not consistent across MCEs. The range was from a low of 1.9% of requests from providers for MHS members identified with SUD to 9.5% for CareSource members. The rates also varied for residential treatment authorization requests, but not as much as was found for inpatient.

- The rates of denied authorization requests were also not consistent by MCE. When SUD-related authorizations were specifically considered, 18% of requests in the first year of the waiver were denied by MCEs. By MCE, the denial rates were 21% for Anthem and CareSource, 13% for MDwise, and 3% for MHS. When authorizations for inpatient and residential were reviewed independently, there was also variation found in the denial rates across the MCEs.

- Most authorization denials were cited by the MCEs as lack of medical necessity (92% for inpatient and 68% for residential treatment).

- When stepping down from ASAM level 4.0, very few (under 2%) beneficiaries had a follow-up stay in a residential treatment setting. The percentage of members who utilized Intensive Outpatient / Partial Hospitalization (IOP/PH) in the 12 weeks after their inpatient anchor event varied between 8.3% and 13.6% depending upon the type of inpatient anchor event (alcohol-related, drug-related, or alcohol and drug-related).

- When the ASAM level 3.5 was considered as the anchor, there is little distinction in the rate of utilization for IOP/PH and MAT for members either in the 12 weeks prior to their ASAM 3.5 residential stay or the 12 weeks after discharging from their ASAM 3.5 residential stay. For IOP/PH, the rates were 18.0% prior to and 14.9% after the residential stay. For MAT, the rates were 30.2% prior to and 27.0% after the residential stay.

Dashboard of Desired versus Observed Trends, CY 2017 to CY 2018
For Quality and Cost Metrics by Sub-population

Quality Metrics											
Population	**#2 Number of SUD Benefici-aries #3**	**#2 Number of New Diagnosed SUD Beneficiaries**	**#15a Rate of Initiation**	**#15b Rate of Engage-ment**	**#5 Number of Beneficiaries Treated in IMD**	**#17a Rate of Follow-up after AODD ED 7 days**	**#17b Rate of Follow-up after AODD ED 30 days**	**#22 Continuity of Pharma-cotherapy for Opioid**	**#21 Concurrent Use of Opioid and Benzo**	**#18 Use of Opioids in High Dose**	**#19 Use of Opioids from Multiple Providers**
Demonstration	Increase	Increase	Decrease	Increase	Decrease	Increase	Increase	Increase	Decrease	Increase	Decrease
Model	Increase	Increase	Decrease	Increase	Decrease	Increase	Increase	Decrease	Decrease	Increase	Decrease
Duals	Increase	Increase	Increase	Decrease	Decrease	Increase	Decrease	Neutral	Decrease	Increase	Decrease
OUD	Increase	Increase	Decrease	Increase	Decrease	Increase	Increase	Decrease	Decrease	Decrease	Decrease
Pregnant	Increase	Increase	Increase	Increase	Increase	Increase	Increase	Increase	Decrease	Neutral	Decrease
Criminally Involved	Decrease	Decrease	Increase	Increase	Decrease	Increase	Increase	Decrease	Decrease	Increase	Increase
MRO	Increase	Increase	Decrease	Decrease	Decrease	Increase	Increase	Decrease	Decrease	Decrease	Decrease

Cost Metrics							
Population	**#28 Total SUD Expenditures**	**#29 Per Capita SUD Expenditures**	**#30 SUD Expenditures in IMD**	**#31 Per Capita SUD Expenditures in IMD**	**#23 Emergency Department Utilization for SUD per 1,000**	**#24 Inpatient Utilization for SUD per 1,000**	**#25 Readmissions for SUD population**
Demonstration	Increase	Increase	Increase	Increase	Increase	Increase	Increase
Model	Increase	Increase	Decrease	Increase	Increase	Decrease	Increase
Duals	Increase	Decrease	Increase	Decrease	Increase	Increase	Decrease
OUD	Increase	Decrease	Decrease	Increase	Decrease	Decrease	Increase
Pregnant	Increase	Increase	Increase	Increase	Increase	Increase	Decrease
Criminally Involved	Increase	Decrease	Increase	Increase	Increase	Increase	Increase
MRO	Increase	Decrease	Decrease	Decrease	Decrease	Decrease	Decrease

Dashboard of Desired versus Observed Trends, CY 2017 to CY 2018
For Access Metrics by Sub-population

Access to Care Metrics										
Population	**#13 SUD Provider Availability**	**#32 Preventative Care**	**#6 Number of Beneficiaries Using Any SUD Treatment**	**#7 Number of Beneficiaries Using Early Intervention**	**#8 Number of Beneficiaries Using Outpatient**	**#9 Number of Beneficiaries Using IOP/PHP**	**#10 Number of Beneficiaries Using Residential and Inpatient**	**#11 Number of Beneficiaries Using Withdrawal Management**	**#12 Number of Beneficiaries Using MAT**	**#36 Average Length of Stay in an IMD**
Demonstration	Increase	Increase	Increase	Decrease	Increase	Decrease	Increase	Increase	Increase	Decrease
Model	Increase	Increase	Increase	Decrease	Increase	Decrease	Increase	Increase	Increase	Decrease
Duals	Increase	Decrease	Increase	Increase	Increase	Decrease	Increase	Decrease	Increase	Increase
OUD	Increase	Increase	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease
Pregnant	Increase	Increase	Increase	Increase	Increase	Increase	Increase	Increase	Increase	Increase
Criminally Involved	Increase	Decrease	Decrease	Neutral	Decrease	Decrease	Increase	Increase	Decrease	Decrease
MRO	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Increase	Increase	Decrease

Interpretations

B&A identified four key interpretations from the interim evaluation conclusions. More details are provided in Section VII of this Interim Evaluation that include interpretations for each hypothesis and research question examined.

1. The number of beneficiaries diagnosed with SUD continues to grow, but the number receiving services and the provider capacity to deliver services is scaling up in response.
2. The state performed as desired on most primary and secondary drivers evaluated, but there are potential areas of consideration across all three domains--quality, cost and access--to monitor and potentially address in future demonstration years.
3. Operational procedures are in place for authorization approval, but consistency across the delivery systems and additional provider education is warranted.
4. Protocols to transition beneficiaries across the ASAM continuum of care were immature in the first year of the waiver. This appears to be a result of a growing provider base across the ASAM continuum and learning from both MCEs and providers.

Based on these initial conclusions and our interpretations, B&A identified 11 policy implications that could influence future results. These are identified in Section VII.

Lessons Learned

1. Computing SUD metrics for an individual state Medicaid program is nuanced and requires rigorous comparison between national specifications and state-specific billing practices.
2. There must be sufficient time required in order to ensure data used in metric computations are valid and robust.
3. For a comprehensive evaluation that analyzes findings across multiple sub-populations, additional data sources beyond enrollment, claims and encounter data are often required. Prior to developing an evaluation design, sufficient due diligence must be completed to map not only the feasibility, but the reliability of data sources that will be integrating into the evaluation from sources outside of the State Medicaid Agency.
4. SUD waiver implementations, in particular, require a systematic and coordinated approach across multiple state agencies not only in the development of the waiver but throughout the implementation.
5. Engagement with stakeholders who will deliver services—namely SUD providers and managed care entities (MCEs)—is essential on an ongoing basis throughout the demonstration. Careful planning on training and communications is needed to set expectations on implementation activities.
6. Due to the aggressive timeframe of the rollout of waiver implementation activities immediately after notice of award from CMS, the FSSA's Office of Medicaid Policy and Planning and Division of Mental Health and Addiction developed workgroups with its MCEs and providers to work through operational tasks and policies in relative real time. The FSSA has been active in continuing these workgroups and have evolved the information and training sessions that serve as agenda items at workgroup meetings as the waiver implementation continues to mature.

Recommendations

With the information learned to date, B&A offers recommendations to the FSSA as waiver implementation activities continue to evolve. These recommendations are enumerated in Section VIII. Among the 22 total recommendations,

- Eight recommendations focus on quality of care
- Three recommendations focus on cost of care
- Six recommendations focus on access to care
- Five recommendations focus on ongoing operations and internal evaluation by the FSSA

SECTION I: GENERAL BACKGROUND INFORMATION

I.A INTRODUCTION

Indiana, along with a number of states, is in the midst of a substantial drug abuse epidemic. The magnitude of the epidemic is demonstrated by the following facts:

- Nearly six times as many Hoosiers died from drug overdoses in 2014 as did in 2000, and the number of heroin overdose deaths increased by nearly 25 times between 2000 and 2014.[1]
- In 2014, Indiana had the 16th highest drug overdose death rate in the nation, which represented a statistically significant increase in the rate from 2013.[2]
- Since 2009, more Hoosiers have lost their lives due to a drug overdose than in automobile accidents on state highways.[3]
- The State's Medicaid population has been particularly impacted by the crisis with nearly 100,000 individuals treated for a diagnosis of substance use disorder in 2016.[4]

As an outgrowth of recommendations made by the State's Taskforce on Drug Enforcement, Treatment, and Prevention, the Family and Social Services Administration (FSSA) requested a waiver from the Centers for Medicare and Medicaid (CMS) under the authority of section 1115(a) of the Social Security Act. The waiver request was to add new evidence-based substance use disorder (SUD) treatment services and to expand access to qualified providers through a waiver of the Institution for Mental Diseases (IMD) exclusion. As proposed, the SUD services would be available to all Medicaid beneficiaries, not just those eligible as a result of the demonstration waiver. The waiver application was submitted on January 31, 2017 and amended on July 20, 2017.

I.B NAME, APPROVAL DATE AND TIME PERIOD COVERED

Name: Healthy Indiana Plan
Project Number: 11-W-00296/5
Approval Date: February 1, 2018
Interim Evaluation Time Period: Due to the timing of the approved waiver (February 1, 2018 through December 31, 2020) and the fact that Indiana is preparing to submit a waiver extension application, the Interim Evaluation is being prepared in advance of the original schedule. This will allow for the state to post the Interim Evaluation with its waiver extension application for public comment in accordance with 42 CFR 431 Subpart G. As a result, the study period for the Interim Evaluation includes three years of pre-waiver data, but the timing restrictions only permit one year of waiver data for annual metrics and 15 months of waiver data for monthly metrics.

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[1] Indiana State Department of Health, Indiana: Special Emphasis Report, Drug Overdose Deaths, 1999-2013 (2016), available at http://www.in.gov/isdh/files/2016_SER_Drug_Deaths_Indiana.pdf.

[2] R. Rudd et al., Increases in drug and opioid overdose deaths — United States, 2000–2014, 64(50) Morbidity and Mortality Weekly Report 1378 (2016).

[3] Indiana State Department of Health, Indiana: Special Emphasis Report, Drug Overdose Deaths, 1999-2013 (2015), available at http://www.in.gov/isdh/files/2015_SER_Drug_Deaths_Indiana_Updated.pdf

[4] State of Indiana 1115 SUD Waiver Implementation Plan, page 4, available at https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/in/Healthy-Indiana-Plan-2/in-healthy-indiana-plan-support-20-sud-implementation-prtcl-appvl-02012018.pdf

I.C DEMONSTRATION GOALS

On February 1, 2018, Indiana also received approval of its SUD Implementation Protocol as required by special terms and conditions (STC) X.10 of the state's section 1115 Healthy Indiana Plan (HIP) demonstration. As set forth in the Implementation Plan, Indiana is aligning the six goals for the SUD waiver component with the milestones outlined by CMS as follows: [5]

1. Increased rates of identification, initiation, and engagement in treatment;
2. Increased adherence to and retention in treatment;
3. Reductions in overdose deaths, particularly those due to opioids;
4. Reduced utilization of emergency departments and inpatient settings for treatment where the utilization is preventable or medically inappropriate through improved access to other continuum of care services;
5. Fewer readmissions to the same or higher level of care where the readmission is preventable or medically inappropriate; and
6. Improved access to care for physical health conditions among beneficiaries.

To accomplish these six goals, Indiana Medicaid is focusing on the three following areas: [6]

- Expanded SUD treatment options for as many of its members as possible;
- Stronger, evidence-based certification standards for its SUD providers, particularly its residential addiction providers; and
- Consistency with prior authorization criteria and determinations among its health plans.

In support of these focus areas, Indiana Medicaid and CMS identified six key milestones, as described in their approved Implementation and Monitoring Plan, which include:[7]

1. Access to critical levels of care for SUD treatment;

2. Use of evidence-based SUD-specific patient placement criteria; prior-authorization, providers, payers; matching need to capacity

3. Use of nationally recognized SUD-specific program standards to set provider qualifications for residential treatment facilities;

4. Sufficient provider capacity at critical levels of care, including medication assisted treatment for opioid use disorder (OUD);

5. Implementation of comprehensive treatment and prevention strategies to address opioid abuse and OUD; and

6. Improved care coordination and transition between levels of care.

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[5] State Medicaid Director Letter #17-003 RE: Strategies to Address the Opioid Epidemic, November 1, 2017, available at https://www.medicaid.gov/federal-policy-guidance/downloads/smd17003.pdf

[6] Indiana 1115 SUD Waiver Implementation Plan, Updated January 2018, page 4, available at https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/in/Healthy-Indiana-Plan-2/in-healthy-indiana-plan-support-20-sud-implementation-prtcl-appvl-02012018.pdf

[7] Indiana 1115 SUD Waiver Implementation Plan, Updated January 2018, pages 4 – 30, available at https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/in/Healthy-Indiana-Plan-2/in-healthy-indiana-plan-support-20-sud-implementation-prtcl-appvl-02012018.pdf

I.D BRIEF DESCRIPTION AND HISTORY OF IMPLEMENTATION

Indiana's approved Implementation Protocol identified specific activities under each milestone with anticipated implementation dates. Since receiving approval of the SUD waiver, the Indiana FSSA has been engaged in implementation activities as found in Exhibit I.1. Over the first 18 months of the waiver, Indiana FSSA has completed 22 out of the 31 identified activities in the Implementation Protocol. Of the nine action items not completed, Indiana FSSA is in progress to implement all but the per diem reimbursement for inpatient SUD stays (Item 10). For this item, the State is continuing to pay for those stays on a per discharge basis.

Exhibit I.1
Status of Indiana SUD Waiver Implementation Activities and Timeline

	Implementation Protocol Section	Action	Implementation Timeline	Was Action Completed?	If Yes, Date Completed	Completed on Time?
1	Access to Critical Levels of Care for SUD Treatment	Pursue Indiana Administrative Code (IAC) change for coverage and reimbursement of OTPs	Will be filed by 12/31/18; completed prior to protocol approval	Yes	9/1/2017	Yes
2		Pursue IAC amendments to Mental Health Services Rule	Will be filed by 12/31/18	No		
3		Pursue IAC change to remove Intensive Outpatient Treatment (IOT) from MRO	Will be filed by 12/31/18	No		
4		Pursue State Plan Amendment (SPA) to move IOT coverage from MRO	Will be filed by 6/30/18	Yes	10/3/2018	No
5		Pursue amendment to 1915(b)(4) waiver	Will be filed by 6/30/18	No		
6		Make necessary system changes to CoreMMIS to remove IOT from MRO	Will be completed by 6/30/18	Yes	7/1/2019	No
7		Develop provider communication over new benefits-billing for IOT/IOP (Intensive Outpatient Program)	Contingent upon approval of SPA	Yes	5/30/2019 BT201929	Yes
8		Make necessary system change to CoreMMIS to enroll residential addiction facilities and to reimburse for residential treatment	Will be completed by 3/1/18	Yes	3/1/2018	Yes
9		Develop provider communication over new benefits-residential treatment	Ongoing and as part of roll-out	Yes	Initial 1/4/2018	Yes
10		Determine final action and necessary system changes to CoreMMIS to allow reimbursement for inpatient SUD stays on a per diem basis	Fall 2018	No		
11		Develop provider communication over new benefits-inpatient SUD stays	Ongoing and as part of roll-out	Yes	Initial 1/4/2018 BT201801	Yes
12		Make necessary system changes to allow reimbursment for Addiction Recovery Management Services	Spring 2018	Yes - excludes Recovery-Focused Case Management	7/1/2019	No
13		Pursue SPA to add coverage and reimbursement of Addiction Recovery Management Services	Spring 2018	Yes	10/3/2018	No
14		Pursue IAC changes to add coverage of Addiction Recovery Management Services	Will be filed by 12/31/18	No		
15		Develop provider communication over new benefits Addiction Recovery Management Services	Ongoing and as part of roll-out	Yes - excludes Recovery-Focused Case Management	Initial 5/30/2019 BT201929	
16		Invite representatives from each of the MCEs, the Indiana Housing and Community Development Authority (IHCDA) and other interested stakeholders towards developing a supportive housing solution	No specific date- implied some time in 2018	No		
17		Establish allowed criteria to use for authorizing inpatient detoxification	Bulletin BT201632 was already released when this protocol was approved. Clarified with BT201821 that MCG required for MCEs/FFS.	Yes	8/1/2016 & 5/22/2018	Yes

Exhibit I.1
Status of Indiana SUD Waiver Implementation Activities and Timeline – Continued[8]

	Implementation Protocol Section	Action	Implementation Timeline	Was Action Completed?	If Yes, Date Completed	Completed on Time?
18	Use of Evidence-Based SUD-Specific Patient Placement Criteria	Provider education on ASAM criteria	Ongoing throughout 2018	Yes	Initial 5/22/2018 BT201821	
19		Development of standard prior authorization SUD treatment form	Completed by 7/1/18	Yes	3/15/2019	No
20		Review contracts and pursue amendments, where necessary, for MCE and CMCS contracts	Filed by 7/1/18	Yes - MCEs	2/24/2018 - MCEs	Yes - MCEs
21		Review CANS/ANSA for alignment with ASAM crtieria	Completed by 12/31/18	No		
22	Use of Nationally Recognized SUD-Specific Program Standards for Residential Treatment	Finalize process for provisional ASAM designation	Completed by 12/31/17	Yes	1/4/2018 (BT201801)	No
23		Insert permanent certification language in IAC	Completed by 12/31/18	No		
24	Sufficient Provider Capacity at Critical Levels of Care	Create new provider specialty for residential addictions facilities	Completed by 3/1/18	Yes	3/1/2018	Yes
25		Data reporting by provider specialty and ASAM level of care	Completed by 3/31/18	Yes	Q1 2018 report	Yes
26		New training materials on 1115-approved services as well as provider enrollment for residential facilities	Completed by early 2018	Yes	Initial 1/4/2018	Yes
27		Assessment of ASAM providers and services (by level of care, includes MAT)	Completed by 12/31/18	Yes	Q3 2018 report	Yes
28	Implementation of Comprehensive Treatment and Prevention Strategies to Address Opioid Abuse	Consider options for emergency responder reimbursement of naloxone	Completed by early 2018	Yes	Q1 2018 report	Yes
29		Integrate all Indiana hospitals with INSPECT (the State's prescription drug monitoring program)	Completed "within 3 years"	No		
30		Expand coverage of peer recovery coaches	No specific date	Yes	7/1/2019	Yes
31	Improved Care Coordination and Transitions Between Levels of Care	Extend MCE case management to individuals transitioning from residential treatment facilities	No specific date	Yes	Amendment 4 - eff. 2/24/2018	Yes

[8] State of Indiana 1115 SUD Waiver Implementation Plan, pages 5-30, available at https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/in/Healthy-Indiana-Plan-2/in-healthy-indiana-plan-support-20-sud-implementation-prtcl-appvl-02012018.pdf

I.E POPULATION GROUPS IMPACTED

Overview of Indiana's Medicaid Program

The FSSA's Office of Medicaid Policy and Planning (OMPP)[9] has responsibility for the administration and oversight of Indiana's Medicaid program under waiver and state plan authorities. Nearly three out of four individuals are enrolled in one of the State's three risk-based managed care programs that each serves a targeted population—Hoosier Healthwise, Healthy Indiana Plan and Hoosier Care Connect.

The approved waiver provides access to the enhanced SUD benefit package for all Indiana Medicaid recipients. Any Indiana Medicaid beneficiary with SUD is eligible to receive SUD services delivered through fee-for-service (FFS) or managed care delivery systems using managed care entities (MCEs). [10]

The **Hoosier Healthwise (HHW)** program began in 1994 with members having the option to enroll with an MCE in 1996. By 2005, enrollment with an MCE was mandatory for select populations, namely, low income families, pregnant women, and children. Enrollees in Indiana's Children's Health Insurance Program (CHIP), which covers children in families up to 250 percent of the Federal Poverty Level (FPL), are also enrolled in HHW. This program is authorized by a 1932(a) state plan amendment.

The **Healthy Indiana Plan (HIP)** was first created in January 2008 under a separate Section 1115 waiver authority. This program covered two groups of adults with family income up to 200 percent of the FPL. The first group was uninsured custodial parents and caretaker relatives of children eligible for Medicaid or CHIP who were not otherwise eligible for Medicaid or Medicare. The second group was uninsured noncustodial parents and childless adults ages 19 through 64 who were not otherwise eligible for Medicaid or Medicare.

The State received a new Section 1115 demonstration waiver authority from CMS to change the design of HIP (the original version now called HIP 1.0) to a non-traditional Medicaid model (the new version called HIP 2.0) that effectively terminated HIP 1.0 on January 31, 2015. The HIP 2.0 model is a health insurance program for uninsured adults between the ages of 19 and 64. The **HIP 2.0** program began February 1, 2015. In addition to the existing HIP 1.0 enrollees, adults from the HHW program (with some exceptions) were transitioned into HIP 2.0. Additionally, the marketplace was open for new uninsured Hoosiers who met the enrollment criteria to join HIP 2.0 at this time.

The HHW and HIP were aligned in Calendar Year (CY) 2011 under a family-focused model such that the programs were aligned to allow a seamless experience for Hoosier families and to establish a medical home model for continuity of care. The same MCEs were contracted to serve both the HHW and HIP populations.

The **Hoosier Care Connect (HCC)** program was implemented April 1, 2015 under a 1915(b) waiver authority. The HCC is a risk-based program that contracts with MCEs to administer and to deliver services to aged, blind and disabled members. The HCC replaced a predecessor program, Care Select, which ended June 30, 2015. Two of the MCEs who administer HCC are the same ones that administer HHW and HIP.

[9] FSSA and OMPP are collectively referred to as Indiana Medicaid throughout this report.

[10] In Indiana, the term MCE is synonymous with the term managed care organization and will be used as such throughout this report. It refers to those entities that Indiana Medicaid contracts with under a full-risk arrangement. Each MCE is a health maintenance organization (HMO) authorized by the Indiana Department of Insurance.

Traditional Medicaid (FFS) is comprised of the remaining Medicaid enrollees who are not members of HHW, HIP or HCC. Specifically, the following populations are covered under Traditional Medicaid under a fee-for-service environment:

- Individuals dually enrolled receiving Medicare and Medicaid benefits;
- Individuals receiving home- and community-based waiver benefits;
- Individuals receiving care in a nursing facility or other State-operated facility;
- Individuals in specific aid categories (e.g., refugees); and
- Individuals awaiting an assignment to an MCE.

Applicants to HHW, HIP and HCC are asked to select the MCE they would like to join if determined eligible for the program. If a member does not select an MCE within 14 days of obtaining eligibility, then the OMPP auto-assigns the member to an MCE. Once assigned, the MCE then has 30 days to work with the member to select a primary medical provider (PMP). If the member does not make a selection within this time frame, the MCE will auto-assign the member to a PMP.

There are four MCEs that are under contract with the OMPP to administer services to its managed care programs. Anthem Insurance Companies, Inc. (Anthem) has been under contract with Indiana Medicaid since 2007. Coordinated Care Corporation, Inc. d/b/a Managed Health Services (MHS) is a subsidiary of the Centene Corporation and has been under contract with Indiana Medicaid since the inception of HHW in 1994. MDwise, Inc., subsidiary of McLaren, has also been participating in HHW since its inception. The newest MCE, CareSource, began contracting with the State in January 2017.

Anthem and MHS serve members in all three of the OMPP's managed care programs—HHW, HIP and HCC. CareSource and MDwise serve members in the HHW and HIP programs. A new contract was executed with the MCEs for the HHW and HIP programs in January 2017. The contract for HCC which began April 1, 2015 is still in effect. The OMPP has recently released a Request for Proposal to seek entities to deliver services under a new HCC contract.

In addition to acute care services which include pharmacy and dental, the MCEs in HHW, HIP and HCC are also responsibility for the delivery of behavioral health and substance abuse treatment services.

Enrollment at a Glance

As seen in Exhibit I.2 on the next page, enrollment in Indiana Medicaid's program was between 1.39 million and 1.47 million in CY 2015 through 2018. In each year, managed care enrollment was between 75.7% and 78.5% of total enrollment. The proportion of managed care enrolment across the three programs has been steady in these four years. Enrollment in HHW is approximately 42% of total Indiana Medicaid enrollment. The HIP enrollment comprises approximately 28% of the total and HCC comprises approximately 6%. The fee-for-service program has been steady at approximately 24% of total enrollment.

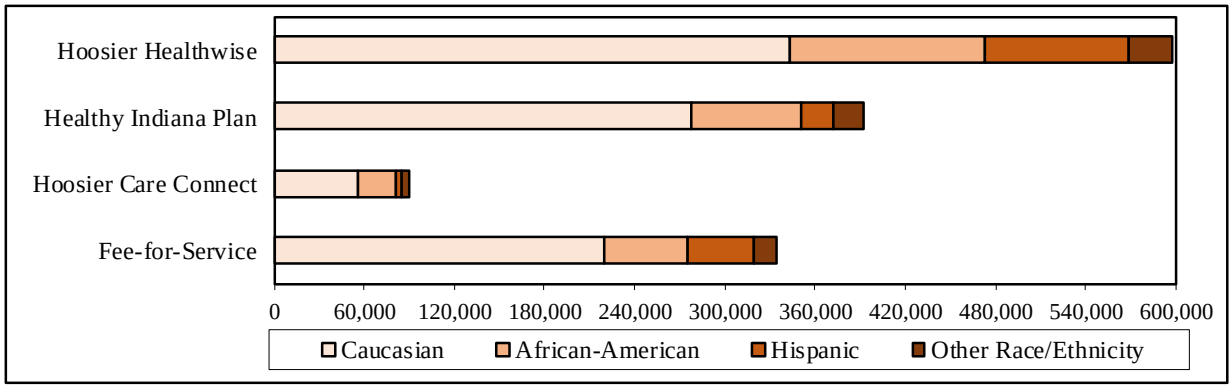
Exhibit I.2
Enrollment Across Indiana Medicaid's Programs, Year End 2015 - 2018

	Managed Care Programs				
	Hoosier Healthwise	**Healthy Indiana Plan**	**Hoosier Care Connect**	**Fee-for-Service**	**All Combined**
December 2015	600,431	355,164	97,609	338,180	1,391,384
	43.2%	25.5%	7.0%	24.3%	100.0%
	75.7%			24.3%	100.0%
December 2016	602,768	404,151	94,438	349,737	1,451,094
	41.5%	27.9%	6.5%	24.1%	100.0%
	75.9%			24.1%	100.0%
December 2017	655,138	414,263	90,462	317,881	1,477,744
	44.3%	28.0%	6.1%	21.5%	100.0%
	78.5%			21.5%	100.0%
December 2018	597,615	392,018	90,488	334,676	1,414,797
	42.2%	27.7%	6.4%	23.7%	100.0%
	76.3%			23.7%	100.0%

Source: OMPP Enterprise Data Warehouse as of August 2019.

As of the end of CY 2018, 63.4% of Indiana Medicaid members were Caucasian, 20.0% were African-American, 11.6% were Hispanic, and 5.0% were of other race/ethnicities (refer to Exhibit I.3 on the next page). There is a slightly higher proportion of Caucasians in HIP than the overall Indiana Medicaid enrollment (71.0% of its total enrollment). There is a higher proportion of Hispanics in HHW than the overall Medicaid enrollment (16.0% of its total). There is a higher proportion of African-Americans in HCC than the overall Medicaid enrollment (27.0% of its total).

Exhibit I.3
Enrollment in Indiana Medicaid's Programs by Race/Ethnicity
As of December 2018



Number of Members	Caucasian	African-American	Hispanic	Other Race/Ethnicity	Total
Hoosier Healthwise	343,000	130,190	95,408	29,017	**597,615**
Healthy Indiana Plan	278,260	72,784	21,295	19,679	**392,018**
Hoosier Care Connect	56,151	24,409	4,166	5,762	**90,488**
Fee-for-Service	219,823	55,427	43,746	15,680	**334,676**

Source: OMPP Enterprise Data Warehouse as of August 2019.

Exhibit I.4 shows that Anthem and MDwise have a similar proportion (32%-34%) of managed care members in HHW, but Anthem is more predominant in both HIP and HCC. As a result, the total enrollment across all three programs at the end of CY 2018 is 40 percent for Anthem, 28 percent for MDwise, 23 percent for MHS and 9 percent for CareSource.

Exhibit I.4
Managed Care Program Enrollment by MCE
As of December 2018

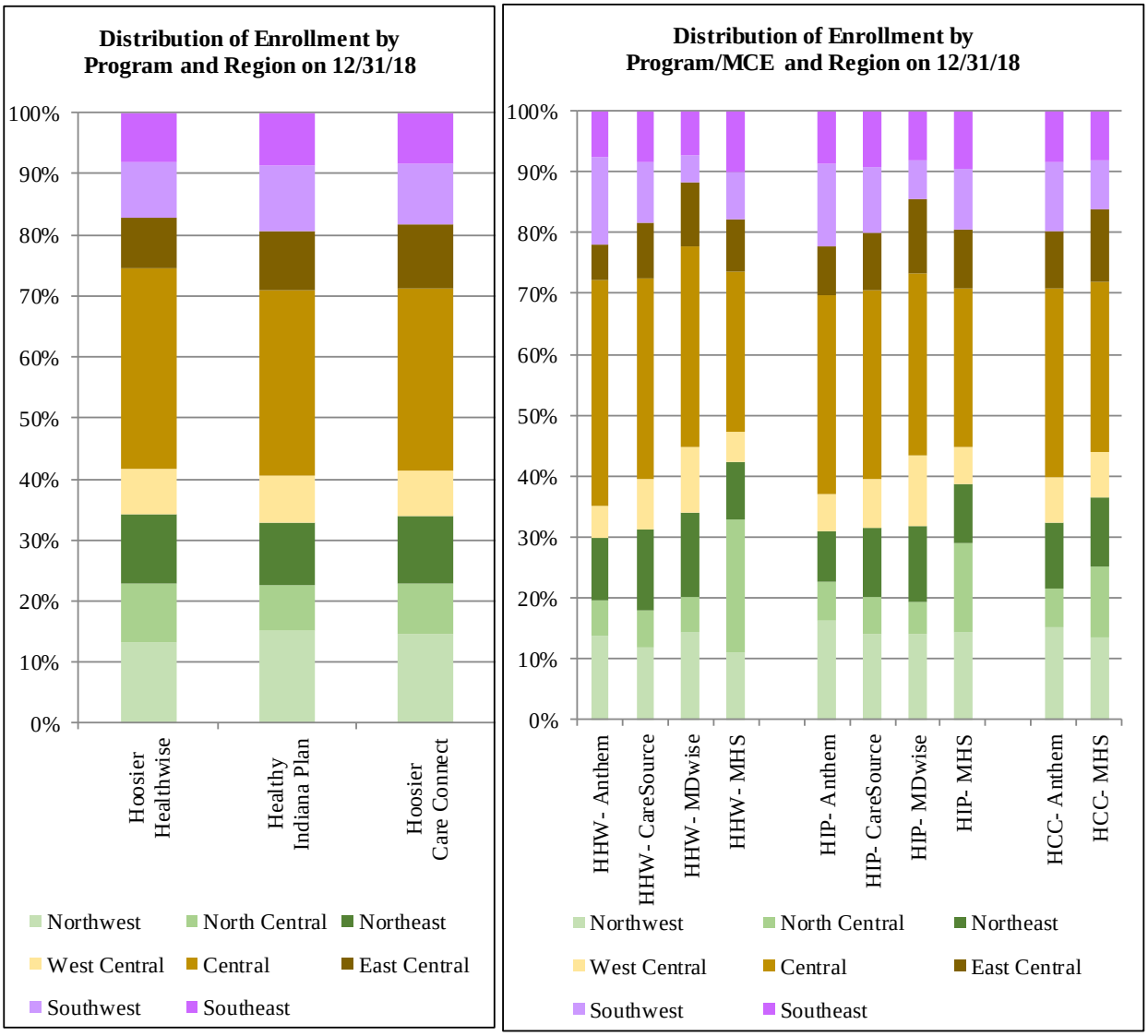
	Hoosier Healthwise	Healthy Indiana Plan	Hoosier Care Connect	All Combined
Anthem	34%	44%	62%	40%
CareSource	9%	11%	0%	9%
MDwise	33%	27%	0%	28%
MHS	24%	18%	38%	23%

Source: OMPP Enterprise Data Warehouse as of August 2019.

Exhibit I.5 on the next page illustrates the enrollment patterns of the three managed care programs across the eight regions defined by the OMPP. Each of the 92 counties in Indiana has been mapped to one of eight MCE regions. The county-to-region mapping appears in Appendix A. There are three regions in the northern part of the state (shown in the green colors), three regions in the central part of the state (shown in the gold/brown colors), and two regions in the southern part of the state (shown in the purple colors).

In general, as seen in the left box of the exhibit, the distribution of the enrollment for HHW, HIP and HCC is consistent across the regions. In the right box of the exhibit, the enrollment is further distributed by both managed care program and MCE. When comparing the left box (statewide) against the right box (by MCE), there is some variation at the MCE level. MHS tends to have a higher percentage of the enrollment the northern regions, MDwise tends to have a higher percentage of the enrollment in the central regions, and Anthem tends to have a higher percentage of the enrollment in the southern regions. This is true for all programs that each of these MCEs is contracted under.

Exhibit I.5
Managed Care Program Enrollment by Region and MCE
As of December 2018



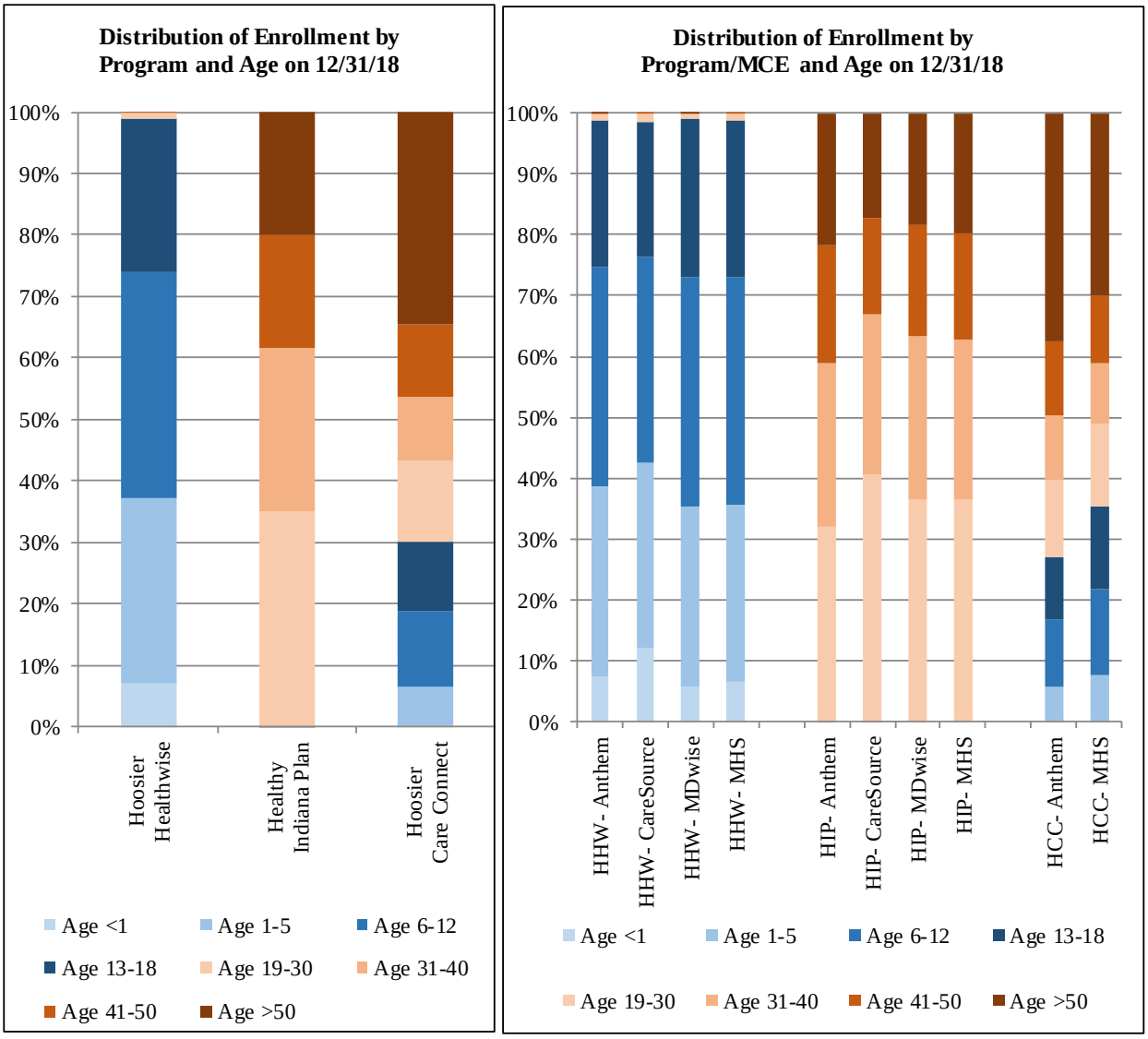
Source: OMPP Enterprise Data Warehouse as of August 2019.

The display for Exhibit I.6 is similar to what was shown in Exhibit I.5, but instead of distributing the enrollment by region, the enrollment is distributed by the age of the members. In this exhibit, the blue colors represent different age groups among children while the peach/orange colors represent different age groups among adults.

Exhibit I.6 illustrates the targeted populations of each of Indiana's managed care programs. As of December 2018, 99 percent of the HHW population is children. With few exceptions, adults that had previously been eligible and enrolled in HHW were transitioned to HIP as of February 1, 2018. Conversely, all of the HIP population is adults. The HCC program is mixed with 30 percent children and 70 percent adults. Even within HCC, the children that are enrolled are mostly older children.

As shown in the boxes below, there are no significant differences in the distribution of the enrollment by age group across the MCEs in any of the three managed care programs.

Exhibit I.6
Managed Care Program Enrollment by Age and MCE
As of December 2018



Source: OMPP Enterprise Data Warehouse as of August 2019.

Indiana Medicaid's SUD Population as of CY 2018

Indiana's SUD population as of CY 2018 included 93,101 beneficiaries, or 6.4% of the enrolled Medicaid population. By nature of the fact that Medicaid adults are primarily enrolled in HIP, this program has most of the individuals identified with a SUD diagnosis. However, the percentage of members in HCC with a SUD diagnosis is a higher percentage than HCC's enrollment as a percent of total Medicaid enrollment. Also, the SUD population had a higher proportion of beneficiaries receiving Medicaid Rehabilitation Option (MRO) services than the enrolled population. The distribution of SUD beneficiaries in MCEs were similar to the enrolled population as were the percent of the populations that were dually-eligible, pregnant, and criminally involved.

Exhibit I.7
Comparison of Medicaid Members with SUD Diagnosis to Total Enrollment
In Waiver Period Calendar Year 2018

Category	Total Enrollment	Percent of Enrolled in the Category	Individuals with a SUD Diagnosis	Percent of Enrolled in the Category	Percent of All Individuals with a SUD Diagnosis
Total Demonstration Population	**1,446,284**	**100.0%**	**93,101**	**6.4%**	**100.0%**
By Delivery System					
Hoosier Healthwise (HHW)	625,574	43.3%	6,903	1.1%	7.4%
Healthy Indiana Plan (HIP)	403,006	27.9%	62,349	15.5%	67.0%
Hoosier Care Connect (HCC)	90,083	6.2%	9,957	11.1%	10.7%
Fee-for-Service (FFS)	327,621	22.7%	13,892	4.2%	14.9%
In Managed Care Model (HHW, HIP and HCC Combined)					
All MCEs	1,118,663	100.0%	77,931	7.0%	100.0%
Anthem	439,075	39.2%	38,536	8.8%	49.4%
CareSource	104,543	9.3%	6,705	6.4%	8.6%
MDwise	321,897	28.8%	17,779	5.5%	22.8%
MHS	253,148	22.6%	14,911	5.9%	19.1%
By Age Group					
Age Less than 18	668,495	46.2%	3,068	0.5%	3.3%
Age 18 to 64	672,224	46.5%	86,670	12.9%	93.1%
Age 65 and Over	105,565	7.3%	3,231	3.1%	3.5%
By Cohort Population					
Dual Eligible	138,736	9.6%	9,915	7.1%	10.6%
Pregnant	28,745	2.0%	1,672	5.8%	1.8%
Criminally Involved	4,533	0.3%	330	7.3%	0.4%
MRO	41,009	2.8%	7,010	17.1%	7.5%

Note that there is a slight difference between the count of member in managed care in the By Delivery System section (n= 79,209) and the sum for All MCEs in the Managed Care Model section (n= 77,931) because B&A was not able to attribute all members to a specific MCE due to incomplete data in the State's data warehouse.

Indiana Medicaid's SUD System of Care as of CY 2018

Indiana Medicaid provides coverage of SUD treatment services to its members based on standards outlined through the American Society of Addiction Medicine (ASAM). Exhibit I.8 provides an overview of each ASAM level of care with Indiana Medicaid coverage pre- and post-waiver implementation. Many services that align with an ASAM level of care were covered prior to the implementation of the 1115 demonstration waiver. As part of the waiver implementation, Indiana is modifying coverage to move what had been MRO services to state plan services. These will be available to all Medicaid members.

Exhibit I.8
Indiana Medicaid Coverage Pre- and Post-Waiver by ASAM Level of Care

ASAM	Service Title	Description	Pre-Waiver Coverage	Post-Waiver Coverage
OTP	Opioid Treatment Program	Pharmacological and non-pharmacological treatment in an office-based setting (methadone)	Currently covered for all (as of Sept. 2017)	Continued oversight of new policy
0.5	Early Intervention	Services for individuals who are at risk of developing substance-related disorders	Currently covered for all	No change expected
1.0	Outpatient Services	Outpatient treatment (usually less than 9 hours a week), including counseling, evaluations and interventions	Currently covered for all	No change expected
2.1	Intensive Outpatient Services	9-19 hours of structured programming per week (counseling and education about addiction-related and mental health programs)	Currently MRO-only	Will be covered for all individuals
2.5	Partial Hospitalization	20 or more hours of clinically intensive programming per week	Covered for all	No change expected
3.1	Clinically Managed Low-Intensity Residential	24-hour supportive living environment; at least 5 hours of low-intensity treatment per week	No coverage	Bundled daily rate for residential treatment
3.5	Clinically Managed High-Intensity Residential	24-hour living environment, more high-intensity treatment (level 3.7 without intensive medical and nursing component)	No coverage	Bundled daily rate for residential treatment
3.7	Medically Monitored Intensive Inpatient Services	24-hour professionally directed evaluation, observation, medical monitoring, and addiction treatment in an inpatient setting	Covered for all (based on medical necessity)	Align authorization criteria with ASAM
4.0	Medically Managed Intensive Inpatient	24-hour inpatient treatment requiring the full resources of an acute care or psychiatric hospital	Covered for all (based on medical necessity)	Align authorization criteria with ASAM
Sub-Support	Addiction Recovery Management Services	Services to help people overcome personal and environmental obstacles to recovery, assist the newly recovering person into the recovering community, and serve as a personal guide and mentor toward the achievement of goals	No coverage	Covered for all individuals
	Supportive Housing Services	Services for individuals who are transitioning or sustaining housing.	No coverage	Explore options for coverage

Snapshot of Key Providers in SUD System of Care by ASAM Level

A breakdown of the count of SUD providers in CY 2018, by provider type and specialty groups, are included in Exhibit I.9. This breakdown excludes MAT providers.

Exhibit I.9
Count of Enrolled Medicaid SUD Provider Type + Specialty Groups as of End of CY 2018 (excludes MAT)

Provider and Specialty Grouping	Count of Providers	Percent of Total
Addiction Services - Opioid Treatment Programs	21	0.5%
Addiction Services - SUD Residential Addiction Treatment Programs	31	0.7%
Hospital - Psychiatric	164	3.8%
Mental Health Provider - Community Mental Health Center entities	24	0.6%
Mental Health Provider - Heath Service Provider in Psychology	23	0.5%
Mental Health Provider - Outpatient Mental Health Clinic	898	21.0%
Mental Health Provider - Psychologist	310	7.3%
Ordering, Prescribing or Referring Provider - Addiction Medicine	58	1.4%
Ordering, Prescribing or Referring Provider - Clinical Psychologist	12	0.3%
Ordering, Prescribing or Referring Provider - Clinical Social Worker	677	15.9%
Ordering, Prescribing or Referring Provider - Mental Health	174	4.1%
Physician - Psychiatrist	1,879	44.0%
Duplicated Total	**4,271**	**100.0%**

Note: It is possible that providers could be in more than one specialty.

Early intervention can occur across multiple provider types and settings of care. Specialized SUD services start with ASAM l.0 Outpatient and range through 4.0 Medically Managed Intensive Inpatient. A variety of provider types that provide SUD can provide each service.

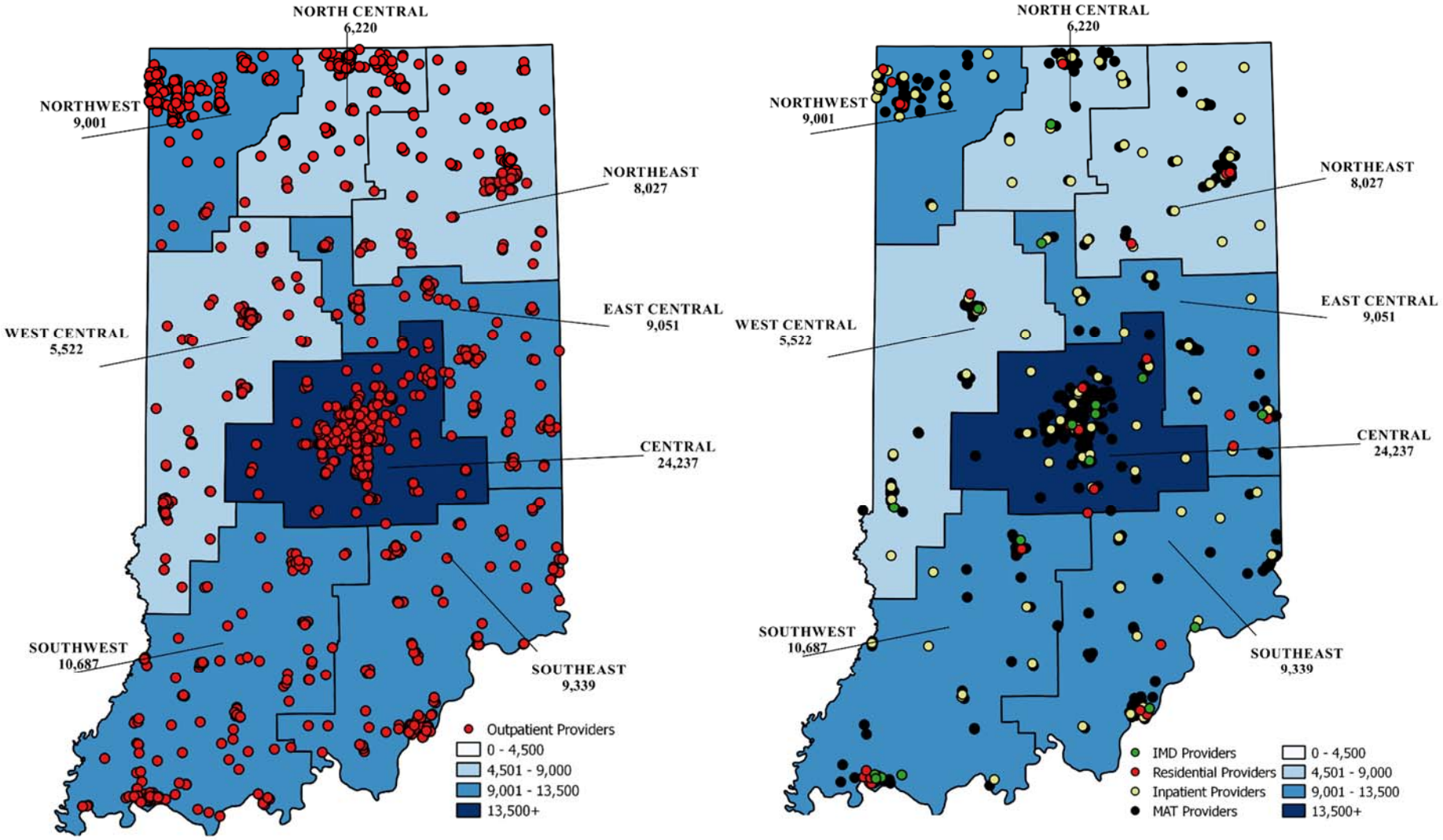
Data was available on the density of outpatient, residential treatment, IMDs and inpatient SUD hospitals by region in CY 2018. Exhibit I.10 summarizes baseline counts of SUD providers in CY 2018 for which data was available (based on claims billing). Counts of IMDs and Residential providers are small relative to other components of the system.

Exhibit 1.11 on the next page displays a heat map of the number of beneficiaries with a SUD diagnosis in CY 2018 by region along with the provider locations for which data was available. Indiana's density of SUD providers generally follows the regional distribution of SUD diagnosis.

Exhibit I.10
Count of Enrolled Medicaid SUD Providers as of End of CY 2018

Provider Type	Count of Providers
IMD	17
Residential Treatment	37
MAT	725
Inpatient	139
Outpatient	2,516
Total	**3,434**

Exhibit I.11
Heat Maps of the Number of Beneficiaries with a SUD Diagnosis in CY2018 by Region
Plotted with Locations of ASAM Level 2.0 – 4.0 + MAT Providers



SECTION II: EVALUATION QUESTIONS AND HYPOTHESES

II.A DEFINING RELATIONSHIPS: AIMS, PRIMARY DRIVERS, AND SECONDARY DRIVERS

Burns & Associates, Inc. (B&A), the Independent Evaluator, examined the relationships between the CMS goals and Indiana Medicaid-delineated interventions included in the 1115 waiver and approved Implementation Plan. As part of the examination of the relationships between goals and the interventions, B&A constructed two driver diagrams identifying primary and secondary drivers of two principle aims: 1) reducing overdose death; and 2) reducing costs. The driver diagrams summarized in Exhibit II.1 and Exhibit II.2 on the following two pages are part of the approved Evaluation Design Plan.

B&A chose overdose deaths as the first aim because it is a measurable health outcome. CMS goals related to improved quality of care were determined to all have the potential to contribute to a reduction in overdose deaths and, therefore, are included as primary drivers. In turn, the specific actions described in the Implementation Plan which would be designed to improve these measures of quality of care were considered as secondary drivers.

Reductions in per capita costs of the SUD population is the second defined aim based on CMS interest on whether the investments in SUD services made as part of the waiver result in demonstrable reductions in non-SUD services spending. Similar to the approach above, B&A identified relationships between goals related to improving physical health and reductions in the use of acute care services as the key primary drivers of achieving a reduction in overall spending, net of SUD investments.

In order to translate these aims as well as primary and secondary drivers into measurable results, B&A compared these items against the measures included in the Monitoring Protocol and identified whether new measures may be needed. B&A found that existing, nationally-recognized measures were available for the aims and primary drivers; moreover, the specifications and data sources were already described as part of FSSA's CMS-approved Monitoring Protocol. The one exception is that B&A added two "potentially preventable" measures. To fill gaps in measuring secondary drivers, B&A added custom measures where needed. These measures, in the post-waiver period, will be used as targets such that performance in the post-waiver period will be considered positive should changes occur in the post- versus pre-waiver period.

A more detailed description of the data, measures and analysis to be used in the Interim Evaluation are described in Section III. Methodology.

Exhibit II.1 Driver Diagram 1.1 Target Health Outcome: Reductions in the Overdose Rate

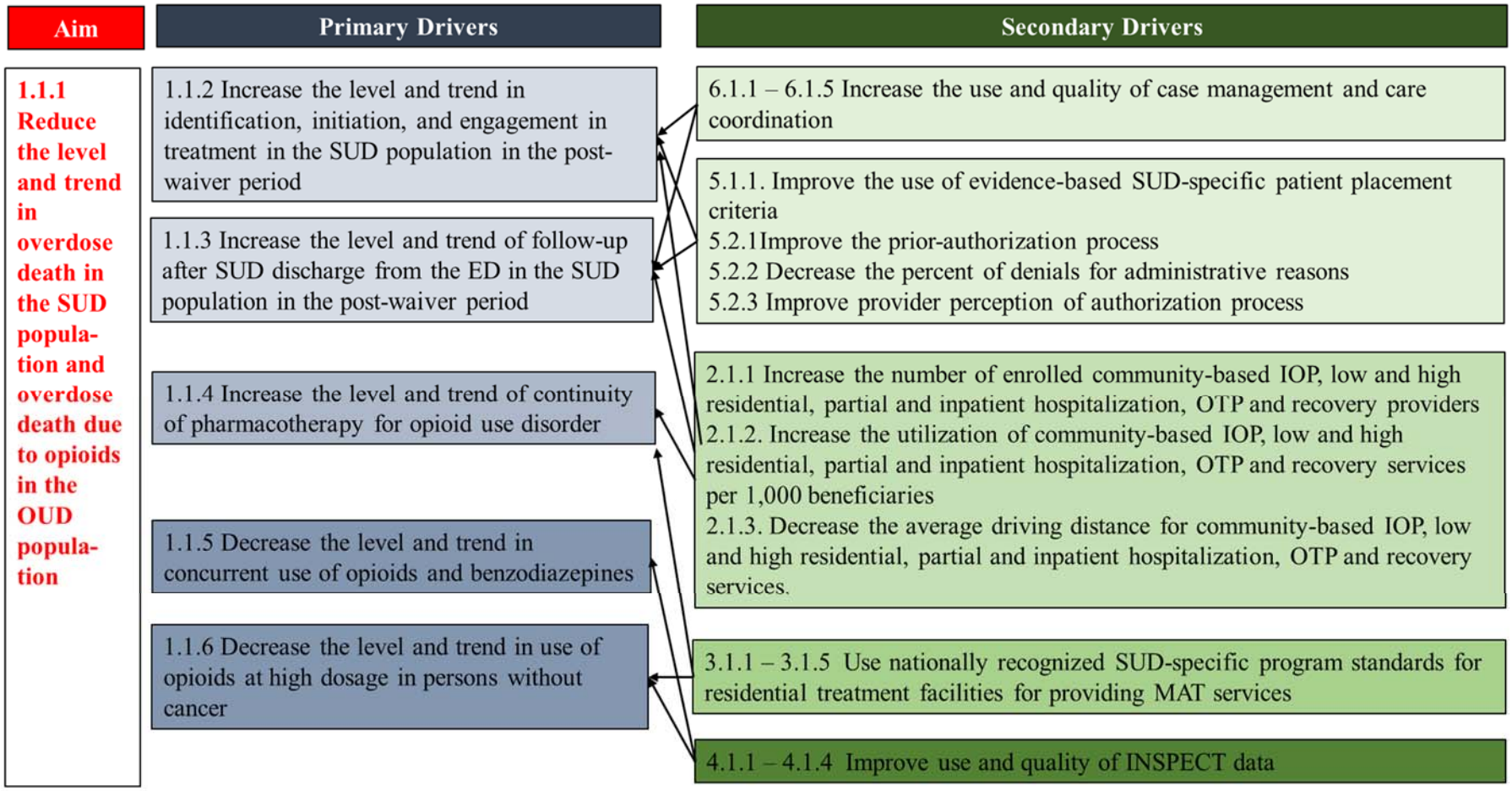
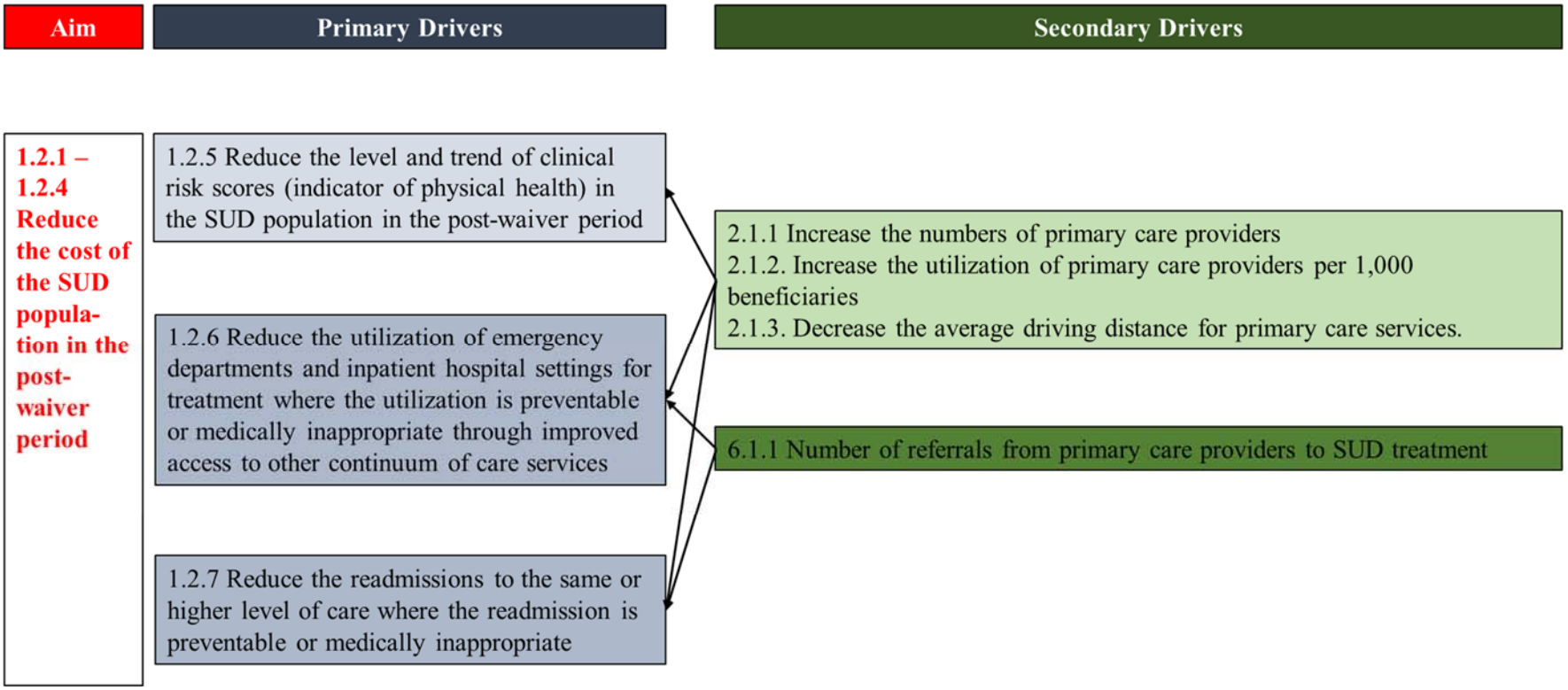


Exhibit II.2 Driver Diagram 1.2 Target Health Outcome: Reductions in Per Capita Cost



II.B INTERIM AND SUMMATIVE EVALUATION SCOPE DIFFERENCES

By design, the Interim Evaluation report represents an independent assessment of the state's 1115 demonstration waiver from the beginning to the midpoint and, in most cases, represents approximately 30 months of waiver data. Due to the timing of the approved waiver (February 1, 2018 through December 31, 2020), the waiver data for this evaluation is limited to 35 months in totality. In addition, Indiana is preparing to submit a waiver extension application. As a result, this Interim Evaluation is being prepared in advance of the originally-anticipated schedule to allow for the state to post the Interim Evaluation with its waiver extension application in accordance with 42 CFR 431 Subpart G.

The study period for this Interim Evaluation, therefore, includes three years of pre-waiver data, but the timing restrictions only permit one year of post-waiver data. Because of the limitations in time and advance preparation, the scope of the Independent Evaluation of Indiana's 1115 SUD waiver will be limited to a subset of the research questions under each of the hypotheses as identified in Section II.C. Hypotheses and Research Questions. The subset of research questions was chosen due to availability of reliable data at the time that this Interim Evaluation was drafted. The research questions selected, however, are in alignment with questions and studies as part of the CMS Monitoring Protocol Specifications and Reporting Templates.

The Summative Evaluation of Indiana's 1115 SUD waiver will not be limited in scope and will include all research questions as identified in the approved Evaluation Design Plan.

II.C HYPOTHESES (H) AND RESEARCH QUESTIONS (Q)

Aims and Primary Drivers

The identified aims as well as primary and secondary drivers were converted into a series of hypotheses (H) and research questions (Q). For each research question, assigned measures and a targeted analytic methodology was developed. This is described in detail in Section III. Methodology.

Hypotheses 1.1 and 1.2 focus on the aims and primary drivers depicted in the driver diagrams. These are the targets for testing using interrupted time series (ITS) as described in Section III. Methodology. The two aims and eight primary drivers will be tested in order to detect statistically significant changes in the pre- and post-waiver period for the Summative Evaluation. Due to data limitations and timing issues, it is not possible to include tests of statistical significance in the Interim Evaluation. Exhibit II.3 on the following page lists each hypothesis and research question and an indication as to whether it is included in the Interim Evaluation.

Exhibit II.3
Aims and Primary Drivers – Hypotheses and Research Questions Included in the Evaluation

Hypotheses	Research Questions	Interim Evaluation	Summative Evaluation
H 1.1 Key health outcomes improve in the SUD population in the post-waiver period.	Q 1.1.1 Does the level and trend of overdose deaths and overdose due to opioids decrease among the SUD population in the post-waiver period?	No	Yes
	Q 1.1.2 Does the level and trend of initiation and engagement in treatment increase in the SUD population in the post waiver period?	Yes	Yes
	Q 1.1.3 Does the level and trend of follow-up after discharge from the Emergency Department (ED) for SUD increase among the SUD population in the post waiver period?	Yes	Yes
	Q 1.1.4 Does the level and trend in continuity of pharmacotherapy for opioid use disorder increase among the OUD population in the post waiver period?	Yes	Yes
	Q 1.1.5 Does the level and trend in concurrent use of opioids and benzodiazepines decrease in the OUD population in the post waiver period?	Yes	Yes
	Q 1.1.6 Does the level and trend in the rate of use of opioids at high dosage in persons without cancer decrease in the post waiver period?	Yes	Yes
H 1.2 Costs of care decreases in the SUD population in the post waiver period.	Q 1.2.1 Does the level and trend in overall spending for the SUD population decrease in the post waiver period?	No	Yes
	Q 1.2.2 Does the level and trend in SUD service spending for the SUD population increase in the post waiver period?	Yes	Yes
	Q 1.2.3 Does the level and trend in non-SUD service spending for the SUD population decrease in the post waiver period?	No	Yes
	Q 1.2.4 Does the level and trend in the percentage of SUD facilities who report they accept Medicaid as a payer increase in the post waiver period?	No	Yes
	Q 1.2.5 Does the level and trend in Clinical Risk Group (CRG) risk scores decrease among the SUD population in the post waiver period?	No	Yes
	Q 1.2.6 Does the level and trend in acute utilization for SUD, potentially preventable emergency department or potentially preventable hospital readmissions decrease in the SUD population in the post waiver period?	Yes	No

Secondary Drivers

Hypotheses 2.1 through 6.1 focus on the secondary drivers as depicted in the driver diagrams and are organized to be consistent with FSSA's CMS-approved Implementation Plan. Unlike those aims and primary drivers in Hypotheses 1.1 and 1.2, the secondary drivers are targets for continuous monitoring and quality improvement. Information required for use in assessment is beyond what is available in claims or other public data sets. As such, performance will be assessed using a set of mixed methods to evaluate progress on the secondary drivers. Where possible, measures will be incorporated into a reporting dashboard of the pre- and post-waiver periods, will be reported on a quarterly basis, and will be refreshed every six months. A summary of methods is detailed in Section III. Methodology. Due to data limitations and timing issues, it is not possible to include each of the secondary drivers in the Interim Evaluation. Exhibit II.4 on the following two pages lists each hypothesis and research question related to secondary drivers with an indication as to whether it is included in the Interim Evaluation.

Exhibit II.4
Secondary Drivers – Hypotheses and Research Questions Inclusion in the Evaluation

Hypotheses	Research Questions	Interim Evaluation	Summative Evaluation
H 2.1 Access to care improved in the SUD population in the post-waiver period.	Q 2.1.1. Does the level and trend in the number of SUD and primary care providers and the number of providers per capita in the SUD population increase in the post waiver period for each ASAM level of care?	Yes	Yes
	Q 2.1.2 Does the utilization of SUD services and primary care in the SUD population increase in the post waiver period for each ASAM level of care?	Yes	Yes
	Q 2.1.3 Does the average driving distance for SUD services and primary care decrease in the SUD population in the post waiver period for each ASAM level of care?	No	Yes
H 3.1 Implementing residential treatment facility provider certification requirements based on ASAM level 3.1 and 3.5 criteria will improve provision of care.	Q 3.1.1 Does provider certification shift from resident and facility-based criteria to treatment-based certification criteria using ASAM level of care over the length of the waiver?	No	Yes
	Q 3.1.2 Does the ability to measure utilization by ASAM facility level improve program monitoring?	No	Yes
	Q 3.1.3 Does provider awareness and use of ASAM Patient Placement Criteria increase over the length of the waiver?	No	Yes
	Q 3.1.4 Do providers offer medication-assisted treatment (MAT)?	No	Yes
	Q 3.1.5 Do residential facilities not currently enrolled in Indiana Medicaid have the opportunity to meet standards for enrollment leading to increased enrollment of residential addictions facilities?	No	Yes
H 4.1 The quality and use of INSPECT data will improve in the post waiver period.	Q 4.1.1 Were changes to INSPECT made according to the Implementation Plan?	No	Yes
	Q 4.1.2 Did changes to INSPECT result in meaningful reporting capabilities?	No	Yes
	Q 4.1.3 Has the number of prescribers using INSPECT increased over time?	No	Yes
	Q 4.1.4 Has the volume of inquiries into the INSPECT database increased over time?	No	Yes

Hypotheses	Research Questions	Interim Evaluation	Summative Evaluation
H 5.1 The Child and Adolescent Needs and Strengths (CANS) and Adult Needs and Strengths Assessment (ANSA) tools are being used to place beneficiaries in ASAM levels of care.	Q 5.1.1 Are clinical criteria for authorization review for services delivered to beneficiaries with SUD being applied consistently across Indiana's Health Coverage Programs (Hoosier Healthwise, Healthy Indiana Plan, Hoosier Care Connect, and Traditional Medicaid)?	No	Yes
H 5.2 Prior authorization (PA) requirements do not negatively impact access to residential or inpatient services (ASAM 3.1, 3.5 and 4.0).	Q 5.2.1 Are the rates of prior authorizations (PAs) submitted and PA requests that are denied in the SUD population, controlling for volume, relatively consistent by MCE and over time?	Yes	Yes
	Q 5.2.2 Are prior authorization (PA) denials predominately for reasons directly related to not meeting clinical criteria as opposed to administrative reasons such as lack of information submitted?	Yes	Yes
	Q 5.2.3 Is provider administrative burden associated with PA requests cited as a perceived barrier to access to care?	No	Yes
H 6.1 Care coordination and transitions between ASAM levels of care will increase in the post-waiver period.	Q 6.1.1 Does the proportion of beneficiaries receiving ASAM designation who had a claim in that ASAM level within the next two consecutive months following the month of ASAM assignment increase over time?	Yes	Yes
	Q 6.1.2 Does the proportion of beneficiaries with a SUD diagnosis who are receiving care coordination increase over time?	No	Yes
	Q 6.1. 3 Do Indiana's MCEs facilitate more active engagement in the case/care management process between behavioral health/substance abuse providers and primary care/other physical health providers for their patients with a SUD diagnosis?	No	Yes

SECTION III: METHODOLOGY

III.A CONTEXT OF THE INTERIM EVALUATION

As mentioned previously, the study period for this Interim Evaluation has been truncated due to both the truncated time period of the State's waiver and the fact that the State is submitting an amendment to its waiver which requires an Interim Evaluation to accompany it. This Interim Evaluation of Indiana's 1115 SUD waiver, therefore, will be limited to a subset of the research questions under each of the hypotheses as identified in Section II.C. Hypotheses and Research Questions.

III.B SUMMATIVE EVALUATION METHODOLOGY

The approved Evaluation Design Plan is a mixed-methods approach, drawing from a range of data sources, measures and analytics to best produce relevant and actionable study findings. B&A tailored the evaluation approach for each research question described in Section II, Evaluation Hypothesis and Research Questions. The approved Evaluation Design Plan reflects a range of data sources, measures and perspectives. It also defines the most appropriate study population and sub-populations, as well as describes the six analytic methods included in the evaluation design.

The six analytic methods proposed for use across the six goals include:

1. single segment interrupted time series (ITS),
2. descriptive statistics (DS),
3. provider surveys (PS)
4. onsite reviews (OR)
5. desk reviews (DR) and,
6. facilitated interviews (FIs) and/or focus groups (FGs).

Exhibit III.1 on the next page presents a chart displaying which method(s) are used for each hypothesis in the Summative Evaluation in accordance with the approved Evaluation Design Plan. It also includes a brief description of the indicated methods, as well as the sources of data on which they rely. The six methods are ordered and abbreviated as described in the first sentence of this paragraph.

As described in Section II.C, the first two hypotheses (1.1. and 1.2) and the 12 associated research questions focus on whether the 1115 SUD waiver provision made an impact on key CMS goals (i.e., aims and primary drivers). In order to facilitate evaluation on whether a statistically significant difference between the pre- and post- waiver period can be detected, the data, measures and methods for these research questions will be tested using healthcare claims and enrollment data, nationally recognized measure specifications, and ITS.

For the remainder of the hypotheses (2.1 – 6.1) and the associated research questions, the focus will shift to the secondary drivers. Given that these are targets for continuous monitoring and quality improvement and require information beyond what is available in claims or other public data sets, this section draws upon a set of mixed methods to evaluate progress on the secondary drivers. Where possible, measures will be incorporated into a reporting dashboard of the pre- and post-waiver periods and reported on a quarterly basis with data refreshed every six months.

The Evaluation Design Plan approved by CMS on June 6, 2019 fully describes the anticipated methodology for the Summative Evaluation. The document can be found in Appendix B.

Exhibit III.1
Summary of Six Methods by Hypotheses – Summative Evaluation

Hypotheses	Method						Description
	1	2	3	4	5	6	
	ITS	DS	PS	OR	DR	FI/FG	
1.1 – 1.2	X	X					ITS will be used. Data sources primarily include claims and enrollment data. The National Survey of Substance Abuse Treatment Services (N-SSATS) data will be used in one instance. As part of the ITS model specification, descriptive statistics will be generated and reported as well.
2.1		X					Claims data will be used to compute a set of access to care measures and reported descriptively and stratified by region, managed care plan or fee for service, and by ASAM level.
3.1		X	X	X	X	*X*	An onsite and a desk review, coupled with the residential provider survey will be used.
4.1		X			X	*X*	This study question will be evaluated using a desk review of externally provided descriptive studies on number of INSPECT users and queries.
5.1 – 5.2		X	X	X		*X*	Onsite reviews will be used to assess the adoption of ANSA and assignment to ASAM by MCEs and FFS. MCE and FFS-supplied data will be used to review prior authorizations for residential and inpatient hospital levels of care. This summary will include: the rate of prior authorization, the rate of prior authorization denials, and the frequency of authorization denial reason code by MCE. A residential and inpatient provider survey will be used to collect data on overall provider perceptions as well as information specific to prior authorization and adoption of ANSA criteria.
6.1		X	X	X		*X*	Claims data and MCE and FFS-supplied care coordination data will be used to calculate descriptive statistics. A cross-sectional provider survey and an onsite review of MCEs and the OMP will also be used to evaluate care coordination activities.

ITS = Interrupted Time Series; DS = Descriptive Statistics; PS = Provider Survey; OR = Onsite Review; DR = Desk Review; FI/FG = Facilitated Interviews and/or Focus Groups

Italics indicate the method will be used "as needed"

III.C INTERIM EVALUATION METHODOLOGY

Modified Evaluation Design for Interim Evaluation

The Interim Evaluation follows the approved Evaluation Design Plan by using a mixed-methods approach as well as drawing from a range of data sources, metrics and analytics to best produce relevant and actionable study findings, the Evaluation has been modified given the context of the expedited preparation of the Interim Evaluation. B&A tailored the Interim Evaluation approach to include those research question described in Section II which were possible to evaluate in this revised timeframe. Whether a question was possible to evaluate depended on the availability and reliability of data and the whether the timing of planned activities in the waiver implementation made analysis relevant at this time.

Due to the methodological limitations discussed in Section IV, no statistical testing is included in the Interim Evaluation. The statistical testing will be included in the Summative Evaluation. The Summative Evaluation will include all three years of post-implementation which will be more appropriate for statistical testing.

Of the six analytic methods proposed for use in the Summative Evaluation across the six goals, the following are included the Interim Evaluation:

1. Descriptive statistics
2. Provider surveys
3. Onsite reviews

Target Population

The target population is any Indiana Medicaid beneficiary with an SUD diagnosis in the study period. B&A used the approved specification for beneficiaries with any SUD diagnosis for identification of beneficiaries with SUD. This will serve as an indicator of exposure to the changes in the waiver. B&A used the specification for CMS Metric #3 from the CMS "1115 Substance Use Disorder Demonstrations: Technical Specifications for Monitoring Metrics", Version 1, dated October 30, 2018 to identify individuals. This population comprises the demonstration population, noted as 1, 3, 4 and 5 below. B&A also developed additional sub-populations, noted as 2, 6, 7, 8 below.

1. **Managed Care Model:** Includes target population in the managed care model
2. **MCE**: Includes target population enrolled in a particular MCE as of base date in the calendar year
3. **Dual eligible**: Includes target population who meet criteria for being dual-eligible with Medicare
4. **OUD**: Includes target population who meet the criteria for having an opioid use disorder (OUD) diagnosis
5. **Pregnant**: Includes target population who meet the criteria for having a pregnancy
6. **Criminally Involved**: Includes target population who meet the criteria for being criminally involved. B&A used Indiana Department of Correction data, matched with the SUD population data, to identify whether or not a person was incarcerated at any time in the calendar year.
7. **MRO**: Includes target population who meet the criteria for being in receipt of MRO services in the calendar year
8. **Region**: Eight regions were created that maps the 92 counties in the state. Individuals based on their zip code on a base date in the calendar year are mapped to one region.

Comparison Groups

For the Interim Evaluation, metrics for the demonstration and sub-populations are computed for a pre- and post-waiver period. Descriptive trends will be evaluated between a one-year pre-waiver calendar year period and the next calendar year, which is considered the post-waiver period. The data is also presented across sub-populations in order to facilitate comparison among populations on levels, and changes in performance on the metrics evaluated.

Evaluation Period

The Interim Evaluation collected data defined as enrollment, or dates of service, of January 1, 2015 through March 31, 2019 for all beneficiaries meeting the criteria as defined as being in the target population. However, upon review of the results presented in Section V, a range of data validity issues arose with respect to the CY 2015 and first quarter CY 2019 data. This data is presented for transparency and to inform the final evaluation period chosen in the Summative Evaluation; however, data from these two periods was not considered valid with respect to drawing conclusions on the Interim Evaluation.

Therefore, B&A based its conclusions on the overall descriptive trends displayed in Section V for CYs 2016 through 2018, with a specific focus on changes between the first year of the demonstration (CY 2018) compared to the preceding year (CY 2017).

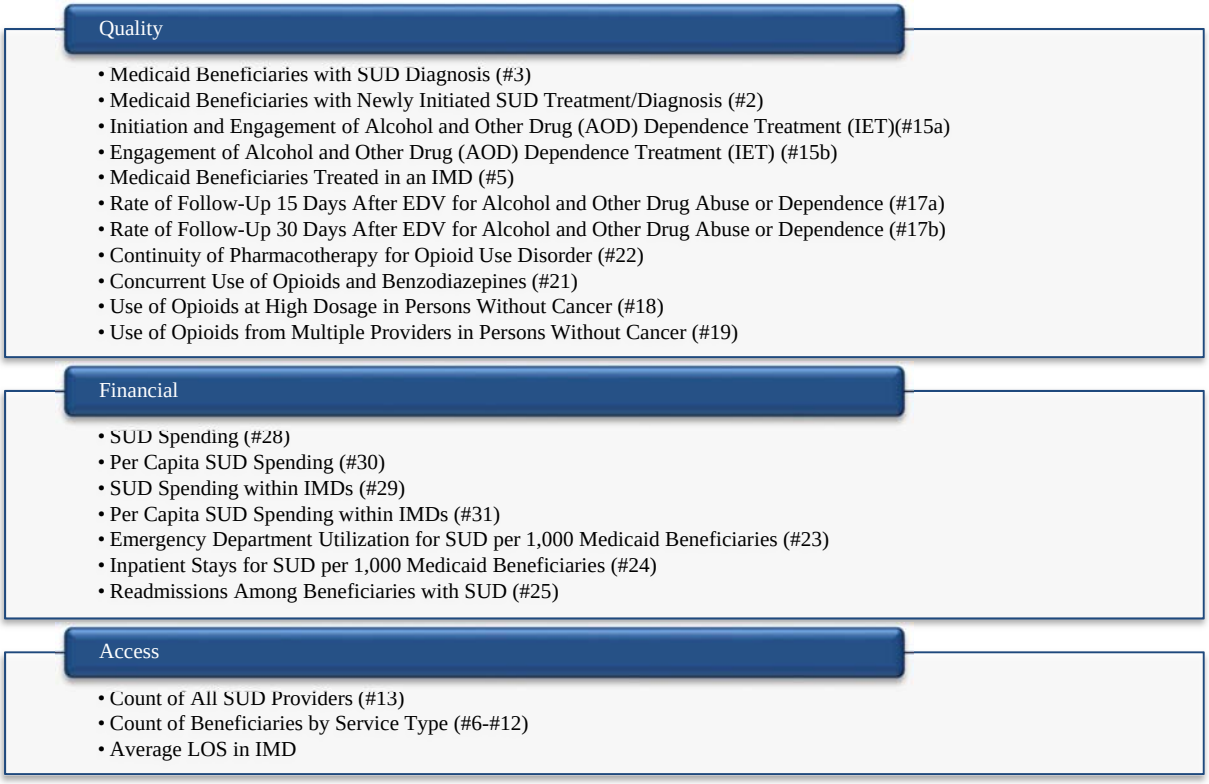
It should be noted that the actual waiver approval date was on February 1, 2018 and, therefore, "Year 1" of the waiver was actually 11 months. B&A used all 12 months of CY 2018 as the first year of the post-waiver period to ensure appropriate comparison groups for the Interim Evaluation. Although CMS approved the SUD provisions of Indiana's 1115 waiver in February 2018, not in January 2018, waiver-related activities were moving forward in anticipation of approval.

Evaluation Measures

CMS Monitoring Metrics

The first three sections of Section V contain CMS-specific metrics. They directly relate to the aims, primary and secondary drivers described in Section II, Hypotheses 1.1, 1.2 and 1.3. The measures fall into three primary domains: quality, access and cost. Exhibit III.2 on the next page summarizes the list of CMS-specific measures included in the Interim Evaluation. A comprehensive summary of measures, which includes measure stewards as well as a description of numerators and denominators can be found in the CMS "1115 Substance Use Disorder Demonstrations: Technical Specifications for Monitoring Metrics", dated October 30, 2018. The exception is that for metrics related to residential and inpatient services, B&A adopted the modified specifications in version 2 of the Technical Specification Guide but not the value sets or other changes described in the CMS "1115 Substance Use Disorder Demonstrations: Technical Specifications for Monitoring Metrics", Version 2, dated August 23, 2019.

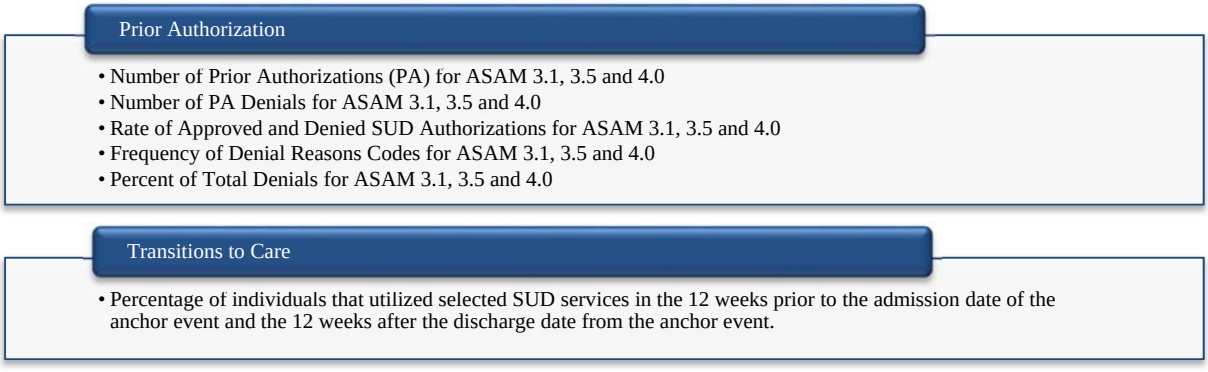
Exhibit III.2 List of Measures by Domain (CMS-specified Metric Number shown)



B&A Metrics

The last two sections of Section V contain B&A-specific metrics. They directly relate to the secondary drivers described in Section II, Hypotheses 5.2 and 6.1. The measures fall into the primary domains of quality and access. Exhibit III.3 summarizes the list of B&A-specific measures included in the Interim Evaluation.

Exhibit III.3 List of B&A Secondary Driver Measures by Focus Study



Data Sources

For the Interim Evaluation, B&A used existing secondary data sources as well as collected primary data. The evaluation relies most heavily on the use of Indiana Medicaid administrative data, such as

enrollment, provider, claims and encounter data. Supplemental administrative data, such as prior approval denials and authorizations, has been incorporated. Primary data in the Summative Evaluation will be limited and include data created by surveys, desk review and facilitated interview instruments. A brief description of these data and their strengths and weaknesses are below.

Indiana Medicaid Administrative Data

Claims and encounters with dates of service (DOS) from January 1, 2015 – March 31, 2019 were received from the OMPP's Enterprise Data Warehouse (EDW). A data request specific to the 1115 SUD Evaluation Design Plan was given to OMPP's EDW vendor (Optum) and the data was delivered to B&A in an agreed-upon format. The initial EDW data set included historical data up to the point of the delivery with subsequent data sent to B&A in the same format as the original data on a monthly basis. All data delivered to B&A from the OMPP comes directly from the EDW. B&A has leveraged all data validation techniques used by Optum before the data is submitted to the EDW.

At the time of production of the CMS-specified metrics, B&A used extracts from the EDW through August 2019 that included data submitted (either fee-for-service claims or managed care encounters) through July 31, 2019. The OMPP required its MCE to submit all encounters with dates of service in CY 2018 to the EDW by June 30, 2018. This timeframe allowed for a one-month lag following the deadline imposed to the MCEs in order to capture all CY 2018 encounter submissions from MCEs.

Three of the four MCEs in Indiana were contracted through the entire study period. The fourth, CareSource, came under contract effective January 1, 2017. Managed care encounter data has the same record layout as fee-for-service and includes variables such as charges and payments at the header and line level. Payment data for MCE encounters represents actual payments made to providers, including SUD and related services payments. MCE paid amounts are housed in multiple tables in the data warehouse depending on the nature of the MCE paid or denied status and status of reprocessing.

Data from the MCEs and the State was collected on prior authorizations, denials, denial reason codes as well as data on care coordination activities. There could be some data validity or quality issues with these sources as they are not as rigorously collected as claims and encounters data. That being said, B&A conducted quality reviews of this self-reported data and, in some cases, requested resubmissions of data to ensure data integrity.

Analytic Methods

Of the six analytic methods depicted in Exhibit III.1, three are included in the Interim Evaluation. An overview of the methods and any specific adaptations to the methodology are described below.

Method #2: Descriptive Statistics

Performance on CMS-specific metrics among the target demonstration population were computed annually and, where possible, monthly. These data were plotted and visualized across the broadest available periods over time to determine validity of historic data as well as identify emerging trends. The descriptive statistics were stratified by sub-populations and were plotted and visualized as well.

To make a determination of progress towards desired milestones, B&A computed the percent change from CY 2017 to CY 2018 for each metric and sub-population to serve as a proxy for an emerging trend. Performance on the metrics and the descriptive trends were compared across domains to derive conclusions.

Method #3: Provider Surveys (PS)

In order to fill gaps and address questions for which claims-based data is insufficient, B&A fielded a one-time data collection survey tool to collect detailed SUD-related prior authorization data from the MCEs. Separately, B&A also requested information from each MCE related their members' enrollment in complex case or care management in CY 2018. The data request sent by B&A to the MCEs to capture SUD-related prior authorizations appears in Appendix C. The data request sent by B&A to the MCEs to capture enrollment in complex case or care management appears in Appendix D.

Method #4: Onsite Reviews (OR)

An onsite interview was conducted on a one-on-one basis with each MCE to learn more about its prior authorization processes related to SUD services. Further, a sample of authorization records were reviewed onsite at each MCE's home location to validate the data presented on the self-reported data submitted by each MCE related to this topic. This process is discussed in detail in Section V under hypothesis question 5.2.1. A copy of the tool used to complete the audit of authorization records appears in Appendix E.

SECTION IV: METHODOLOGICAL LIMITATIONS

IV.A DISCUSSION OF SUMMATIVE EVALUATION LIMITATIONS

There are inherent limitations to both the study design and its specific application to the SUD waiver evaluation. That being said, the proposed design is feasible and is a rational explanatory framework for evaluating the impact of the SUD waiver on the SUD population. Moreover, to fill gaps left by the limitations of this study design, a limited number of provider surveys, onsite reviews, desk reviews, and facilitated interviews/focus groups will be included in the Summative Evaluation to provide a more holistic and comprehensive evaluation.

Another limitation is the length of time of the evaluation period. It is not expected that a two-year evaluation period, assuming year one as the benchmark period, will be sufficient time to observe changes in all measures of interest. In some cases, the time period may be insufficient to observe descriptive or statically significant differences in outcomes in the SUD population. Therefore, it is expected that not all outcomes included in the study will show a demonstrable change descriptively. B&A does expect some process measures to show a change during this time frame.

Moreover, with any study focused on the SUD population and potentially rare outcome measures, such as overdose rates, insufficient statistical power to detect a difference is a concern. For any observational studies, especially if the exposures and the outcomes being assessed are rare, it is difficult to find statistically significant results. It is not unexpected, therefore, that many of the outcome measure sample sizes will be too small to observe statistically significant results.

Related to the issues mentioned above, many of the outcome measures are multi-dimensional and influenced by social determinants of health. While changes under the waiver related to access to care may be one dimension of various outcomes of interest and may contribute to improvements, it may be difficult to achieve statistically significant findings in the absence of data on other contributing dimensions such as social determinants of health (e.g., housing, employment and previous incarcerations).

Although the waiver is new, there were no identified implementation delays or other outstanding concerns. As such, B&A believes that the approved Evaluation Design Plan provides more than adequate rigor in the observational study design, especially when considering the range of supplemental evaluation methods proposed for inclusion. As described in detail in the approved Evaluation Design Plan, the study mitigates known limitations to the extent feasible drawing upon the range of options to fill gaps in the observational study design. Moreover, B&A's Evaluation Design Plan is consistent with, and expands upon, CMS-approved 1115 demonstration waiver SUD evaluation plans available on the CMS State Waivers List.[11]

Another special consideration is in the case of residential treatment in IMDs. While the waiver change is stated as "no coverage" to "coverage for all", B&A identified that IMD residential services may have been provided in the pre-waiver period, but these would have been funded by 100% state funds as opposed to matched federal dollars. Therefore, it is unclear whether a detectable change will be seen related to IMDs specifically or whether change is created by the availability of new funds to be invested in other waiver services. This nuance will be considered when evaluating the results.

[11] Medicaid State Waivers List can be accessed at: https://www.medicaid.gov/medicaid/section-1115-demo/demonstration-and-waiver-list/index.html

IV.B DISCUSSION OF INTERIM-SPECIFIC EVALUATION LIMITATIONS

It has already been addressed that the greatest limitation of this Interim Evaluation report is the duration of time available for study. Whereas most 1115 demonstration waivers allow for approximately 30 months of experience to study, this evaluation is limited to just 12 months. This is due to the State of Indiana's interest in submitting a waiver extension application which necessitates an Interim Evaluation report in accordance with 42 CFR 431 Subpart G. As a result, the study period for this Interim Evaluation endeavored to include three years of pre-waiver data while the restricting the time to one year of post-waiver data.

Because of the limitations in time and advance preparation, the scope of the Independent Evaluation of Indiana's 1115 SUD waiver is limited to a subset of the research questions under each of the hypotheses, as identified in Section II.C. Hypotheses and Research Questions. The subset of research questions was chosen due to availability of reliable data at the time that this Interim Evaluation was compiled.

Other limitations identified by B&A that are specific to the Interim Evaluation include, but are not limited to, the following:

1. Incomplete CY 2015 Data. In the course of analyzing CY 2015 data for CMS-specified metrics included in the Interim Evaluation, a pattern of incomplete data in CY 2015 was explained primarily due to the conversion from ICD-9 to ICD-10 diagnostic coding in October 2015. Because the referenced specifications include value sets which often rely on diagnosis coding, which is only ICD-10, these metrics are not properly being calculated in the CY 2015 timeframe. This data was included in the Section V for transparency and justification for eliminating their use in the Summative Evaluation.

2. Timing of Encounter Data in the State's Data Warehouse. For monthly-specified metrics, B&A analyzed data for the experience period for the first quarter of CY 2019. Based on the timing of the analysis, three months of lag time was allowed for payment adjudication for claims and encounters after the potential service data in this period. However, the results that B&A observed seem to suggest under-reporting across almost all metrics where data was available in the first three quarters of CY 2019 compared to CY 2018. Therefore, like the CY 2015 data, the first three quarters of CY 2019 are presented, where available, for transparency and to illustrate the need to allow for sufficient time for receipt of data. This is particularly true for encounter data to make it through the incurred, submitted and paid process from each MCE and then for the MCE to submit into the state's data warehouse. There is also a time period to be considered from submission by the MCE to processing by the State's vendors who intake the encounters to process, validate and populate in the data warehouse.

3. Comparator/Length of Time. An obvious limitation to the Interim Evaluation is the insufficiency of time upon which to build appropriate comparator groups and trends over time.

4. Sub-Population Limitations. Many of the sub-population designations rely on diagnostic information and are only as good as the coding on the health care claims. Therefore, some data for sub-populations may be approximations and may be under-reported. Moreover, many sub-populations have a small number of beneficiaries to start, so more variability in year-over-year trends would be expected. These trends are not necessarily indicative of meaningful changes in any one metric. Finally, combined with the small numbers, the criminally involved sub-population relies on external data provided to BA& through CY 2018. The validity in the historic and more contemporaneous CY 2019 period is of concern.

5. Subset of Research Questions. The Interim Evaluation only addressed a subset of the research questions related to the aims, primary drivers and secondary drivers of improvements under the demonstration. In fact, the two primary aims related to overdose deaths and decreases on overall healthcare spending were not included due to a lack of available data and insufficiency of time. While the Interim Evaluation does provide a robust snapshot of some of the primary drivers of quality, cost and access, it does not cover the full scope of secondary drivers that will be described in the Summative Evaluation due primarily to planned activities dates that are outside of the Interim Evaluation period.

6. Descriptive Trends: Indicative but No Statistical Significance Testing. While some metrics included in both the Interim and Summative Evaluations are computed monthly, most are computed annually. Therefore, sufficient time must elapse in order to have enough observations for use in statistical testing. With only one annual observation in the post-implementation period, statistical tests could not be conducted. Moreover, many of the sub-populations include a small number of observations and may not be appropriate for statistical testing even when more years of data do become available.

SECTION V: RESULTS

V.A INTRODUCTION

As described in Section III, the Interim Evaluation contains metrics for which data was available and provides insight into research questions as defined in the driver diagrams found in Section II. For the Interim Evaluation, there was adequate data available for the majority of research questions included as part of hypotheses 1.1, 1.2, 2.1, 5.2 and 6.1. For the primary driver 1.1.1, data on overdose deaths is not yet available so the associated research questions are not included in the Interim Evaluation. In addition, secondary drivers associated with hypotheses 3.1, 4.1 and 5.1 are not included in the Interim Evaluation due to limited data and the truncated timeframe for preparation of this report. These will be evaluated in the Summative Evaluation once more post-waiver experience data is collected.

The results for the following hypotheses are included in the Interim Evaluation and are reported as sub-sections of the results section:

- 1.1 Quality of Care (CMS Metrics)
- 1.2 Cost of Care (CMS Metrics)
- 2.1 Access to Care (CMS Metrics)
- 5.2 Prior Authorization (B&A Metrics)
- 6.1 Transitions of Care (B&A Metrics)

The detailed results are reported and grouped by hypothesis. The first three hypotheses (1.1, 1.2 and 2.1) are based on CMS-defined specifications and consistent with state-required monitoring reports as described in Section II. The second two hypotheses, 5.2 and 6.1, are based on original metric specifications created by the independent evaluator and supplemented with qualitative findings from facilitated interviews with stakeholders.

Within each sub-section in Section V, results include a narrative description that summarize the results for each hypothesis and research question combination. A set of exhibits report available data for the metric(s) associated with each question. Exhibits for hypotheses 1.1 (Quality), 1.2 (Cost), and 1.3 (Access) display results in a standardized format specific to whether the measure is reported annually or monthly. The narrative and associated exhibits summarize findings for the entire demonstration population as well as for the model population (i.e., individuals enrolled in managed care). Additionally, the Interim Evaluation includes reporting at sub-population levels including beneficiaries who are dually eligible for Medicare and Medicaid (the duals), individuals with an OUD diagnosis, pregnant individuals, criminally involved and the Medicaid Rehabilitation Option (MRO) populations. Finally, results by metric also include a breakdown by managed care entity (MCE) and by eight regions in the state.

A full summary of conclusions and interpretation of these results is included in Section VI and Section VII. Recommendations are found in Section VIII. Exhibits VI.1.3, VI.1.4 and VI.1.5 in Section VI display the dashboard of results for the first three hypotheses. The dashboard uses color coding to indicate whether the observed trend between CY 2017 and CY 2018 is as desired (green), the same (yellow) or not desired (red).

For hypothesis 5.2, only research questions 5.2.1 and 5.2.2 were able to be included in the Interim Evaluation. Conclusions cannot yet be drawn on these research questions due to the relatively short period of the waiver thus far. A more thorough examination for each question using a longer study period will be included in the Summative Evaluation.

For hypothesis 6.1, the initial study focused on research question 6.1.1. Information related to this question, as well as the remaining research questions associated with hypothesis 6.1, will be updated in the Summative Evaluation. The analysis of case and care management activities will be tracked throughout the waiver period and reported on in the Summative Evaluation.

V.B SECTION 1. QUALITY OF CARE

Hypothesis 1.1: Key health outcomes improve in the SUD population in the post-waiver period.

Research Questions

This hypothesis includes six research questions aimed at understanding the waiver's impact on quality of care. Of the six questions, the Interim Evaluation analyzed five. The other question associated with the primary driver 1.1.1, reduction in overdose deaths, requires additional data and transformations that are not available for inclusion in the Interim Evaluation. The primary driver 1.1.1 will be included in the Summative Evaluation.

The following five questions are meant to inform whether key health outcomes improve in the SUD population in the post-waiver period:

1.1.2 Does the level and trend of initiation and engagement in treatment increase in the SUD population in the post waiver period?

1.1.3 Does the level and trend of follow-up after discharge from the ED for SUD increase among the SUD population in the post waiver period?

1.1.4 Does the level and trend in continuity of pharmacotherapy for opioid use disorder increase among the OUD population in the post waiver period?

1.1.5 Does the level and trend in concurrent use of opioids and benzodiazepines decrease in the OUD population in the post waiver period?

1.1.6 Does the level and trend in the rate of use of opioids at high dosage in persons without cancer decrease in the post waiver period?

Metrics

The Interim Evaluation includes computed performance on eleven unique metrics. The evaluation used the identified metrics which are considered indicators of quality of care to answer the five research questions evaluated. All measures in this section are either required and/or recommended by CMS for Indiana's SUD 1115 waiver monitoring activities. There are a mix of metrics with a national steward and those that are defined by CMS.

Where possible, the Interim Evaluation presents data from CY 2015 and CY 2019 for transparency, but it is not included in evaluating trends given its limitations as discussed in Section IV Methodological Limitations. The Interim Evaluation considered annual data that was visualized by plotting metrics over

time. Metrics also include data plotted over time for key sub-populations, MCEs and regions. The annual observed trend between CY 2017 and CY 2018 was compared against desired trends to derive the Interim Evaluation conclusions.

The following metrics were computed to evaluate hypothesis 1.1:

1. Medicaid Beneficiaries with SUD Diagnosis (#3)
2. Medicaid Beneficiaries with Newly Initiated SUD Treatment/Diagnosis (#2)
3. Initiation of Alcohol and Other Drug (AOD) Dependence Treatment (IET) (#15a)
4. Engagement of Alcohol and Other Drug (AOD) Dependence Treatment (IET) (#15b)
5. Medicaid Beneficiaries Treated in an IMD (#5)
6. Rate of Follow-Up 7 Days After EDV for Alcohol and Other Drug Abuse or Dependence (#17a)
7. Rate of Follow-Up 30 Days After EDV for Alcohol and Other Drug Abuse or Dependence (#17b)
8. Continuity of Pharmacotherapy for Opioid Use Disorder (#22)
9. Concurrent Use of Opioids and Benzodiazepines (#21)
10. Use of Opioids at High Dosage in Persons Without Cancer (#18)
11. Use of Opioids from Multiple Providers in Persons Without Cancer (#19)

Results Desired versus Observed Trends

Exhibit V.1.1 summarizes the observed versus desired trend in the pre-waiver period of CY 2017 and the post-waiver period of CY 2018 for the 11 measures included as part of hypothesis 1.1. Despite the underlying data limitations as described in Section IV, the overall demonstration population trends were moving in the direction desired for 73% (8 of 11) of the metrics studied. There was, however, variation of these trends at the sub-population, MCE and/or regional level.

Desired trends are highlighted in green and trends not desired are highlighted in red.

Exhibit V.1.1
Summary of Results Hypothesis 1.1 (Quality) Annual Trend CY 2017 – CY 2018

Research Question	Metrics	Desired Trend	Demo Trend	Sub-Population Trends		MCE Trends	Regional Trends	
1.1.2. Does the level and trend of initiation and engagement in treatment increase in the SUD population in the post waiver period?	Medicaid Beneficiaries with SUD Diagnosis (#3)	Increase (diagnosis after seeking care)	**5.1%**	Model: 3.9% Dual: 3.7% OUD: 4.1%	Pregnant: 21.8% Criminally Involved: -0.3% MRO: 4.1%	Anthem: 6.5% CareSource: 73.5% MDwise: -10.2% MHS: -2.9%	Central: 5.4% East Central: 11.6% North Central: -3.4% Northeast: 2.9%	Northwest: 6.8% Southeast: 2.0% Southwest: 0.4% West Central: 8.7%
	Medicaid Beneficiaries with Newly Initiated SUD Treatment /Diagnosis (#2)	Increase	**12.6%**	Model: 13.4% Dual: 5.4% OUD: 49.8%	Pregnant: 47.3% Criminally Involved: -43.1% MRO: 7.5%	Anthem: 20.0% CareSource: 331.7% MDwise: -15.0% MHS: 3.4%	Central: 10.3% East Central: 10.4% North Central: -1.6% Northeast: -0.6%	Northwest: 8.0% Southeast: 15.1% Southwest: 5.4% West Central: 0.9%
	Rate of Other Drug (AOD) Dependence Treatment (IET) a. Initiation of Treatment (#15a)	Increase	-3.6%	Model: -4.8% Dual: 0.09% OUD: -1.0%	Pregnant: 1.1% Criminally Involved: 4.2% MRO: -2.1%	Anthem: -8.7% CareSource: -2.6% MDwise: -0.9% MHS: -1.5%	Central: -5.3% East Central: -5.9% North Central: -3.4% Northeast: 2.1%	Northwest: -7.4% Southeast: 1.6% Southwest: -3.8% West Central: -2.7%
	Rate of Other Drug (AOD) Dependence Treatment (IET) b. Engagement in Treatment (#15b)	Increase	**1.1%**	Model: 2.4% Dual: -1.6% OUD: 2.1%	Pregnant: 7.6% Criminally Involved: 7.3% MRO: -2.5%	Anthem: 6.4% CareSource: 3.9% MDwise: -4.3% MHS: -9.4%	Central: -1.8% East Central: -11.2% North Central: -3.7% Northeast: -3.5%	Northwest: 8.0% Southeast: 12.7% Southwest: 12.6% West Central: -15.0%
	Medicaid Beneficiaries Treated in an IMD for SUD (#5)	Increase	**-1.6%**	Model: -0.3% Dual: -10.1% OUD: -7.4%	Pregnant: 35.7% Criminally Involved: -31.9% MRO: -2.6%	Anthem: -23.0% CareSource: 146.7% MDwise: 54.2% MHS: 15.3%	Central: -7.8% East Central: -19.1% North Central: -7.7% Northeast: 21.7%	Northwest: -5.4% Southeast: -13.0% Southwest: -20.2% West Central: -4.7%

Research Question	Metrics	Desired Trend	Demo Trend	Sub-Population Trends		MCE Trends	Regional Trends	
1.1.3 Does the level and trend of follow-up after discharge from the ED increase among the SUD population in the post waiver period?	Rate of Follow-Up After ED visit for AODD 7 days (#17a)	Increase	**17.2%**	Model: 14.3% Dual: 3.8% OUD: 28.9%	Pregnant: 30.8% Criminally Involved: -650.0% MRO: 0.9%	Anthem: 13.3% CareSource: 38.9% MDwise: 12.4% MHS: 14.6%	Central: 23.6% East Central: -17.2% North Central: 64.6% Northeast: 11.1%	Northwest: 58.4% Southeast: 46.6% Southwest: 3.8% West Central: -14.0%
	Rate of Follow-Up After ED visit for AODD 30 days (#17b)	Increase	**17.0%**	Model: 16.9% Dual: -2.1% OUD: 26.6%	Pregnant: 33.3% Criminally Involved: 462.5% MRO: 4.4%	Anthem: 20.4% CareSource: 26.3% MDwise: 13.5% MHS: 8.9%	Central: 15.8% East Central: -1.4% North Central: 43.6% Northeast: 0.4%	Northwest: 49.5% Southeast: 65.7% Southwest: 15.3% West Central: -19.3%
1.1.4 Does the level and trend in continuity of pharmaco-therapy for OUD increase in the post waiver period?	Continuity of Pharmacotherapy for Opioid Use Disorder (#22)	Increase	**1.1%**	Model: -2.89% *Dual: N/A* OUD: -1.0%	Pregnant: 8.1% Criminally Involved: -13.4% MRO: -21.8%	Anthem: 8.8% CareSource: -29.9% MDwise: -19.1% MHS: 6.4%	Central: 9.8% East Central: 8.8% North Central: 11.2% Northeast: 69.5%	Northwest: -25.0% Southeast: -8.8% Southwest: -0.5% West Central: -40.8%
1.1.5 Does the level and trend in concurrent use of opioids and benzo-diazepines decrease in the OUD population in the post waiver period?	Concurrent Use of Opioids and Benzodiazepines (#21)	Decrease	**-11.6%**	Model: -16.9% Dual: -39.8% OUD: -21.5%	Pregnant: -17.7% Criminally Involved: -42.3% MRO: -11.0%	Anthem: -9.0% CareSource: 0.9% MDwise: -28.2% MHS: -1.9%	Central: -9.2% East Central: -12.9% North Central: 0.5% Northeast: -31.1%	Northwest: -10.0% Southeast: -7.97% Southwest: -14.3% West Central: -14.3%

Research Question	Metrics	Desired Trend	Demo Trend	Sub-Population Trends		MCE Trends	Regional Trends	
1.1.6 Does the level and trend in the rate of use of opioids at high dosage in persons without cancer decrease in the post waiver period?	Use of Opioids at High Dosage in Persons Without Cancer (#18)	Decrease	**5.0%**	Model: 4.4% Dual: 32.2% OUD: -1.8%	*Pregnant: N/A* Criminally Involved: 61.1% MRO: -16.9%	Anthem: 4.4% CareSource: -22.7% MDwise: 2.1% MHS: 10.9%	Central: 12.9% East Central: 5.3% North Central: 2.8% Northeast: 8.4%	Northwest: -19.0% Southeast: 5.5% Southwest: 12.2% West Central: -0.4%
	Use of Opioids from Multiple Providers in Persons Without Cancer (#19)	Decrease	**-39.2%**	Model: -44.2% Dual: -53.2% OUD: -47.5%	Pregnant: -10.4% Criminally Involved: -204.1% MRO: -44.6%	Anthem: -49.0% CareSource: -7.0% MDwise: -49.0% MHS: -32.6%	Central: -34.6% East Central: -47.4% North Central: -46.0% Northeast: -30.9%	Northwest: -48.2% Southeast: -27.2% Southwest: -49.5% West Central: -22.0%

Results by Research Question

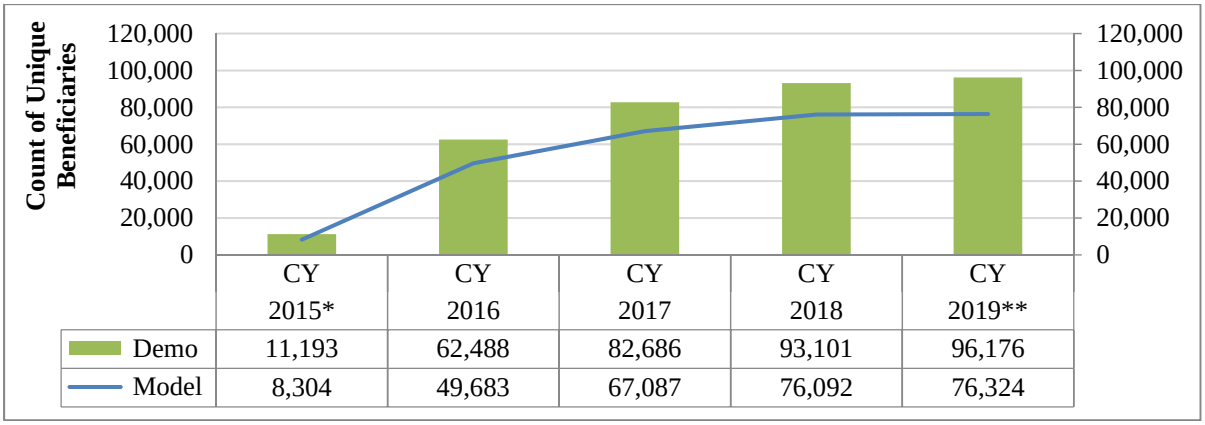
Hypothesis Question 1.1.2:
Does the level and trend in SUD service spending for the SUD population increase in the post waiver period? (Metrics #3, #2, #15a, #15b)

Metrics #3 and #2: Medicaid Beneficiaries with SUD Diagnosis

Population Breakdown (Metrics #3 and #2)

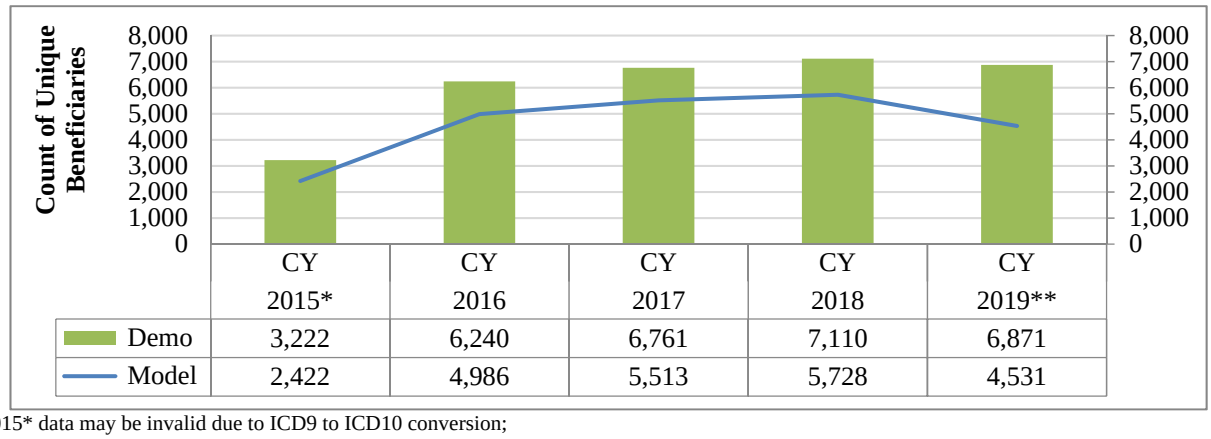
Exhibit V.1.2 (Metric #3) and Exhibit V.1.3 (Metric #2) summarize the demonstration and model population data from CY 2015 to CY 2019. As can be seen in Exhibit V.1.2, the Medicaid population with a SUD diagnosis (Metric #3) under the demonstration grew by 12.6% from 82,686 in the pre-waiver CY 2017 timeframe to 93,101 in CY 2018. The number of Medicaid beneficiaries newly diagnosed with SUD (Metric #2) shown in Exhibit V.1.1 also grew, but more slowly, by 5.1% from 6,761 in CY 2017 to 7,110 in CY 2018.

Exhibit V.1.2
Medicaid Beneficiaries with SUD Diagnosis (#3)
displayed by Demonstration and Model Populations, CY2015* - CY2019**



	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Demo	11,193	62,488	82,686	93,101	96,176
Model	8,304	49,683	67,087	76,092	76,324

Exhibit V.1.3
Medicaid Beneficiaries with a New SUD Diagnosis (#2)
displayed by Demonstration and Model Populations, CY2015* - CY2019**



	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Demo	3,222	6,240	6,761	7,110	6,871
Model	2,422	4,986	5,513	5,728	4,531

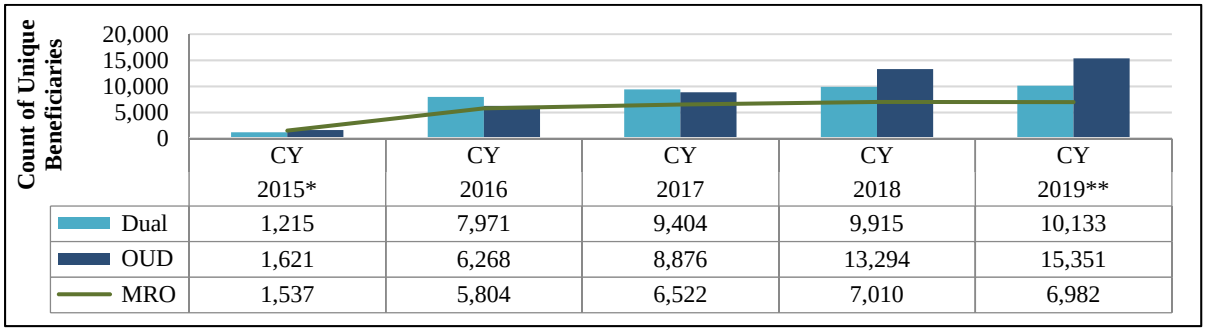
2015* data may be invalid due to ICD9 to ICD10 conversion;
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

Sub-Population Breakdowns (Metrics #3 and #2)

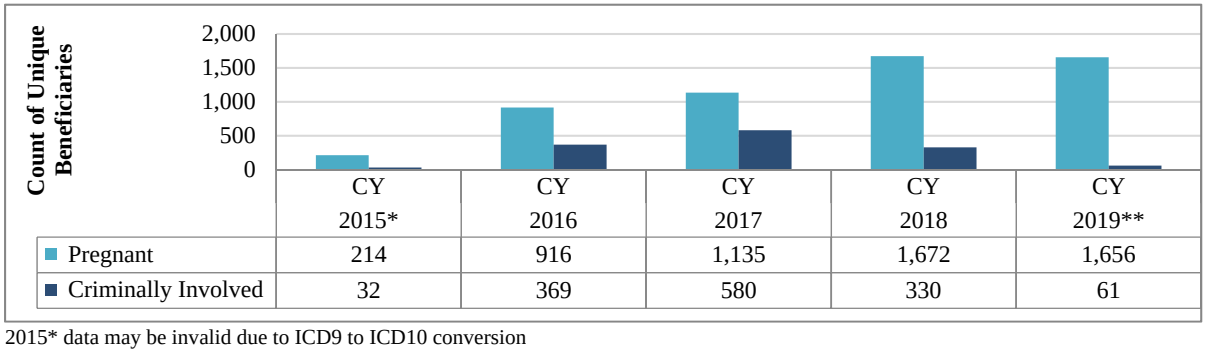
Exhibit V.1.4 summarizes the sub-population data from CY 2015 to CY 2019 for Metric #3. There were 13,294 beneficiaries with an OUD diagnosis in CY2018, which was 14% of the total SUD population. This population grew faster than the overall demonstration population--48.8% compared to 12.6%--from 8,876 in CY 2017 to 13,294 in CY 2018. Early trends from 2019 indicate continued higher-than-average demonstration population growth.

There were 7,010 beneficiaries (8% of the total SUD population) who are current or historic recipients of specialized community mental health services (called the Medicaid Rehabilitation Option (MRO) in Indiana) in the CY 2018 SUD population. This population grew 7.5% between CY 2017 to CY 2018. There were 9,915 Medicaid and Medicare dual eligible beneficiaries (8% of the total SUD population) in the SUD population in CY 2018. The dual eligible population grew by 5.4% between CY 2017 and CY 2018. There were 1,672 pregnant beneficiaries with SUD in CY 2018, which grew by 47.3% from CY 2017 to CY 2018. Finally, there were 330 criminally involved beneficiaries in the SUD population in CY 2018, a decrease from 580 in CY 2017.

Exhibit V.1.4
Medicaid Beneficiaries with SUD Diagnosis (#3)
displayed by Sub Populations, CY2015* - CY2019**



	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Dual	1,215	7,971	9,404	9,915	10,133
OUD	1,621	6,268	8,876	13,294	15,351
MRO	1,537	5,804	6,522	7,010	6,982



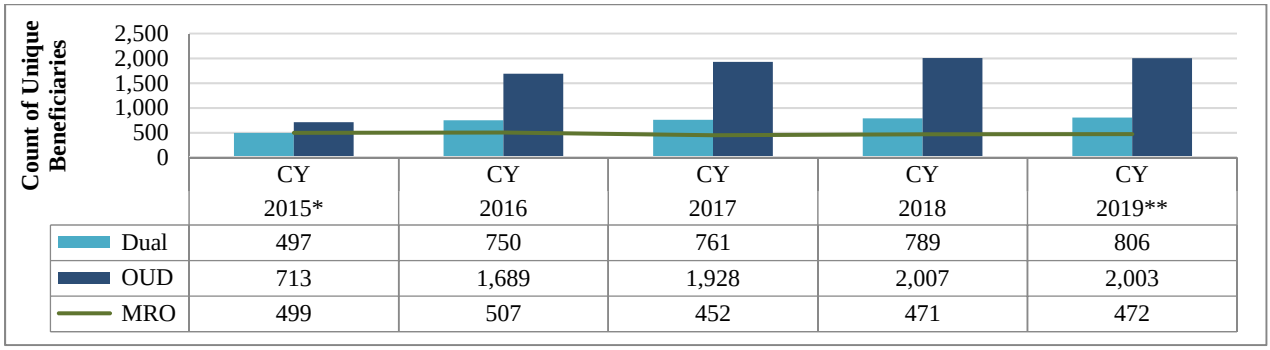
	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Pregnant	214	916	1,135	1,672	1,656
Criminally Involved	32	369	580	330	61

2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

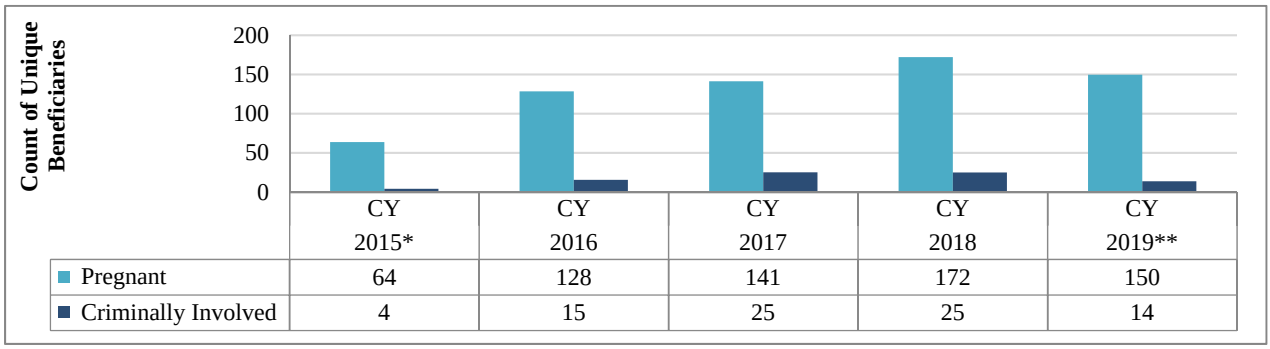
Exhibit V.1.5 summarizes the sub-population data from CY 2015 to CY 2019 for Metric #2. There were 2,007 beneficiaries with a new OUD diagnosis in CY 2018, which was 28% of the total SUD population with a new diagnosis. This population grew by 4.1% from CY 2017 to CY 2018. There were 471 beneficiaries who are current or historic recipients of MRO services in the CY 2018 SUD population, a growth of 4.1% between CY 2017 to CY 2018. There were 789 dual eligible beneficiaries with a new SUD diagnosis in CY 2018, a growth of 3.7% between CY 2017 and CY 2018. There were 172 pregnant beneficiaries with a new SUD diagnosis in CY 2018, a growth of 21.8% between CY 2017 and CY 2018.

Finally, there were 25 criminally involved beneficiaries with a new SUD diagnosis in CY 2018, the same as in CY 2017.

Exhibit V.1.5
Medicaid Beneficiaries with a New SUD Diagnosis (#2)
displayed by Sub Populations, CY2015* - CY2019**



	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Dual	497	750	761	789	806
OUD	713	1,689	1,928	2,007	2,003
MRO	499	507	452	471	472



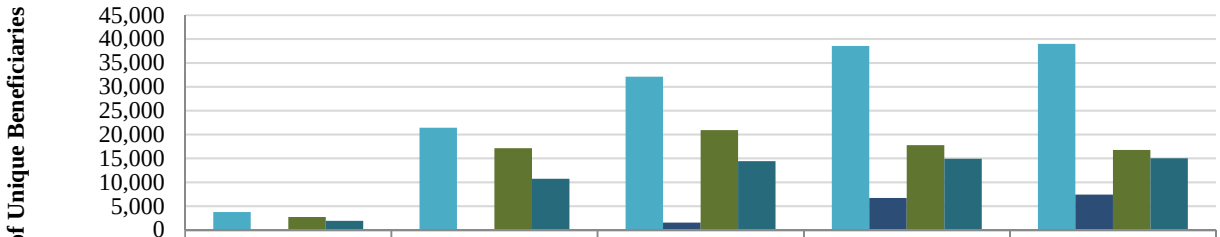
	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Pregnant	64	128	141	172	150
Criminally Involved	4	15	25	25	14

2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

MCE Breakdowns (Metrics #3 and #2)

Exhibit V.1.6 summarizes the model population data from CY 2015 to CY 2019 by MCE for Metric #3. There was some variation in the counts of beneficiaries with a SUD diagnosis and the annual change among the MCEs. In CY 2018, Anthem represents approximately 51% of the SUD population, or 35,536 beneficiaries; their population grew by 20.0% between CY 2017 and CY 2018. MDwise had 17,779 beneficiaries with a SUD diagnosis in CY 2018, which was down by 15.0% compared to 2017. MHS increased the number of beneficiaries with a SUD diagnosis by 3.4% from CY 2017 to 14,911 beneficiaries in CY 2018. CareSource however, is growing rapidly and gained 331.7% more beneficiaries in CY 2018 compared to CY 2017, up to 6,705 from 1,533 in the prior year. This large growth is due to CareSource's lower overall enrollment since the MCE just began its contract in CY 2017.

Exhibit V.1.6
Medicaid Beneficiaries with a SUD Diagnosis (#3)
displayed by MCE, CY2015* - CY2019**

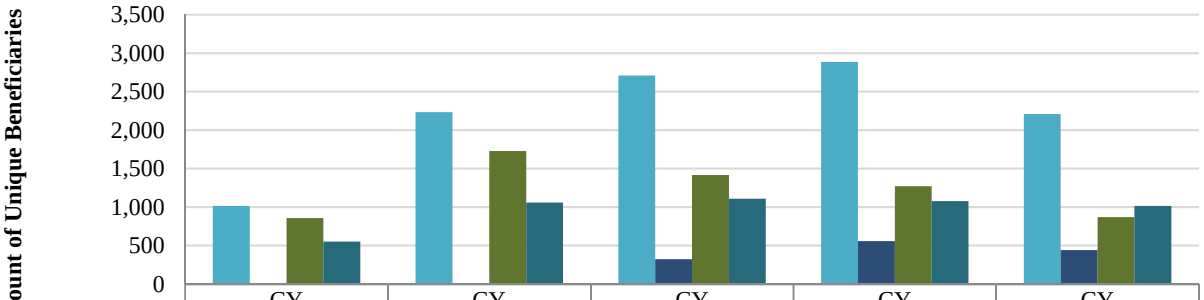


	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Anthem	3,747	21,415	32,117	38,536	38,989
CareSource			1,553	6,705	7,405
MDwise	2,718	17,113	20,910	17,779	16,767
MHS	1,897	10,741	14,423	14,911	15,020

2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

Exhibit V.1.7 summarizes the model population data from CY 2015 to CY 2019 by MCE for Metric #2. There was some variation in the counts of beneficiaries with a new SUD diagnosis and the annual change among the MCEs. In CY 2018, Anthem represents approximately 50% of the newly diagnosed SUD population, with 2,885 beneficiaries; their population grew by 6.5% between CY 2017 and CY 2018. MDwise had 1,271 beneficiaries with a new SUD diagnosis in CY 2018, down by 10.2% compared to CY 2017. Similarly, MHS declined by -2.9% to 1,076 beneficiaries with a new SUD diagnosis in CY 2018. CareSource however, is growing rapidly and gained 73.5% more beneficiaries in CY 2018 (557) compared to CY 2017 (321).

Exhibit V.1.7
Medicaid Beneficiaries with a New SUD Diagnosis (#2)
displayed by MCE, CY2015* - CY2019**



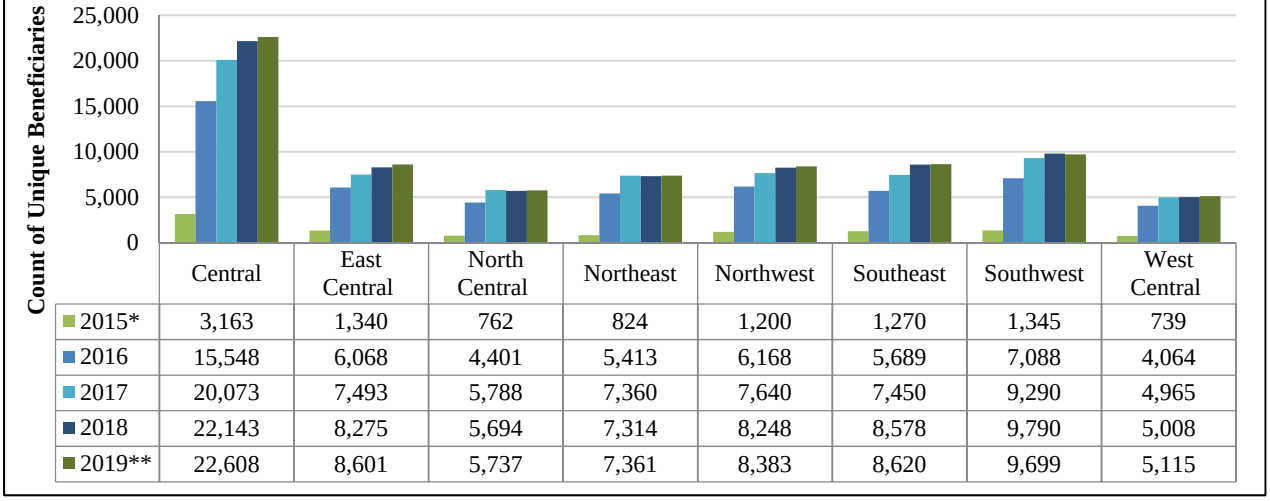
	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Anthem	1,014	2,232	2,709	2,885	2,209
CareSource			321	557	440
MDwise	857	1,727	1,415	1,271	868
MHS	551	1,059	1,108	1,076	1,015

2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

Regional Breakdowns (Metrics #3 and #2)

Exhibit V.1.8 summarizes the SUD population data from CY 2015 to CY 2019 by region for Metric #3. The Central region represented 29% of beneficiaries with a SUD diagnosis each year which is indicative of the state population as a whole. The remaining seven regions represent between 7% and 13% of the total population with a SUD diagnosis. All but the North Central region increased between CY 2017 and CY 2018.

Exhibit V.1.8
Medicaid Beneficiaries with a SUD Diagnosis (#3)
displayed by Region, CY2015* - CY2019**

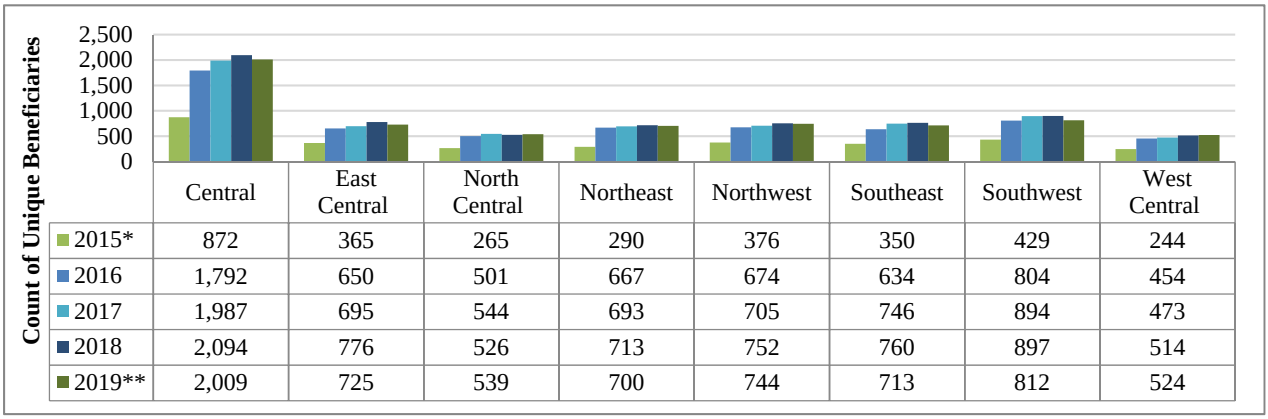


	Central	East Central	North Central	Northeast	Northwest	Southeast	Southwest	West Central
2015*	3,163	1,340	762	824	1,200	1,270	1,345	739
2016	15,548	6,068	4,401	5,413	6,168	5,689	7,088	4,064
2017	20,073	7,493	5,788	7,360	7,640	7,450	9,290	4,965
2018	22,143	8,275	5,694	7,314	8,248	8,578	9,790	5,008
2019**	22,608	8,601	5,737	7,361	8,383	8,620	9,699	5,115

2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

Exhibit V.1.9 summarizes the newly diagnosed SUD population data from CY 2015 to CY 2019 by region for Metric #2. Once again, the Central region was predominant representing 24% of beneficiaries with a new SUD diagnosis. The remaining seven regions represent between 5% and 11% of the total population with a new SUD diagnosis. The Central, East Central, Northwest, Southeast, Southwest and the Southeast all had more beneficiaries with a new SUD diagnosis in CY 2018 compared to CY 2017.

Exhibit V.1.9
Medicaid Beneficiaries with a New SUD Diagnosis (#2)
displayed by Region, CY2015* - CY2019**



	Central	East Central	North Central	Northeast	Northwest	Southeast	Southwest	West Central
2015*	872	365	265	290	376	350	429	244
2016	1,792	650	501	667	674	634	804	454
2017	1,987	695	544	693	705	746	894	473
2018	2,094	776	526	713	752	760	897	514
2019**	2,009	725	539	700	744	713	812	524

2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

Metrics #15a and #15b: Initiation and Engagement of SUD Treatment

Population and Sub-Population Breakdowns (Metrics #15a and 15b)

Exhibit V.1.10 summarizes the demonstration, model and sub-population data from CY 2015 to CY 2018 for Metric #15a. Exhibit V.1.11 shows the same information for Metric #15b. The rate of initiation of SUD treatment decreased 3.6% from 57 percent in the pre-waiver CY 2017 timeframe to 55 percent in CY 2018 for the demonstration population. All sub-populations also decreased or stayed neutral, with the exception of pregnant and criminally involved beneficiaries which increased.

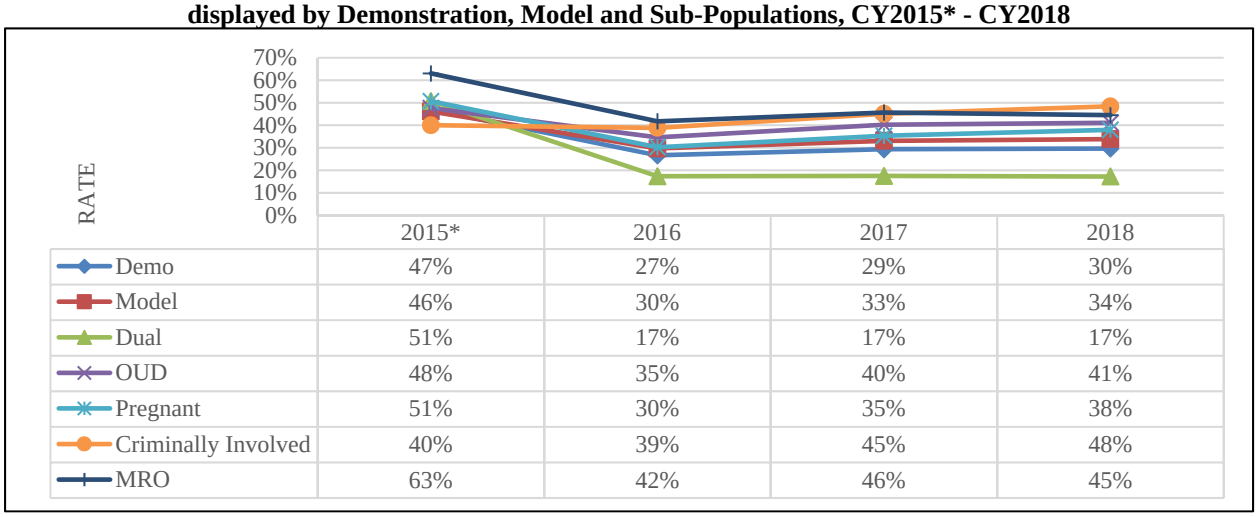
Exhibit V.1.10
Rate of Initiation of SUD Treatment (#15a)
displayed by Demonstration, Model and Sub-Populations, CY2015* - CY2018

	2015*	2016	2017	2018
Demo	59%	54%	57%	55%
Model	59%	54%	59%	56%
Dual	60%	53%	55%	55%
OUD	61%	60%	64%	64%
Pregnant	66%	56%	57%	58%
Criminally Involved	61%	59%	61%	64%
MRO	65%	58%	63%	62%

2015* data may be invalid due to ICD9 to ICD10 conversion

As can be seen in Exhibit V.1.11, the rate of engagement in SUD treatment following initiation increased for the demonstration population by 1.1% from 29 percent in the pre-waiver CY 2017 timeframe to 30 percent in CY 2018. All sub-populations also increased or stayed neutral except the MRO population which decreased.

Exhibit V.1.11
Rate of Engagement of SUD Treatment (#15b)
displayed by Demonstration, Model and Sub-Populations, CY2015* - CY2018



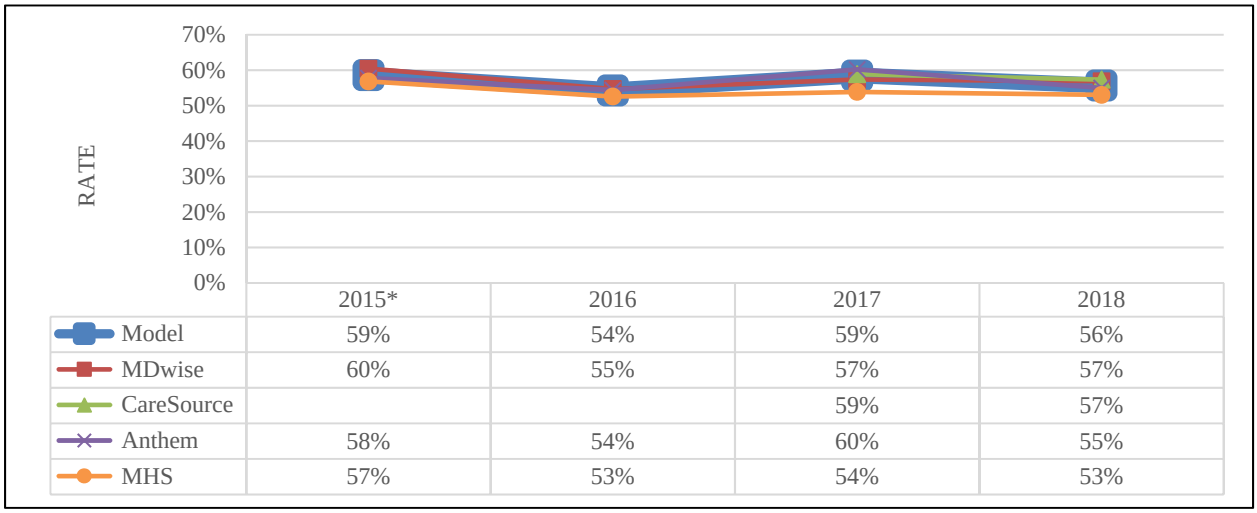
	2015*	2016	2017	2018
Demo	47%	27%	29%	30%
Model	46%	30%	33%	34%
Dual	51%	17%	17%	17%
OUD	48%	35%	40%	41%
Pregnant	51%	30%	35%	38%
Criminally Involved	40%	39%	45%	48%
MRO	63%	42%	46%	45%

2015* data may be invalid due to ICD9 to ICD10 conversion

MCE Breakdowns (Metrics #15a and 15b)

Exhibit V.1.12 summarizes the model data by MCE from CY 2015 to CY 2018 for Metric #15a. The rate of initiation of SUD treatment for the managed care model population decreased by 4.8%, from 59 percent in the pre-waiver CY 2017 timeframe to 56 percent in CY 2018. All MCEs had a higher rate in CY 2017 compared to CY 2018, with declines ranging from -0.9% (MDwise) to -8.7% (Anthem).

Exhibit V.1.12
Rate of Initiation of SUD Treatment (#15a)
displayed by MCE, CY2015* - CY2018

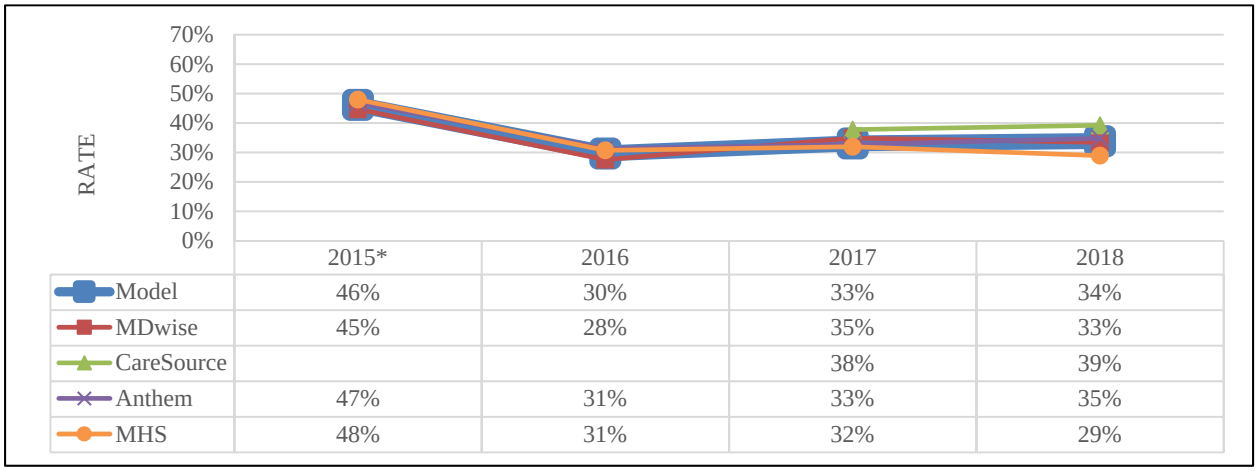


	2015*	2016	2017	2018
Model	59%	54%	59%	56%
MDwise	60%	55%	57%	57%
CareSource			59%	57%
Anthem	58%	54%	60%	55%
MHS	57%	53%	54%	53%

2015* data may be invalid due to ICD9 to ICD10 conversion

Exhibit V.1.13 summarizes the model data by MCE from CY 2015 to CY 2018 for Metric #15b. The rate of engagement in SUD treatment following initiation increased by 2.4% from 33 percent in the pre-waiver CY 2017 timeframe to 34 percent in CY 2018 for the managed care model population. CareSource and Anthem increased by 6.4% and 3.9%, respectively, while MDwise and MHS decreased by 4.3% and 9.4%, respectively.

Exhibit V.1.13
Rate of Engagement of SUD Treatment (#15b)
displayed MCE, CY2015* - CY2018



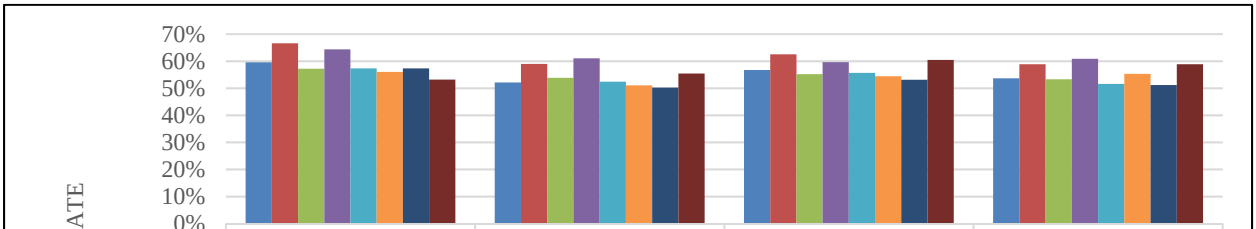
	2015*	2016	2017	2018
Model	46%	30%	33%	34%
MDwise	45%	28%	35%	33%
CareSource			38%	39%
Anthem	47%	31%	33%	35%
MHS	48%	31%	32%	29%

2015* data may be invalid due to ICD9 to ICD10 conversion

Regional Breakdowns (Metrics #15a and 15b)

Exhibit V.1.14 summarizes the model data by MCE from CY 2015 to CY 2018 for Metric #15a. There is some regional variation in the rate of initiation of SUD treatment ranging from 51 to 61 percent in CY 2018. All but the Northeast and Southeast had a lower rate in CY 2018 compared to CY 2017.

Exhibit V.1.14
Rate of Initiation of SUD Treatment (#15a)
displayed by Region, CY2015* - CY2018

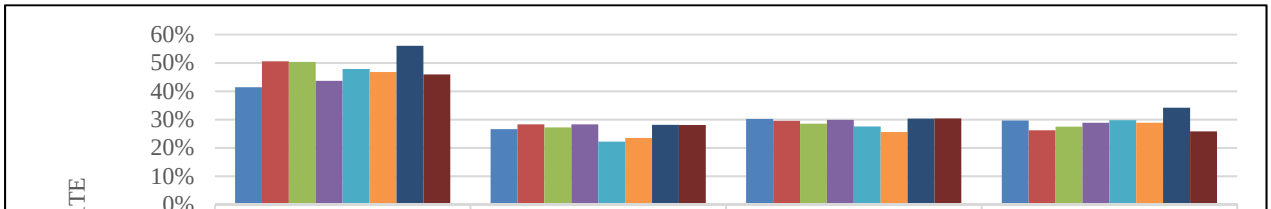


	2015*	2016	2017	2018
Central	60%	52%	57%	54%
East Central	67%	59%	63%	59%
North Central	57%	54%	55%	53%
Northeast	64%	61%	60%	61%
Northwest	57%	52%	56%	52%
Southeast	56%	51%	54%	55%
Southwest	57%	50%	53%	51%
West Central	53%	55%	60%	59%

2015* data may be invalid due to ICD9 to ICD10 conversion

Exhibit V.1.15 summarizes the model data by MCE from CY 2015 to CY 2018 for Metric #15b. The rate of engagement in SUD treatment following initiation was similar across most all regions in CY 2018 from 26 percent to 30 percent. The Southwest region, however, was notable with a rate of 34 percent.

Exhibit V.1.15
Rate of Engagement of SUD Treatment (#15b)
displayed by Region, CY2015* - CY2018



	2015*	2016	2017	2018
Central	41%	27%	30%	30%
East Central	51%	28%	30%	26%
North Central	50%	27%	29%	27%
Northeast	44%	28%	30%	29%
Northwest	48%	22%	28%	30%
Southeast	47%	23%	26%	29%
Southwest	56%	28%	30%	34%
West Central	46%	28%	30%	26%

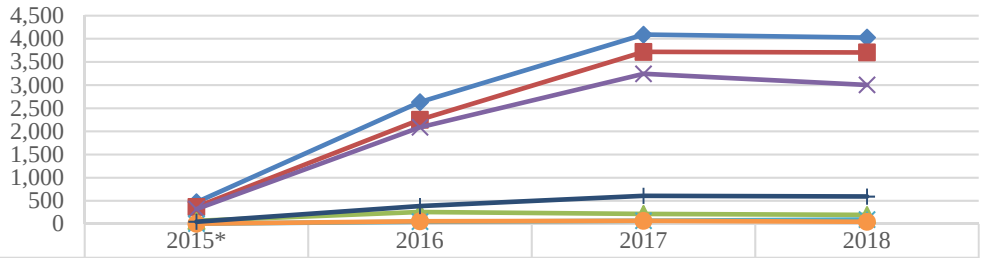
2015* data may be invalid due to ICD9 to ICD10 conversion

Metric #5: Medicaid Beneficiaries Treated in an IMD

Population and Sub-Population Breakdowns (Metric #5)

Exhibit V.1.16 summarizes the demonstration, model and sub-population data from CY 2015 to CY 2018 for Metric #5. The number of beneficiaries receiving treatment in an IMD decreased by 1.6%, from 4.091 in the pre-waiver CY 2017 timeframe to 4,026 in CY 2018. All but the pregnant sub-population also decreased although those changes were small over the study period.

Exhibit V.1.16
Beneficiaries Treated in an IMD (Metric #5)
displayed by Demonstration, Model and Sub-Populations, CY2015* - CY2018



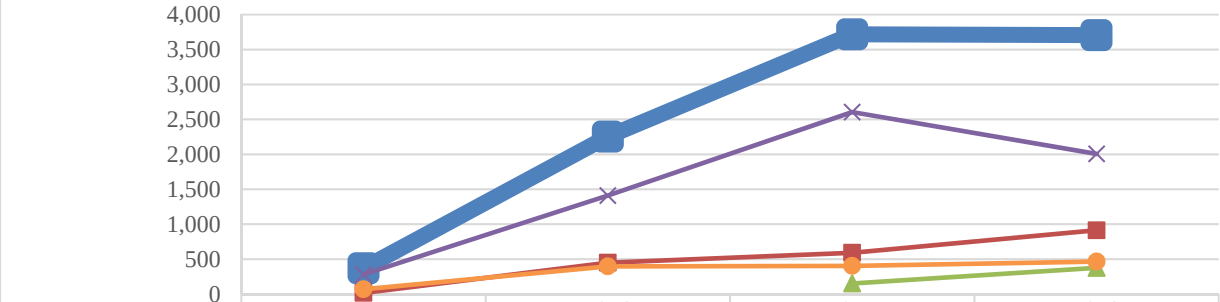
	2015*	2016	2017	2018
Demo	470	2,633	4,091	4,026
Model	369	2,253	3,717	3,705
Dual	68	258	218	196
OUD	322	2,088	3,244	3,003
Pregnant	8	50	70	95
Criminally Involved	6	57	69	47
MRO	49	388	609	593

2015* data may be invalid due to ICD9 to ICD10 conversion

MCE Breakdowns (Metrics #5)

Exhibit V.1.17 on the following page summarizes the model data by MCE from CY 2015 to CY 2018 for Metric #5. In the managed care model population, the number of beneficiaries receiving SUD treatment in an IMD decreased by 0.3%, from 3,717 in the pre-waiver CY 2017 timeframe to 3,705 in CY 2018. Anthem decreased by 23.0% in CY2018 while the remaining MCEs all increased.

Exhibit V.1.17
Beneficiaries Treated in an IMD (Metric #5)
displayed MCE, CY2015* - CY2018



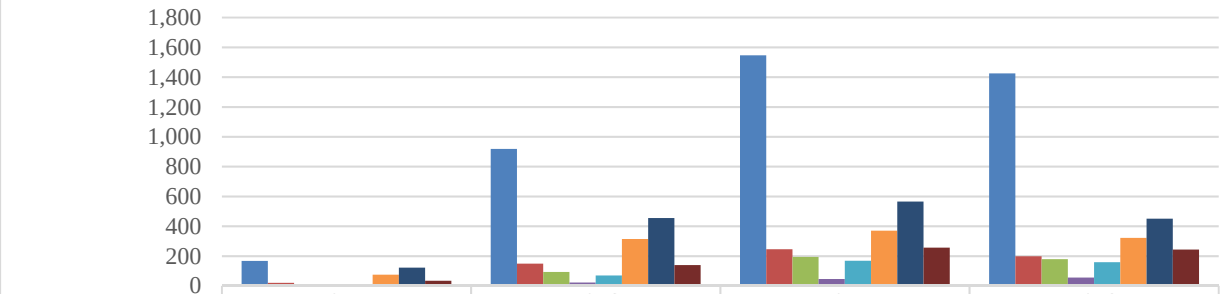
	2015*	2016	2017	2018
Model	369	2,253	3,717	3,705
MDwise	17	450	592	913
CareSource			152	375
Anthem	282	1,410	2,605	2,007
MHS	70	397	404	466

2015* data may be invalid due to ICD9 to ICD10 conversion

Regional Breakdowns (Metrics #5)

Exhibit V.1.18 summarizes the model data by region from CY 2015 to CY 2018 for Metric #5. All regions, with the exception of the Northeast, decreased in the number of Medicaid beneficiaries receiving treatment in IMDs in CY 2018 compared to CY 2017. Only the Northeast region had an increase in beneficiaries treated in an IMD in CY 2018, as compared to CY 2017.

Exhibit V.1.18
Beneficiaries Treated in an IMD (Metric #5)
displayed by Region, CY2015* - CY2018



	2015*	2016	2017	2018
Central	167	919	1,546	1,425
East Central	20	149	246	199
North Central	5	93	194	179
Northeast	5	23	46	56
Northwest	8	70	168	159
Southeast	75	314	370	322
Southwest	122	455	565	451
West Central	34	140	256	244

2015* data may be invalid due to ICD9 to ICD10 conversion

Hypothesis Question 1.1.3:
Does the level and trend of follow-up after discharge from the ED for SUD increase among the SUD population in the post waiver period? (Metrics #17a and #17b)

Metrics #17a and #17b: Rate of Follow-up After an ED Visit for Alcohol and Other Drug Abuse or Dependence (AODD)

Follow-up after discharge from the ED with either AODD was computed as two rates as follows:

a. Follow-up within 7 days after discharge from an ED with AODD diagnosis
b. Follow-up within 30 days after discharge from an ED with AODD diagnosis

Population and Sub-Population Breakdowns (Metrics #17a and #17b)

Exhibit V.1.19 summarizes the trend and absolute rate in CY 2018 for the demonstration population using data from CY 2015 to CY 2018 (Metric #17a – 17b). Exhibits V.1.20 and V.1.21 on the next page summarize the demonstration, model and sub-population data from CY 2015 to CY 2018 for Metric #17a and #17b.

As found in Exhibit V.1.19, the absolute rate for follow-up after an ED visit for AODD for the demonstration population is low.

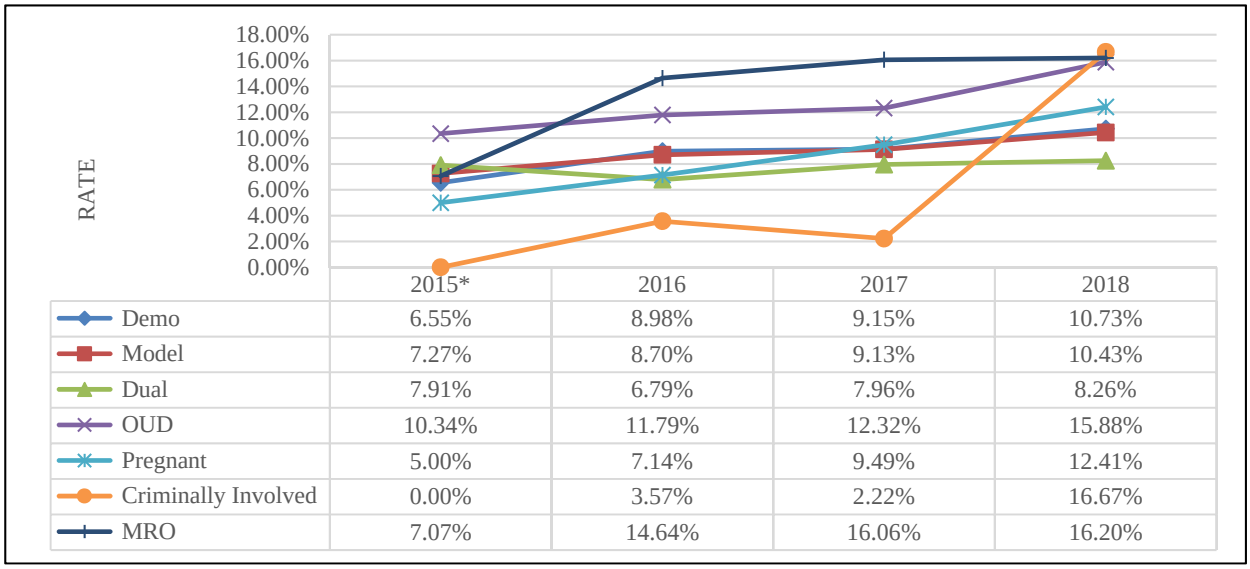
Exhibit V.1.19
Summary of the Rate of Follow-up and Trend (#17a and #17b)
displayed by Demonstration Population, CY2017 to CY2018

	17a. AODD, 7 days	17b. AODD, 30 days
CY2017 to CY2018 Trend	17.2%	17.0%
CY 2018 Rate	11%	16%

The same trend is observed for sub-populations as found in Exhibits V.1.20 and V.1.21. The range of follow-up after an ED visit for AODD within 7 days across all populations (Exhibit V.1.20) in CY 2018 was from 8% in the dual-eligible population to 17% in the criminally involved population. The rate in the OUD and MRO population was 16%. The range within 30 days, as found in Exhibit V.1.21, was 12% for the dual-eligible population, 23% for the pregnant population, 25% for the criminally involved, 26% for the OUD population, and 27% for the MRO population.

The largest positive trend in the rate of follow-up after an ED for AODD within 7 and 30 days was among the OUD, pregnant and criminally involved populations. Those receiving care under the MRO options had a positive trend, but it was lower than average. While dual-eligible beneficiaries had a small increase in the rate of follow-up after 7 days, the rate after 30 days decreased from CY 2017 to CY 2018.

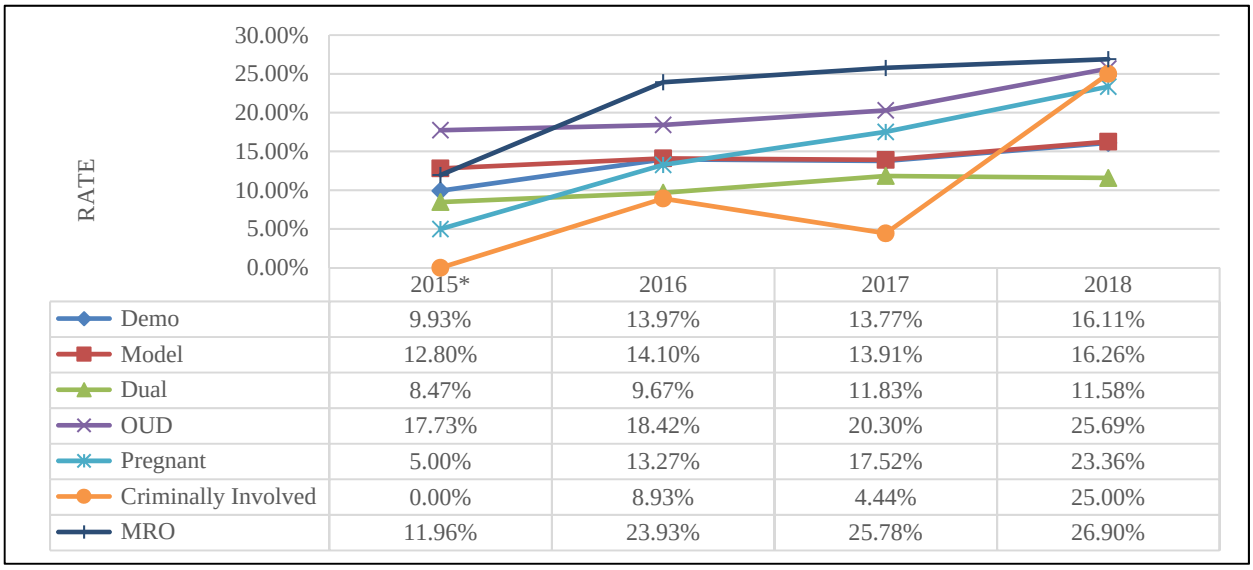
Exhibit V.1.20
Rate of Follow-up AODD ED within 7 Days (#17a)
displayed by Demonstration, Model and Sub-Populations, CY2015* - CY2018



	2015*	2016	2017	2018
Demo	6.55%	8.98%	9.15%	10.73%
Model	7.27%	8.70%	9.13%	10.43%
Dual	7.91%	6.79%	7.96%	8.26%
OUD	10.34%	11.79%	12.32%	15.88%
Pregnant	5.00%	7.14%	9.49%	12.41%
Criminally Involved	0.00%	3.57%	2.22%	16.67%
MRO	7.07%	14.64%	16.06%	16.20%

2015* data may be invalid due to ICD9 to ICD10 conversion

Exhibit V.1.21
Rate of Follow-up AODD EDV 30 Days (#17b)
displayed by Demonstration, Model and Sub-Populations, CY2015* - CY2018



	2015*	2016	2017	2018
Demo	9.93%	13.97%	13.77%	16.11%
Model	12.80%	14.10%	13.91%	16.26%
Dual	8.47%	9.67%	11.83%	11.58%
OUD	17.73%	18.42%	20.30%	25.69%
Pregnant	5.00%	13.27%	17.52%	23.36%
Criminally Involved	0.00%	8.93%	4.44%	25.00%
MRO	11.96%	23.93%	25.78%	26.90%

2015* data may be invalid due to ICD9 to ICD10 conversion

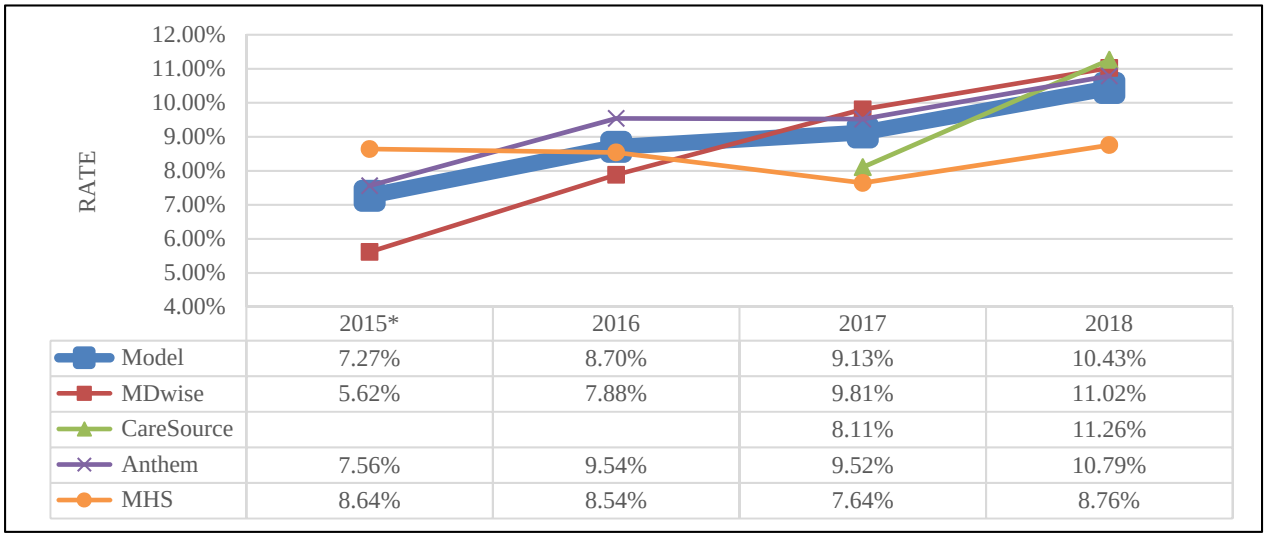
MCE Breakdowns (Metrics #17a and 17b)

Exhibits V.1.22 and V.1.23 summarize the model data by MCE from CY 2015 to CY 2018 for Metric #17a and Metric #17b, respectively. As found in Exhibit V.1.22, the absolute rate of follow-up after an ED visit for AODD within 7 days was low. There was only small variation among the MCEs, ranging from a low of 9% for MHS to 11% for MDwise, CareSource and Anthem. While the absolute rates were higher within 30 days, as can be seen in Exhibit V.1.23, they still represented only a quarter of the target

population (i.e., those discharged from an ED with a diagnosis of AODD). The rates ranged from 13% for MHS to 17% for the remaining MCEs (Anthem, MDwise and CareSource).

The annual trend between CY 2017 and CY 2018 was positive for all MCEs, with little variation, with the exception of CareSource. CareSource's trend was double the other MCEs, but this is attributable to the MCE's overall growth in the number of beneficiaries covered in the same period. Anthem's 30-day trend was 20.4% and was well above MDwise (13.5%) and MHS (8.9%). CareSource's trend in 30-day follow-up was the highest (26.3%), but its sample is much lower than the other MCEs in this timeframe.

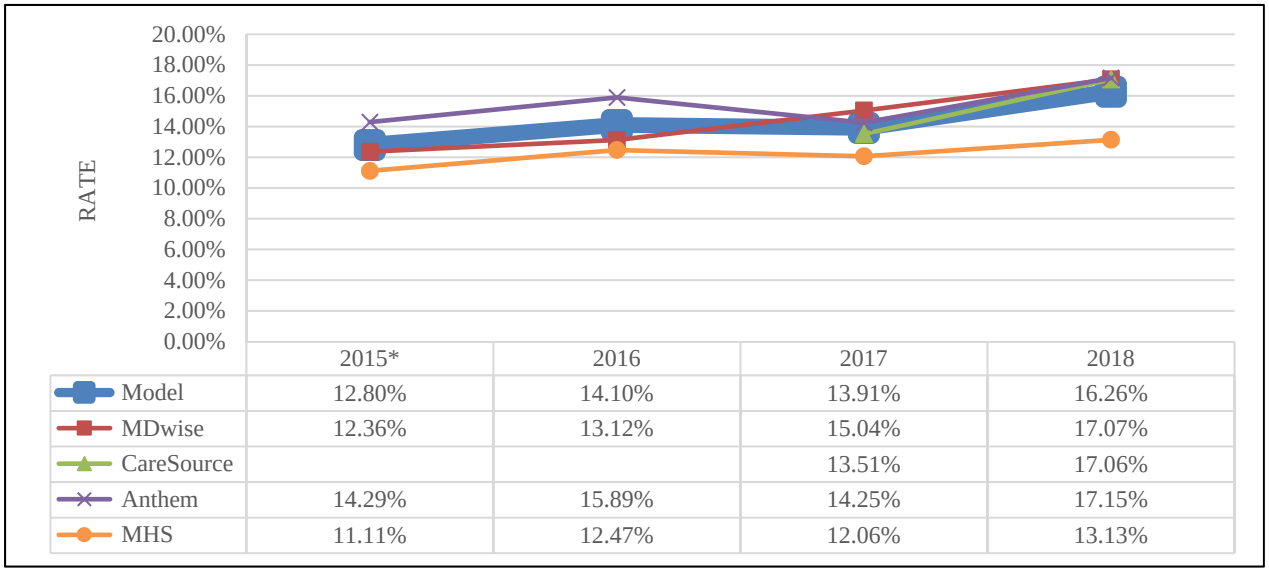
Exhibit V.1.22
Rate of Follow-Up After ED visit for Alcohol and Other Drug Abuse or Dependence within 7 days Annually (#17a), displayed by MCE, CY2015* - CY2018



	2015*	2016	2017	2018
Model	7.27%	8.70%	9.13%	10.43%
MDwise	5.62%	7.88%	9.81%	11.02%
CareSource			8.11%	11.26%
Anthem	7.56%	9.54%	9.52%	10.79%
MHS	8.64%	8.54%	7.64%	8.76%

2015* data may be invalid due to ICD9 to ICD10 conversion

Exhibit V.1.23
Rate of Follow-Up After ED visit for Alcohol and Other Drug Abuse or Dependence within 30 days Annually (#17b), displayed by MCE, CY2015* - CY2018



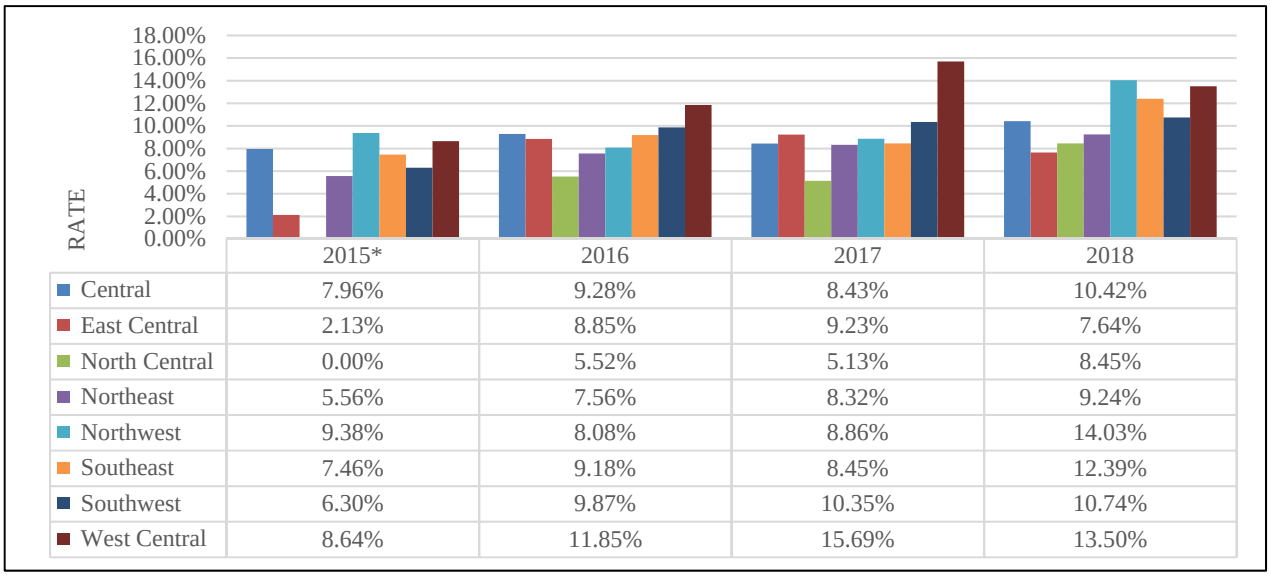
	2015*	2016	2017	2018
Model	12.80%	14.10%	13.91%	16.26%
MDwise	12.36%	13.12%	15.04%	17.07%
CareSource			13.51%	17.06%
Anthem	14.29%	15.89%	14.25%	17.15%
MHS	11.11%	12.47%	12.06%	13.13%

2015* data may be invalid due to ICD9 to ICD10 conversion

Regional Breakdowns (Metrics #17a and 17b)

Exhibit V.1.24 and Exhibit V.1.25 summarize the model data by region from CY 2015 to CY 2018 for Metric #17a. and Metric #17b. As found in Exhibit V.1.24, the absolute rate of follow-up after an ED visit for AODD within 7 days ranges from 8% in the East and North Central regions to 14% in the Northwest and 13% in West Central. In Exhibit V.1.25, the absolute rates increase when 30 days is considered, from a low of 12% in North Central to 21% the Southeast and 20% in the Northwest.

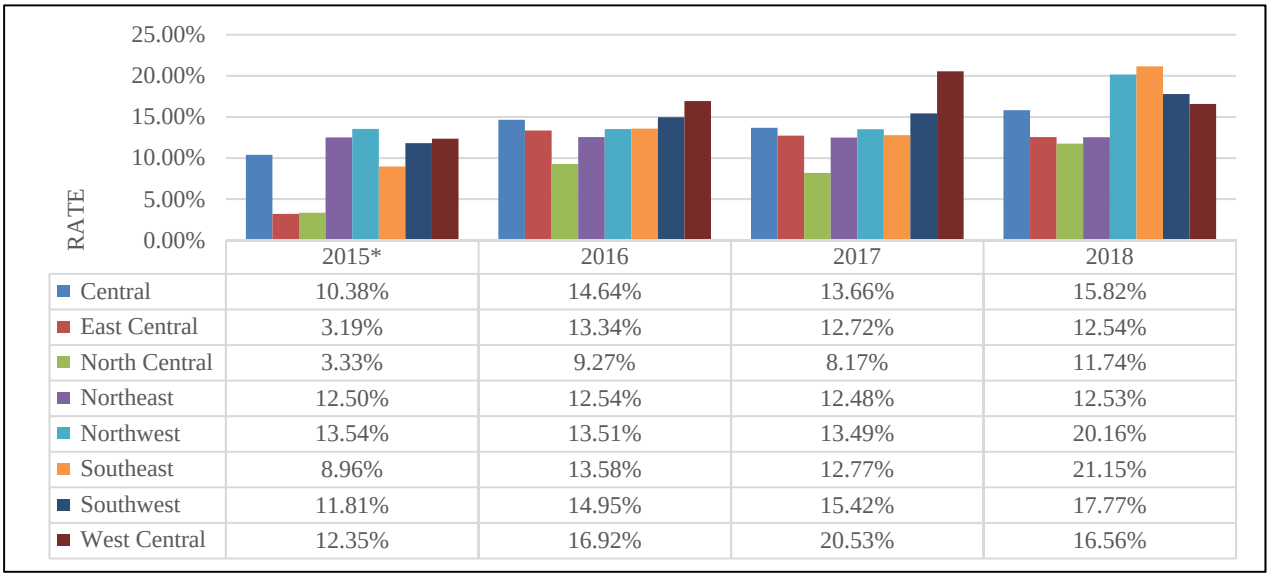
Exhibit V.1.24
Rate of Follow-Up After ED Visit for Alcohol and Other Drug Abuse or Dependence within 7 days Annually (#17a), displayed by Region, CY2015* - CY2018



	2015*	2016	2017	2018
Central	7.96%	9.28%	8.43%	10.42%
East Central	2.13%	8.85%	9.23%	7.64%
North Central	0.00%	5.52%	5.13%	8.45%
Northeast	5.56%	7.56%	8.32%	9.24%
Northwest	9.38%	8.08%	8.86%	14.03%
Southeast	7.46%	9.18%	8.45%	12.39%
Southwest	6.30%	9.87%	10.35%	10.74%
West Central	8.64%	11.85%	15.69%	13.50%

2015* data may be invalid due to ICD9 to ICD10 conversion

Exhibit V.1.25
Rate of Follow-Up After ED visit for Alcohol and Other Drug Abuse or Dependence within 30 days Annually (#17b), displayed by Region, CY2015* - CY2018



	2015*	2016	2017	2018
Central	10.38%	14.64%	13.66%	15.82%
East Central	3.19%	13.34%	12.72%	12.54%
North Central	3.33%	9.27%	8.17%	11.74%
Northeast	12.50%	12.54%	12.48%	12.53%
Northwest	13.54%	13.51%	13.49%	20.16%
Southeast	8.96%	13.58%	12.77%	21.15%
Southwest	11.81%	14.95%	15.42%	17.77%
West Central	12.35%	16.92%	20.53%	16.56%

2015* data may be invalid due to ICD9 to ICD10 conversion

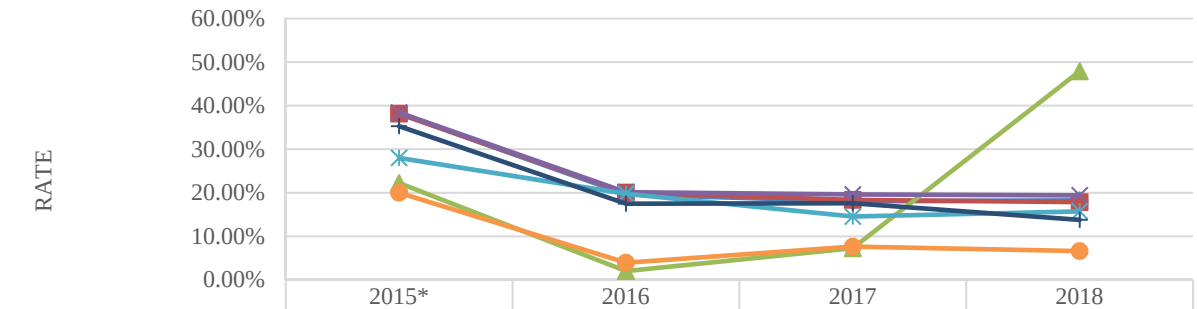
Hypothesis Question 1.1.4:
Does the level and trend in continuity of pharmacotherapy for opioid use disorder increase among the OUD population in the post waiver period?

Metric #22: Continuity of Pharmacotherapy for Opioid Use Disorder

Population and Sub-Population Breakdowns (Metric #22)

Exhibit V.1.26 summarizes the demonstration, model and sub-population data from CY 2015 to CY 2018 for Metric #22. There was a small increase in the rate of continuity of pharmacotherapy for OUD in the demonstration population with SUD of 1.1% between CY 2017 and CY 2018. However, when limited to those with a diagnosis of OUD, the rate was -1.0%. Except for the dual eligible population at 48%, which was 262% higher in CY 2018 than in CY 2017, other sub-populations varied from 7% among the criminally involved to 19% among the OUD population in CY 2018. The pregnancy population had a rate of 16% in CY 2018 which grew from CY 2017 by 8.1%.

Exhibit V.1.26
Rate of Continuity of Pharmacotherapy for Opioid Use Disorder Annually (#22)
displayed by Demonstration, Model and Sub-Populations, CY2015* - CY2018



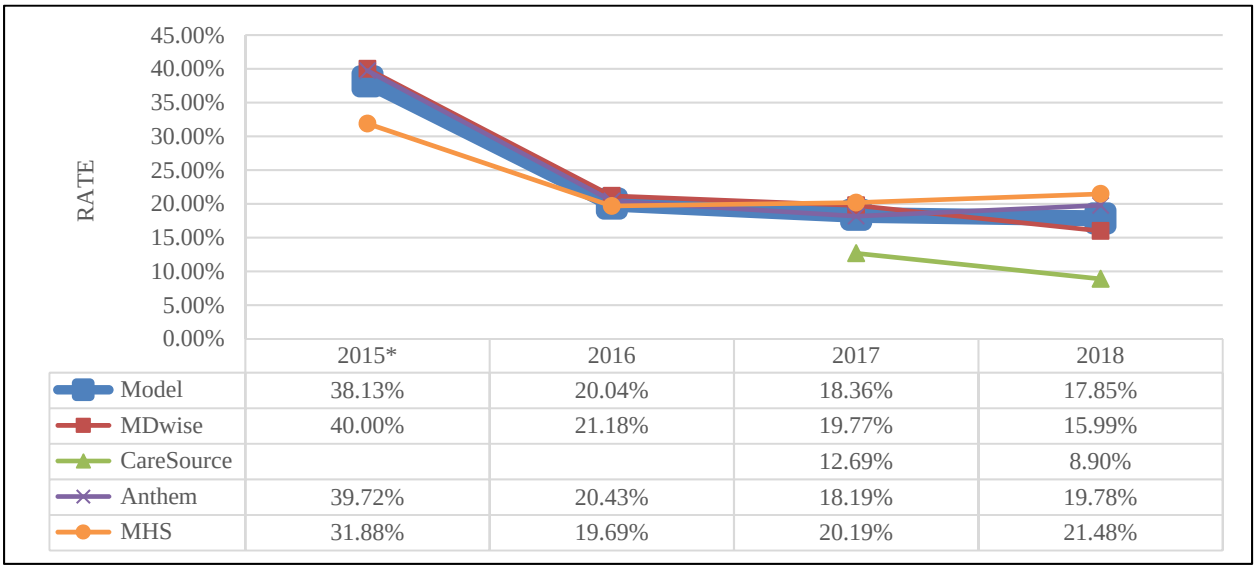
	2015*	2016	2017	2018
Demo	38.16%	19.64%	18.05%	18.26%
Model	38.13%	20.04%	18.36%	17.85%
Dual	22.22%	2.04%	7.27%	47.89%
OUD	38.42%	20.14%	19.61%	19.40%
Pregnant	28.00%	19.77%	14.55%	15.73%
Criminally Involved	20.00%	3.95%	7.64%	6.62%
MRO	35.28%	17.50%	17.62%	13.78%

2015* data may be invalid due to ICD9 to ICD10 conversion

MCE Breakdowns (Metric #22)

Exhibit V.1.27 summarizes the model data by MCE from CY 2015 to CY 2019 for Metric #22. The absolute rate of continuity of pharmacotherapy for OUD was low among the MCEs, ranging from a low of 9% for CareSource to 21% for MHS. The annual trend for the model was negative (-2.8%) between CY 2017 and CY 2018. However, it was positive for Anthem (8.8%) and MHS (6.4%) but negative for CareSource (-29.9%) and MDwise (-19.1%). CareSource's trend may be partially attributable to increased growth in their covered population in the same timeframe.

Exhibit V.1.27
Rate of Continuity of Pharmacotherapy for Opioid Use Disorder Annually (#22)
displayed MCE, CY2015* - CY2018



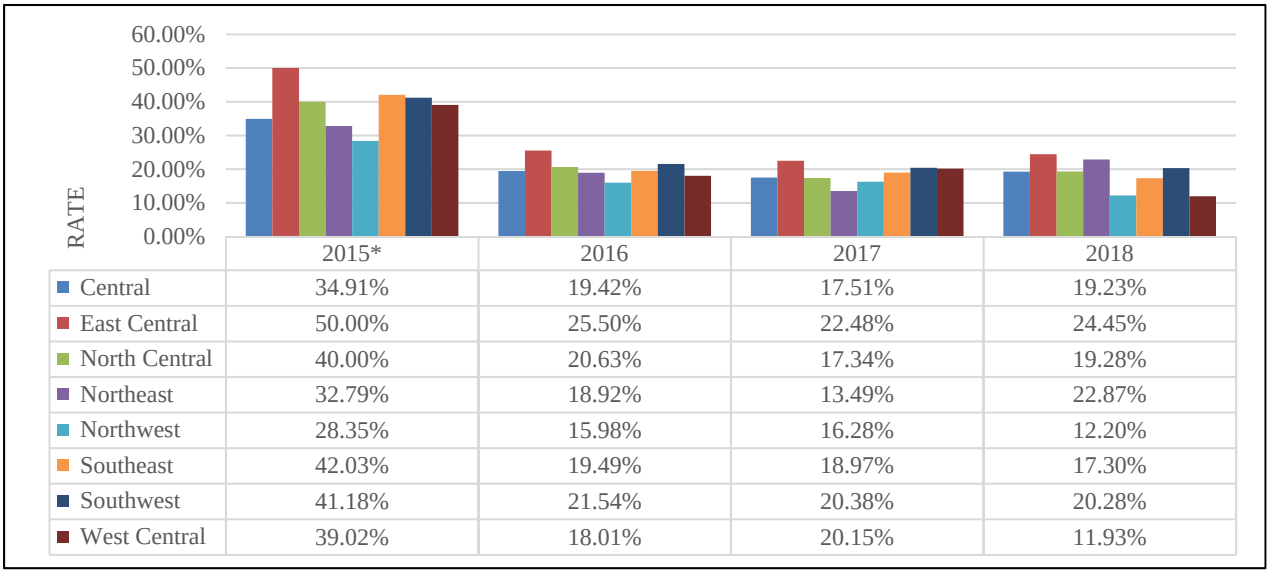
	2015*	2016	2017	2018
Model	38.13%	20.04%	18.36%	17.85%
MDwise	40.00%	21.18%	19.77%	15.99%
CareSource			12.69%	8.90%
Anthem	39.72%	20.43%	18.19%	19.78%
MHS	31.88%	19.69%	20.19%	21.48%

2015* data may be invalid due to ICD9 to ICD10 conversion

Regional Breakdowns (Metric #22)

Exhibit V.1.28 summarizes the model data by region from CY 2015 to CY 2018 for Metric #22. The absolute rate of continuity of pharmacotherapy for OUD ranges from 12% in the Northwest and West Central to 24% in East Central and 23% in the Northeast. The trend in CY 2018 compared to CY 2017 is mixed among regions from a decrease of 41% in West Central to an increase of 69% in the Northeast.

Exhibit V.1.28
Rate of Continuity of Pharmacotherapy for Opioid Use Disorder Annually (#22)
displayed by Region, CY2015* - CY2018



	2015*	2016	2017	2018
Central	34.91%	19.42%	17.51%	19.23%
East Central	50.00%	25.50%	22.48%	24.45%
North Central	40.00%	20.63%	17.34%	19.28%
Northeast	32.79%	18.92%	13.49%	22.87%
Northwest	28.35%	15.98%	16.28%	12.20%
Southeast	42.03%	19.49%	18.97%	17.30%
Southwest	41.18%	21.54%	20.38%	20.28%
West Central	39.02%	18.01%	20.15%	11.93%

2015* data may be invalid due to ICD9 to ICD10 conversion

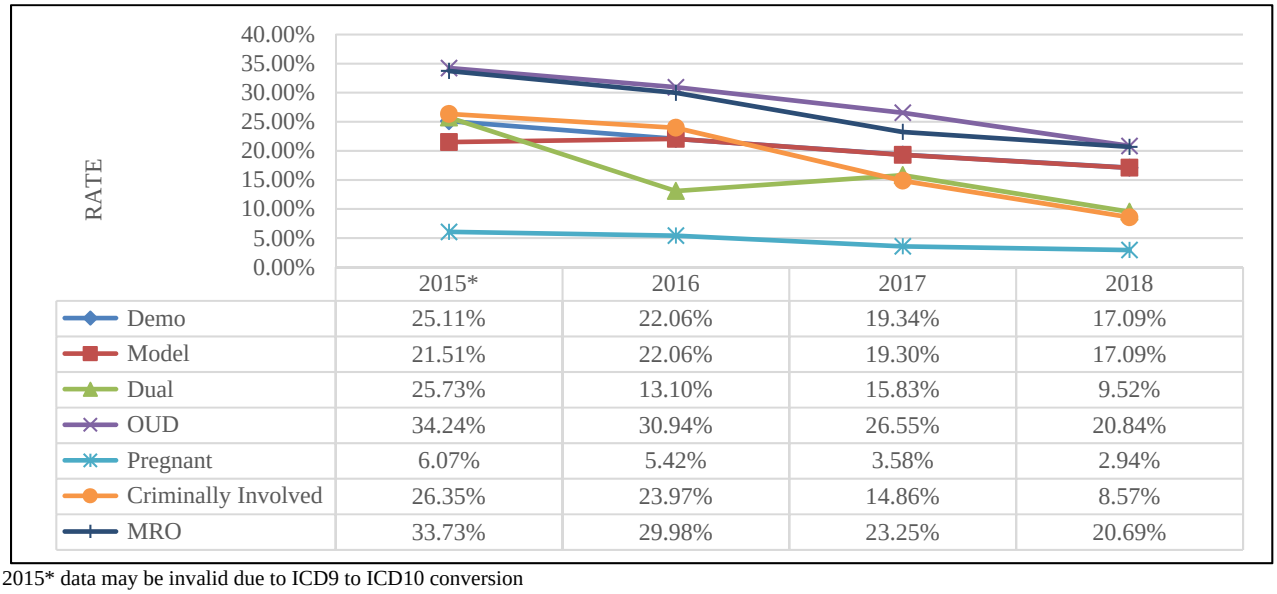
Hypothesis Question 1.1.5:
Does the level and trend in concurrent use of opioids and benzodiazepines decrease in the OUD population in the post waiver period?

Metric #21: Concurrent Use of Opioids and Benzodiazepines

Population and Sub-Population Breakdowns (Metric #21)

Exhibit V.1.29 summarizes the demonstration, model and sub-population data from CY 2015 to CY 2018 for Metric #21. The rate of concurrent use of opioids and benzodiazepines in the demonstration population was 17% in CY 2018. The range of rates among the sub-populations was as low as 3% in the pregnant population to 21% in the OUD and MRO populations. There was a decrease in the rate of concurrent use of opioids and benzodiazepines in the demonstration population with SUD of 11.6% between CY 2017 and CY 2018. Among those with the diagnosis of OUD, the rate was -21.5%. The remaining sub-populations also experienced a decrease.

Exhibit V.1.29
Rate of Concurrent Use of Opioids and Benzodiazepines Annually (#21)
displayed by Demonstration, Model and Sub-Populations, CY2015* - CY2018



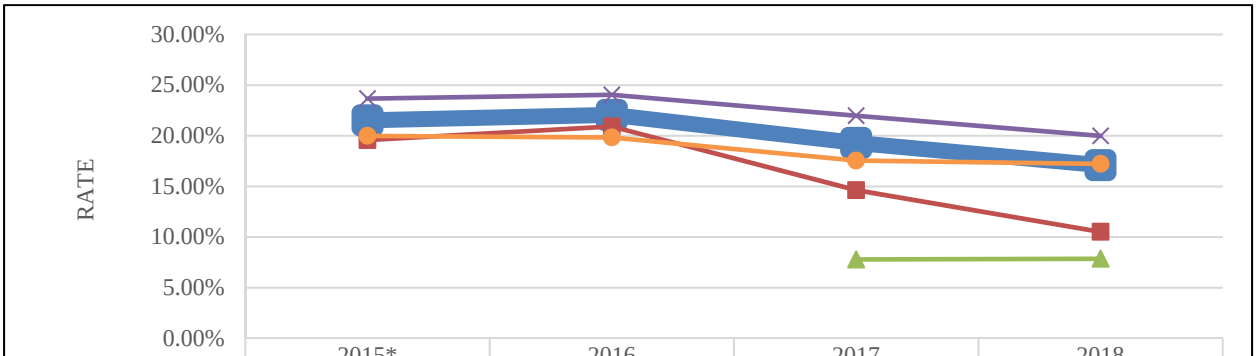
	2015*	2016	2017	2018
Demo	25.11%	22.06%	19.34%	17.09%
Model	21.51%	22.06%	19.30%	17.09%
Dual	25.73%	13.10%	15.83%	9.52%
OUD	34.24%	30.94%	26.55%	20.84%
Pregnant	6.07%	5.42%	3.58%	2.94%
Criminally Involved	26.35%	23.97%	14.86%	8.57%
MRO	33.73%	29.98%	23.25%	20.69%

2015* data may be invalid due to ICD9 to ICD10 conversion

MCE Breakdowns (Metrics #21)

Exhibit V.1.30 summarizes the model data by MCE from CY 2015 to CY 2018 for Metric #21. The absolute rate of concurrent use of opioids and benzodiazepines in the model populations was the same as in the demonstration, or 17%. CareSource had the lowest absolute rate in CY 2018 of 8%, followed by MDwise at 11%. MHS is at 17% and Anthem had the highest rate of 20%. There was variation in the trend from CY 2017 to CY 2018 among the MCEs, ranging from +0.9% for CareSource to -28.2% for MDwise.

Exhibit V.1.30
Rate of Concurrent Use of Opioids and Benzodiazepines Annually (#21)
displayed MCE, CY2015* - CY2018



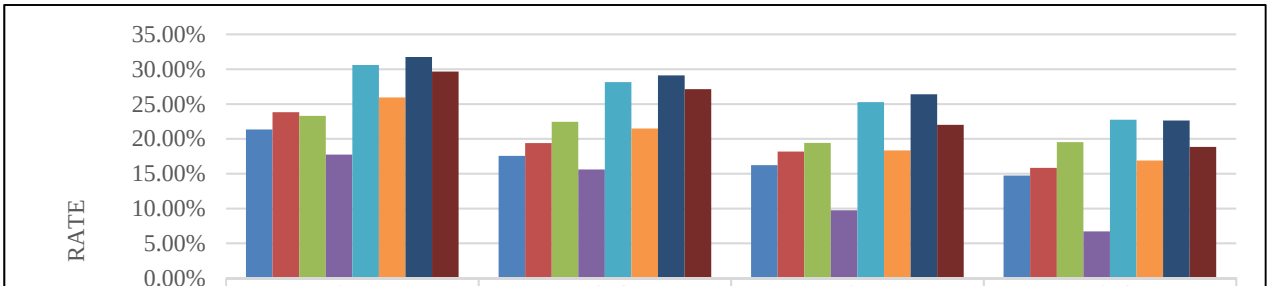
	2015*	2016	2017	2018
Model	21.51%	22.06%	19.30%	17.09%
MDwise	19.57%	20.91%	14.63%	10.51%
CareSource			7.79%	7.86%
Anthem	23.67%	24.04%	21.98%	19.99%
MHS	19.99%	19.83%	17.55%	17.23%

2015* data may be invalid due to ICD9 to ICD10 conversion

Regional Breakdowns (Metric #21)

Exhibit V.1.31 summarizes the model data by region from CY 2015 to CY 2018 for Metric #21. The absolute rate of concurrent use of opioids and benzodiazepines ranges from 7% in the Northeast to 23% in the Northwest. The trend in CY 2018 compared to CY 2017 is mostly negative, from -7.9% in the Southeast to -31.1% in the Northeast; the North Central region was positive at +0.5%.

Exhibit V.1.31
Rate of Concurrent Use of Opioids and Benzodiazepines Annually (#21)
displayed by Region, CY2015* - CY2018



	2015*	2016	2017	2018
Central	21.34%	17.55%	16.22%	14.73%
East Central	23.82%	19.40%	18.16%	15.82%
North Central	23.30%	22.43%	19.42%	19.52%
Northeast	17.73%	15.61%	9.74%	6.71%
Northwest	30.60%	28.13%	25.28%	22.75%
Southeast	25.92%	21.47%	18.33%	16.89%
Southwest	31.75%	29.10%	26.39%	22.61%
West Central	29.65%	27.12%	22.00%	18.84%

2015* data may be invalid due to ICD9 to ICD10 conversion

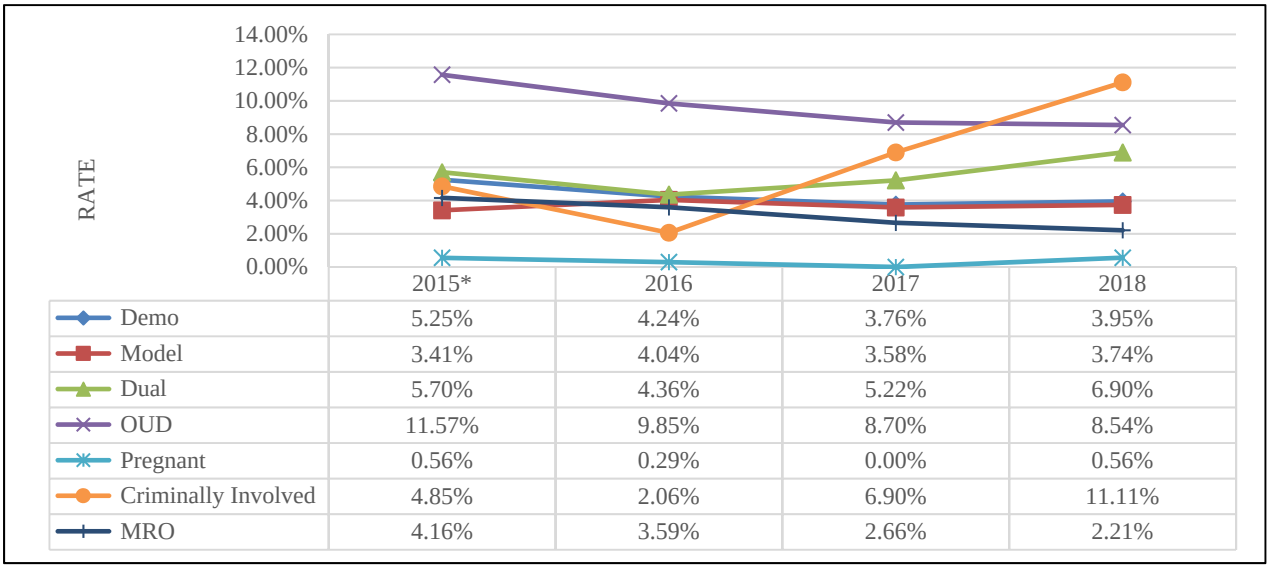
Hypothesis Question 1.1.6:
Does the level and trend in the rate of use of opioids at high dosage in persons without cancer decrease in the post waiver period?

Metrics #18 and #19: Use of Opioids for Persons Without Cancer

Population and Sub-Population Breakdowns (Metric #18 and #19)

Exhibit V.1.32 summarizes the demonstration, model and sub-population data from CY 2015 to CY 2018 for Metric #18. The rate of use of opioids in high dosage in persons without cancer in the demonstration population was 3.95% in CY 2018. The range of rates among the subpopulations was as low as 0.56% in the pregnant population and 2.21% in the MRO population up to 8.55% in the OUD and 11.11% in the criminally involved population. There was an overall increase in the rate for this measure in the demonstration population with SUD of 5.0% between CY 2017 and CY 2018. Among those with diagnosis of OUD, the rate was lower in CY 2018 than CY 2017 (-1.8%), as was in the MRO population (-16.9%). The remaining subpopulations increased in CY 2018 compared to CY 2017, including 61.1% in the criminally involved population and 32.2% in the dual eligible population.

Exhibit V.1.32
Rate of Use of Opioids at High Dosage in Persons Without Cancer Annually (#18)
displayed by Demonstration, Model and Sub-Populations, CY2015* - CY2018

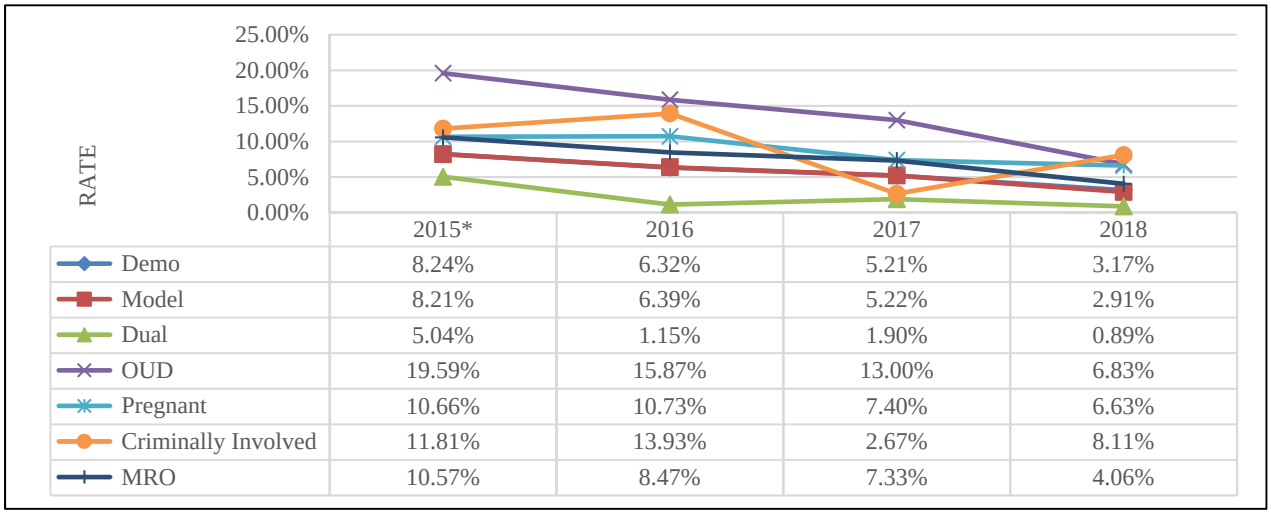


	2015*	2016	2017	2018
Demo	5.25%	4.24%	3.76%	3.95%
Model	3.41%	4.04%	3.58%	3.74%
Dual	5.70%	4.36%	5.22%	6.90%
OUD	11.57%	9.85%	8.70%	8.54%
Pregnant	0.56%	0.29%	0.00%	0.56%
Criminally Involved	4.85%	2.06%	6.90%	11.11%
MRO	4.16%	3.59%	2.66%	2.21%

2015* data may be invalid due to ICD9 to ICD10 conversion

Exhibit V.1.33 summarizes the demonstration, model and sub-population data from CY 2015 to CY 2018 for Metric #19. The rate of use of opioids from multiple providers in persons without cancer in the demonstration population was 3.17% in CY 2018. The range of rates among the subpopulations was as low as 0.89% in the dual eligible population to a high of 8.11% in the criminally involved population. The MRO population has a rate of 4.06%. The OUD and pregnant population had rates of 6.83% and 6.63%, respectively. There was an overall decrease in this measure in the demonstration population with SUD of -39.2% between CY 2017 and CY 2018. Among those with a diagnosis of OUD, the rate was -47.5%. For those with a history of MRO services, it was -44.6%. The dual eligible population decreased the most by -53.2% whereas the criminally involved population grew by 204.1% between CY 2017 and CY 2018.

Exhibit V.1.33
Rate of Use of Opioids from Multiple Providers in Persons Without Cancer Annually (#19)
displayed by Demonstration, Model and Sub-Populations, CY2015* - CY2018



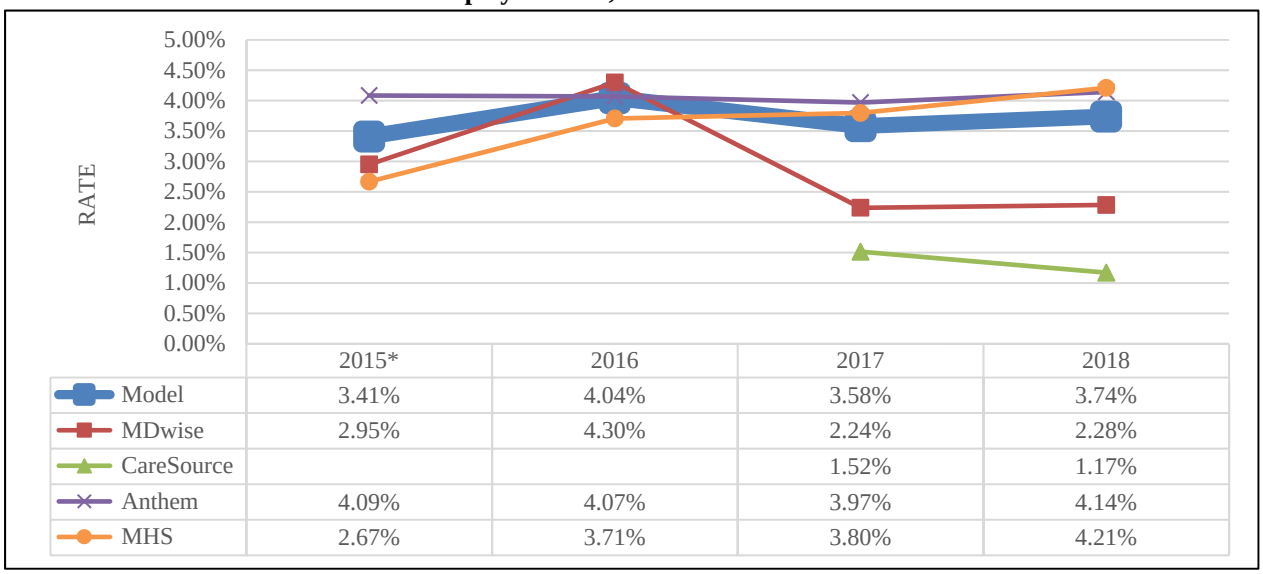
	2015*	2016	2017	2018
Demo	8.24%	6.32%	5.21%	3.17%
Model	8.21%	6.39%	5.22%	2.91%
Dual	5.04%	1.15%	1.90%	0.89%
OUD	19.59%	15.87%	13.00%	6.83%
Pregnant	10.66%	10.73%	7.40%	6.63%
Criminally Involved	11.81%	13.93%	2.67%	8.11%
MRO	10.57%	8.47%	7.33%	4.06%

2015* data may be invalid due to ICD9 to ICD10 conversion

MCE Breakdowns (Metrics #18 and #19)

Exhibit V.1.34 summarizes the model data by MCE from CY 2015 to CY 2018 for Metric #18. The absolute rate of use of opioids at a high dosage in persons without cancer in the model population (3.74%) was similar to the demonstration (3.95%) population. CareSource had the lowest absolute rate in CY 2018 of 1.17% followed by MDwise at 2.28%, MHS at 4.21% and Anthem at 4.14%. There was variation in the trend from CY 2017 to CY 2018 among the MCEs, ranging from -22.7% for CareSource to +10.9% for MHS.

Exhibit V.1.34
Rate of Use of Opioids at High Dosage in Persons Without Cancer (#18)
displayed MCE, CY2015* - CY2018

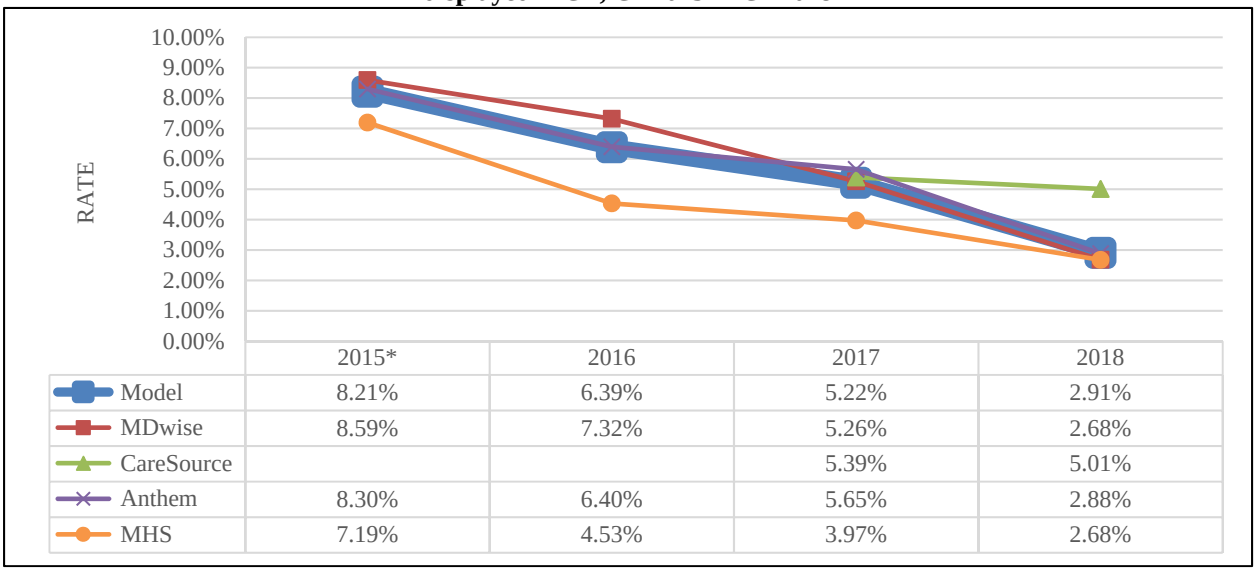


	2015*	2016	2017	2018
Model	3.41%	4.04%	3.58%	3.74%
MDwise	2.95%	4.30%	2.24%	2.28%
CareSource			1.52%	1.17%
Anthem	4.09%	4.07%	3.97%	4.14%
MHS	2.67%	3.71%	3.80%	4.21%

2015* data may be invalid due to ICD9 to ICD10 conversion

Exhibit V.1.35 summarizes the model data by MCE from CY 2015 to CY 2018 for Metric #19. The absolute rate of use of opioids from multiple providers in persons without cancer in the model population (2.91%) was similar to the demonstration (3.17%) population. CareSource had the highest absolute rate in CY 2018 of 5.01% followed by MDwise at 2.68%, MHS at 2.68% and Anthem at 2.88%. The trend from CY 2017 to CY 2018 decreased for all MCEs with -7.0% for CareSource, -49.9% for Anthem and MDwise, and -32.6% for MHS.

Exhibit V.1.35
Rate of Use of Opioids from Multiple Providers in Persons Without Cancer (#19)
displayed MCE, CY2015* - CY2018



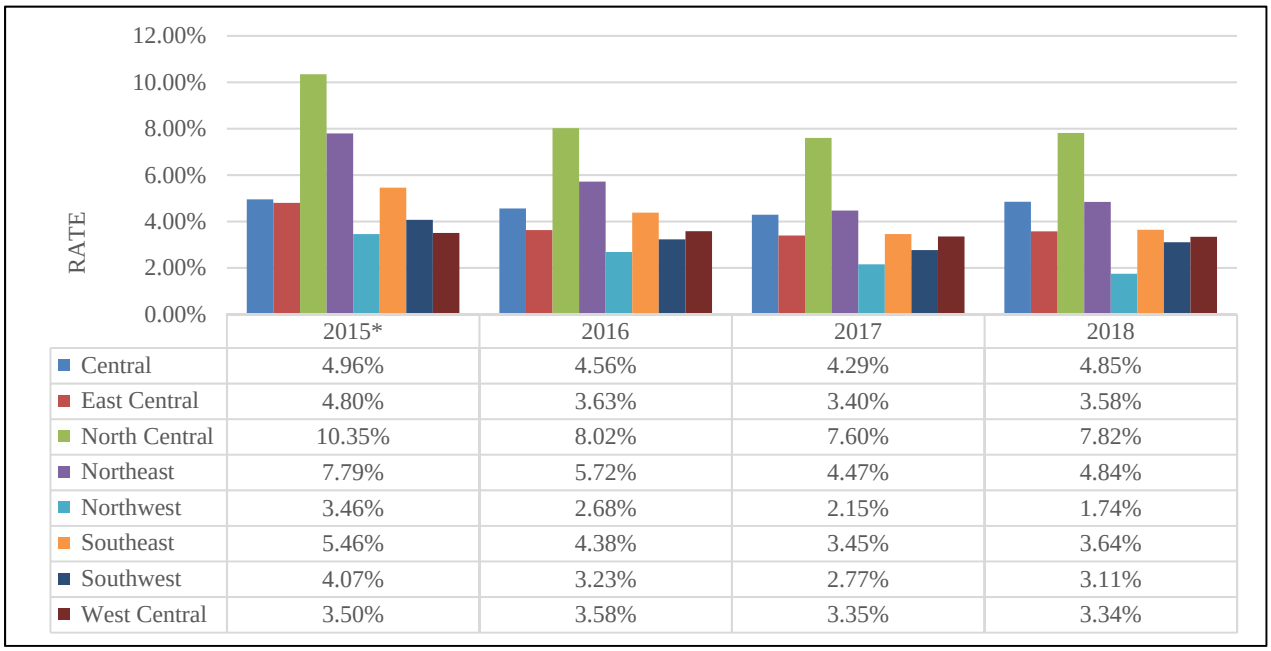
	2015*	2016	2017	2018
Model	8.21%	6.39%	5.22%	2.91%
MDwise	8.59%	7.32%	5.26%	2.68%
CareSource			5.39%	5.01%
Anthem	8.30%	6.40%	5.65%	2.88%
MHS	7.19%	4.53%	3.97%	2.68%

2015* data may be invalid due to ICD9 to ICD10 conversion

Regional Breakdowns (Metric #18 and #19)

Exhibit V.1.36 and Exhibit V.1.37 summarize the model data by region from CY 2015 to CY 2018 for Metric #18 and #19. As found in Exhibit V.1.36 on the next page, the trend from CY 2017 to CY 2018 in concurrent use of opioids and benzodiazepines ranges from 7% in the Northeast to 23% in the Northwest. For the use of opioids from multiple providers in persons without cancer (Exhibit V.1.37), the trend in CY 2018 compared to CY 2017 is mostly negative from -7.9% in the Southeast to -31.1% in the Northeast; the North Central was positive at 0.5%.

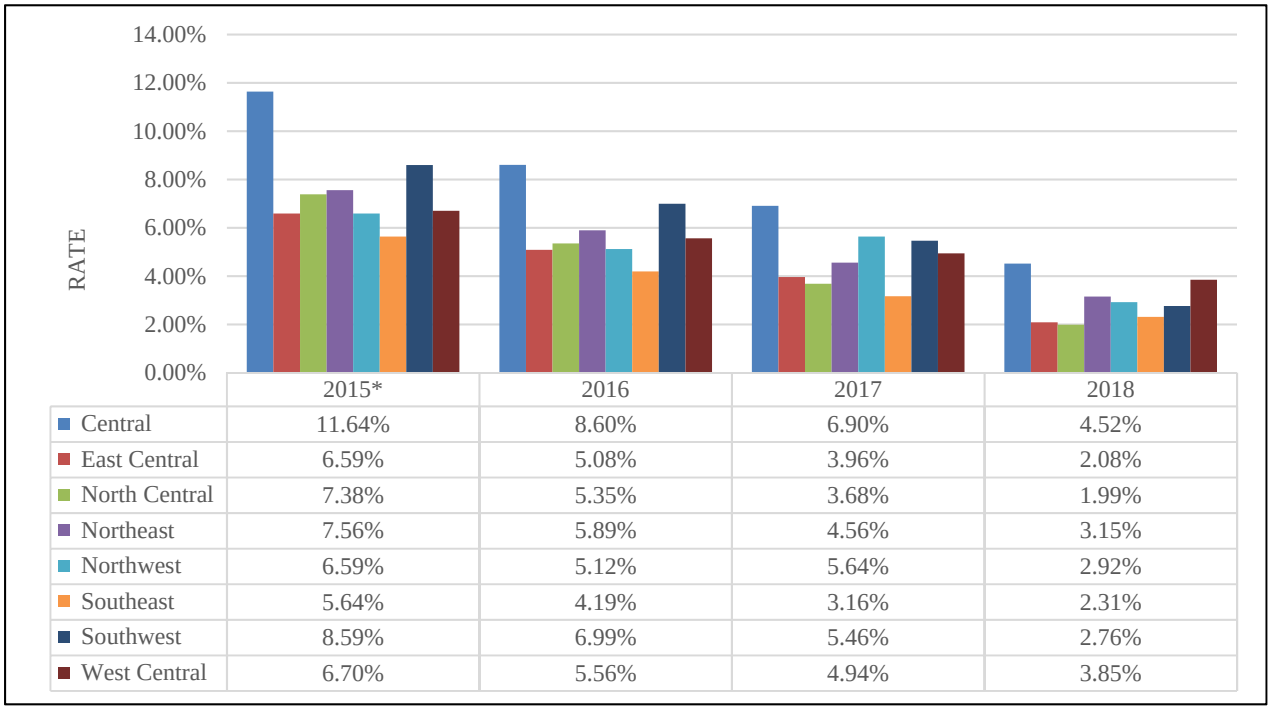
Exhibit V.1.36
Rate of Use of Opioids at High Dosage in Persons Without Cancer Annually (#18)
displayed by Region, CY2015* - CY2018



	2015*	2016	2017	2018
Central	4.96%	4.56%	4.29%	4.85%
East Central	4.80%	3.63%	3.40%	3.58%
North Central	10.35%	8.02%	7.60%	7.82%
Northeast	7.79%	5.72%	4.47%	4.84%
Northwest	3.46%	2.68%	2.15%	1.74%
Southeast	5.46%	4.38%	3.45%	3.64%
Southwest	4.07%	3.23%	2.77%	3.11%
West Central	3.50%	3.58%	3.35%	3.34%

2015* data may be invalid due to ICD9 to ICD10 conversion

Exhibit V.1.37
Rate of Use of Opioids from Multiple Providers in Persons Without Cancer Annually (#19)
displayed by Region, CY2015* - CY2018



	2015*	2016	2017	2018
Central	11.64%	8.60%	6.90%	4.52%
East Central	6.59%	5.08%	3.96%	2.08%
North Central	7.38%	5.35%	3.68%	1.99%
Northeast	7.56%	5.89%	4.56%	3.15%
Northwest	6.59%	5.12%	5.64%	2.92%
Southeast	5.64%	4.19%	3.16%	2.31%
Southwest	8.59%	6.99%	5.46%	2.76%
West Central	6.70%	5.56%	4.94%	3.85%

2015* data may be invalid due to ICD9 to ICD10 conversion

V.C SECTION 2. COSTS OF SUD CARE

Hypothesis 1.2: Costs of care decreases in the SUD population in the post waiver period.

Research Questions

This hypothesis includes six research questions aimed at understanding the waiver's impact on the costs of care. Of the six questions, the Interim Evaluation analyzed two; the remaining required additional data and transformations that were not available at the time of preparing this report. They will be included in the Summative Evaluation.

The following two questions are meant to inform how costs of SUD care change for the SUD population in the post-waiver period:

1.2.2 Does the level and trend in SUD service spending for the SUD population increase in the post waiver period?

1.2.6 Does the level and trend in acute utilization for SUD, potentially preventable emergency department or potentially preventable hospital readmissions decrease in the SUD population in the post waiver period?

Metrics

Seven unique metrics were computed as indicators of costs of care as defined in the two research questions evaluated. Each metric is an indicator of aspects of costs of care, which as defined in Section IV, would be impacted by waiver activities focused on improving the SUD system of care. All measures in this section are either required, and/or recommended by CMS for Indiana SUD waiver monitoring activities. There are a mix of metrics with a national steward and those that are defined by CMS.

Where possible, the Interim Evaluation presents data from CY 2015 and CY 2019 for transparency, but it is not included in evaluating trends given its limitations as discussed in Section IV. The Interim Evaluation considered annual data that was visualized by plotting metrics over time. Metrics also plotted data over time for key sub-populations, MCEs and regions. The annual observed trend between CY 2017 and CY 2018 were compared against desired trends to derive the Interim Evaluation conclusions.

The following metrics were computed to evaluate hypothesis 1.2:

1. SUD Spending (#28)
2. Per Capita SUD Spending (#30)
3. SUD Spending within IMDs (#29)
4. Per Capita SUD Spending within IMDs (#31)
5. Emergency Department Utilization for SUD per 1,000 Medicaid Beneficiaries (#23)
6. Inpatient Stays for SUD per 1,000 Medicaid Beneficiaries (#24)
7. Readmissions Among Beneficiaries with SUD (#25)

Results Desired versus Observed Trends

Exhibit V.2.1 summarizes the observed versus desired trend in the pre-waiver period of CY 2017 and the post-waiver period of CY 2018 for the seven measures included as part of hypothesis 1.2. The overall demonstration population trends were as desired for SUD and IMD spending measures, but not as desired as it relates to indicators of decreased acute care costs which are the targets for offsets in investments in SUD services. Of the seven measures, four were as desired and three were not as desired. There was variation of these trends at the sub-population, MCE and/or regional-level.

Exhibit V.2.1
Summary of Results Hypothesis 1.2 (Cost) Annual Trend CY 2017 – CY 2018

Research Question	Metrics	Desired Trend	Demo Trend	Sub-Population Trends		MCE Trends	Regional Trends	
1.2.2. Does the level and trend in SUD service spending for the SUD population increase in the post waiver period?	SUD Spending (#28)	Increase	**15.4%**	Model: 15.4% Dual: 9.9% OUD: 28.4%	Pregnant: 11.7% Criminally Involved: 53.1% MRO: 7.7%	Anthem: 2.4% CareSource: 213.6% MDwise: 9.4% MHS: 7.3%	Central: 9.7% East Central: 5.0% North Central: 4.8% Northeast: 11.0%	Northwest: 17.7% Southeast: 18.0% Southwest: 9.5% West Central: 16.2%
	Per Capita SUD Spending (#30)	Increase	**4.2%**	Model: -0.3% Dual: 21.0% OUD: -4.6%	Pregnant: 9.0% Criminally Involved: 12.3% MRO: -0.4%	Anthem: -7.1% CareSource: 57.4% MDwise: 23.2% MHS: 2.3%	Central: 3.9% East Central: -2.7% North Central: 8.8% Northeast: 15.1%	Northwest: 9.7% Southeast: 12.8% Southwest: 9.8% West Central: 16.6%
	SUD Spending within IMDs (#29)	Increase	**2.7%**	Model: 3.6% Dual: -22.4% OUD: -3.2%	Pregnant: 59.4% Criminally Involved: -6.5% MRO: -6.5%	Anthem: -19.6% CareSource: 214.7% MDwise: 79.7% MHS: 8.34%	Central: -1.7% East Central: -18.7% North Central: 9.7% Northeast: 17.4%	Northwest: 5.3% Southeast: -21.5% Southwest: -16.2% West Central: -8.4%
	Per Capita SUD Spending within IMDs (#31)	Increase	**4.3%**	Model: -4.0% Dual: -13.7% OUD: 4.6%	Pregnant: 17.5% Criminally Involved: -37.2% MRO: -4.0%	Anthem: 4.3% CareSource: 27.6% MDwise: 16.5% MHS: -6.1%	Central: 6.6% East Central: 0.5% North Central: 18.9% Northeast: -3.6%	Northwest: 11.3% Southeast: -9.7% Southwest: 5.0% West Central: -3.9%

Research Question	Metrics	Desired Trend	Demo Trend	Sub-Population Trends		MCE Trends	Regional Trends	
1.2.6 Does the level and trend in acute utilization for SUD, potentially preventable emergency department or potentially preventable hospital readmissions decrease in the SUD population in the post waiver period?	Emergency Department Utilization for SUD per 1,000 Medicaid Beneficiaries (#23)	Decrease	**4.6%**	Model: 2.1% Dual: 3.7% OUD: -33.8%	Pregnant: 42.6% Criminally Involved: 59.0% MRO: -1.9%	Anthem: 6.6% CareSource: 62.0% MDwise: 0.00% MHS: -15.9%	Central: 8.4% East Central: 3.9% North Central: -13.6% Northeast: 6.8%	Northwest: 1.7% Southeast: 8.5% Southwest: -2.3% West Central: -13.1%
	Inpatient Stays for SUD per 1,000 Medicaid Beneficiaries (#24)	Decrease	**14.0%**	Model: -23.3% Dual: 100.0% OUD: -44.0%	Pregnant: 8.1% Criminally Involved: 15.7% MRO: -19.3%	Anthem: -34.4% CareSource: 47.3% MDwise: 3.0% MHS: -19.0%	Central: 7.6% East Central: 22.0% North Central: 11.4% Northeast: 1.2%	Northwest: 12.7% Southeast: 19.0% Southwest: 28.5% West Central: -12.1%
	Readmissions Among Beneficiaries with SUD (#25)	Decrease	**2.3%**	Model: 3.4% Dual: -1.6% OUD: 0.8%	Pregnant: -30.0% Criminally Involved: -13.4% MRO: -0.8%	Anthem: 2.3% CareSource: -25.0% MDwise: 6.6% MHS: 12.9%	Central: -0.3%% East Central: 3.1% North Central: 6.0% Northeast: 6.2%	Northwest: -3.3% Southeast: -0.8% Southwest: 16.8% West Central: 7.3%

Results by Research Question

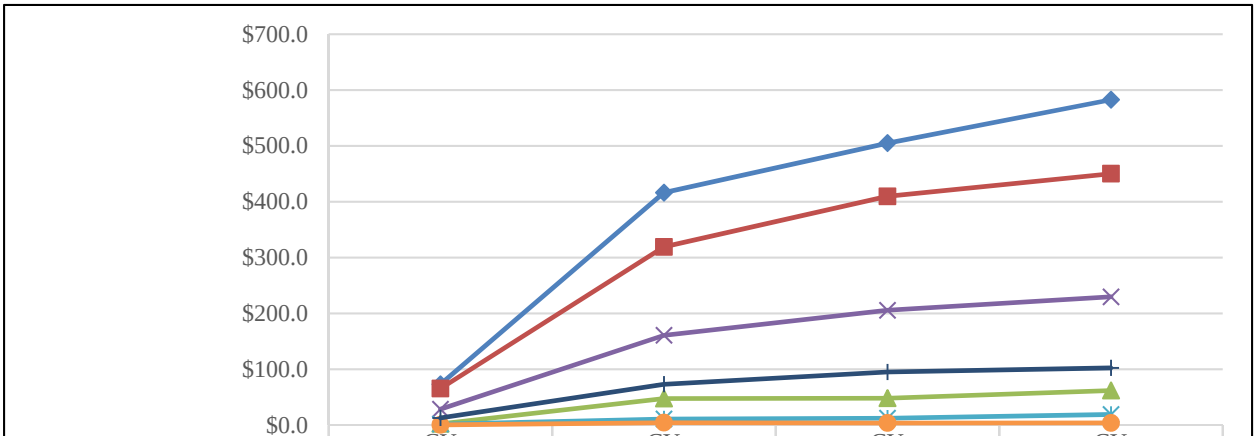
Hypothesis Question 1.2.2:
Does the level and trend in SUD service spending for the SUD population increase in the post waiver period? (Metrics #28, #30, #29, #31)

Metrics #28 and #30: SUD Spending (Total and Per Capita) Overall

Population Breakdown (Metrics #28 and #30)

Exhibit V.2.2 (total spending) and Exhibit V.2.3 (per capita spending) summarize the demonstration and model population data from CY 2015 to CY 2019. Spending on SUD services was approximately $582.8 million in CY 2018 and per capita spending was $5,682 in that year. Total SUD spending increased by 15.4% between CY 2017 and CY 2018 while per capita spending increased only 4.2%. Since total expenditures increased, the slow growth in per capita spending suggests the increase is that more beneficiaries are being served rather than more expenditures to the same beneficiaries. All sub-populations saw an increase in SUD spending in CY 2018. At a per capita level, there was annual variation, but that is not unexpected given the small numbers of beneficiaries in the pregnant and criminally involved populations.

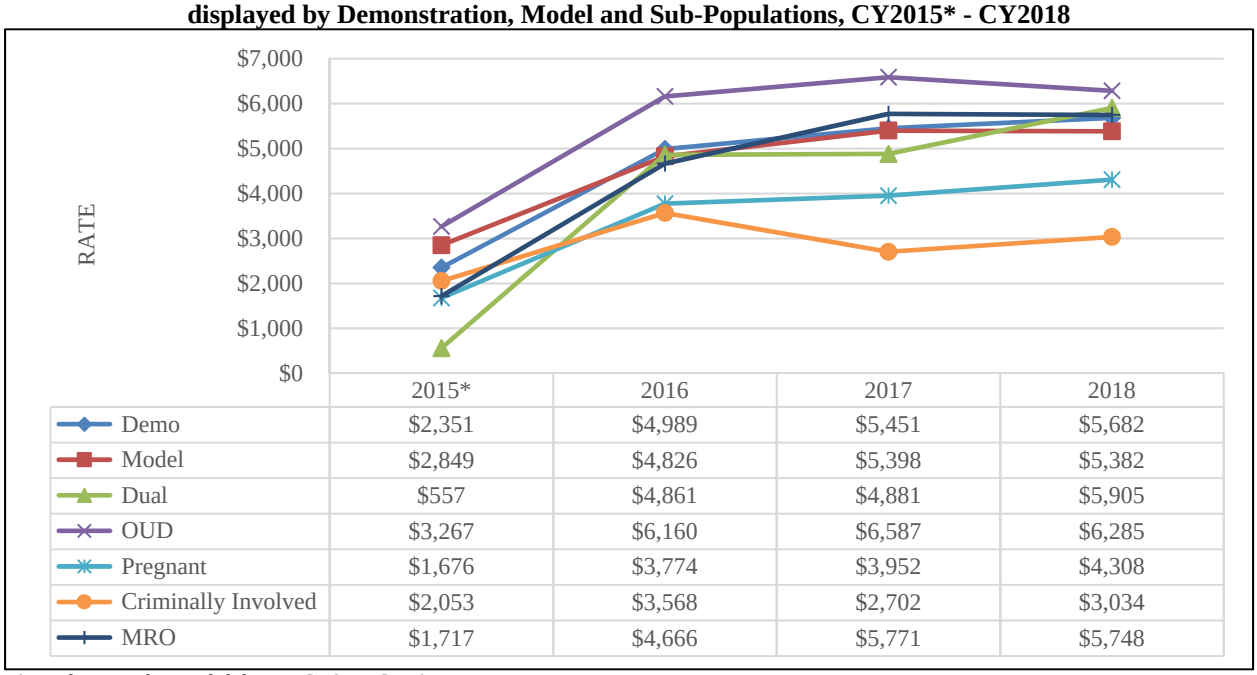
Exhibit V.2.2
SUD Spending (#28)
displayed by Demonstration, Model and Sub-Populations (displayed in millions), CY2015* - CY2018



	CY 2015*	CY 2016	CY 2017	CY 2018
Demo	$73.2	$416.3	$505.0	$582.8
Model	$65.6	$319.2	$409.8	$450.3
Dual	$2.5	$47.7	$48.4	$62.1
OUD	$28.6	$161.0	$205.7	$229.8
Pregnant	$1.9	$11.0	$12.5	$19.2
Criminally Involved	$0.6	$4.5	$3.9	$4.1
MRO	$12.9	$73.2	$95.3	$102.6

2015* data may be invalid due to ICD9 to ICD10 conversion

Exhibit V.2.3
Per Capita SUD Spending (#30)
displayed by Demonstration, Model and Sub-Populations, CY2015* - CY2018



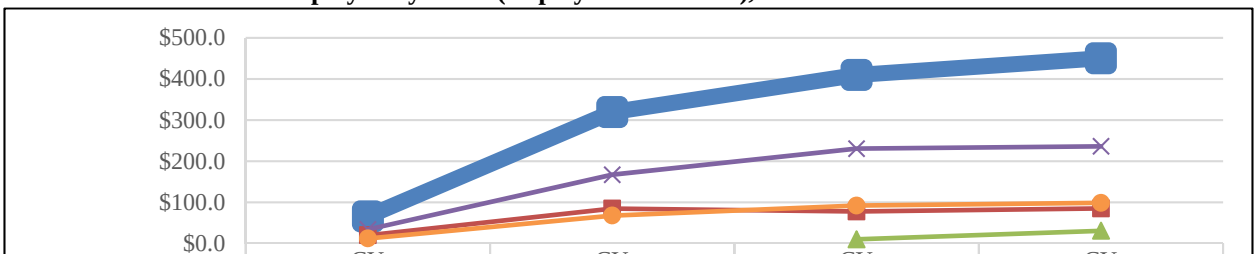
	2015*	2016	2017	2018
Demo	$2,351	$4,989	$5,451	$5,682
Model	$2,849	$4,826	$5,398	$5,382
Dual	$557	$4,861	$4,881	$5,905
OUD	$3,267	$6,160	$6,587	$6,285
Pregnant	$1,676	$3,774	$3,952	$4,308
Criminally Involved	$2,053	$3,568	$2,702	$3,034
MRO	$1,717	$4,666	$5,771	$5,748

2015* data may be invalid due to ICD9 to ICD10 conversion

MCE Breakdowns (Metrics #28 and #30)

Exhibits V.2.4 and V.2.5 summarize data in the same format as above but for the model data by MCE. Exhibit V.2.4 shows that Anthem spent the most on SUD services, or $236.1 million of $450.3 million within the CY 2018 managed care model population. This was followed by MHS at $98.6 million, MDwise at $84.9 million, and CareSource at $30.6 million.

Exhibit V.2.4
SUD Spending (#28)
displayed by MCE (displayed in millions), CY2015* - CY2018

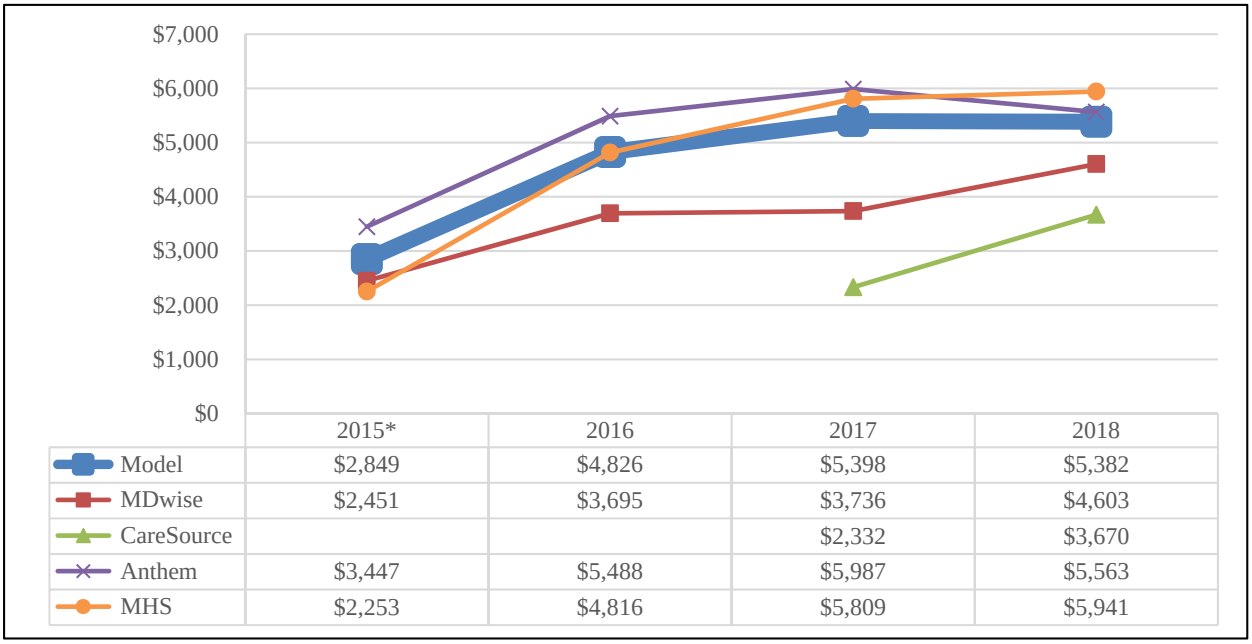


	CY 2015*	CY 2016	CY 2017	CY 2018
Model	$65.6	$319.2	$409.8	$450.3
MDwise	$19.8	$84.5	$77.6	$84.9
CareSource			$9.8	$30.6
Anthem	$33.9	$167.1	$230.5	$236.1
MHS	$11.9	$67.7	$91.9	$98.6

2015* data may be invalid due to ICD9 to ICD10 conversion

There is variation in the per capita spending on SUD services among MCEs as can be seen in Exhibit V.2.5. In CY 2018, per capita SUD spending was the lowest for CareSource at $3,670. Per capita spending was highest for MHS at $5,941, followed by Anthem at $5,563 and then MDwise at $4,603. All but Anthem saw an increase in per capita SUD spending in CY 2018 compared to CY 2017, although the changes were small except for CareSource, which is expected given its increased overall enrollment.

Exhibit V.2.5
Per Capita SUD Spending (#30)
displayed by MCE, CY2015* - CY2018



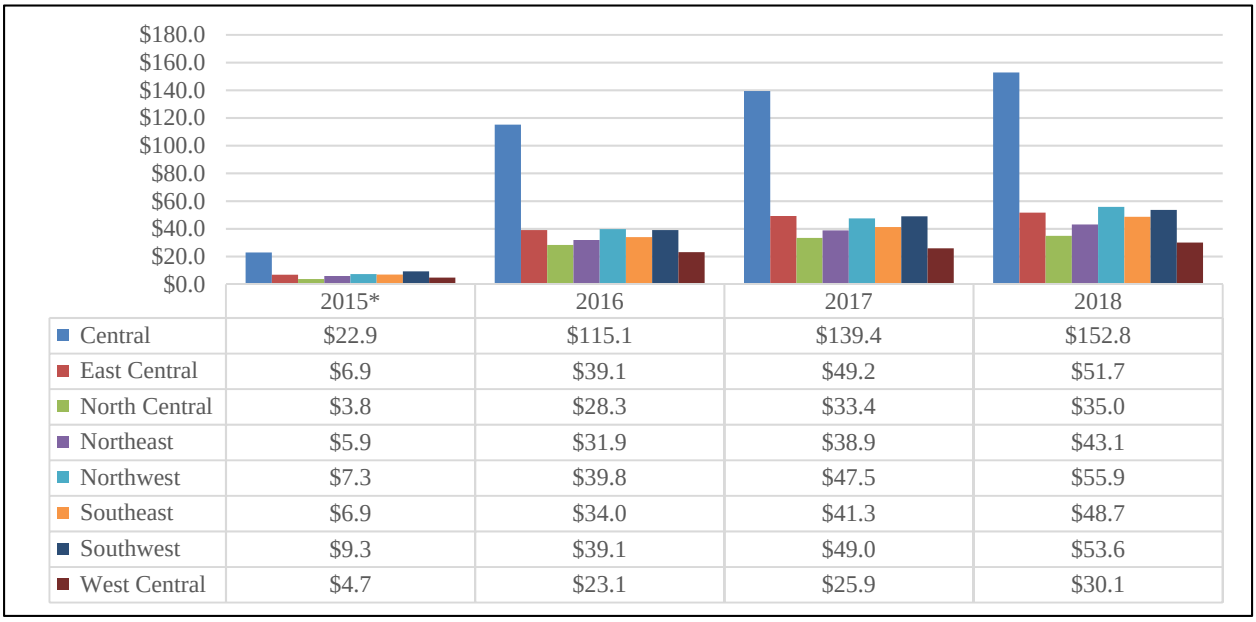
	2015*	2016	2017	2018
Model	$2,849	$4,826	$5,398	$5,382
MDwise	$2,451	$3,695	$3,736	$4,603
CareSource			$2,332	$3,670
Anthem	$3,447	$5,488	$5,987	$5,563
MHS	$2,253	$4,816	$5,809	$5,941

2015* data may be invalid due to ICD9 to ICD10 conversion

Regional Breakdowns (Metrics #28 and #30)

Exhibit V.2.6 and Exhibit V.2.7 summarize the total and per capita model spending data by region from CY 2015 to CY 2018 for Metric #28 and #30. The Central region is the largest region with over $152.8 million in SUD spending in CY 2018 (Exhibit V.2.6). The remaining seven regions range from $30.11 million in the West Central to $55.9 million in the Northwest region. SUD per capita spending (Exhibit V.2.7) increased in all regions. There was little variation in per capita spending at the regional level. In CY 2018, per capita SUD spending varied from $5,330 in the Southwest to $6,590 in the Central region.

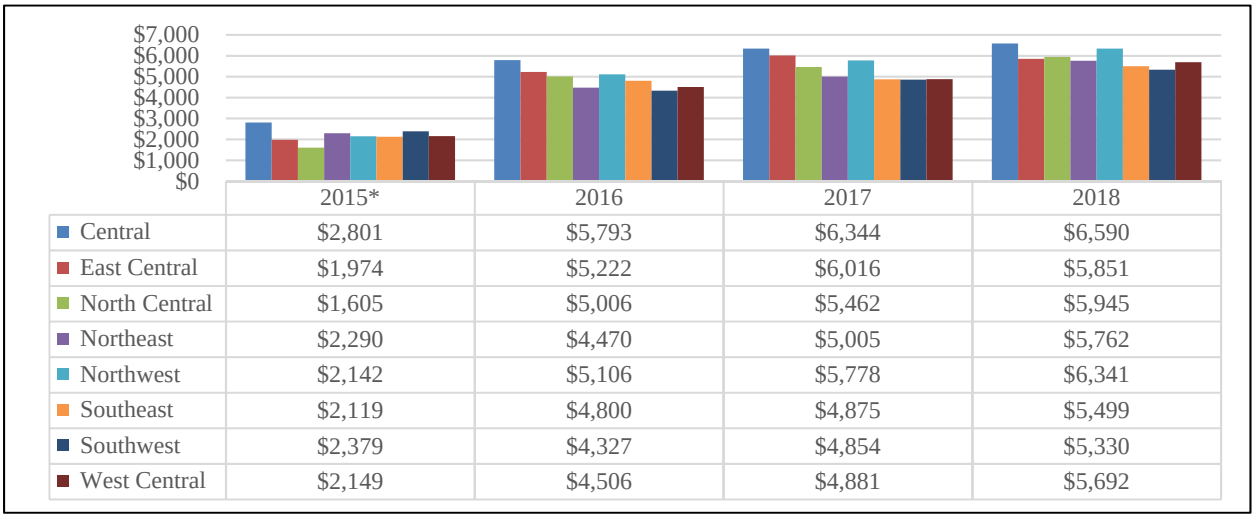
Exhibit V.2.6
SUD Spending Annually (#28)
displayed by Region (displayed in millions), CY2015* - CY2018



	2015*	2016	2017	2018
Central	$22.9	$115.1	$139.4	$152.8
East Central	$6.9	$39.1	$49.2	$51.7
North Central	$3.8	$28.3	$33.4	$35.0
Northeast	$5.9	$31.9	$38.9	$43.1
Northwest	$7.3	$39.8	$47.5	$55.9
Southeast	$6.9	$34.0	$41.3	$48.7
Southwest	$9.3	$39.1	$49.0	$53.6
West Central	$4.7	$23.1	$25.9	$30.1

2015* data may be invalid due to ICD9 to ICD10 conversion

Exhibit V.2.7
Per Capita SUD Spending Annually (#30)
displayed by Region, CY2015* - CY2018



	2015*	2016	2017	2018
Central	$2,801	$5,793	$6,344	$6,590
East Central	$1,974	$5,222	$6,016	$5,851
North Central	$1,605	$5,006	$5,462	$5,945
Northeast	$2,290	$4,470	$5,005	$5,762
Northwest	$2,142	$5,106	$5,778	$6,341
Southeast	$2,119	$4,800	$4,875	$5,499
Southwest	$2,379	$4,327	$4,854	$5,330
West Central	$2,149	$4,506	$4,881	$5,692

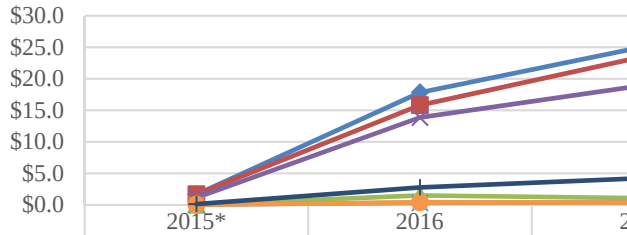
2015* data may be invalid due to ICD9 to ICD10 conversion

Metrics #29 and #31: SUD Spending (Total and Per Capita) within IMDs

Population Breakdown (Metrics #29 and #31)

Exhibit V.2.8 and Exhibit V.2.9 summarize the demonstration and model population data for SUD spending in an IMD from CY 2015 to CY 2019. Overall spending in IMDs remained stable, with a small increase in CY 2018 compared to CY 2017. Per capita spending was $6,393 in CY 2018 in the demonstration population receiving IMD services. The OUD population comprises the majority of SUD spending, or $18.3 million of $25.74 million overall. The MRO population is $3.9 million of spending in IMDs in CY 2018; for the remaining sub-populations, the spend is very little in IMDs. The trend in total and per capita spending on SUD services in an IMD decreased in CY 2018 compared to CY 2017.

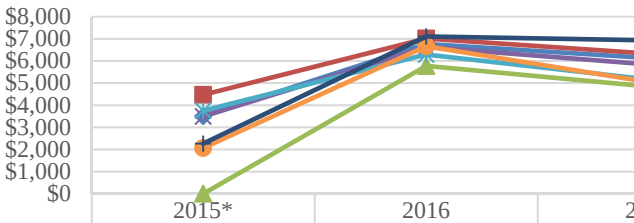
Exhibit V.2.8
SUD Spending in an IMD (#29)
displayed by Demonstration, Model and Sub-Populations (displayed in millions), CY2015* - CY2018



	2015*	2016	2017	2018
Demo	$1.6	$17.8	$25.1	$25.7
Model	$1.6	$15.8	$23.5	$24.4
Dual	$0.0	$1.5	$1.1	$0.8
OUD	$1.1	$13.8	$19.0	$18.3
Pregnant	$0.0	$0.3	$0.4	$0.6
Criminally Involved	$0.0	$0.4	$0.3	$0.3
MRO	$0.1	$2.8	$4.2	$3.9

2015* data may be invalid due to ICD9 to ICD10 conversion

Exhibit V.2.9
Per Capita SUD Spending in an IMD (#31)
displayed by Demonstration, Model and Sub-Populations, CY2015* - CY2018



	2015*	2016	2017	2018
Demo	$3,509	$6,768	$6,129	$6,393
Model	$4,470	$7,013	$6,331	$6,582
Dual	$0	$5,775	$4,841	$4,178
OUD	$3,498	$6,628	$5,843	$6,110
Pregnant	$3,753	$6,293	$5,165	$6,067
Criminally Involved	$2,063	$6,667	$5,038	$6,914
MRO	$2,265	$7,108	$6,935	$6,658

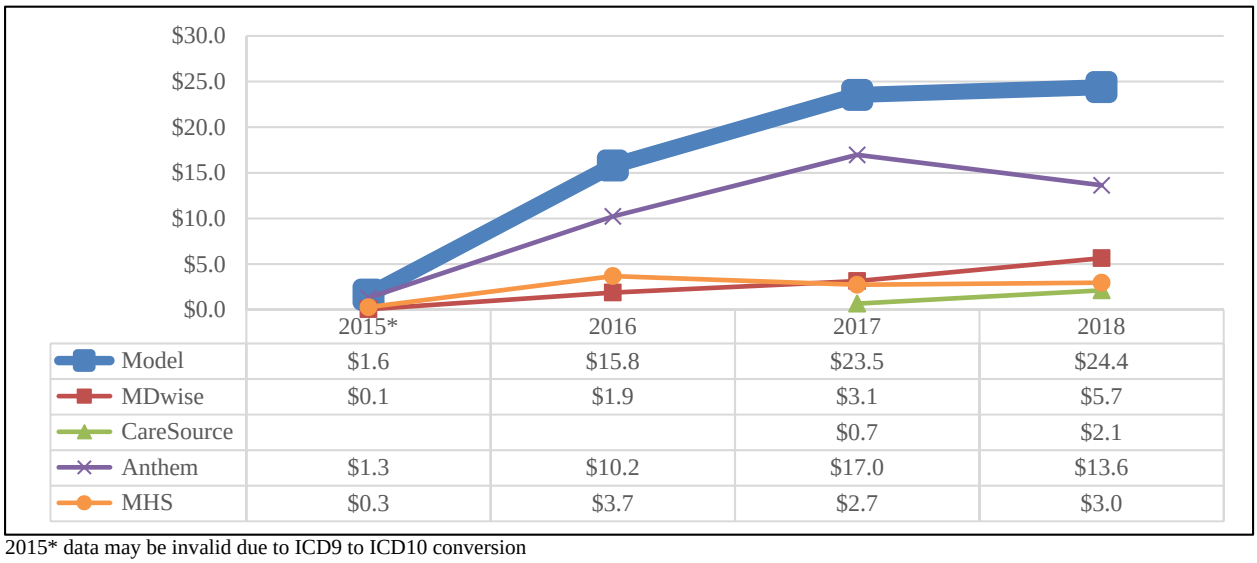
2015* data may be invalid due to ICD9 to ICD10 conversion

MCE Breakdowns (Metrics #29 and #31)

Exhibits V.2.10 and V.2.11 summarize the model data by MCE from CY 2015 to CY 2018 for Metric #29 and #31. Anthem spent the most on SUD services in an IMD at $13.6 million of $24.4 million in CY 2018 (Exhibit V2.10). MDwise spent $5.7 million on IMD services; MHS spend $3.0 million; and CareSource spent $2.1 million. All but Anthem increased spending in IMDs in CY 2018 from CY 2017.

Per capita SUD spending on IMD services among MCEs was similar. There was an increase in CY 2018 compared to CY 2017 for all MCEs except MHS.

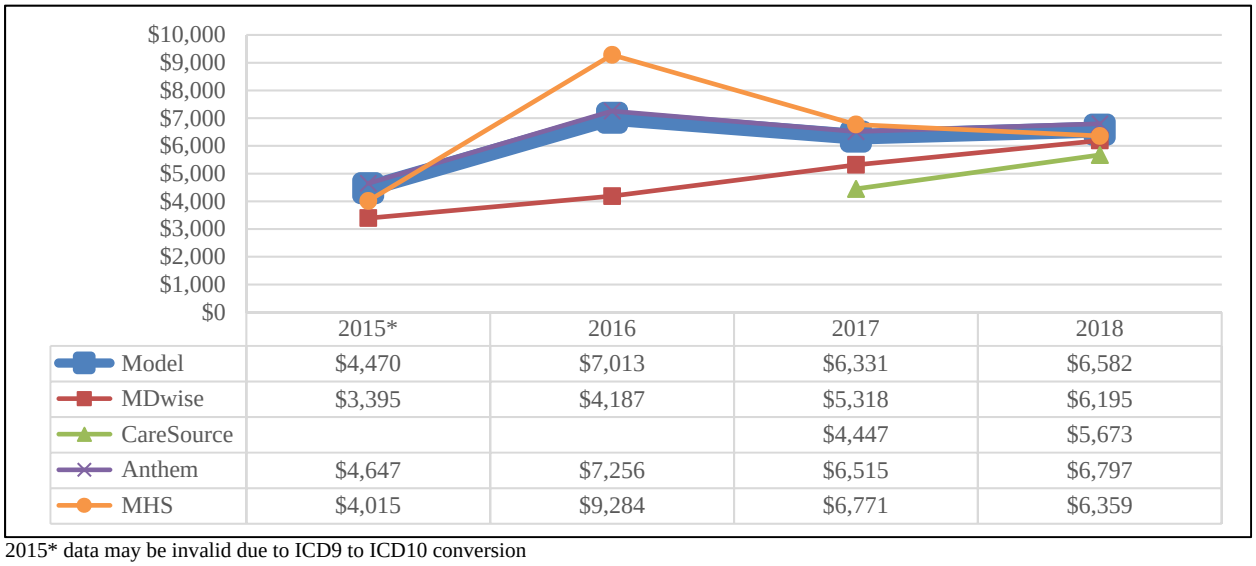
Exhibit V.2.10
SUD Spending (#29)
displayed by MCE (displayed in millions), CY2015* - CY2018



	2015*	2016	2017	2018
Model	$1.6	$15.8	$23.5	$24.4
MDwise	$0.1	$1.9	$3.1	$5.7
CareSource			$0.7	$2.1
Anthem	$1.3	$10.2	$17.0	$13.6
MHS	$0.3	$3.7	$2.7	$3.0

2015* data may be invalid due to ICD9 to ICD10 conversion

Exhibit V.2.11
Exhibit Per Capita SUD Spending (#31)
displayed by MCE, CY2015* - CY2018



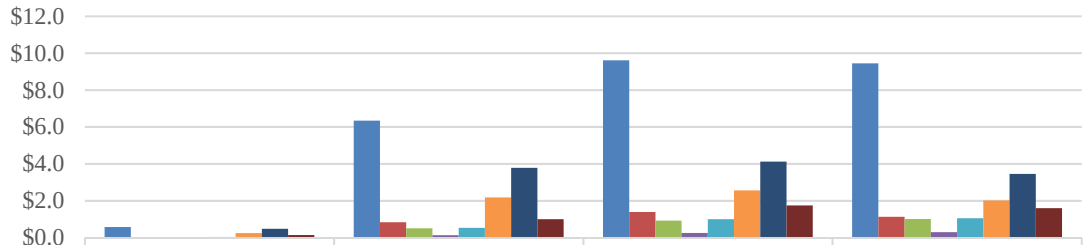
	2015*	2016	2017	2018
Model	$4,470	$7,013	$6,331	$6,582
MDwise	$3,395	$4,187	$5,318	$6,195
CareSource			$4,447	$5,673
Anthem	$4,647	$7,256	$6,515	$6,797
MHS	$4,015	$9,284	$6,771	$6,359

2015* data may be invalid due to ICD9 to ICD10 conversion

Regional Breakdowns (Metrics #29 and #31)

Exhibits V.2.12 and V.2.13 summarize the model data by region from CY 2015 to CY 2018 for Metric #29 and #31. The Central region is the region is the regions with the greatest spend with over $9.4 million in SUD spending in an IMD in CY 2018. The remaining seven regions ranged from $300,000 in the Northeast to $3.5 million the Southwest. Exhibit V.2.13 shows that regional variation in average spending on IMD services in CY 2018 ranged from $5,378 in the Northeast region to $7,666 in the Southwest region.

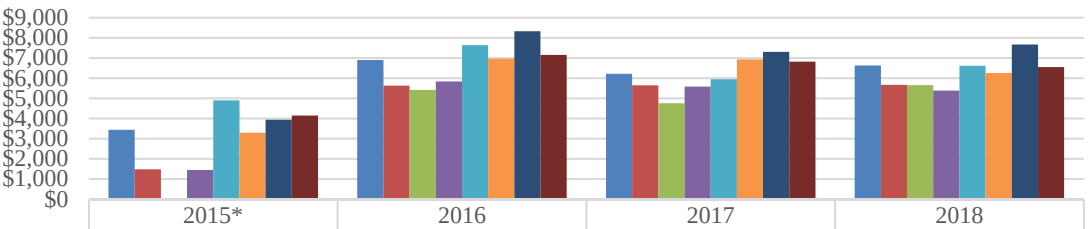
Exhibit V.2.12
SUD Spending in an IMD Annually (#29)
displayed by Region (displayed in millions), CY2015* - CY2018



	2015*	2016	2017	2018
Central	$0.6	$6.3	$9.6	$9.4
East Central	$0.0	$0.8	$1.4	$1.1
North Central	$0.0	$0.5	$0.9	$1.0
Northeast	$0.0	$0.1	$0.3	$0.3
Northwest	$0.0	$0.5	$1.0	$1.1
Southeast	$0.2	$2.2	$2.6	$2.0
Southwest	$0.5	$3.8	$4.1	$3.5
West Central	$0.1	$1.0	$1.7	$1.6

2015* data may be invalid due to ICD9 to ICD10 conversion

Exhibit V.2.13
SUD Per Capita Spending in an IMD Annually (#31)
displayed by Region, CY2015* - CY2018



	2015*	2016	2017	2018
Central	$3,434	$6,898	$6,214	$6,627
East Central	$1,477	$5,631	$5,642	$5,670
North Central	$0	$5,413	$4,752	$5,650
Northeast	$1,445	$5,833	$5,577	$5,378
Northwest	$4,894	$7,635	$5,941	$6,612
Southeast	$3,295	$6,957	$6,928	$6,253
Southwest	$3,940	$8,327	$7,303	$7,666
West Central	$4,143	$7,153	$6,814	$6,550

2015* data may be invalid due to ICD9 to ICD10 conversion

Hypothesis Question 1.2.6:
Does the level and trend in acute utilization for SUD, potentially preventable emergency department or potentially preventable hospital readmissions decrease in the SUD population in the post waiver period? (Metrics #23, #24 and #25)

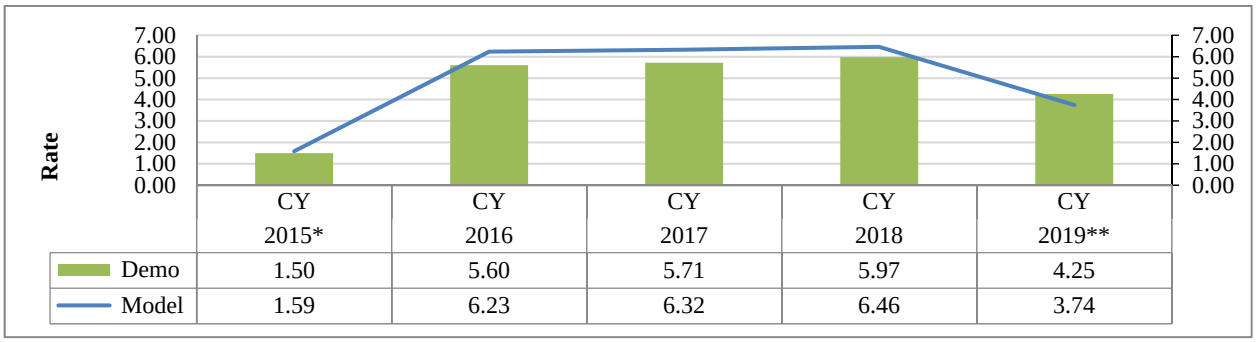
Metrics #22 and #24: Emergency Department Utilization for SUD per 1,000 and Inpatient Stays for SUD per 1,000 Medicaid Beneficiaries

Population Breakdown (Metrics #23 and #24)

Exhibits V.2.14 and V.2.15 summarize the ED utilization (Exhibit V.2.14) and inpatient utilization (V.2.15) for the demonstration and model population data from CY 2015 to CY 2019. The rate of ED utilization for SUD per 1,000 Medicaid beneficiaries was 5.97 in CY 2018, up from 5.71 in CY 2017 in the demonstration population. There was a 4.6% increase between CY 2017 and CY 2018 in the demonstration population. The model population had a higher rate per 1,000 of 6.46 in CY 2018 and 6.32 in CY 2017, a 2.1% increase from CY 2017 to CY 2018.

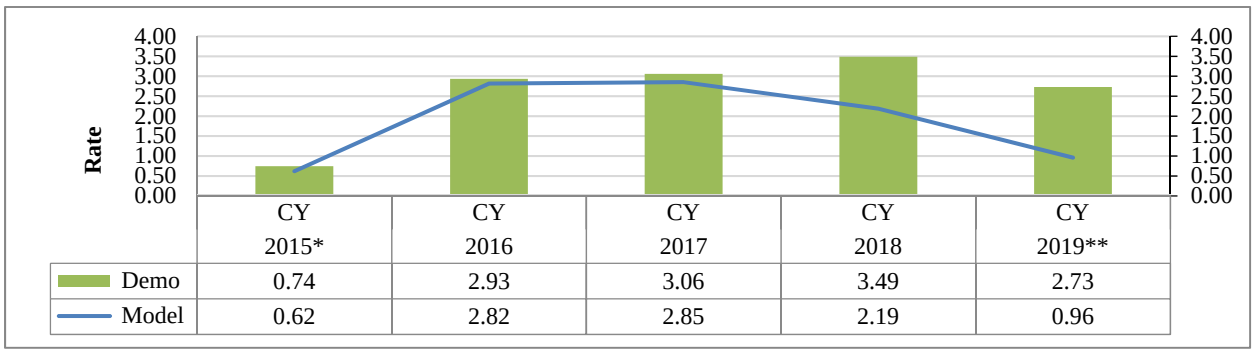
The rate of inpatient stays for SUD per 1,000 Medicaid beneficiaries for the demonstration population was 3.49 in CY 2018, up from 3.06 in CY 2017, or 14.0%. This trend is not desired. The model population rate was lower and decreased from 2.85 in CY 2017 to 2.19 in CY 2018, a decrease of 23.3% which is desired.

Exhibit V.2.14
Rate of ED Utilization for SUD per 1,000 Medicaid Beneficiaries (#23)
displayed by Demonstration and Model Populations, CY2015* - CY2019**



	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Demo	1.50	5.60	5.71	5.97	4.25
Model	1.59	6.23	6.32	6.46	3.74

Exhibit V.2.15
Inpatient Stays for SUD per 1,000 (#24)
displayed by Demonstration and Model Populations, CY2015* - CY2019*



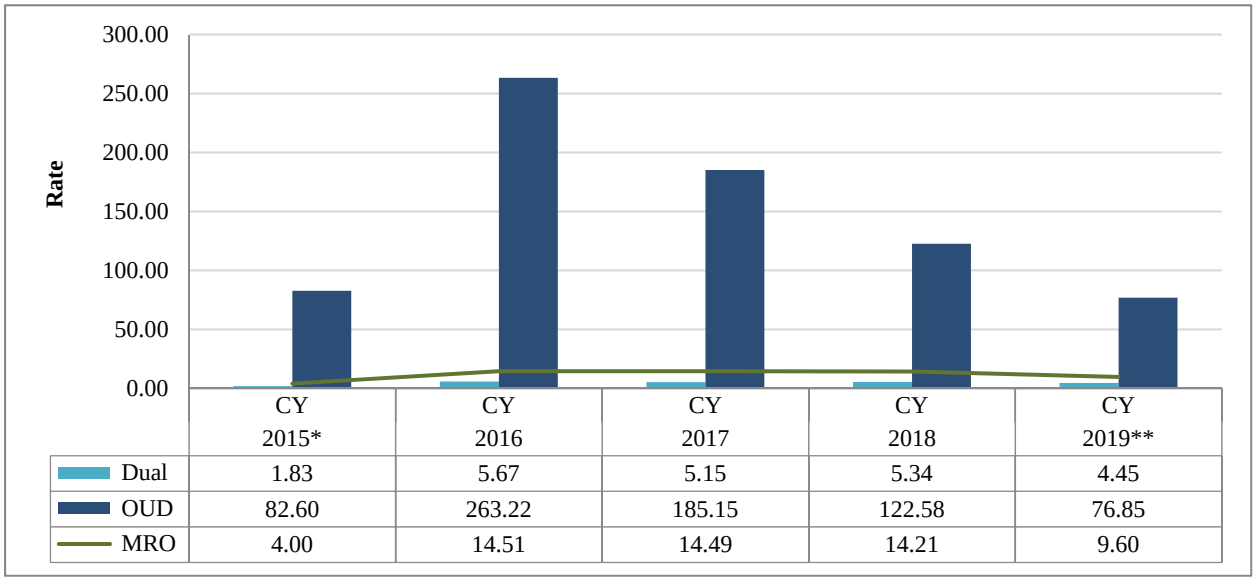
	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Demo	0.74	2.93	3.06	3.49	2.73
Model	0.62	2.82	2.85	2.19	0.96

2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

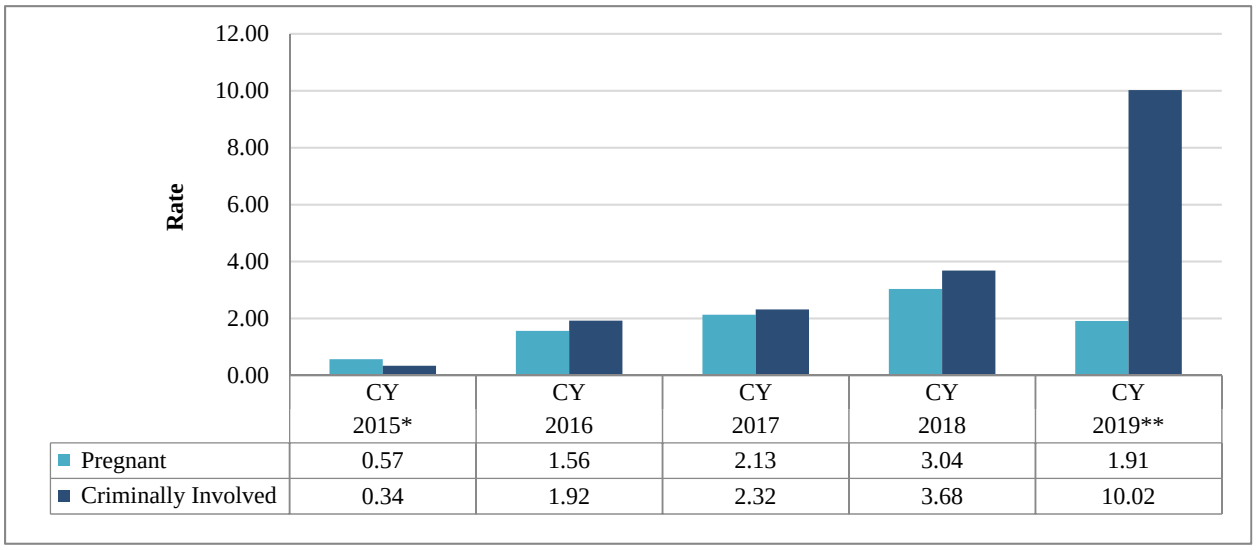
Sub Population Breakdowns (Metrics #23 and #24)

Exhibit V.2.16 summarizes the sub-population data from CY 2015 to CY 2019. The rate of ED utilization for SUD per 1,000 Medicaid beneficiaries was highest in the OUD population at 122.58 in CY 2018, almost 20 times the demonstration rate. The MRO population rate was 14.21 in CY 2018. Dual eligible, pregnant and criminally involved sub-populations had rates below the demonstration rate. Except for the OUD population, there was a positive trend between CY 2017 and CY 2018.

Exhibit V.2.16
ED Utilization for SUD per 1,000 Medicaid Beneficiaries (#23)
displayed by Sub Populations, CY2015* - CY2019**



	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Dual	1.83	5.67	5.15	5.34	4.45
OUD	82.60	263.22	185.15	122.58	76.85
MRO	4.00	14.51	14.49	14.21	9.60

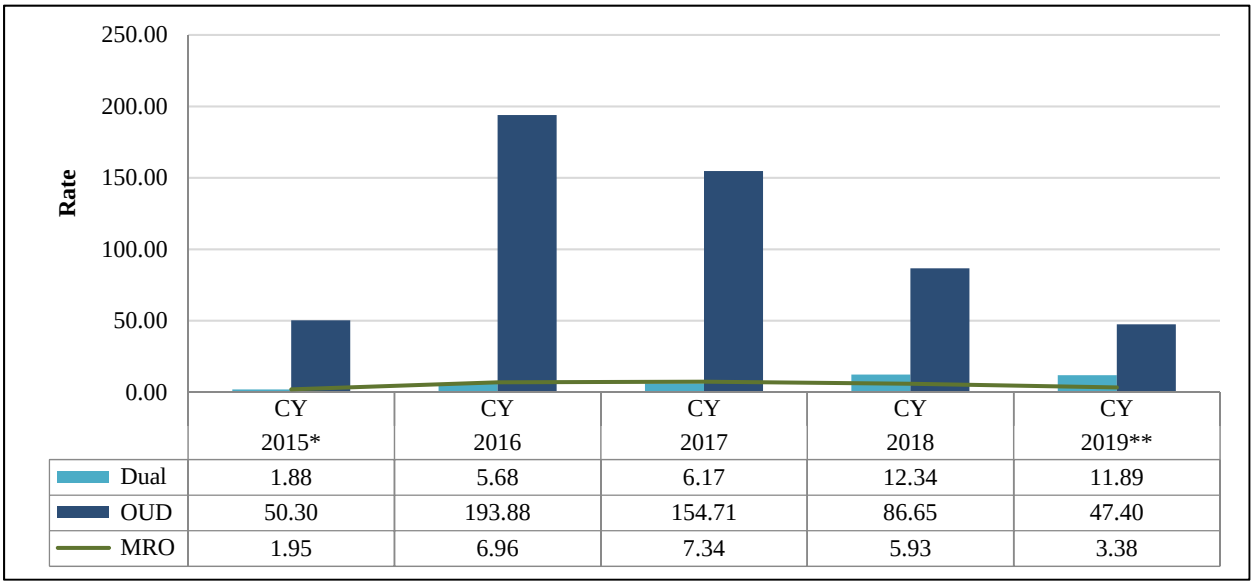


	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Pregnant	0.57	1.56	2.13	3.04	1.91
Criminally Involved	0.34	1.92	2.32	3.68	10.02

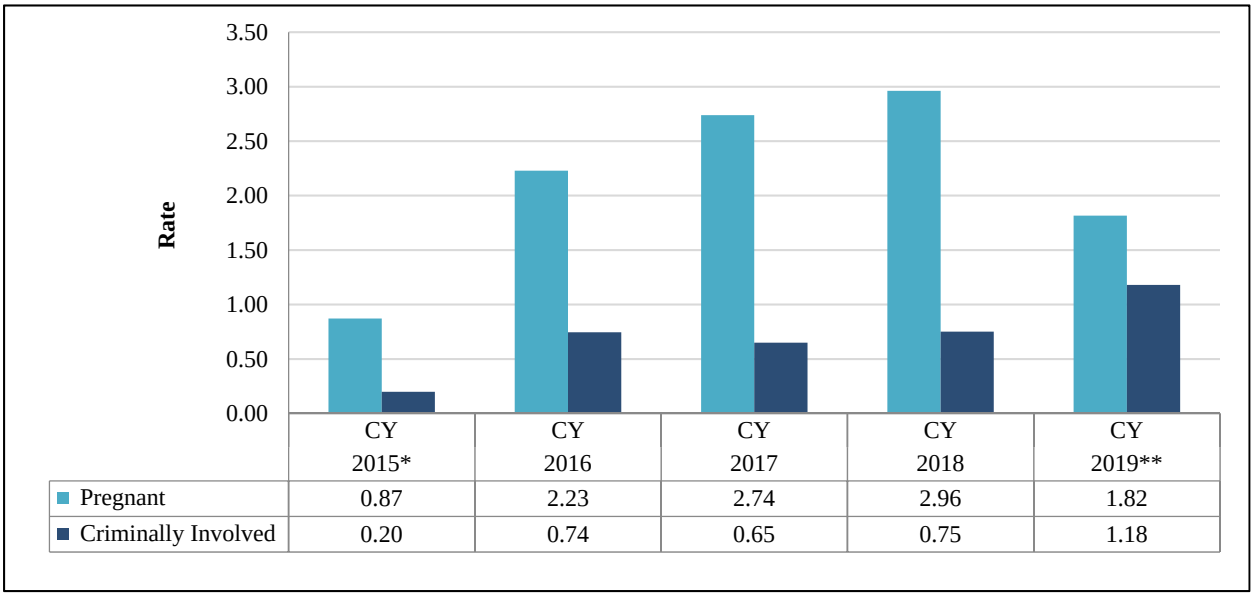
2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

Exhibit V.2.17 summarizes the sub-population data from CY 2015 to CY 2019 for inpatient stays. The rate of inpatient stays for SUD per 1,000 Medicaid beneficiaries was highest in the OUD population at 86.65 in CY 2018. The MRO population rate was 5.93 in CY 2018. The dual-eligible population was 12.34 in CY 2018. The pregnant and criminally involved sub-populations had rates below the demonstration rate. The OUD and MRO sub-population had a negative trend while there was a positive trend for pregnant, dual eligible and criminally involved sub-populations between CY 2017 and CY 2018.

Exhibit V.2.17
Inpatient Stays for SUD per 1,000 Medicaid Beneficiaries (#24)
displayed by Sub Populations, CY2015* - CY2019**



	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Dual	1.88	5.68	6.17	12.34	11.89
OUD	50.30	193.88	154.71	86.65	47.40
MRO	1.95	6.96	7.34	5.93	3.38



	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Pregnant	0.87	2.23	2.74	2.96	1.82
Criminally Involved	0.20	0.74	0.65	0.75	1.18

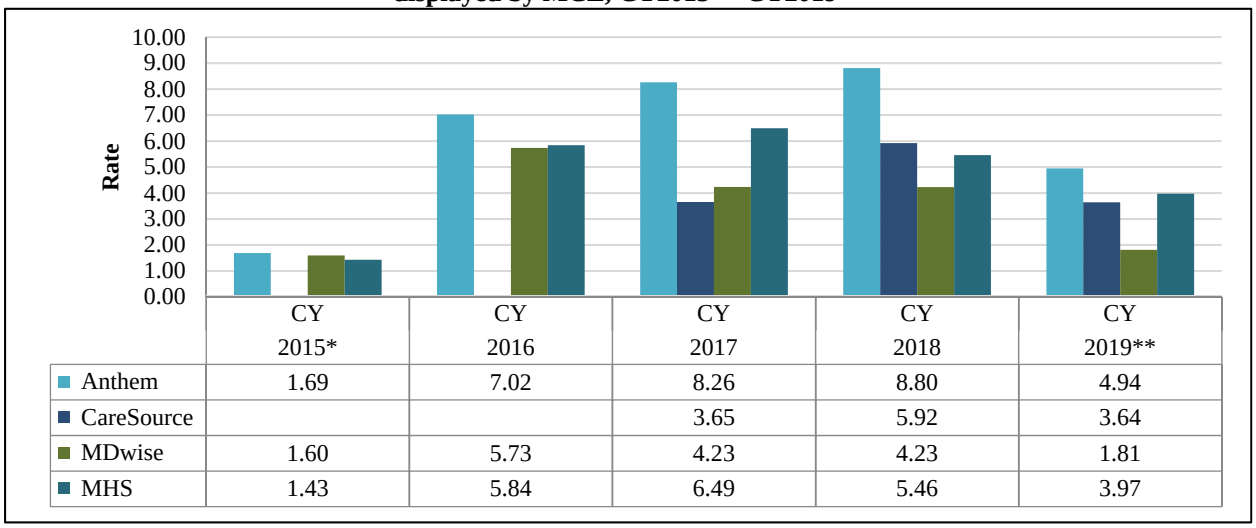
2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claim

MCE Breakdowns (Metrics #23 and #24)

Exhibits V.2.18 and V.2.19 summarize the model population data from CY 2015 to CY 2019 by MCE for Metric #23 and #24. In CY 2018, Anthem's rate of ED utilization for SUD per 1,000 is highest at 8.80, followed by CareSource with 5.92 and MHS at 5.46. MDwise had the lowest rate at 4.23. The rates for Anthem and CareSource both increased, MDwise was constant, and MHS decreased between CY 2017 and CY 2018.

The rates of inpatient stays for SUD per 1,000 was at 2.93 for Anthem 2.93, 1.98 for MHS, 1.66 for CareSource and 1.50 for MDwise. Anthem and MHS rates decreased between CY 2017 and CY 2018, whereas CareSource and MDwise increased.

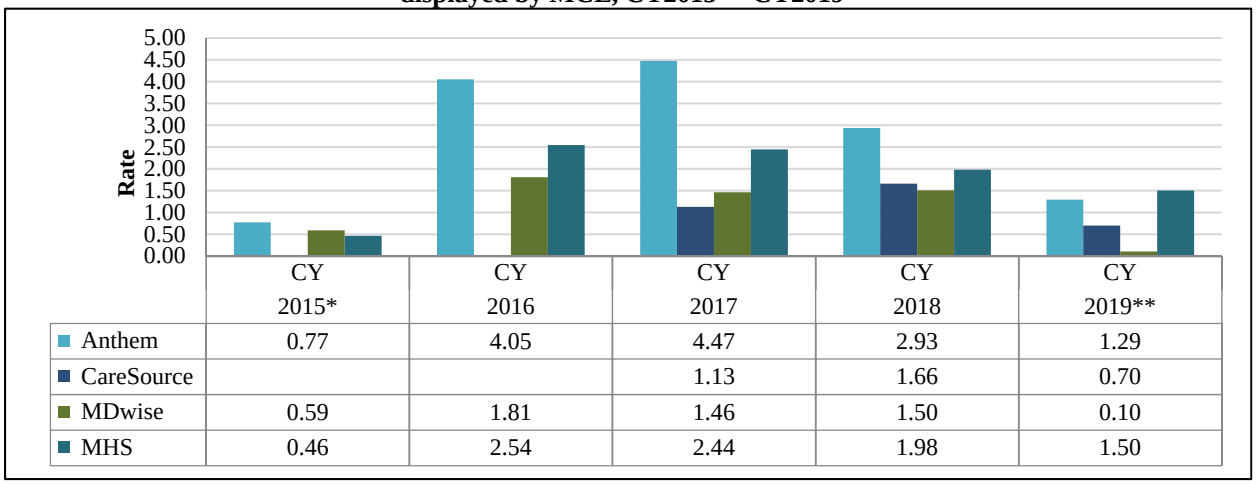
Exhibit V.2.18
ED Utilization for SUD per 1,000 Medicaid Beneficiaries (#23)
displayed by MCE, CY2015* - CY2019**



	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Anthem	1.69	7.02	8.26	8.80	4.94
CareSource			3.65	5.92	3.64
MDwise	1.60	5.73	4.23	4.23	1.81
MHS	1.43	5.84	6.49	5.46	3.97

2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

Exhibit V.2.19
Inpatient Stays for SUD per 1,000 Medicaid Beneficiaries (#24)
displayed by MCE, CY2015* - CY2019*



	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Anthem	0.77	4.05	4.47	2.93	1.29
CareSource			1.13	1.66	0.70
MDwise	0.59	1.81	1.46	1.50	0.10
MHS	0.46	2.54	2.44	1.98	1.50

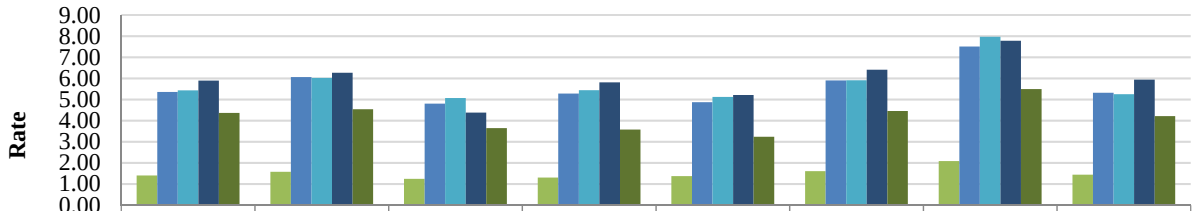
2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

Regional Breakdowns (Metrics #23 and #24)

Exhibits V.2.20 and V.2.21 summarize the SUD population data from CY 2015 to CY 2019 by region for Metric #23 and #24. In CY 2018, the rate ED use for SUD varied from a high of 7.78 visits in the Southwest to a low of 4.38 visits per 1,000 in the Northeast. All but the North Central and Southwest regions increased between CY 2017 and CY 2018.

In Exhibit V.2.21, the West Central region had the lowest rate of inpatient stays at 2.55 per 1,000 beneficiaries in CY 2018. The Southwest had the highest rate at 4.99 per 1,000 beneficiaries. Every region experienced an increase in the rate of inpatient stays for SUD per 1,000 beneficiaries from CY 2017 to CY 2018.

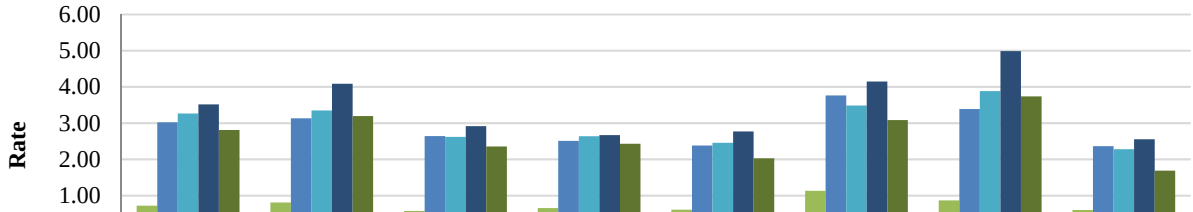
Exhibit V.2.20
ED Utilization for SUD per 1,000 Medicaid Beneficiaries (#23)
displayed by Region, CY2015* - CY2019**



	Central	East Central	North Central	Northeast	Northwest	Southeast	Southwest	West Central
2015*	1.41	1.58	1.24	1.31	1.37	1.61	2.08	1.44
2016	5.36	6.06	4.80	5.28	4.87	5.90	7.51	5.32
2017	5.43	6.03	5.07	5.44	5.12	5.91	7.97	5.25
2018	5.89	6.26	4.38	5.81	5.21	6.41	7.78	5.94
2019**	4.36	4.54	3.65	3.57	3.23	4.46	5.49	4.22

2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

Exhibit V.2.21
Inpatient Stays for SUD per 1,000 Medicaid Beneficiaries (#24)
displayed by Region, CY2015* - CY2019**



	Central	East Central	North Central	Northeast	Northwest	Southeast	Southwest	West Central
2015*	0.72	0.81	0.57	0.65	0.61	1.13	0.87	0.60
2016	3.02	3.13	2.64	2.51	2.38	3.76	3.39	2.36
2017	3.27	3.35	2.62	2.64	2.46	3.48	3.88	2.28
2018	3.51	4.09	2.91	2.67	2.77	4.15	4.99	2.55
2019**	2.81	3.19	2.35	2.43	2.03	3.08	3.74	1.69

2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

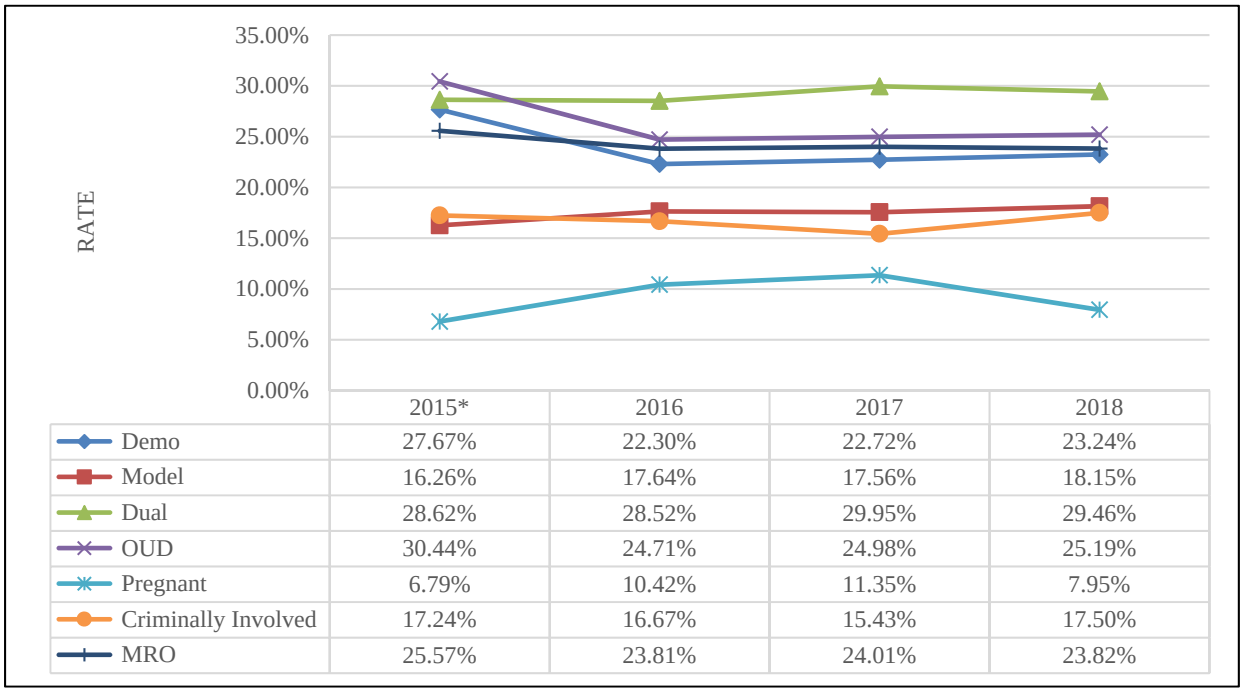
Metric #25: Readmissions Among Beneficiaries with SUD

Population Breakdown (Metric #25)

Exhibit V.2.22 summarizes the demonstration and model population data from CY 2015 to CY 2018. In CY 2018, the rate of readmission among beneficiaries with SUD was 23.24% in the demonstration population and 18.15% among the population in the managed care model. The lowest rate of readmission was among pregnant beneficiaries. The dual eligible, OUD and MRO populations had rates above the demonstration rate.

Compared to CY 2017, the demonstration rate increased by 2.3%. The dual-eligible, pregnant and MRO population rates decreased between CY 2017 and CY 2018, while the OUD and criminally involved population rates increased.

Exhibit V.2.22
Rate of Readmission among Beneficiaries with SUD (#25)
displayed by Demonstration, Model and Sub-Populations, CY2015* - CY2018



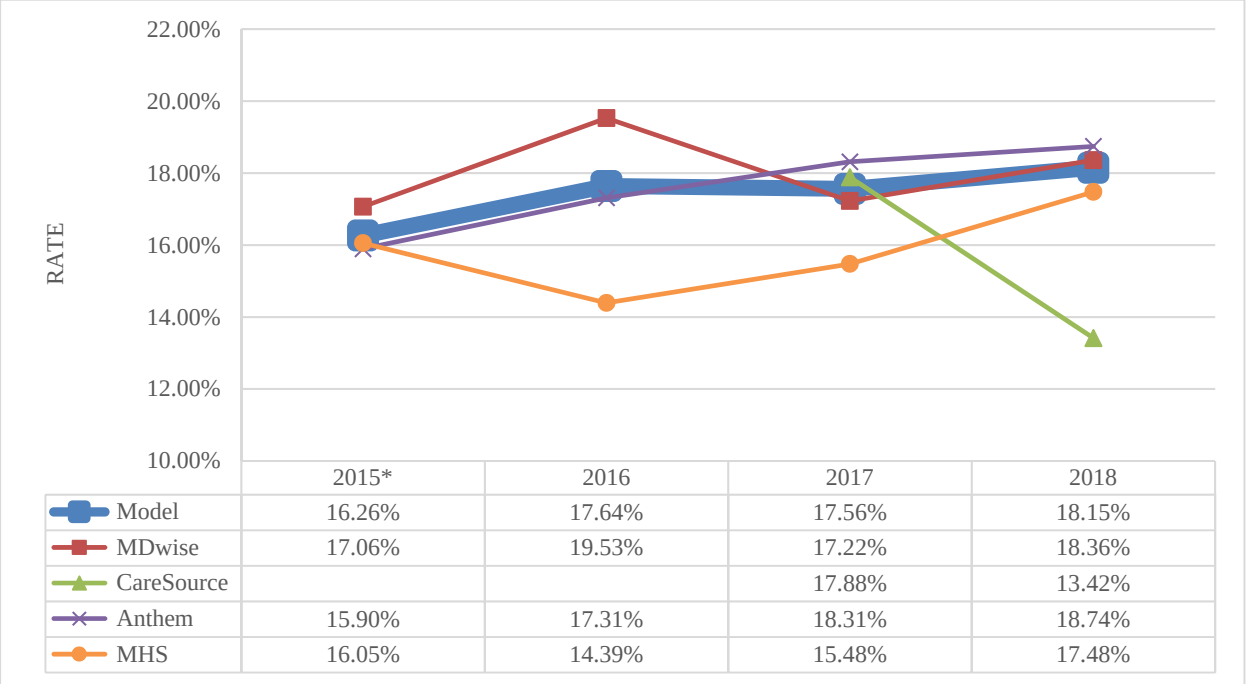
	2015*	2016	2017	2018
Demo	27.67%	22.30%	22.72%	23.24%
Model	16.26%	17.64%	17.56%	18.15%
Dual	28.62%	28.52%	29.95%	29.46%
OUD	30.44%	24.71%	24.98%	25.19%
Pregnant	6.79%	10.42%	11.35%	7.95%
Criminally Involved	17.24%	16.67%	15.43%	17.50%
MRO	25.57%	23.81%	24.01%	23.82%

2015* data may be invalid due to ICD9 to ICD10 conversion

MCE Breakdowns (Metrics #25)

Exhibit V.2.23 summarizes the demonstration and model population data from CY 2015 to CY 2018 by MCE. In CY 2018, CareSource had the lowest rate of readmissions among beneficiaries with SUD at 13.42%, down -25.0% from CY 2017. Anthem had the highest rate at 18.74%, an increase of 2.3% from CY 2017. MDwise had a rate of 18.36%, up 6.6% from CY 2017. MHS had a rate of 17.48%, up 12.9% from CY 2017.

Exhibit V.2.23
Rate of Readmission among Beneficiaries with SUD (#25)
displayed by MCE, CY2015* - CY2018



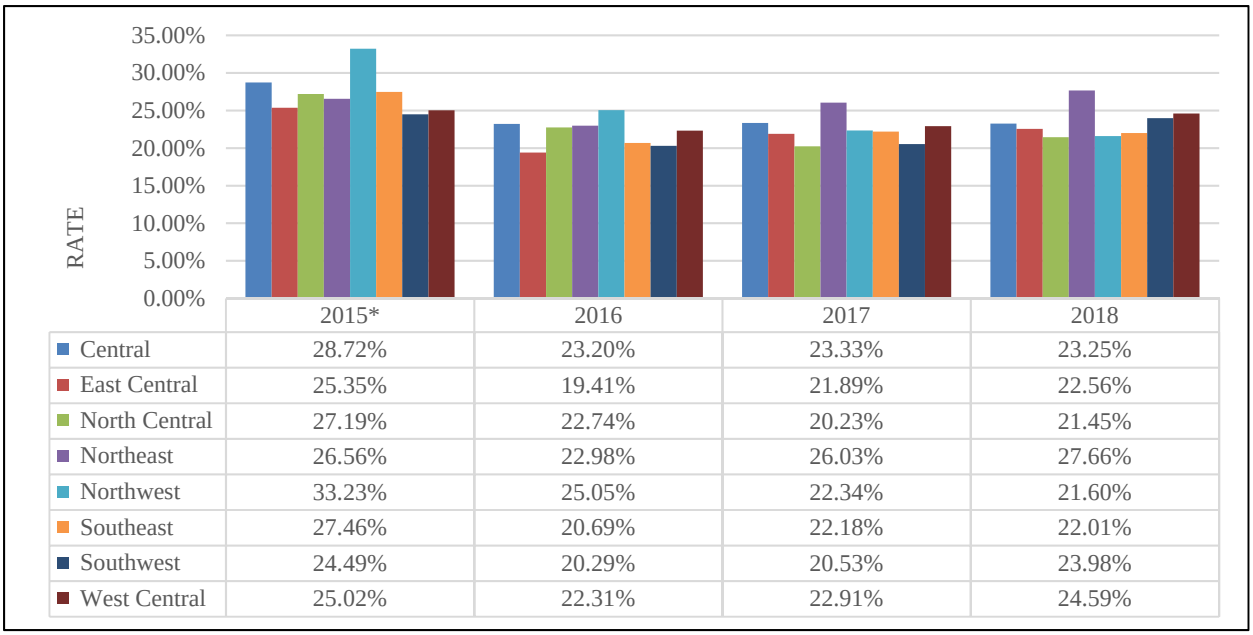
	2015*	2016	2017	2018
Model	16.26%	17.64%	17.56%	18.15%
MDwise	17.06%	19.53%	17.22%	18.36%
CareSource			17.88%	13.42%
Anthem	15.90%	17.31%	18.31%	18.74%
MHS	16.05%	14.39%	15.48%	17.48%

2015* data may be invalid due to ICD9 to ICD10 conversion

Regional Breakdowns (Metrics #25)

Exhibit V.2.24 summarizes the model data by region from CY 2015 to CY 2018 for Metric #25. In CY 2018, the highest regional rate of readmission for SUD was 27.66% in the Southwest. The lowest was for the North Central at 21.45%. All regional readmissions rates, except the Central, Northwest and Southeast regions increased between CY 2017 and CY 2018.

Exhibit V.2.24
Rate of Readmission among Beneficiaries with SUD (#25)
displayed by Region, CY2015* - CY2018



	2015*	2016	2017	2018
Central	28.72%	23.20%	23.33%	23.25%
East Central	25.35%	19.41%	21.89%	22.56%
North Central	27.19%	22.74%	20.23%	21.45%
Northeast	26.56%	22.98%	26.03%	27.66%
Northwest	33.23%	25.05%	22.34%	21.60%
Southeast	27.46%	20.69%	22.18%	22.01%
Southwest	24.49%	20.29%	20.53%	23.98%
West Central	25.02%	22.31%	22.91%	24.59%

2015* data may be invalid due to ICD9 to ICD10 conversion

V.D SECTION 3. ACCESS TO SUD CARE

Hypothesis 2.1: Access to care improved in the SUD population in the post-waiver period.

Research Questions

This hypothesis includes three research questions aimed at understanding the waiver's impact on access to care. Of the three questions, the Interim Evaluation analyzed two of them. For the other question, additional data and transformations of current data were not available at the time this report was prepared to be included. Results from the third hypothesis question will be included in the Summative Evaluation.

The following two questions are meant to inform how access to SUD care change for the SUD population in the post-waiver period:

2.1.1 Does the level and trend in the number of SUD and primary care providers and the number of providers per capita in the SUD population increase in the post waiver period for each ASAM level of care?

2.1.2 Does the utilization of SUD services and primary care in the SUD population increase in the post waiver period for each ASAM level of care?

Metrics

Ten unique metrics were computed as indicators of access to SUD care as defined in the two research questions evaluated. Each metric is an indicator of aspects of access to care which, as defined in Section IV, would be impacted by waiver activities focused on improving the SUD system of care. All measures in this section are either required and/or recommended by CMS for Indiana FSSA SUD waiver monitoring activities. There are a mix of metrics with a national steward and those that are defined by CMS.

Where possible, the Interim Evaluation presents data from CY 2015 and CY 2019 for transparency, but it is not included in evaluating trends given its limitations as discussed in Section IV. The Interim Evaluation considered annual data that was visualized by plotting metrics over time. Metrics also plotted data over time for key sub-populations, MCEs and regions. The annual observed trend between CY 2017 and CY 2018 were compared against desired trends to derive the Interim Evaluation conclusions.

The following metrics were computed to evaluate hypothesis 2.1:

1. SUD Provider Availability (#13)
2. Access to Preventative/Ambulatory Health Services for Adult Beneficiaries with SUD (#32)
3. Count of Beneficiaries receiving Any SUD Treatment (#6)
4. Count of Beneficiaries receiving Early Intervention (#7)
5. Count of Beneficiaries receiving Outpatient Services (#8)
6. Count of Beneficiaries receiving Intensive Outpatient or Partial Hospitalization Services (#9)
7. Count of Beneficiaries receiving Residential and Inpatient Services (#10)
8. Count of Beneficiaries receiving Withdrawal Management (#11)
9. Count of Beneficiaries receiving MAT (#12)
10. Average Length of Stay in IMDs (#36)

Results Desired versus Observed Trends

Exhibit V.3.1 summarizes the observed versus desired trend in the pre-waiver period of CY 2017 and the post-waiver period of CY2018 for the 10 measures included as part of hypothesis 2.1. The overall demonstration population trends were as desired in eight of the ten metrics.

Exhibit V.3.1
Summary of Results Hypothesis 2.1 (Access) Annual Trend CY 2017 – CY 2018

Research Question	Metrics	Desired Trend	Demo Trend	Sub-Population Trends		MCE Trends	Regional Trends	
2.1.1. Does the level and trend in the number of SUD and primary care providers and the number of providers per capita in the SUD population increase in the post waiver period for each ASAM level of care?	SUD Provider Availability (#13)	Increase	**9.4%**	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
	Access to Preventative /Ambulatory Health Services for Adult Medicaid Beneficiaries with SUD (#32)	Increase	**0.2%**	Model:0.5% Dual: -0.7% OUD: 0.7%	Pregnant: 1.3% Criminally Involved: -2.8% MRO: 0.3%	Anthem: 0.5% CareSource: -2.5% MDwise: 0.5% MHS: 2.6%	Central: 0.1% East Central: -0.8% North Central: -1.5% Northeast: -0.9%	Northwest: 0.4% Southeast: 2.4% Southwest: 1.4% West Central: 0.2%
2.1.2 Does the utilization of SUD services and primary care in the SUD population increase in the post waiver period for each ASAM level of care?	Any SUD Treatment (#6)	Increase	**16.0%**	Model: 14.4% Dual: 9.6% OUD: 25.6%	Pregnant: 66.5% Criminally Involved: -24.7% MRO: 11.7%	Anthem: 17.3% CareSource: 149.4% MDwise: -6.4% MHS: 5.3%	Central: 20.0% East Central: 14.8% North Central: 5.2% Northeast: 3.6%	Northwest: 16.6% Southeast: 24.6% Southwest: 18.6% West Central: 7.4%
	Early Intervention (#7)	Increase	**-46.4%**	Model: -47.7% Dual: 68.8% OUD: -58.7%	Pregnant: 20.0% Criminally Involved: N/A MRO: -16.7%	Anthem: -46.0% CareSource: 150.0% MDwise: -0.5% MHS: -40.3%	Central: -84.9% East Central: -86.77% North Central: 425.0% Northeast: 20.0%	Northwest: 14.6% Southeast: -75.0% Southwest: -100% West Central: 85.7%
	Outpatient Services (#8)	Increase	**14.5%**	Model: 11.8% Dual: 9.1% OUD: 27.5%	Pregnant: 54.6% Criminally Involved: -6.2% MRO: 11.1%	Anthem: 15.40% CareSource: 142.9% MDwise: --6.0% MHS: -2.4%	Central: 19.6% East Central: 6.1% North Central: 4.4% Northeast: 0.3%	Northwest: 24.1% Southeast: 27.9% Southwest: 15.3% West Central: 4.0%

Research Question	Metrics	Desired Trend	Demo Trend	Sub-Population Trends		MCE Trends	Regional Trends	
	Intensive Outpatient or Partial Hospitalization Services (#9)	Increase	**-8.8%**	Model: -12.1% Dual: -20.7% OUD: -17.7%	Pregnant: 2.1% Criminally Involved: -0.9% MRO: -9.0%	Anthem: -12.1% CareSource: 73.6% MDwise: --25.1% MHS: -20.0%	Central: 10.4% East Central: -25.2% North Central: -6.1% Northeast: -42.0%	Northwest: -29.2% Southeast: -21.7% Southwest: -14.1% West Central: 9.6%
	Residential and Inpatient Services (#10)	Increase	9.7%	Model: 6.9% Dual: 10.9% OUD:0.9%	Pregnant: 64.2% Criminally Involved: 6.4% MRO: 7.9%	Anthem: 0.5% CareSource: 176.0% MDwise: -5.8% MHS: 10.2%	Central: 3.4% East Central: 10.3% North Central: -2.2% Northeast: 12.9%	Northwest: 16.4% Southeast: 18.9% Southwest: 13.7% West Central: 13.1%
2.1.2 Does the utilization of SUD services and primary care in the SUD population increase in the post waiver period for each ASAM level of care?	Withdrawal Management (#11)	Increase	**6.7%**	Model: 9.4% Dual: -1.5% OUD: -5.8%	Pregnant: 640.0% Criminally Involved: 75.0% MRO: 38.0%	Anthem: -7.7% CareSource: 225.8% MDwise: 4.9% MHS: 15.3%	Central: -4.5% East Central: 17.8% North Central: -7.2% Northeast: 8.8%	Northwest: 34.5% Southeast: 23.5% Southwest: 17.4% West Central: 2.2%
	MAT (#12)	Increase	**31.6%**	Model: 30.1% Dual: 76.0% OUD: -33.2%	Pregnant: 114.9% Criminally Involved: -9.0% MRO: 36.9%	Anthem: 37.5% CareSource: 186.4% MDwise: 0.8% MHS: 26.8%	Central: 29.2% East Central: 30.8% North Central: 18.0% Northeast: 47.0%	Northwest: 28.4% Southeast: 27.3% Southwest: 50.7% West Central: -20.9%
	Average Length of Stay in IMDs (#36)	Decrease	**-5.9%**	Model: -5.9 Dual: -11.5% OUD: -4.8%	Pregnant: -16.2% Criminally Involved: -10.9% MRO: -6.1%	Anthem: -2.7% CareSource: 33% MDwise: -0.5% MHS: -40.3%	Central: -40.0% East Central: 5.6% North Central: -1.9% Northeast: 5.6%	Northwest: -10.6% Southeast: -7.5% Southwest: -9.8% West Central: -10.2%

Results by Research Question

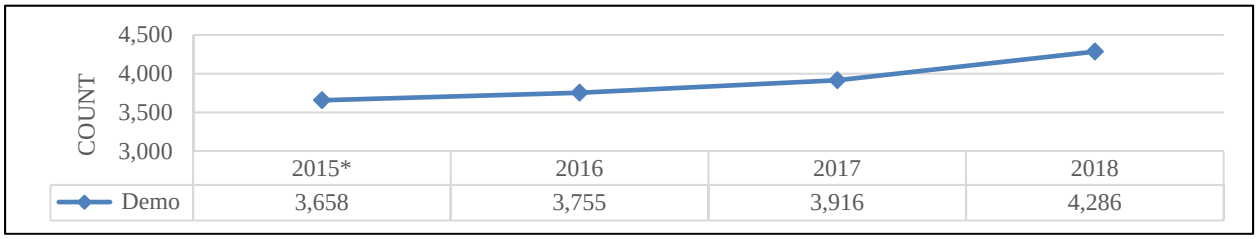
Hypothesis Question 2.1.1:
Does the level and trend in the number of SUD and primary care providers and the number of providers per capita in the SUD population increase in the post waiver period for each ASAM level of care? (Metrics #13 and #32)

Metric #13: SUD Provider Availability

Population Breakdown (Metric #13)

As seen in Exhibit V.3.2 below, in CY 2018 the number of SUD providers was 4,286, an increase of 9.4% from 3,916 in CY 2017. The specifications for this metric do not allow for calculation by sub-population.

Exhibit V.3.2
Count of SUD Providers (#13)
displayed by Demonstration Populations, CY2015* - CY2018



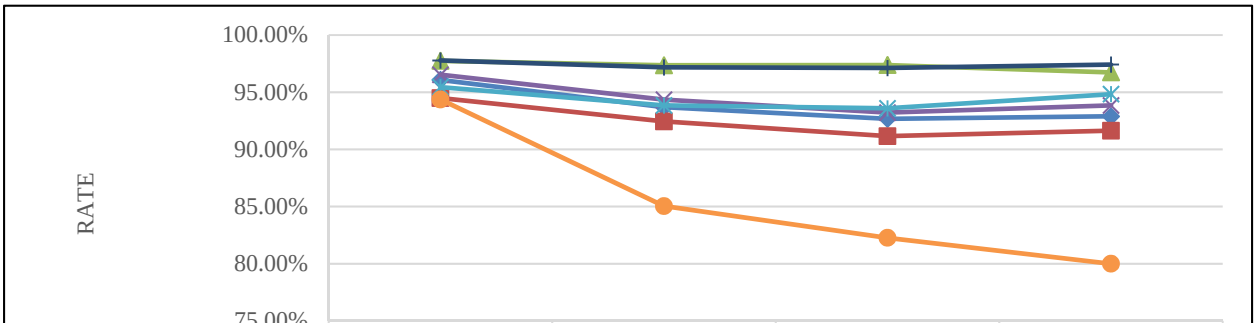
2015* data may be invalid due to ICD9 to ICD10 conversion

Metric #32: Access to Preventative/Ambulatory Health Services for Adult Beneficiaries with SUD

Population Breakdown (Metric #32)

In CY 2018, access to preventative and/or ambulatory health services for adult Medicaid beneficiaries with SUD was 93% in the demonstration populations and similarly high for all sub-populations ranging from 97% in the MRO and dual eligible population to 92% in the managed care model population. Criminally involved, however, was at 80% which was not unexpected. Between CY 2017 and CY 2018, all but the dual eligible and criminally involved populations increased modestly. Refer to Exhibit V.3.3 on the next page.

Exhibit V.3.3
Rate of Access to Preventive/ Ambulatory Health Services for Adults with SUD Annually (#32) displayed by Demonstration, Model and Sub-Populations, CY2015* - CY2018



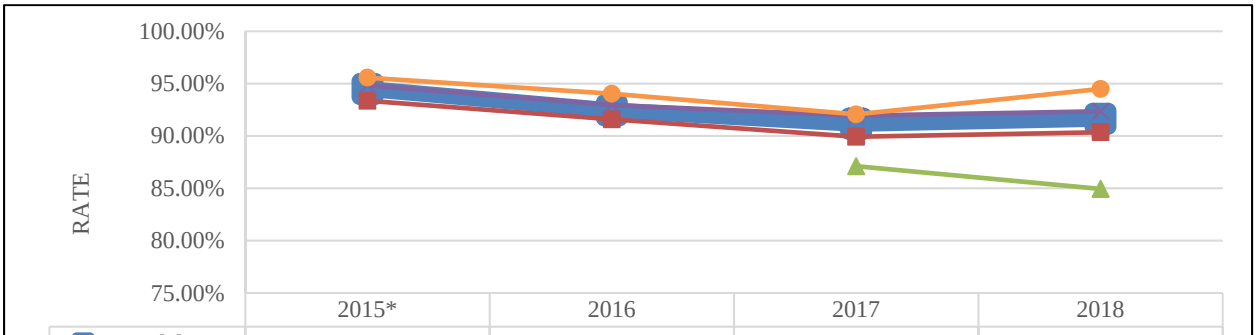
	2015*	2016	2017	2018
Demo	96.08%	93.69%	92.68%	92.90%
Model	94.49%	92.44%	91.16%	91.64%
Dual	97.74%	97.36%	97.38%	96.73%
OUD	96.53%	94.35%	93.21%	93.85%
Pregnant	95.45%	93.85%	93.59%	94.83%
Criminally Involved	94.37%	85.04%	82.26%	80.00%
MRO	97.78%	97.18%	97.12%	97.42%

2015* data may be invalid due to ICD9 to ICD10 conversion

MCE Breakdowns (Metric #32)

Exhibit V.3.4 summarize the demonstration and model population data from CY 2015 to CY 2018. In CY 2018, MHS had the highest percentage at 94.49% of adult Medicaid beneficiaries with a SUD diagnosis that accessed preventative and/or ambulatory care. CareSource had the lowest proportion at 84.49%. Anthem's rate was 92.36% while MDwise was at 90.36%. All but CareSource had modest increases between CY 2017 and CY 2018.

Exhibit V.3.4
Rate of Access to Preventive/ Ambulatory Health Services for Adults with SUD Annually (#32) displayed by MCE, CY2015* - CY2018



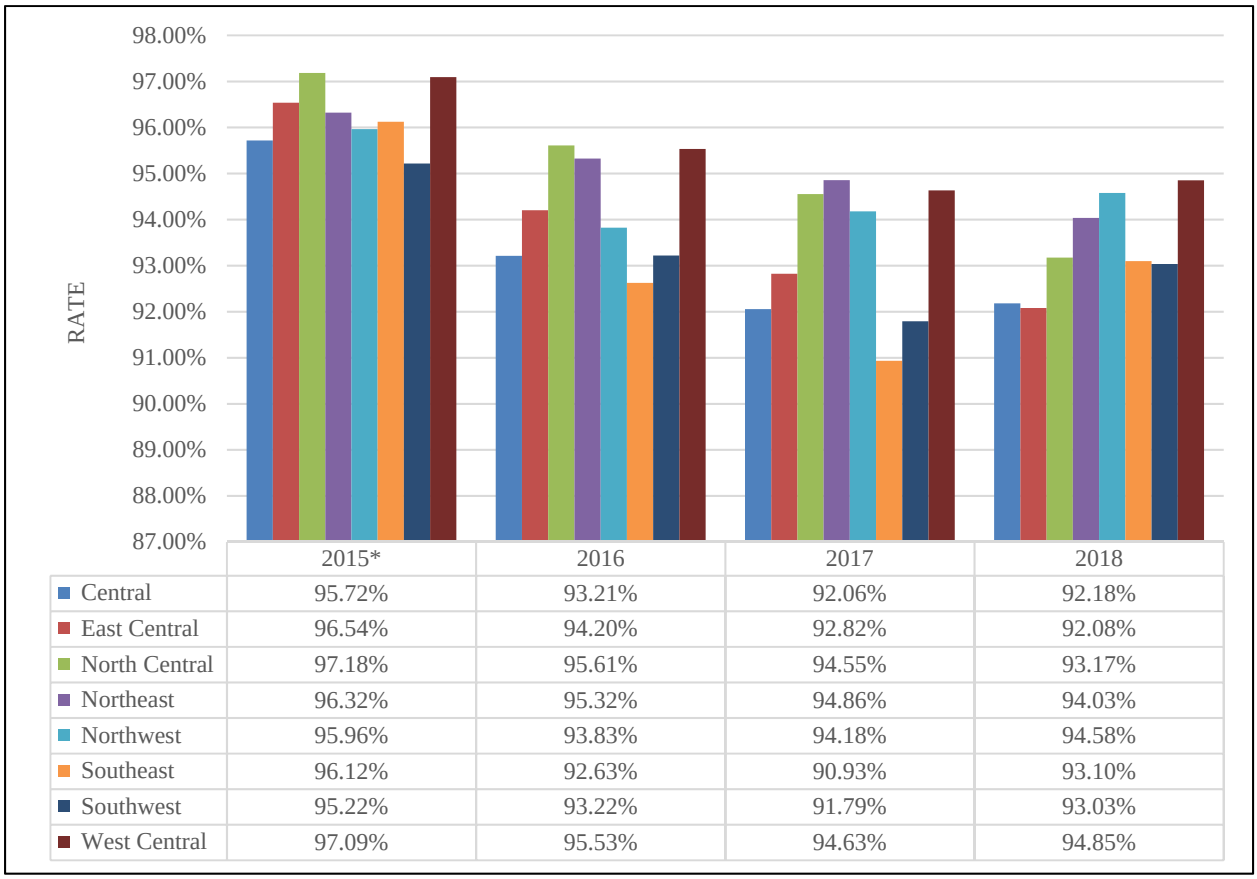
	2015*	2016	2017	2018
Model	94.49%	92.44%	91.16%	91.64%
MDwise	93.36%	91.59%	89.93%	90.36%
CareSource			87.11%	84.94%
Anthem	94.85%	92.95%	91.94%	92.36%
MHS	95.57%	94.03%	92.06%	94.49%

2015* data may be invalid due to ICD9 to ICD10 conversion

Regional Breakdowns (Metric #32)

Exhibit V.3.5 summarizes the model data by region from CY 2015 to CY 2018 for Metric #25. The range in the percentage of adults with SUD that had access to preventative and/or ambulatory care was small between 92% and 95%. East Central, North Central and the Northeast region decreased between CY 2017 and CY 2018, while the remaining five regions increased.

Exhibit V.3.5
Rate of Access to Preventive/ Ambulatory Health Services for Adults with SUD Annually (#32) displayed by Region, CY2015* - CY2018



	2015*	2016	2017	2018
Central	95.72%	93.21%	92.06%	92.18%
East Central	96.54%	94.20%	92.82%	92.08%
North Central	97.18%	95.61%	94.55%	93.17%
Northeast	96.32%	95.32%	94.86%	94.03%
Northwest	95.96%	93.83%	94.18%	94.58%
Southeast	96.12%	92.63%	90.93%	93.10%
Southwest	95.22%	93.22%	91.79%	93.03%
West Central	97.09%	95.53%	94.63%	94.85%

2015* data may be invalid due to ICD9 to ICD10 conversion

Hypothesis Question 2.1.2:
Does the utilization of SUD services and primary care in the SUD population increase in the post waiver period for each ASAM level of care? (Metrics #6 - #12 and #36)

Metric #6:	**Count of Beneficiaries Receiving Any SUD Treatment**
Metric #7:	**Count of Beneficiaries Receiving Early Intervention**
Metric #8:	**Count of Beneficiaries Receiving Outpatient Treatment**
Metric #9:	**Count of Beneficiaries Receiving Intensive Outpatient or Partial Hospitalization Services**
Metric #10:	**Count of Beneficiaries Receiving Residential and Inpatient Services**
Metric #11:	**Count of Beneficiaries Receiving Withdrawal Management**

Population Breakdown (Metrics #6 - #11) – found in Exhibits V.3.6 to V.3.23

In CY 2018, the number of Medicaid beneficiaries receiving any SUD treatment increased to 23,160, up from 19,969 in CY 2017, a 16.0% increase. There were mixed trends in the number of beneficiaries receiving SUD treatment at different ASAM levels of care in the pre- and post- waiver period. The second ASAM level, including 2.1: Intensive IOP and 2.5: PHP, decreased between CY 2017 and CY 2018 in the demonstration population. ASAM levels 0.5, 1, 3 and 4 all increased between CY 2017 and CY 2018 in the demonstration population. The number of beneficiaries receiving withdrawal management also increased. Refer to Exhibits V.3.6 through V.3.11 on page V-55 for details.

There were 595 pregnant beneficiaries receiving SUD treatment in CY 2018, up from 358 in CY 2017, a 66.5% increase. Criminally involved beneficiaries decreased by a small amount in the same period, down from 41 to 38 beneficiaries. The upward trend in outpatient treatment, withdrawal management and residential and inpatient services among pregnant beneficiaries in the pre- and post- waiver period was large. The dual-eligible, OUD, and MRO populations also increased in the pre- and post- waiver period. Refer to Exhibits V.3.12 through V.3.23 on pages V-56 and V-57 for details.

Some ASAM levels (such as early intervention and withdrawal management) and sub-populations (such as criminally involved) have low absolute numbers of beneficiaries. Therefore, trends cannot be derived at this time. A number of potential data limitations to consider for these metrics with a low number of observations are described in Section IV of this report. Specifically, the measure specifications as outlined by CMS may be narrow or may not account for state-specific logic necessary to identify services. Some information may also not be documented on a medical claim or encounter.

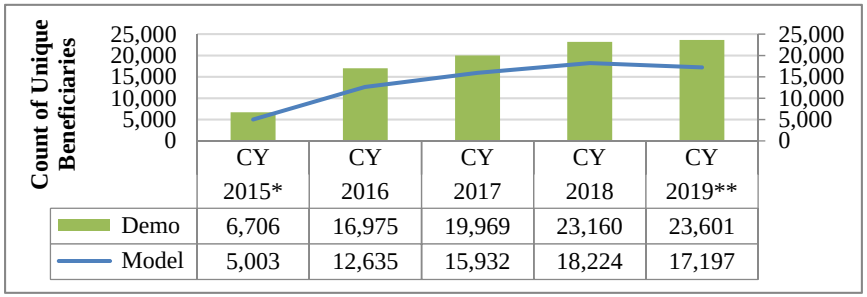
MCE and Regional Breakdowns (Metrics #6 - #11) – found in Exhibits V.3.24 to V.3.35

Of the beneficiaries receiving any SUD service in the managed care model population, Anthem served the majority of beneficiaries in CY 2018 (n= 9,361). MDwise served 3,799 beneficiaries, MHS served 3,531 and CareSource served 1,543.

All but one region had increases in the number of Medicaid beneficiaries receiving any SUD services.

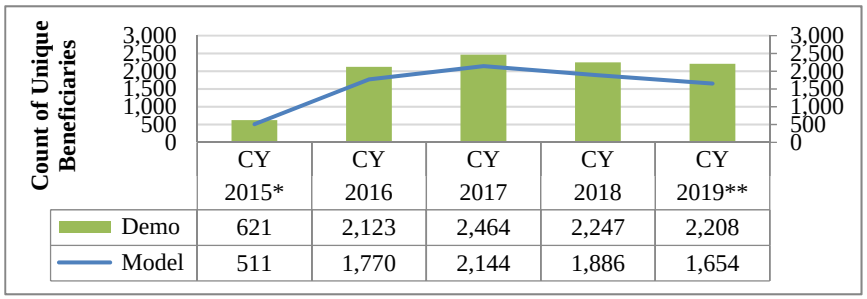
Refer to pages V-58 through V-63 for details.

Exhibit V.3.6 Any SUD Treatment (#6)
Demonstration and Model Populations, CY2015* - CY2019**



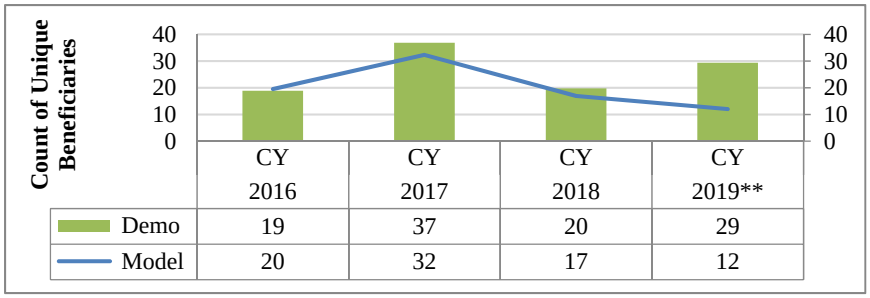
	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Demo	6,706	16,975	19,969	23,160	23,601
Model	5,003	12,635	15,932	18,224	17,197

Exhibit V.3.7 Intensive Outpatient and Partial Hospitalization (#9)
Demonstration and Model Populations, CY2015* - CY2019**



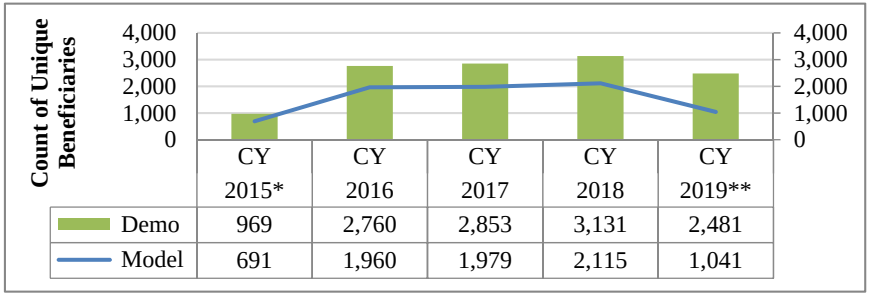
	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Demo	621	2,123	2,464	2,247	2,208
Model	511	1,770	2,144	1,886	1,654

Exhibit V.3.8 Early Intervention Treatment (#7)
Demonstration and Model Populations, CY2016 - CY2019**



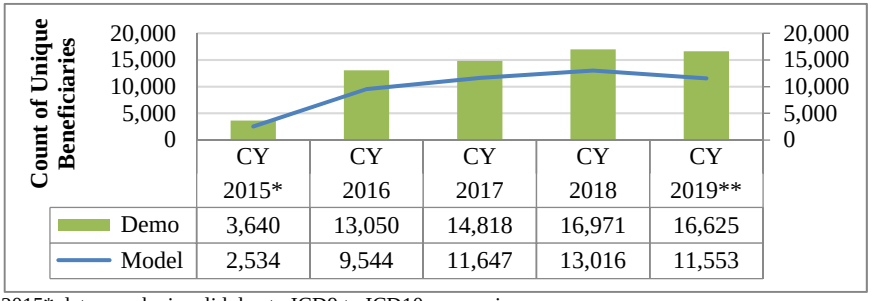
	CY 2016	CY 2017	CY 2018	CY 2019**
Demo	19	37	20	29
Model	20	32	17	12

Exhibit V.3.9 Residential and Inpatient SUD Treatment (#10)
Demonstration and Model Populations, CY2015* - CY2019**



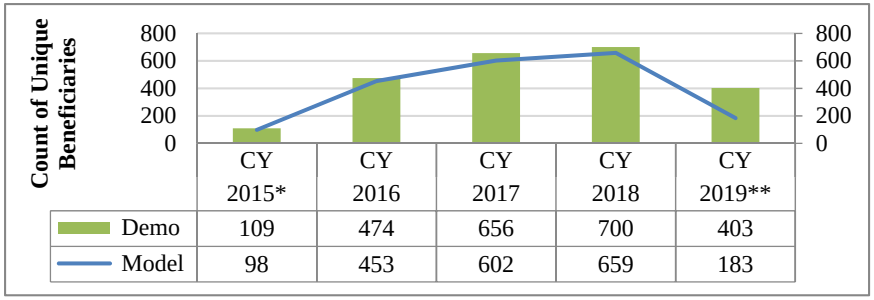
	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Demo	969	2,760	2,853	3,131	2,481
Model	691	1,960	1,979	2,115	1,041

Exhibit V.3.10 Outpatient SUD Treatment (#8)
Demonstration and Model Populations, CY2015* - CY2019**



	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Demo	3,640	13,050	14,818	16,971	16,625
Model	2,534	9,544	11,647	13,016	11,553

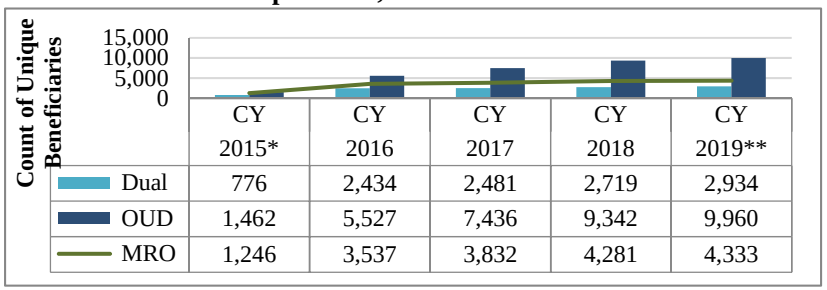
Exhibit V.3.11 Withdrawal Management SUD Treatment (#11)
Demonstration and Model Populations, CY2015* - CY2019**



	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Demo	109	474	656	700	403
Model	98	453	602	659	183

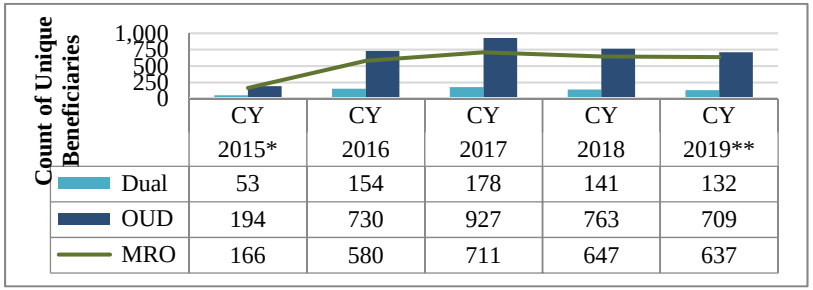
2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

Exhibit V.3.12 Any SUD Treatment (#6)
Sub-Populations, CY2015* - CY2019**



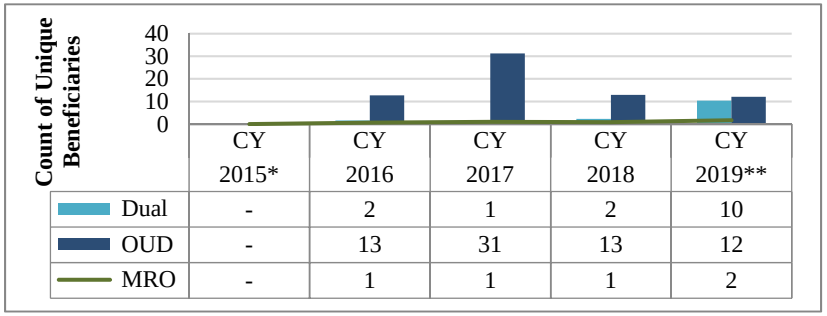
	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Dual	776	2,434	2,481	2,719	2,934
OUD	1,462	5,527	7,436	9,342	9,960
MRO	1,246	3,537	3,832	4,281	4,333

Exhibit V.3.13 Intensive Outpatient and Partial Hospitalization (#9)
Sub-Populations, CY2015* - CY2019**



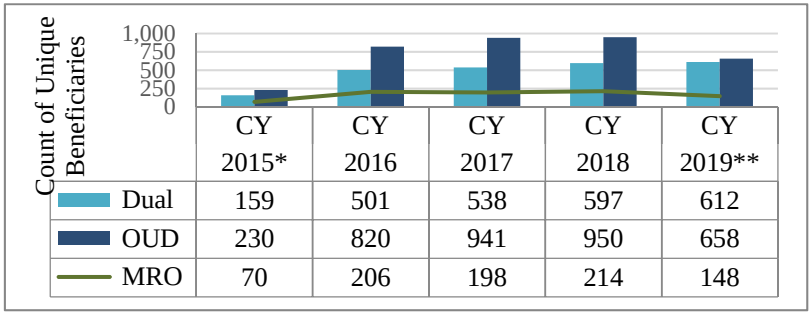
	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Dual	53	154	178	141	132
OUD	194	730	927	763	709
MRO	166	580	711	647	637

Exhibit V.3.14 Early Intervention Treatment (#7)
Sub-Populations, CY2016 - CY2019**



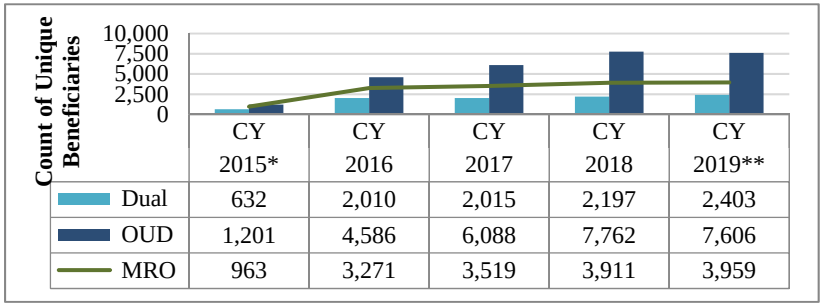
	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Dual	-	2	1	2	10
OUD	-	13	31	13	12
MRO	-	1	1	1	2

Exhibit V.3.15 Residential and Inpatient SUD Treatment (#10)
Sub-Populations, CY2015* - CY2019**



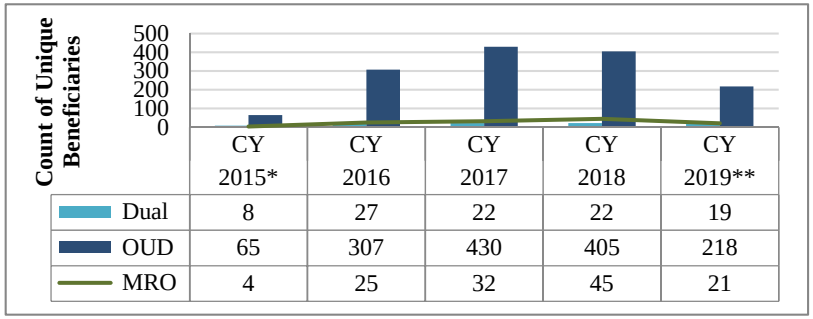
	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Dual	159	501	538	597	612
OUD	230	820	941	950	658
MRO	70	206	198	214	148

Exhibit V.3.16 Outpatient SUD Treatment (#8)
Sub-Populations, CY2015* - CY2019**



	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Dual	632	2,010	2,015	2,197	2,403
OUD	1,201	4,586	6,088	7,762	7,606
MRO	963	3,271	3,519	3,911	3,959

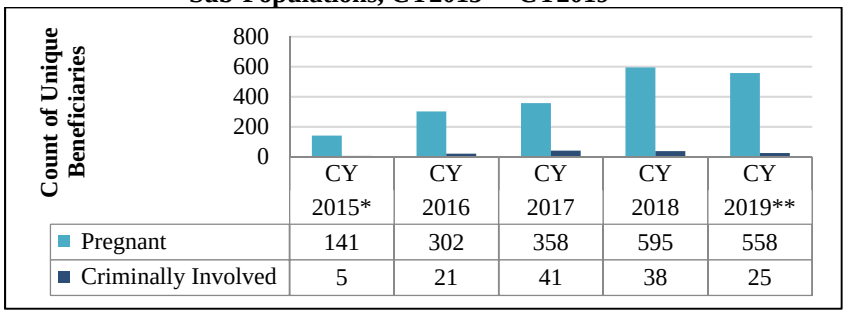
Exhibit V.3.17 Withdrawal Management SUD Treatment (#11)
Sub-Populations, CY2015* - CY2019**



	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Dual	8	27	22	22	19
OUD	65	307	430	405	218
MRO	4	25	32	45	21

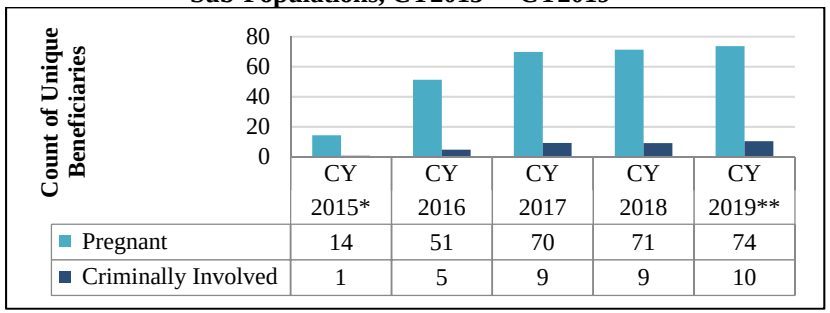
2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

Exhibit V.3.18 Any SUD Treatment (#6)
Sub-Populations, CY2015* - CY2019**



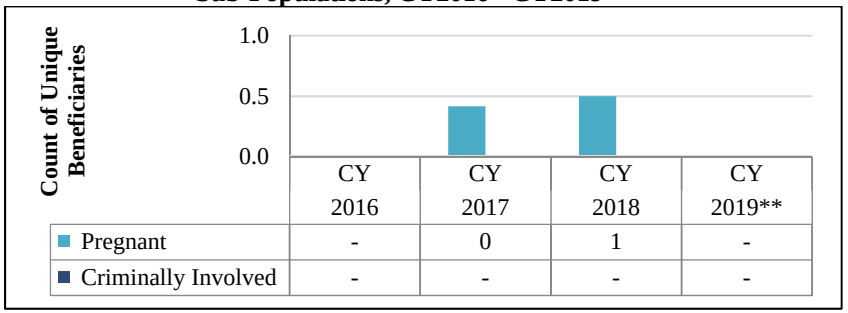
	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Pregnant	141	302	358	595	558
Criminally Involved	5	21	41	38	25

Exhibit V.3.19 Intensive Outpatient and Partial Hospitalization (#9)
Sub-Populations, CY2015* - CY2019**



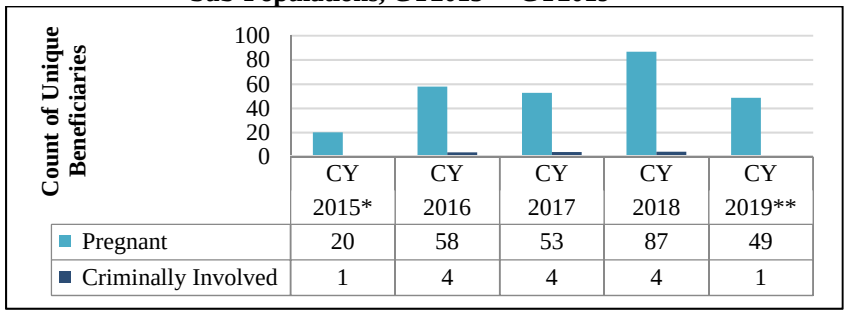
	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Pregnant	14	51	70	71	74
Criminally Involved	1	5	9	9	10

Exhibit V.3.20 Early Intervention Treatment (#7)
Sub-Populations, CY2016 - CY2019**



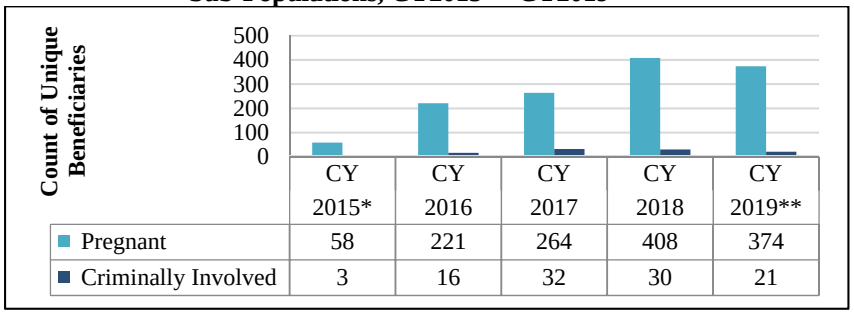
	CY 2016	CY 2017	CY 2018	CY 2019**
Pregnant	-	0	1	-
Criminally Involved	-	-	-	-

Exhibit V.3.21 Residential and Inpatient SUD Treatment (#10)
Sub-Populations, CY2015* - CY2019**



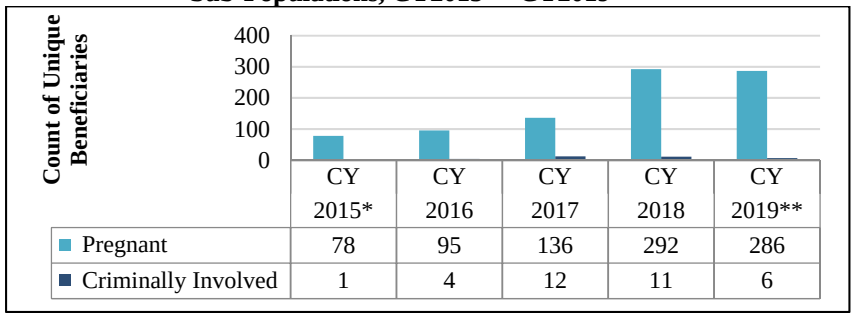
	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Pregnant	20	58	53	87	49
Criminally Involved	1	4	4	4	1

Exhibit V.3.22 Outpatient SUD Treatment (#8)
Sub-Populations, CY2015* - CY2019**



	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Pregnant	58	221	264	408	374
Criminally Involved	3	16	32	30	21

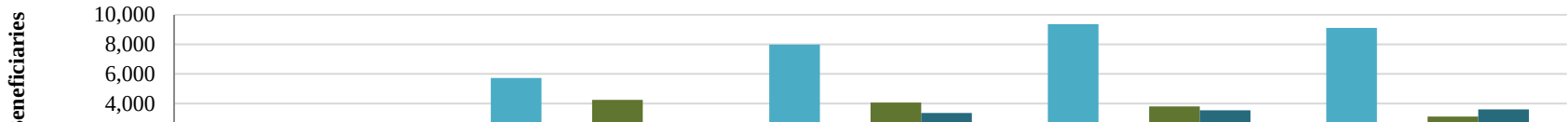
Exhibit V.3.23 Withdrawal Management SUD Treatment (#11)
Sub-Populations, CY2015* - CY2019**



	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Pregnant	78	95	136	292	286
Criminally Involved	1	4	12	11	6

2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

Exhibit V.3.24 Any SUD Treatment (#6)
MCE, CY2015* - CY2019**



	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Anthem	2,291	5,717	7,981	9,361	9,110
CareSource			619	1,543	1,391
MDwise	1,635	4,240	4,059	3,799	3,106
MHS	1,078	2,625	3,354	3,531	3,595

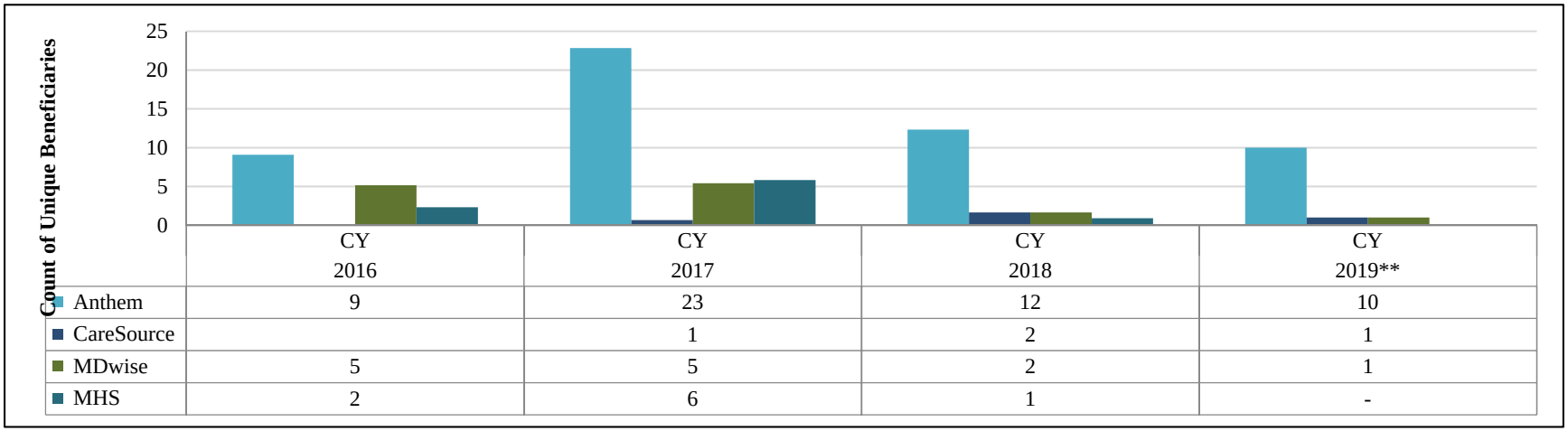
2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

Exhibit V.3.25 Any SUD Treatment (#6)
Region, CY2015* - CY2019**

	Central	East Central	North Central	Northeast	Northwest	Southeast	Southwest	West Central
2015*	1,927	843	488	500	783	807	868	449
2016	4,548	1,943	1,389	1,734	1,880	1,863	2,343	1,177
2017	5,352	2,280	1,593	2,123	2,069	2,455	2,797	1,244
2018	6,420	2,616	1,676	2,200	2,412	3,059	3,317	1,335
2019**	6,545	2,746	1,719	2,307	2,476	2,943	3,363	1,353

2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

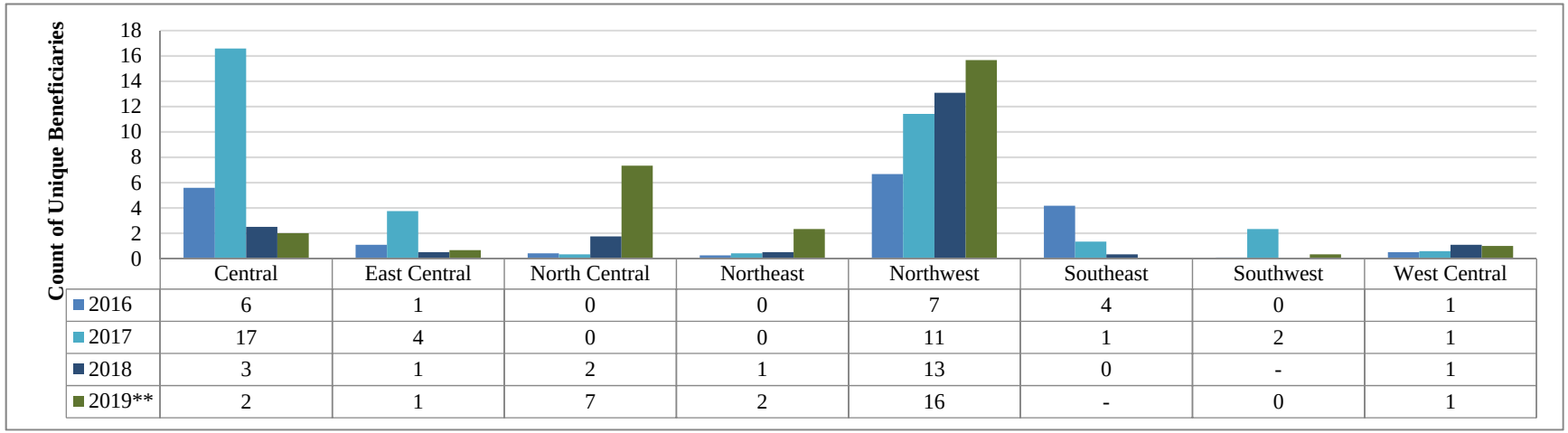
Exhibit V.3.26 Early Intervention Treatment (#7)
MCE, CY2016 - CY2019**



	CY 2016	CY 2017	CY 2018	CY 2019**
Anthem	9	23	12	10
CareSource		1	2	1
MDwise	5	5	2	1
MHS	2	6	1	-

2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

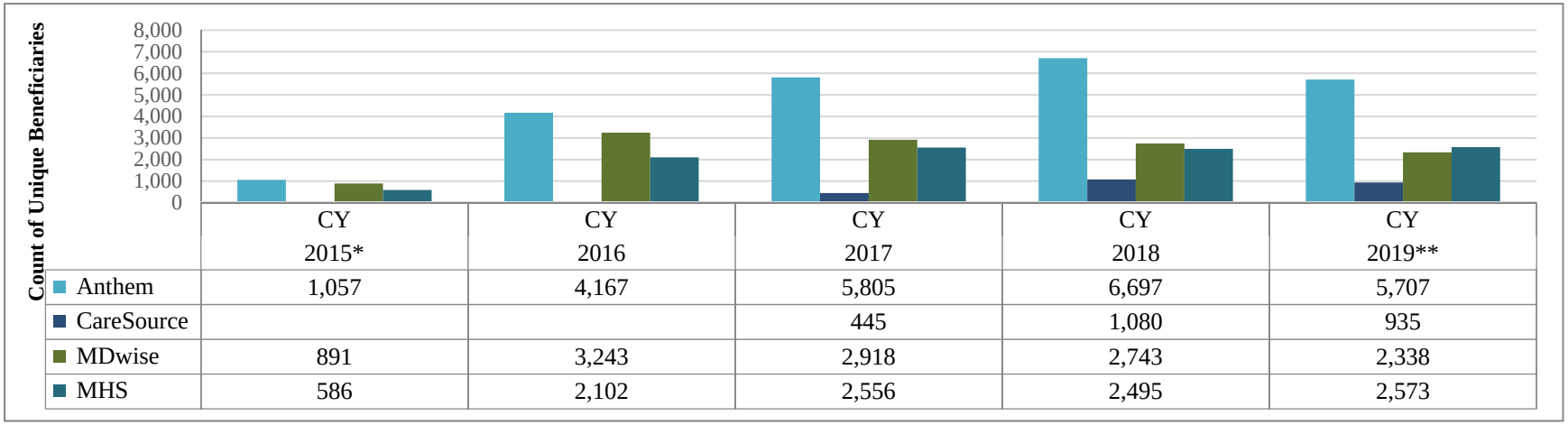
Exhibit V.3.27 Early Intervention Treatment (#7)
Region, CY2016 - CY2019**



	Central	East Central	North Central	Northeast	Northwest	Southeast	Southwest	West Central
2016	6	1	0	0	7	4	0	1
2017	17	4	0	0	11	1	2	1
2018	3	1	2	1	13	0	-	1
2019**	2	1	7	2	16	-	0	1

2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

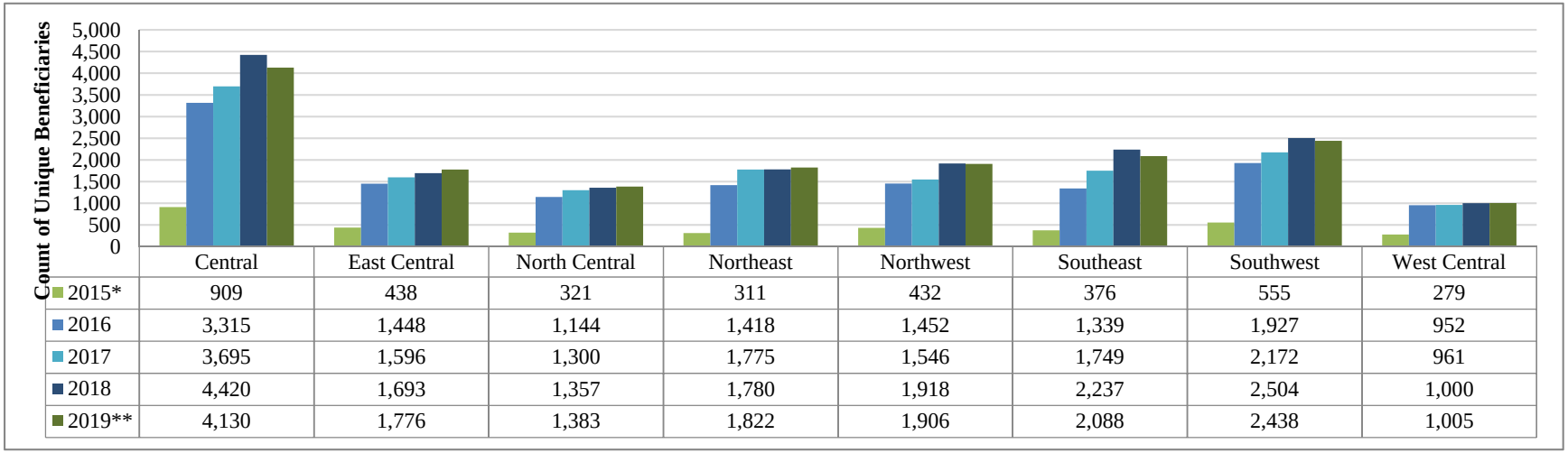
Exhibit V.3.28 Outpatient SUD Treatment (#8)
MCE, CY2015* - CY2019**



	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Anthem	1,057	4,167	5,805	6,697	5,707
CareSource			445	1,080	935
MDwise	891	3,243	2,918	2,743	2,338
MHS	586	2,102	2,556	2,495	2,573

2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

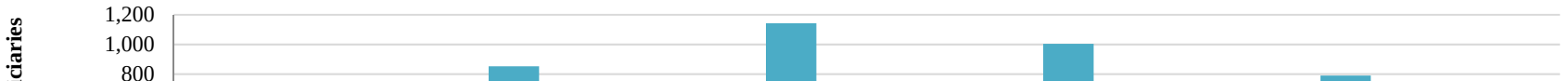
Exhibit V.3.29 Outpatient SUD Treatment (#8)
Region, CY2015* - CY2019**



	Central	East Central	North Central	Northeast	Northwest	Southeast	Southwest	West Central
2015*	909	438	321	311	432	376	555	279
2016	3,315	1,448	1,144	1,418	1,452	1,339	1,927	952
2017	3,695	1,596	1,300	1,775	1,546	1,749	2,172	961
2018	4,420	1,693	1,357	1,780	1,918	2,237	2,504	1,000
2019**	4,130	1,776	1,383	1,822	1,906	2,088	2,438	1,005

2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

Exhibit V.3.30 Intensive Outpatient and Partial Hospitalization (#9)
MCE, CY2015* - CY2019**



	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Anthem	237	852	1,143	1,004	790
CareSource			115	200	168
MDwise	153	516	442	331	402
MHS	120	409	464	371	294

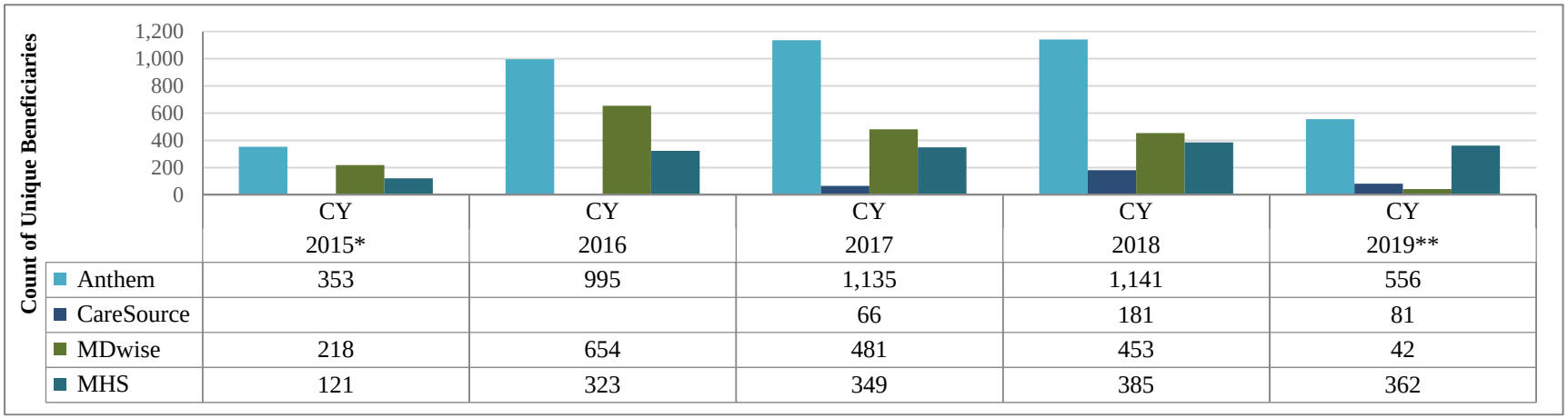
2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

Exhibit V.3.31 Intensive Outpatient and Partial Hospitalization (#9)
Region, CY2015* - CY2019**

	Central	East Central	North Central	Northeast	Northwest	Southeast	Southwest	West Central
2015*	217	50	9	11	52	79	179	21
2016	742	153	50	29	220	254	603	62
2017	821	188	42	30	275	331	705	68
2018	907	140	40	17	195	259	606	74
2019**	893	210	17	10	174	251	577	64

2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

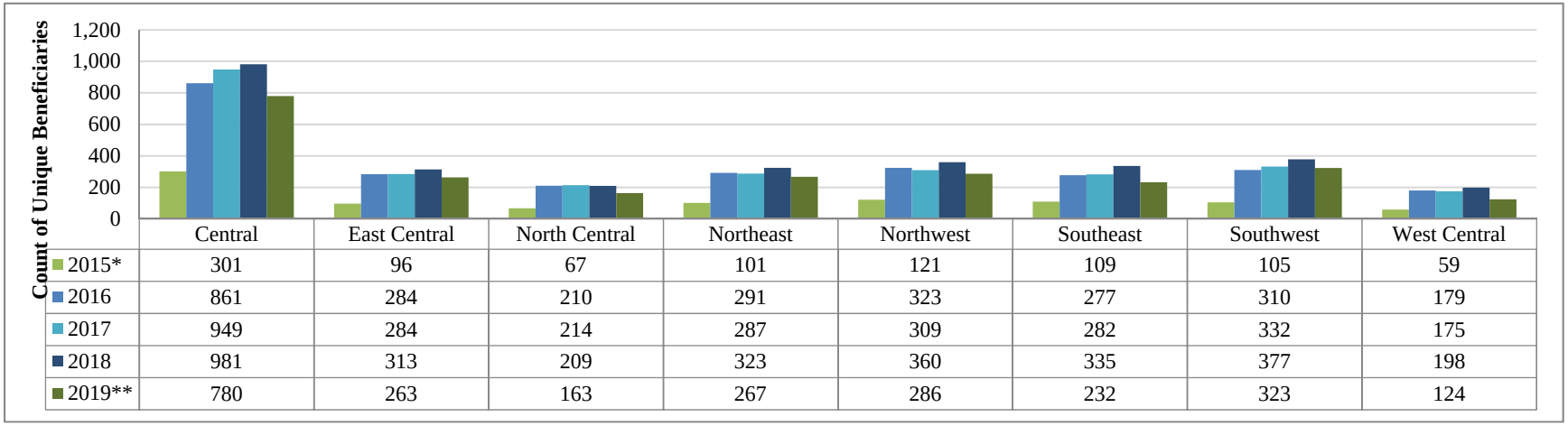
Exhibit V.3.32 Residential and Inpatient SUD Treatment (#10)
MCE, CY2015* - CY2019**



	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Anthem	353	995	1,135	1,141	556
CareSource			66	181	81
MDwise	218	654	481	453	42
MHS	121	323	349	385	362

2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

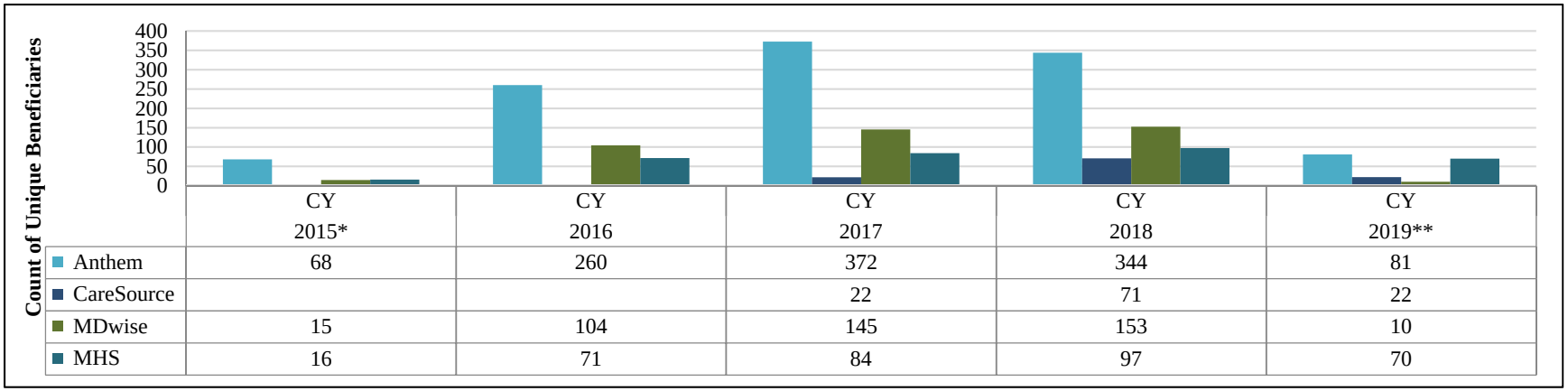
Exhibit V.3.33 Residential and Inpatient SUD Treatment (#10)
Region, CY2015* - CY2019**



	Central	East Central	North Central	Northeast	Northwest	Southeast	Southwest	West Central
2015*	301	96	67	101	121	109	105	59
2016	861	284	210	291	323	277	310	179
2017	949	284	214	287	309	282	332	175
2018	981	313	209	323	360	335	377	198
2019**	780	263	163	267	286	232	323	124

2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

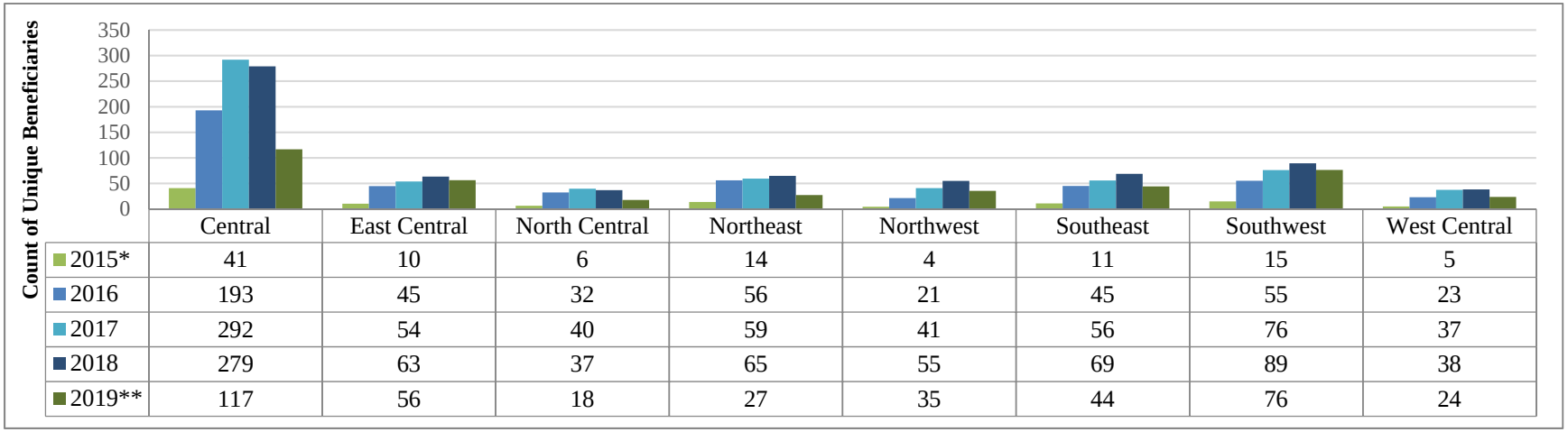
Exhibit V.3.34 Withdrawal Management SUD Treatment (#11)
MCE, CY2015* - CY2019**



	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Anthem	68	260	372	344	81
CareSource			22	71	22
MDwise	15	104	145	153	10
MHS	16	71	84	97	70

2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

Exhibit V.3.35 Withdrawal Management SUD Treatment (#11)
Region, CY2015* - CY2019**



	Central	East Central	North Central	Northeast	Northwest	Southeast	Southwest	West Central
2015*	41	10	6	14	4	11	15	5
2016	193	45	32	56	21	45	55	23
2017	292	54	40	59	41	56	76	37
2018	279	63	37	65	55	69	89	38
2019**	117	56	18	27	35	44	76	24

2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

Metric #12: Count of Beneficiaries Receiving Medication Assisted Treatment (MAT)

Population Breakdown (Metric #12)

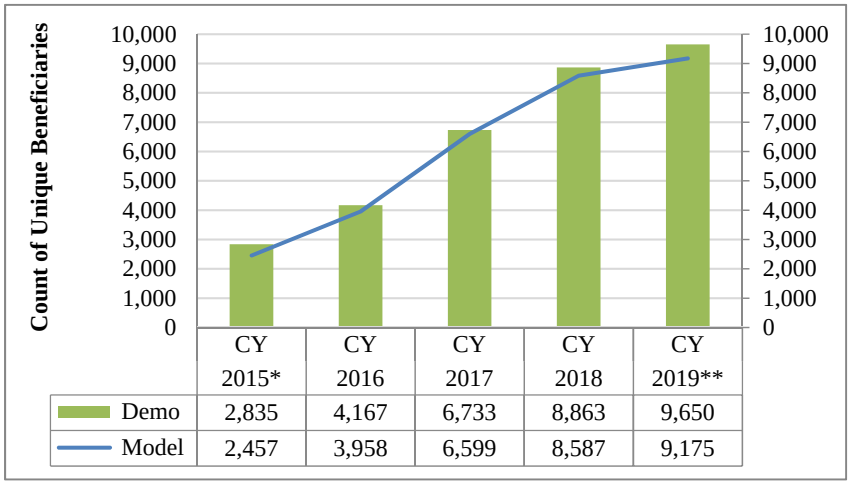
In CY 2018, the number of beneficiaries receiving MAT was 8,863, up 31.6% from 6,733 in CY 2017. There were more beneficiaries in each sub-population evaluated in CY 2018 compared to the previous year. Pregnant beneficiaries increased from 136 receiving MAT in CY 2017 to 292 in CY 2018, or 114.9%. Criminally involved beneficiaries remained stable in the period. As expected, those beneficiaries meeting the criteria of the OUD sub-population flag represented a large proportion of the population; however, there are some beneficiaries receiving MAT who do not meet those criteria.

The vast majority of the population receiving MAT were between the ages of 18 and 64. It should be noted, however, that there were 124 beneficiaries under the age of 18 and there were 11 aged 65 and older who received MAT in CY 2018.

Refer to Exhibits V.3.36 and V.3.37 on pages V-65 and V-66 for details.

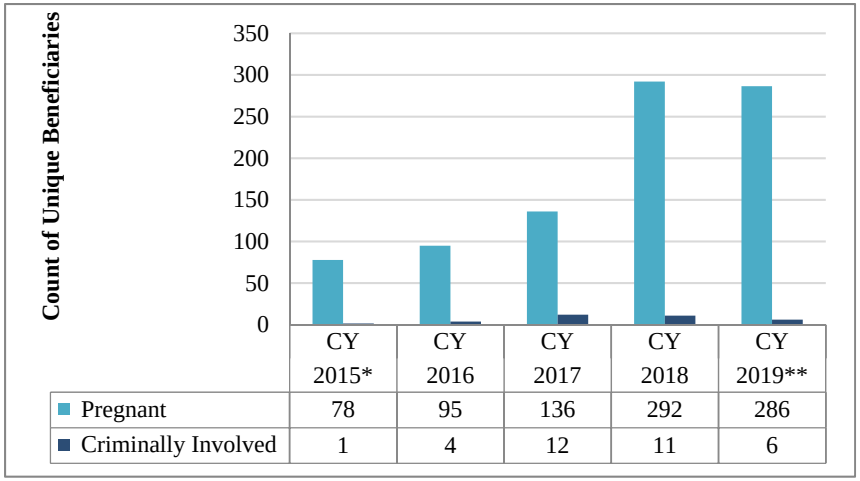
Exhibit V.3.36 Medication Assisted Treatment (#12)

Demonstration and Model Populations



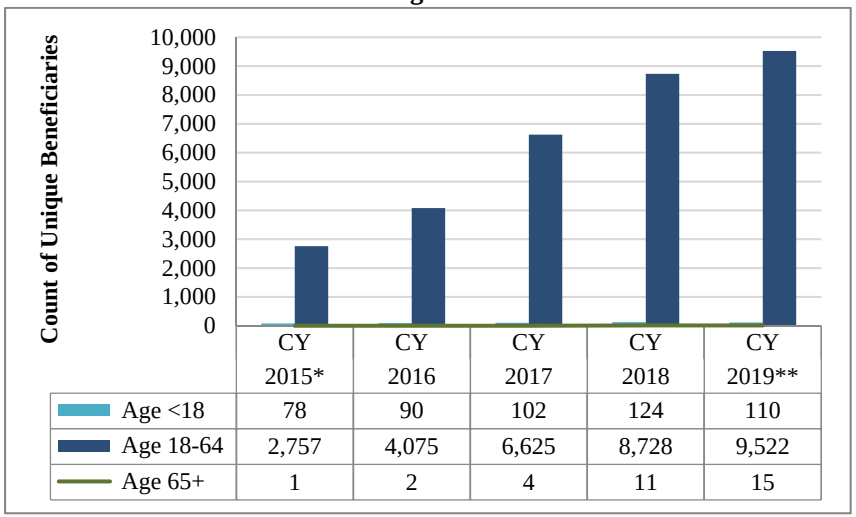
	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Demo	2,835	4,167	6,733	8,863	9,650
Model	2,457	3,958	6,599	8,587	9,175

Sub-Populations

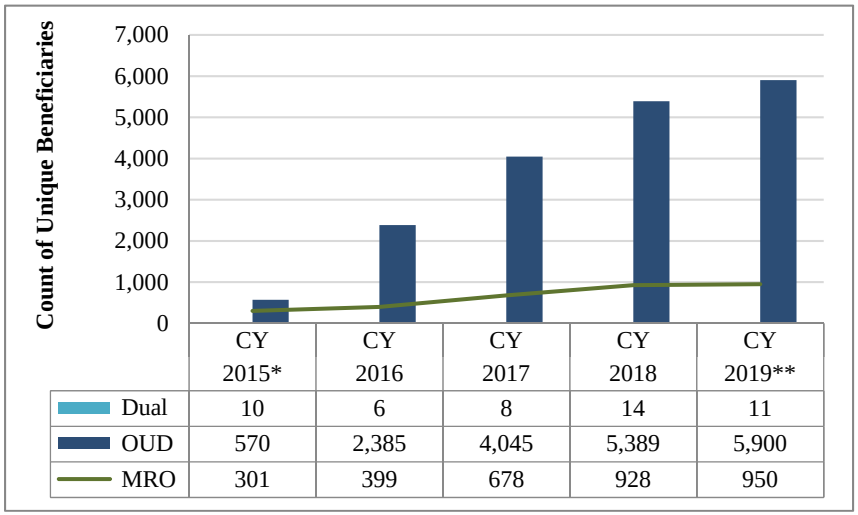


	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Pregnant	78	95	136	292	286
Criminally Involved	1	4	12	11	6

Age



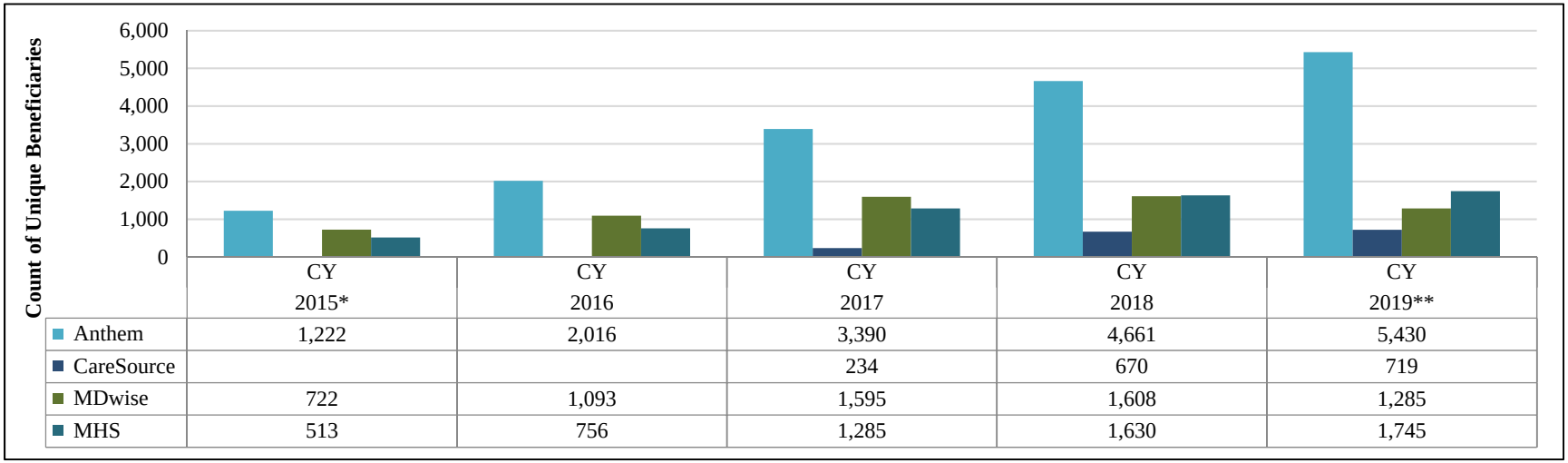
	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Age <18	78	90	102	124	110
Age 18-64	2,757	4,075	6,625	8,728	9,522
Age 65+	1	2	4	11	15



	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Dual	10	6	8	14	11
OUD	570	2,385	4,045	5,389	5,900
MRO	301	399	678	928	950

2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

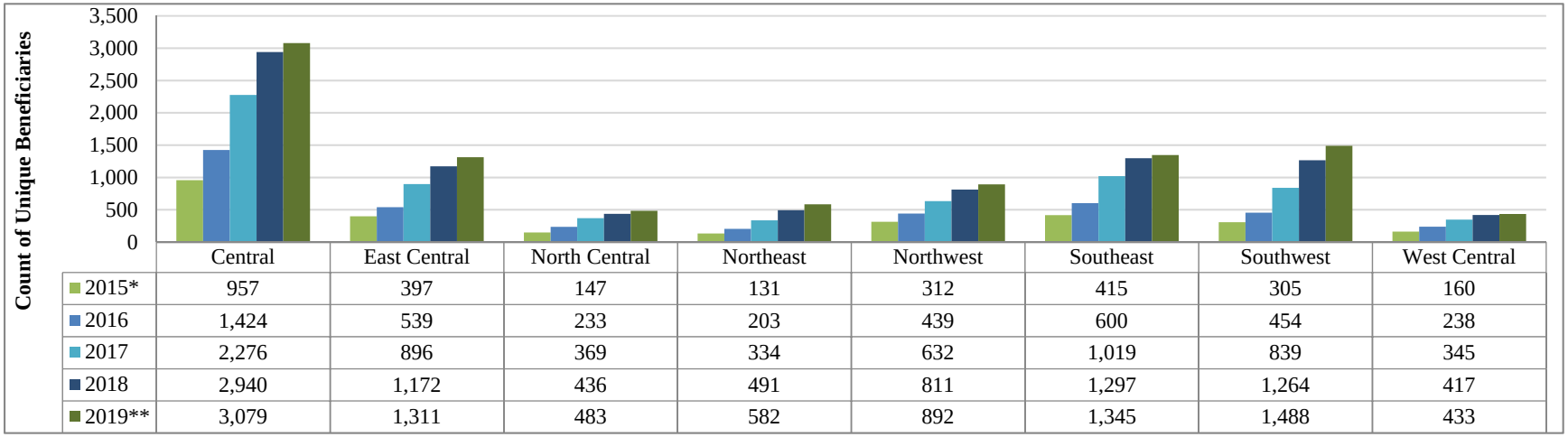
Exhibit V.3.37 Medication Assisted Treatment (#12)
MCE



	CY 2015*	CY 2016	CY 2017	CY 2018	CY 2019**
Anthem	1,222	2,016	3,390	4,661	5,430
CareSource			234	670	719
MDwise	722	1,093	1,595	1,608	1,285
MHS	513	756	1,285	1,630	1,745

2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

Region



	Central	East Central	North Central	Northeast	Northwest	Southeast	Southwest	West Central
2015*	957	397	147	131	312	415	305	160
2016	1,424	539	233	203	439	600	454	238
2017	2,276	896	369	334	632	1,019	839	345
2018	2,940	1,172	436	491	811	1,297	1,264	417
2019**	3,079	1,311	483	582	892	1,345	1,488	433

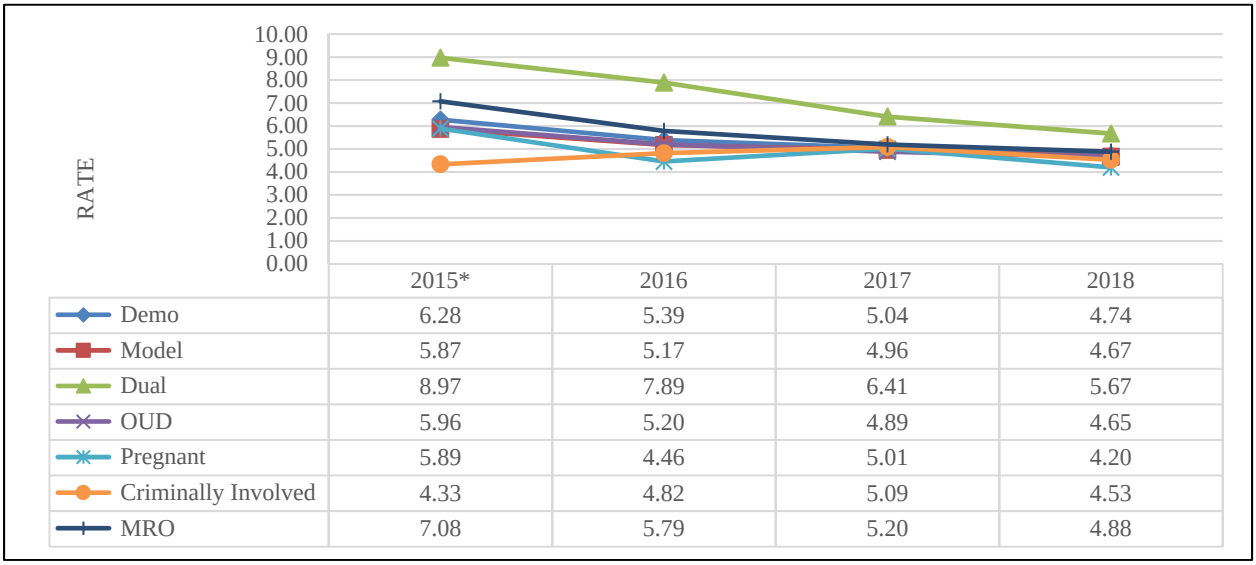
2015* data may be invalid due to ICD9 to ICD10 conversion
2019**data may be incomplete due to insufficient time for collection of paid versus incurred encounters and claims

Metric #36: Average Length of Stay in IMDs

Population Breakdown (Metric #36)

Exhibit V.3.38 summarize the demonstration and model population data from CY 2015 to CY 2018. The average length of stay in IMDs in CY 2018 was 4.74 which is down from 5.04 in CY 2017. All sub-populations decreased in the range of -16.2% for pregnant beneficiaries to -4.8% in the OUD population.

Exhibit V.3.38
Average Length of Stay in IMDs Annually (#36)
displayed by Demonstration, Model and Sub-Populations, CY2015* - CY2018



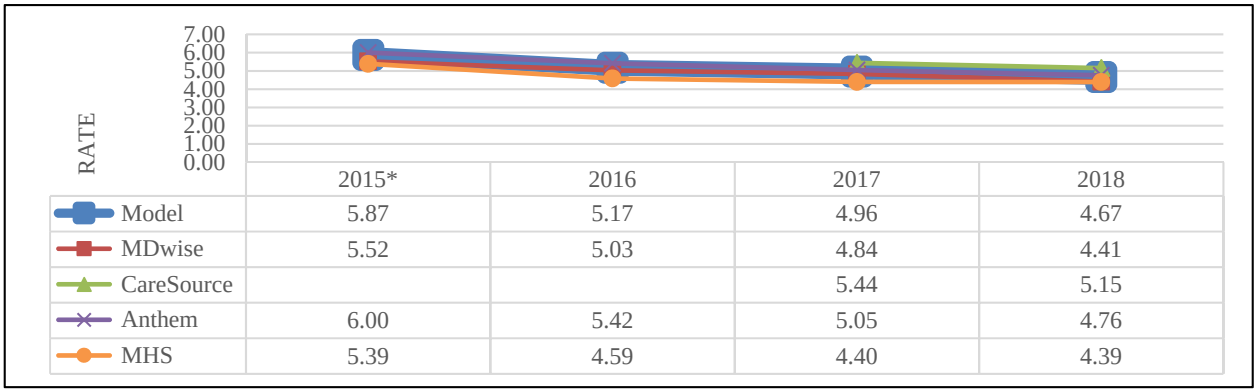
	2015*	2016	2017	2018
Demo	6.28	5.39	5.04	4.74
Model	5.87	5.17	4.96	4.67
Dual	8.97	7.89	6.41	5.67
OUD	5.96	5.20	4.89	4.65
Pregnant	5.89	4.46	5.01	4.20
Criminally Involved	4.33	4.82	5.09	4.53
MRO	7.08	5.79	5.20	4.88

2015* data may be invalid due to ICD9 to ICD10 conversion

MCE Breakdowns (Metric #36)

Exhibit V.3.39 summarizes the model data by MCE from CY 2015 to CY 2018 for Metric #36. MDwise experienced the largest drop in length of stay at an IMD by -8.9%. Anthem and CareSource decreased similarly by -5.7% and -5.2%, respectively. MHS stayed almost neutral with a decrease of -0.1%.

Exhibit V.3.39
Average Length of Stay in IMDs Annually (#36)
displayed by MCE, CY2015* - CY2018



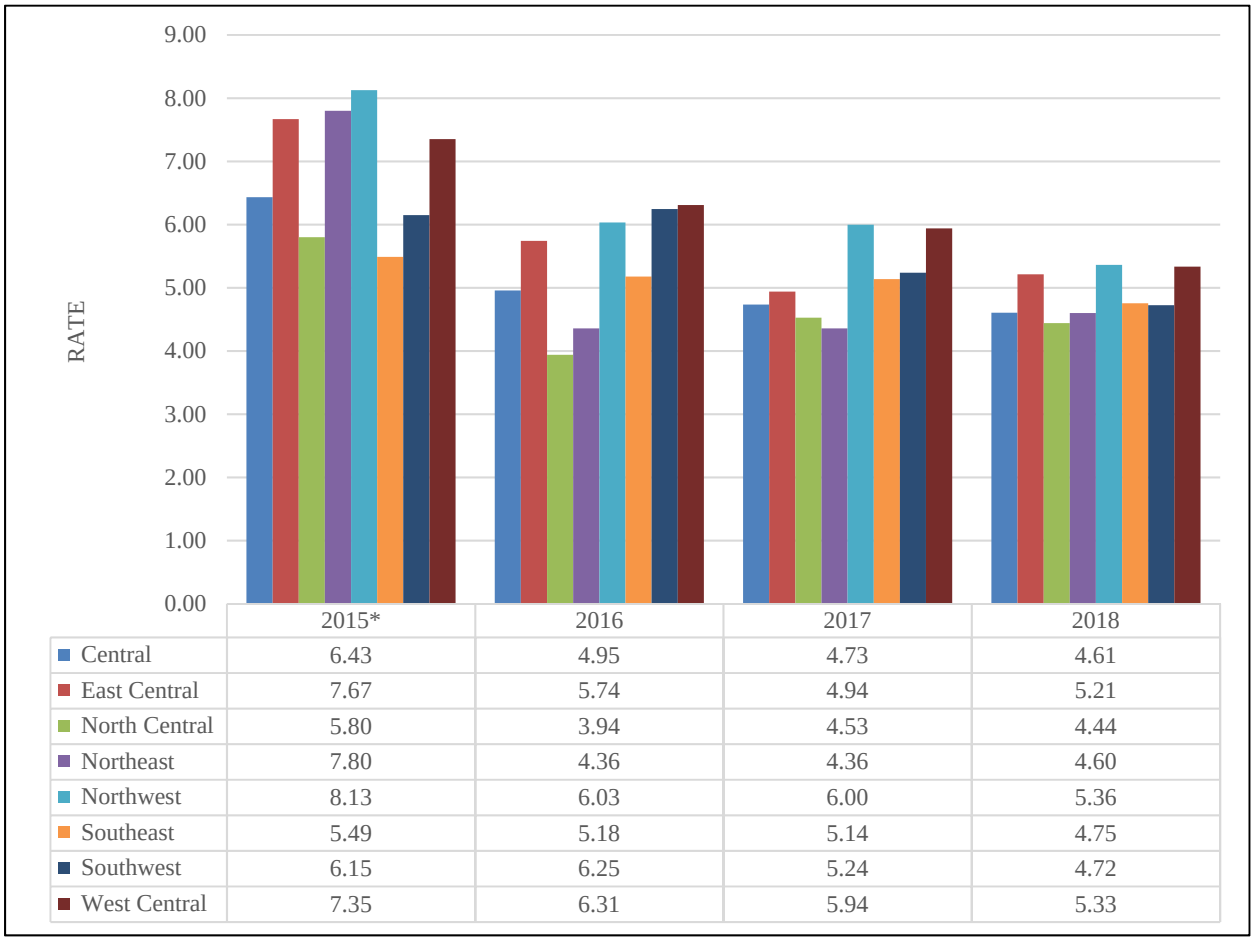
	2015*	2016	2017	2018
Model	5.87	5.17	4.96	4.67
MDwise	5.52	5.03	4.84	4.41
CareSource			5.44	5.15
Anthem	6.00	5.42	5.05	4.76
MHS	5.39	4.59	4.40	4.39

2015* data may be invalid due to ICD9 to ICD10 conversion

Regional Breakdowns (Metrics #36)

Exhibit V.3.40 summarizes the model data by region from CY 2015 to CY 2018 for Metric #36. Regional trends in the pre- and post- waiver period varied. The Central, North Central, Northwest, Southeast, Southwest and West Central all decreased in average length of stay in IMDs. The East Central and Northeast both increased in average length of stay.

Exhibit V.3.40
Average Length of Stay in IMDs Annually (#36)
displayed by Region, CY2015* - CY2018



	2015*	2016	2017	2018
Central	6.43	4.95	4.73	4.61
East Central	7.67	5.74	4.94	5.21
North Central	5.80	3.94	4.53	4.44
Northeast	7.80	4.36	4.36	4.60
Northwest	8.13	6.03	6.00	5.36
Southeast	5.49	5.18	5.14	4.75
Southwest	6.15	6.25	5.24	4.72
West Central	7.35	6.31	5.94	5.33

2015* data may be invalid due to ICD9 to ICD10 conversion

V.E SECTION 4. PRIOR AUTHORIZATION

Hypothesis 5.2: Prior authorization (PA) requirements do not negatively impact access to residential or inpatient services.

Research Questions

This hypothesis includes three research questions aimed at understanding the waiver's impact on access to services due to service authorization requirements.

- *5.2.1 Are the rates of prior authorizations (PA) submitted and PA requests that are denied in the SUD population, controlling for volume, relatively consistent by MCE and over time*
- *5.2.2 Are PA denials predominantly for reasons directly related to not meeting clinical criteria as opposed to administrative reasons such as lack of information submitted?*
- *5.2.3 Is provider administrative burden associated with PA requests cited as a perceived barrier to access to care?*

The first two questions are addressed by B&A in this Interim Evaluation; however, conclusions cannot yet be drawn due to the relatively short period of the waiver thus far. A more thorough examination for each question using a longer study period will be included in the Summative Evaluation.

Introduction

Since the majority of Indiana Medicaid beneficiaries are enrolled in a managed care model, B&A's initial study on authorizations focused on beneficiaries enrolled as members with a managed care entity (MCE) in on the State's three benefit programs—Hoosier Healthwise (HHW), Healthy Indiana Plan (HIP) or Hoosier Care Connect (HCC). The four MCEs under contract with the State are Anthem, CareSource, MDwise and Managed Health Services (MHS). In all three managed care delivery programs, the MCEs require approved authorizations for inpatient (ASAM Level 4.0) and residential treatment (ASAM Level 3.1 and 3.5) services.

The initial study conducted by B&A included a desk review of all SUD-related authorization requests for the period February 1, 2018 – December 31, 2018 as well as an onsite review at each MCE of a sample of 120 total authorization requests (30 from each MCE).

In addition to the desk review and onsite review of authorization records, B&A bundled authorizations into a single episode of care in the inpatient or residential treatment setting for each MCE member. The claims submitted by providers were matched to the authorization records to compare claim status to authorization status. B&A allowed for a claims runout period through June 30, 2019 for dates of service through December 31, 2018.

It should be noted that the FSSA met with the managed care entities (MCEs) and providers on this topic of authorization procedures throughout the first year of the waiver. The feedback obtained from these meetings has already been instrumental in streamlining prior authorization processes across MCEs and clearer definitions around expectations from providers related to authorization submissions. These changes were communicated by FSSA to providers in early Calendar Year (CY) 2019 with changes taking effect in April 2019. As a result of these changes, B&A will be conducting the focus study described in this section once again in CY 2020 for the look-back period of the second half of CY 2019.

Upon completion of this second study, we will be able to assess the effectiveness of the new operational protocols put in place. The results of the second study and the comparison to this first study will be reported on in the Summative Evaluation.

The hypotheses question related to provider administrative burden will be addressed in the Mid-Point Assessment after qualitative interviews have been conducted with providers and the MCEs.

Methodology to Conduct the Study

B&A requested all SUD-related authorization requests from each MCE for service dates between February 1 and December 31, 2018. The information was provided to B&A in an Excel spreadsheet in February 2019 with columns/values pre-defined by B&A for standardization. The counts and percentages computed represent individual authorization requests. For example, a provider may have submitted three different requests for a single residential treatment episode—one for the first 14 days, a second for an additional seven days, and a third for four additional days. Each of these requests was counted separately.

B&A used this self-reported data to profile the number of unique members for whom authorizations were requested as well as the number of requests per MCE member. Requests made by providers were segregated between inpatient, residential treatment (ASAM Levels 3.1 or 3.5) and outpatient. Not all MCEs have the same requirements for authorizations in ASAM levels below 3.1; therefore, B&A focused on ASAM levels 3.1, 3.5 and 4.0 requests.

From the total inpatient and residential authorization requests made in CY 2018, B&A drew a sample of 120 authorizations for additional review. A total of 30 requests were selected from each MCE. A combination of inpatient and residential requests was sampled that was proportional to each MCE's volume of these requests. By design, denied requests were oversampled such that each MCE had 24 denied requests and six approved requests in the sample.

The B&A review team consisted of three members—two non-clinicians and one clinician. In early February 2019, the team conducted a qualitative interview with each MCE to learn more about their process for the intake and determination of authorization requests. These interviews informed what would be reviewed onsite for each sample record. The MCEs were notified in advance (early March) of their sample to be reviewed onsite at their office in Indianapolis. In late March, the B&A team conducted the onsite reviews. For each record in the sample, a process review was conducted by non-clinicians and a clinical review was conducted by an addiction specialist. The process review assessed each MCE's consistency with their own processes as well as a comparison of the processes across MCEs. The clinical review included a determination if—given the information presented with the authorization request—the independent clinical agreed or disagreed with the determination to approve or deny the request based on medical necessity. All information was tabulated in tool designed for this study. A review tool was completed for each of the 120 records in the sample. Information from the desk review of all requests and the onsite sample was tabulated in April 2019.

Separate from this process, when more than one request existed, B&A joined individual authorization requests for an MCE member into one episode of care. Episodes were tracked by member and by MCE for both inpatient and residential treatment stays. In August 2019, encounters (claims) from the MCEs submitted through June 30, 2019 were tabulated for SUD-related services and matched against the episodes defined in the authorization records. B&A allowed for sufficient time for claims with service dates in CY 2018 to be submitted by the MCEs to the FSSA. B&A tracked the status of claims paid or denied by the MCE to the provider against the original authorizations requested or denied by the provider.

Profile of MCE Members and Authorization Requests

In the first 11 months of the SUD waiver period (February 1 – December 31, 2018), requests were made by providers to the MCEs for 4,857 individuals for inpatient services, for 1,645 individuals for residential treatment, and for 1,554 individuals for outpatient-related SUD services.

Exhibit V.4.1
Counts of Unique Members with Auth Requests in CY 2018

MCE	SUD Inpatient Auth Request	SUD RTC Auth Request	SUD Outpatient Auth Request
All MCEs	**4,857**	**1,645**	**1,554**
Anthem	2,712	885	997
CareSource	636	320	92
MDwise	1,231	330	275
MHS	278	110	190

Authorization information self-reported by the MCEs to Burns & Associates.

Only one authorization request was made for 57 percent of these members. Conversely, for three percent of members, more than five requests were made. The percentages shown in Exhibit V.4.2 are generally similar for Anthem, MDwise and MHS. CareSource did differ from its peers.

Exhibit V.4.2
Percent of Members Based on Number of Auths Requested on their Behalf

MCE	Only 1 Auth	2 Auths	3 to 5 Auths	More than 5 Auths
All MCEs	**57%**	**22%**	**18%**	**3%**
Anthem	57%	20%	19%	4%
CareSource	74%	15%	9%	2%
MDwise	48%	29%	20%	3%
MHS	50%	25%	21%	4%

Authorization information self-reported by the MCEs to Burns & Associates.

With the exception of Anthem which is lower than its peers, more than 75 percent of all requests when members had more than one request were either for two inpatient authorizations (IP-IP) or two residential treatment center authorizations (RTC-RTC).

Exhibit V.4.3
For those Members with More than 1 Authorization Request, the Percentage of Members with Each of These Combinations

MCE	IP - IP	RTC - RTC	OP - OP	IP - OP	Other
Anthem	38%	24%	16%	13%	9%
CareSource	31%	45%	4%	9%	11%
MDwise	70%	15%	5%	3%	7%
MHS	53%	30%	7%	4%	6%

Authorization information self-reported by the MCEs to Burns & Associates.

For 98 percent of members that had more than one inpatient authorization request during this time period, at least one of their requests was approved. For 76 percent of members, all requests were approved. For 76 percent of members that had more than one residential treatment authorization request during this time period, at least one of their requests was approved. For 65 percent of members, all requests were approved.

Exhibit V.4.4
The Number of Members* Based on Disposition Status when Combo is Inpatient - Inpatient

MCE	Anthem	Care Source	MDwise	MHS	All MCEs Combined	Pct of Total
Approved - Approved	457	73	441	98	1,069	76%
Approved - Denied	117	7	108	5	237	17%
Denied - Approved	47	5	11	1	64	5%
Denied - Denied	32	1	0	0	33	2%

The Number of Members* Based on Disposition Status when Combo is RTC - RTC

MCE	Anthem	Care Source	MDwise	MHS	All MCEs Combined	Pct of Total
Approved - Approved	225	52	92	59	428	65%
Approved - Denied	78	7	7	0	92	14%
Denied - Approved	56	2	11	1	70	11%
Denied - Denied	59	5	8	0	72	11%

* For those Members with More than 1 Authorization Request

Authorization information self-reported by the MCEs to Burns & Associates.

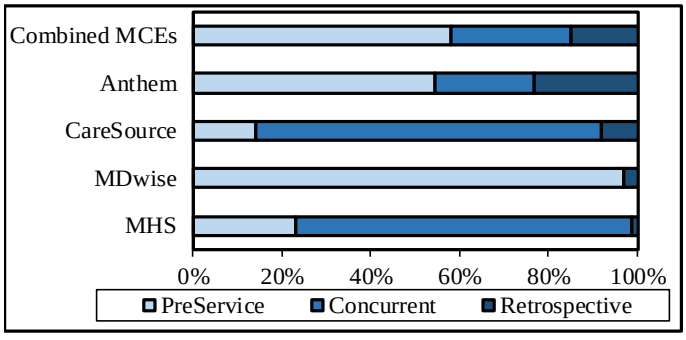
Findings from All SUD-related Authorizations in CY 2018

This section reports the findings of all SUD-related authorization requests to the MCEs by providers. As mentioned above, this information was self-reported to B&A by each MCE in a pre-defined template.

The category designation is important because it ties to the turnaround time standards imposed by the FSSA.

It appears that MDwise is classifying authorizations different from other MCEs (pre-service vs. concurrent review).

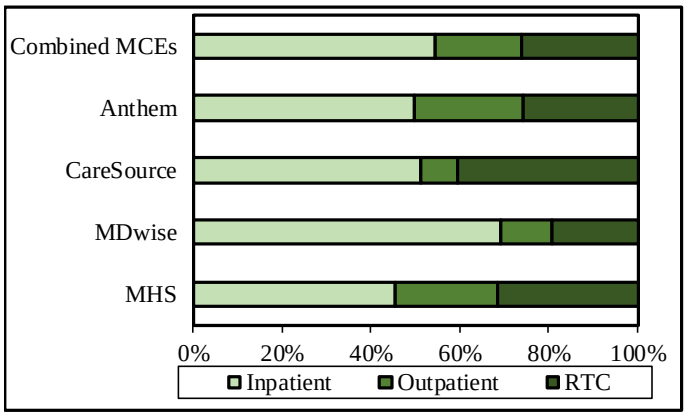
Exhibit V.4.5
SUD Authorizations by Category



	PreService	Concurrent	Retrospective
Combined MCEs	7,870	3,652	2,025
Anthem	4,223	1,729	1,794
CareSource	218	1,185	122
MDwise	3,201	0	95
MHS	228	738	14

Across all MCEs, 55 percent of SUD-related authorization requests in CY 2018 were for inpatient, 19 percent for outpatient, and 26 percent for residential treatment. MDwise had a higher proportion of inpatient authorizations than its peers. CareSource had a higher percentage of residential treatment authorizations than other MCEs.

Exhibit V.4.6
Service Category for Authorization Request
SUD Services Only

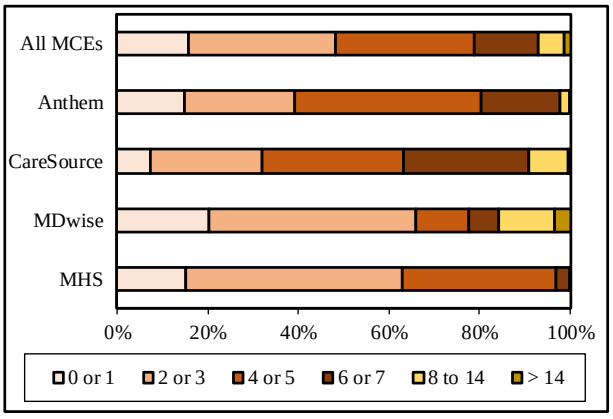


	Inpatient	Outpatient	RTC
Combined MCEs	7,384	2,624	3,539
Anthem	3,871	1,894	1,981
CareSource	784	121	620
MDwise	2,285	382	629
MHS	444	227	309

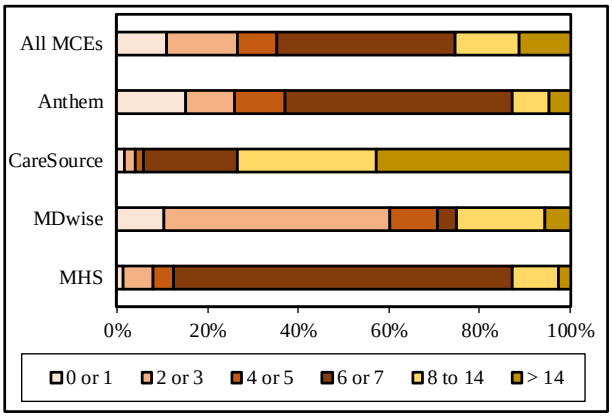
Among inpatient requests across all MCEs, 48 percent were for three days or less. MDwise had a higher percentage of these requests than other MCEs. B&A did observe that there were some instances where the request did not have a specific number of days requested. These are recorded as zero days. For residential treatment centers (RTCs), 27 percent of requests across all MCEs were for three days or less. There was 11 percent of requests for more than 14 days. This was primarily driven by CareSource.

Exhibit V.4.7
Number of Days Requested

Inpatient



RTC

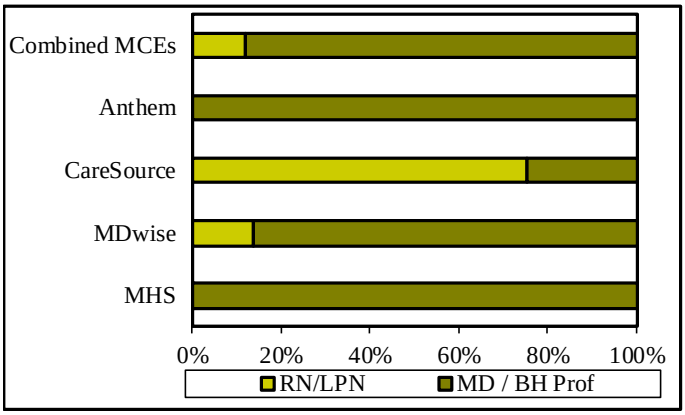


	0 or 1	2 or 3	4 or 5	6 or 7	8 to 14	> 14
All MCEs	1,153	2,366	2,247	1,049	417	90
Anthem	579	941	1,589	675	78	6
CareSource	57	193	245	215	68	4
MDwise	449	1,020	263	146	271	79
MHS	68	212	150	13	0	1

	0 or 1	2 or 3	4 or 5	6 or 7	8 to 14	> 14
All MCEs	377	541	307	1,364	492	392
Anthem	300	209	219	982	161	92
CareSource	10	14	11	126	184	258
MDwise	63	298	63	26	116	34
MHS	4	20	14	230	31	8

Across all MCEs, 88 percent of requests were reviewed by a medical doctor or licensed behavioral health or substance abuse clinician. This was true 100 percent of the time for Anthem and MHS. CareSource had the highest occurrence of reviews by a nurse. It should be noted, however, that approvals can be made by a nurse.

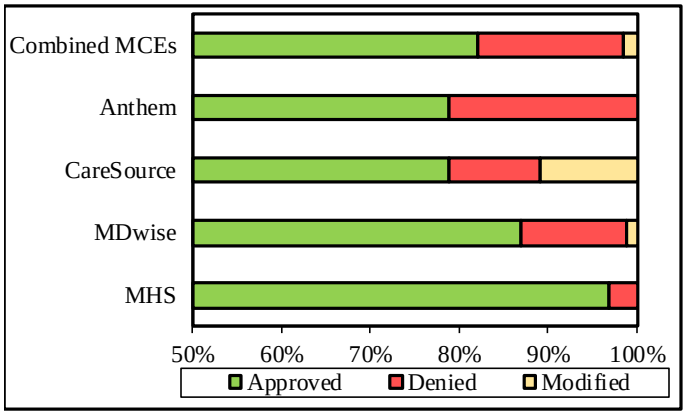
Exhibit V.4.8
Who Reviewed the Auth Request



	RN/LPN	MD / BH Prof
Combined MCEs	1,606	11,905
Anthem	0	7,746
CareSource	1,151	374
MDwise	454	2,842
MHS	1	943

Across all MCEs, 82 percent of SUD-related authorization requests were approved in CY 2018. By MCE, approval rates were 79 percent for Anthem and CareSource, 87 percent for MDwise and 97 percent for MHS. A small number of requests were classified as modified.

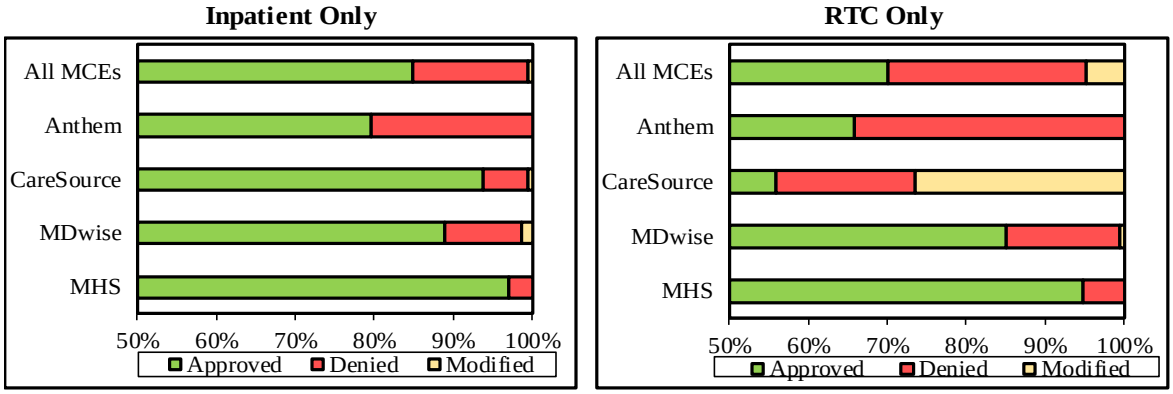
Exhibit V.4.9
Authorization Disposition
All SUD-related Requests



	Approved	Denied	Modified
Combined MCEs	11,035	2,196	206
Anthem	6,112	1,634	0
CareSource	1,193	154	166
MDwise	2,780	378	40
MHS	950	30	0

There was some difference in the approval and denial rates by service category. Although 82 percent of requests were approved overall, for inpatient services specifically, it was 85 percent; for residential treatment, 70 percent. The approval rate in both service categories varied by MCE.

Exhibit V.4.10
Authorization Disposition

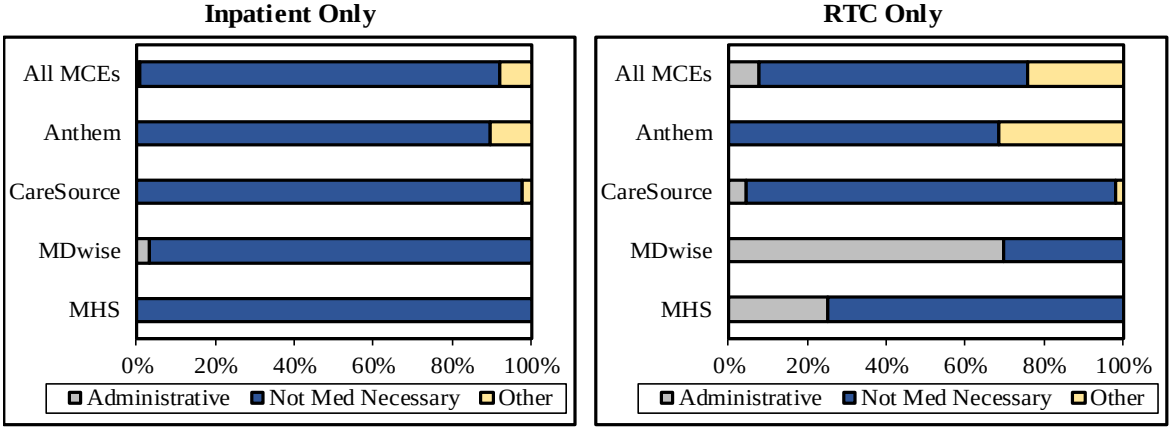


	Approved	Denied	Modified
All MCEs	6,227	1,067	35
Anthem	3,079	792	0
CareSource	734	45	4
MDwise	1,983	217	31
MHS	431	13	0

	Approved	Denied	Modified
All MCEs	2,452	886	165
Anthem	1,305	676	0
CareSource	343	108	162
MDwise	511	86	3
MHS	293	16	0

For inpatient, the citation for 92 percent of authorizations denied was lack of medical necessity. For residential treatment, 68 were due to lack of medical necessity. Results for residential, however, are skewed by the fact that 31 percent of Anthem's requests had a reason cited of 'other'.

Exhibit V.4.11
Denial Reason

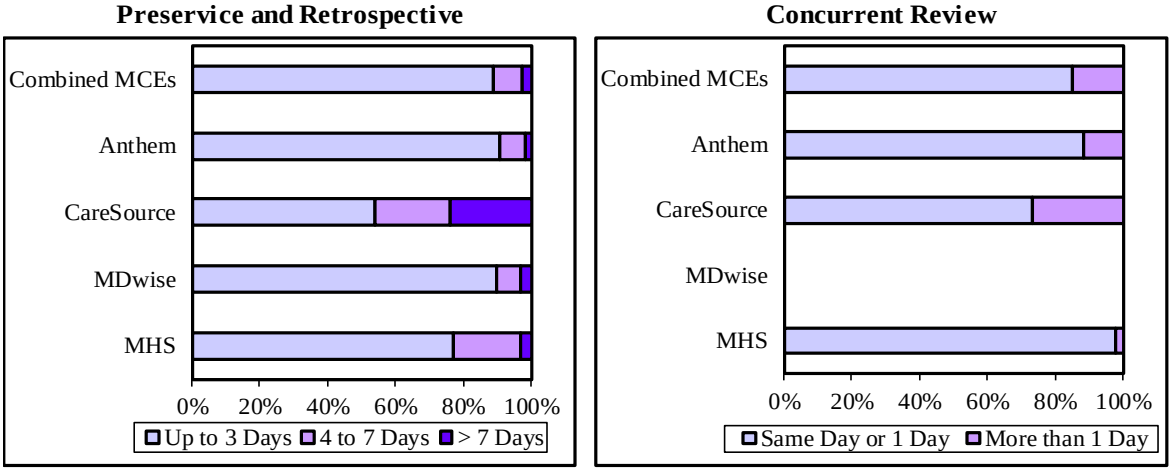


	Administrative	Not Med Necessary	Other
All MCEs	7	977	83
Anthem	0	710	82
CareSource	0	44	1
MDwise	7	210	0
MHS	0	13	0

	Administrative	Not Med Necessary	Other
All MCEs	69	603	214
Anthem	0	464	212
CareSource	5	101	2
MDwise	60	26	0
MHS	4	12	0

All MCEs except CareSource had a turnaround time (TAT) well within the FSSA requirements for preservice (7 days) and retrospective (30 days). Similarly, all MCEs except CareSource usually met the concurrent review TAT of one day.

Exhibit V.4.12
Turnaround Time on Decision



	Up to 3 Days	4 to 7 Days	> 7 Days
Combined MCEs	8,765	820	277
Anthem	5,463	457	97
CareSource	183	76	80
MDwise	2,932	239	93
MHS	187	48	7

	Same Day or 1 Day	More than 1 Day
Combined MCEs	3,112	536
Anthem	1,526	203
CareSource	864	317
MDwise	0	0
MHS	722	16

Findings Related to the Study Sample Reviewed

Within the 120 sample authorization records reviewed, the B&A team specifically looked for the following elements:

- The accuracy of the MCE self-reporting of type of authorization, who reviewed the auth, turnaround time, disposition status;
- Notes in the record to indicate if clinical documentation was supplied by the provider and, if yes, clinician reviewed the documents;
- Evidence if the provider asked for reconsideration of the authorization decision;
- Evidence if the provider asked for peer-to-peer consultation;
- Indication of the criteria used when "lack of medical necessity" was cited as reason for denial; and
- Evidence of a letter to the provider and member for denials (required) and level of detail provided in the letter related to clinical criteria used.

With few exceptions, among the 120 sample cases reviewed, the attribution of the type of authorization, the disposition status, and the turnaround time matched what was given to B&A in the self-reported spreadsheets.

There were 88 percent of all authorizations in CY 2018 reviewed by an MD or licensed behavioral health clinician. In the sample, B&A found that 91 percent were reviewed by one of these licensed professionals.

Other findings from the study sample:

- In only two out of 120 situations was a reconsideration requested by the provider.
- In only 10 out of 120 situations was a peer-to-peer consultation requested by the provider.
- Lack of medical necessity was cited in 85 percent of cases when the authorization was denied.
- In the letter to the provider, when lack of medical necessity was cited,
    - For 62 percent of the sample, a specific citation was cited from MCG, InterQual or MCE guidelines
    - For 21 percent of the sample, no specific citation was cited
    - No letter was found in the file 13 percent of the time

B&A's clinician reviewed the clinical information and other documentation for every denied authorization in the sample and a small number of approvals. In 93 out of 97 cases, our clinician concurred with the MCE's decision to deny. Some specific findings from this clinical review include:

- There were numerous instances of insufficient documentation to support a fully-informed clinical decision. Per NCQA accreditation guidelines, when a clinician at the MCE reviews the auth, if denied, a "lack of medical necessity" reason is given even if it is really due to insufficient documentation to make a decision.
- Attempts were found where MCEs tried to get more clinical information, but there was no response from providers.
- There were inconsistent approvals/denials for detoxification and residential services noted among the sample across MCEs.
- It appeared that the MCEs could do a better job to communicate to providers what is required and also what is not required.

Findings Related to the Comparison of Authorizations and Claims

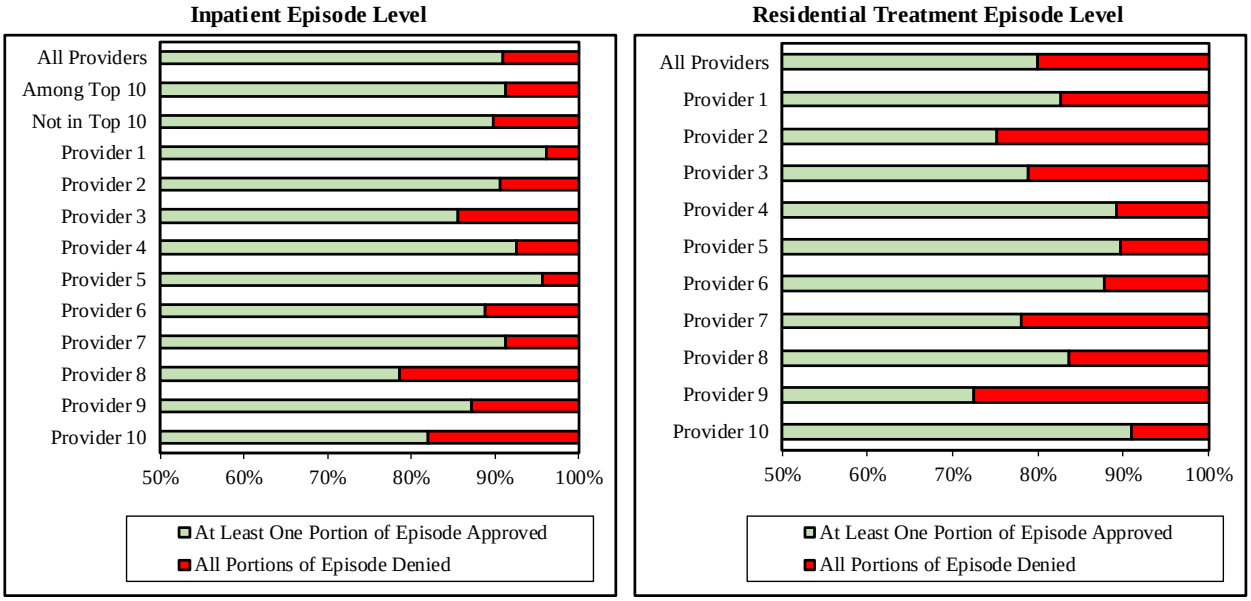
Among encounters reported to FSSA by its MCEs representing the claims paid or denied to providers, in the study period of dates of service February 1 – December 31, 2018 there were 103 unique providers that billed for inpatient services related to SUD. Of these, however, the top 10 providers by volume represented 78 percent of the volume and 18 providers represented 90 percent of the volume. For residential treatment services, although there are more physical locations than this, there were 14 actual entities delivering this service. Among these, 10 providers represented 97 percent of the volume. These statistics will continue to be trended since the FSSA continues to expand its network of providers for residential treatment.

In 91 percent of the inpatient episodes studied by B&A in CY 2018, at least some portion of the stay was approved. This, however, does not imply that all days of the stay were approved. For individual providers among the top 10 for inpatient services, this statistic varied from 78 percent to 96 percent.

In 80 percent of the residential treatment episodes studied, at least some portion of the stay was approved. Among the top 10 providers, this statistic varied from 72 percent to 91 percent.

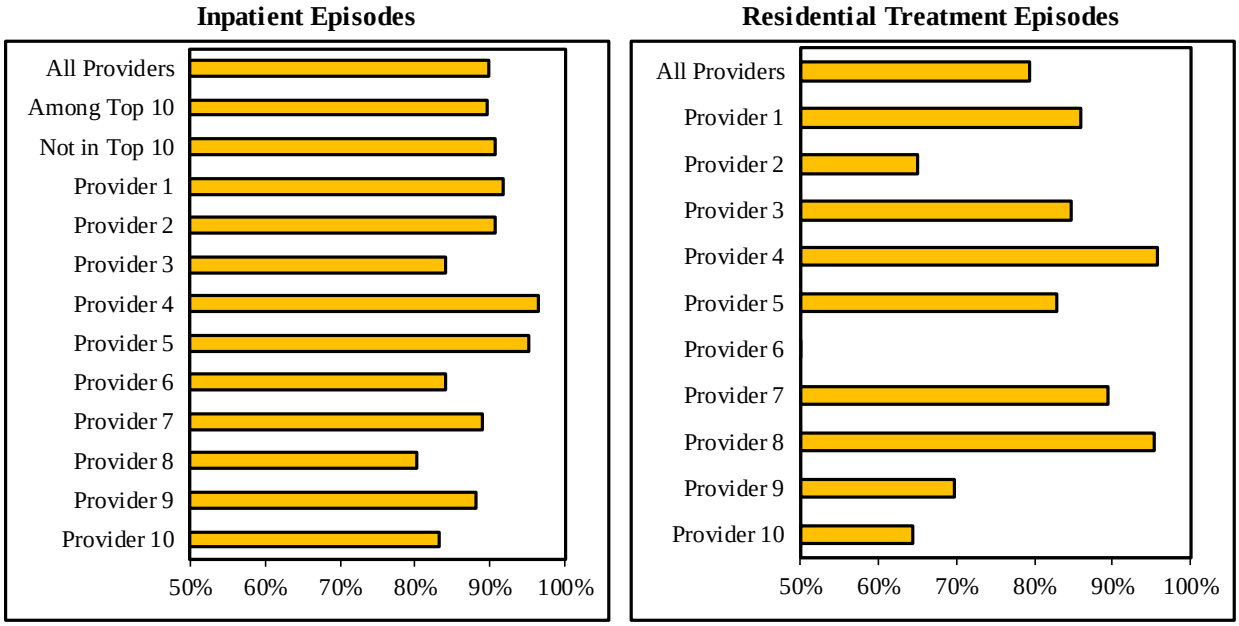
Refer to Exhibit V.4.13 on the next page for details.

Exhibit V.4.13
Authorizations Approved and Denied



When this information was analyzed based on total days requested, 90 percent of inpatient days were approved and 79 percent of residential treatment days were approved. The range among providers for inpatient services was 80 to 96 percent; for residential treatment, 70 to 98 percent.

Exhibit V.4.14
Ratio of Requested Days to Approved Days



As seen in Exhibits V.4.15 (inpatient) and V.4.16 (residential treatment) below, the top providers have varying levels of approval rates for their SUD-related episodes across the MCEs.

Exhibit V.4.15
Examination of Approval Rates for Inpatient Services by MCE, Top 10 Providers Requesting Authorization

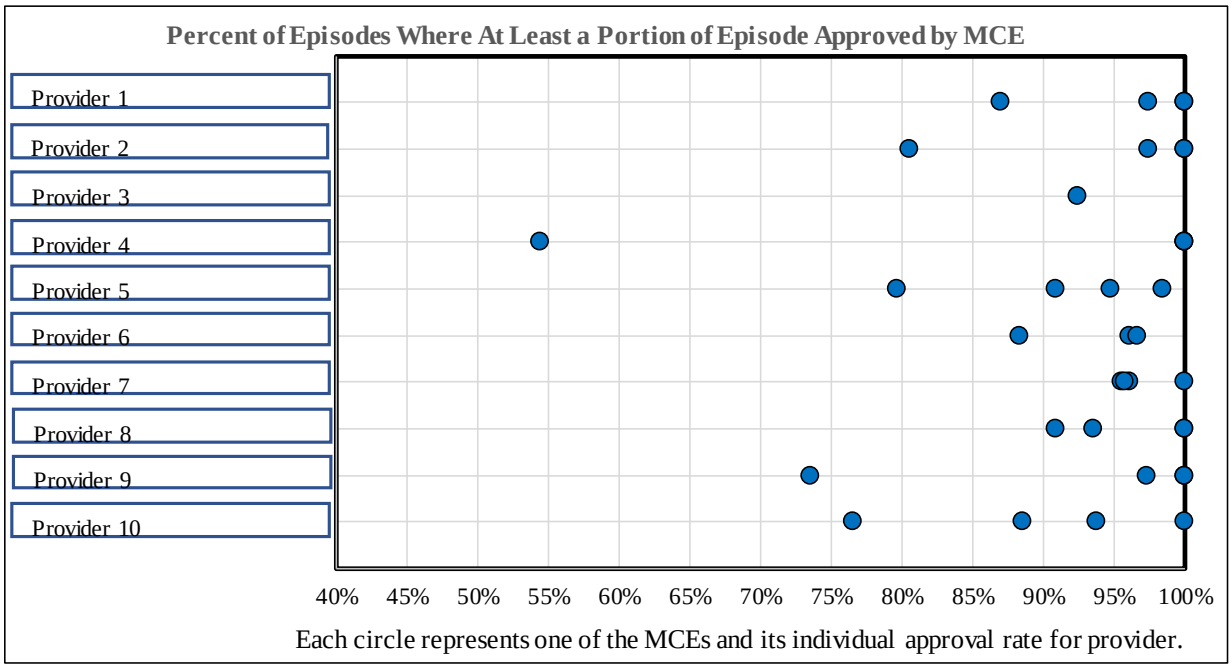
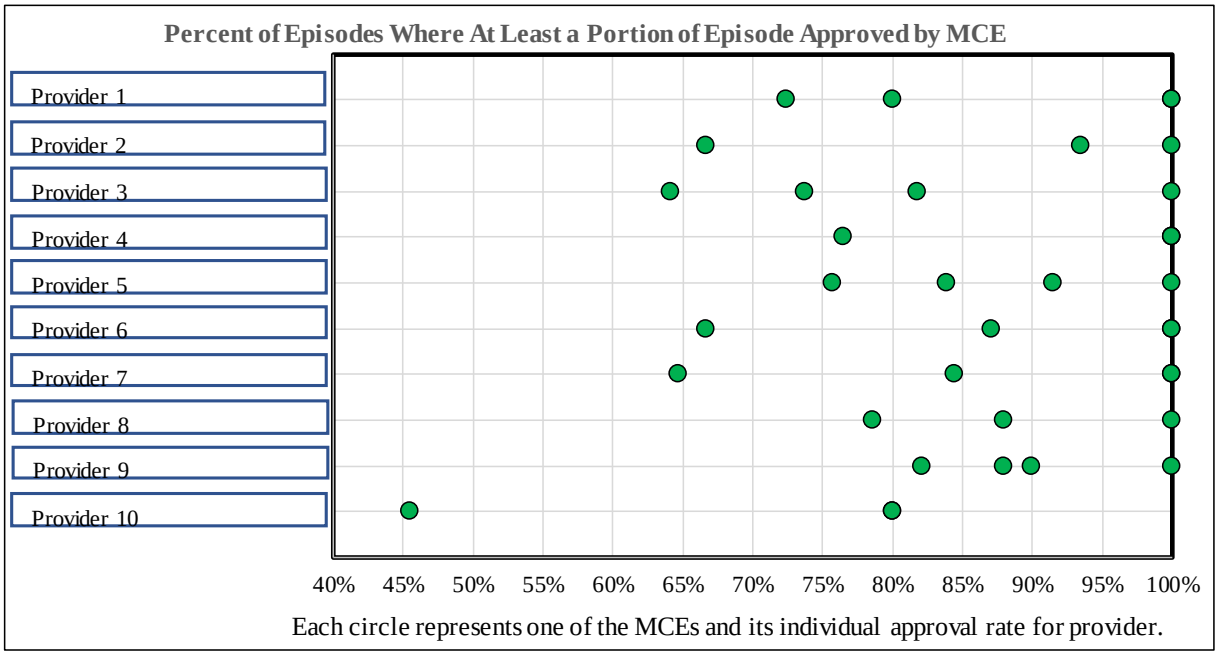


Exhibit V.4.16
Examination of Approval Rates for Residential Services by MCE, Top 10 Providers Requesting Authorization



Inpatient and residential treatment were reviewed at the episode level across four categories:

- Group 1: Approved authorization and paid claim (expected outcome)
- Group 2: Approved authorization and denied claim (unexpected outcome)
- Group 3: Denied authorization and paid claim (unexpected outcome)
- Group 4: Denied authorization and denied claim (expected outcome)

For inpatient episodes across all MCEs (Exhibit V.4.17), the findings showed that 87.4 percent of episodes were in Group 1, 3.1 percent in Group 2, 5.0 percent in Group 3, and 4.5 percent in Group 4. For residential episodes across all MCEs (Exhibit V.4.18), the findings showed that 67.7 percent of episodes were in Group 1, 16.2 percent in Group 2, 8.8 percent in Group 3, and 7.4 percent in Group 4. Findings varied by provider, particularly the residential treatment providers.

Exhibit V.4.17
Comparing Authorizations to Claims
Inpatient Episodes

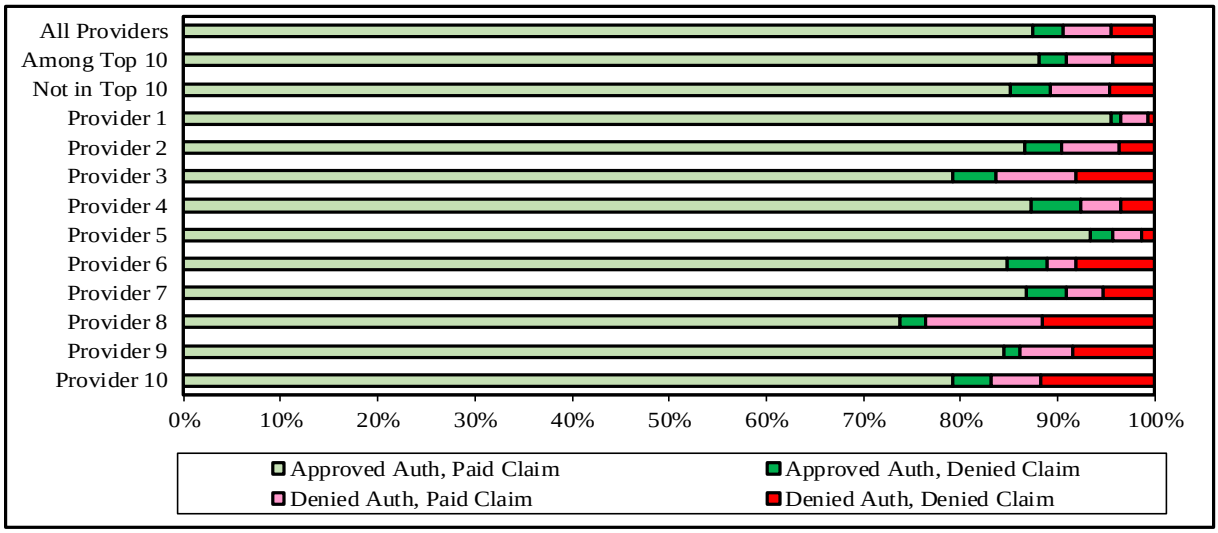
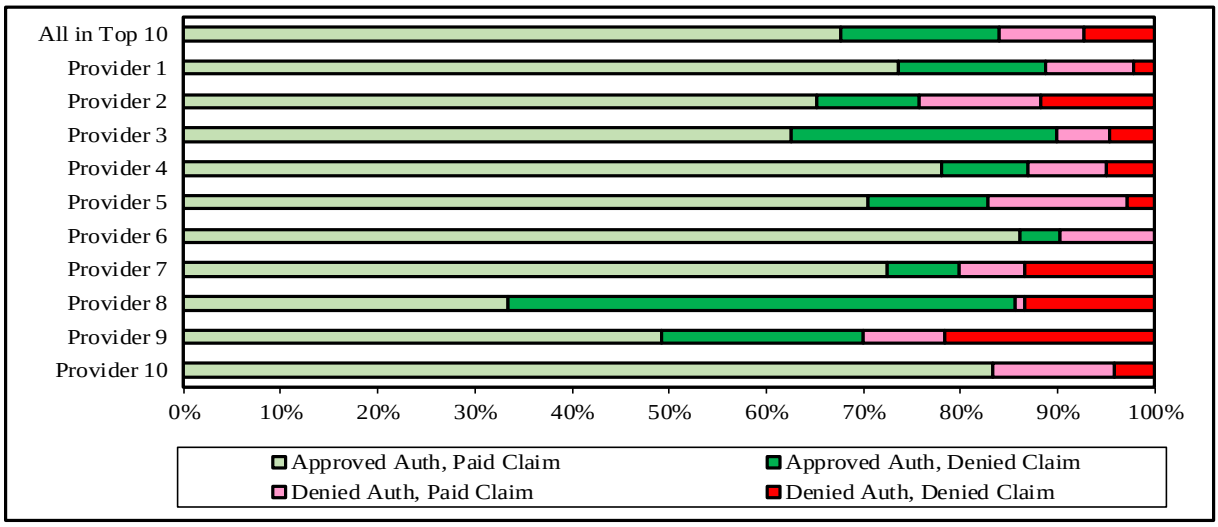


Exhibit V.4.18
Comparing Authorizations to Claims
Residential Treatment Episodes



V.F SECTION 5. CARE COORDINATION AND TRANSITIONS

Hypothesis 6.1: Care coordination and transitions between ASAM levels of care will increase in the post-waiver period.

Research Questions

This hypothesis includes three research questions aimed at understanding the waiver's impact on care coordination and transitioning individuals to the appropriate level of care over the course of their recovery period. Each of these questions is addressed in this Interim Evaluation; however, a more thorough examination for each question using a longer study period will be included in the Summative Evaluation.

- *6.1.1 Does the proportion of beneficiaries receiving ASAM designation who had a claim in that ASAM level within the next two consecutive months following the month of ASAM assignment increase over time?*

- *6.1.2 Does the proportion of beneficiaries with a SUD diagnosis who are receiving care coordination increase over time?*

- *6.1.3 Do Indiana's MCEs facilitate more active engagement in the case/care management process between behavioral health/substance abuse providers and primary care/other physical health providers for their patients with a SUD diagnosis?*

In this Interim Evaluation, B&A is reporting information for a baseline period that occurred shortly after the implementation of the waiver. This information will be monitored throughout the remainder of the waiver period so that an assessment can be made related to changes over the course of the waiver in the Summative Evaluation report. Our initial study focused on hypothesis question 6.1.1 only. Information related to this question will be updated in the Summative Evaluation. The analysis of case and care management activities will be tracked throughout the waiver period and reported on in the Summative Evaluation.

Introduction

Since the majority of Indiana Medicaid beneficiaries are enrolled in a managed care model, B&A's initial study on transitions to care focused on beneficiaries enrolled as members with a managed care entity (MCE) in on the State's three benefit programs—Hoosier Healthwise (HHW), Healthy Indiana Plan (HIP) or Hoosier Care Connect (HCC). The four MCEs under contract with the State are Anthem, CareSource, MDwise and Managed Health Services (MHS). In all three managed care delivery programs, the MCEs are responsible for complex case and care management services of their members which includes the coordination of care.

After the approval of the State's SUD waiver effective February 1, 2018, there was a transition period pertaining to which providers were authorized to deliver and bill for SUD inpatient and residential services. By July 1, 2018, the State established criteria to authorize providers who deliver care at these ASAM levels. Providers are now licensed by the State under a separate provider type and category. MCEs may contract with any SUD provider that is enrolled with the State under this provider type and category.

It should be noted that SUD providers have the option to contract with some, but not all, MCEs and in some, but not all, State delivery models. However, B&A found that each of the SUD providers who deliver SUD inpatient and residential services tend to contract with all MCEs for all programs.

Methodology to Conduct the Study

B&A used encounters submitted by each of the MCEs to the State as of June 30, 2019 for this study. Anchor events were identified to create an episode of care for each member based on admission. Anchor events included in the study were those that occurred between July 1, 2018 and December 31, 2018. The episodes were defined by the ASAM level of care:

- ASAM 4.0 (inpatient) was defined using diagnosis related groupings (Indiana uses 3M's APR-DRG grouper)
    - Inpatient, alcohol dependency, was defined by DRG 775 (Alcohol Abuse & Dependence)
    - Inpatient, drug dependency, was defined by DRGs 773 (Opioid Abuse & Dependence), 774 (Cocaine Abuse & Dependence) and 776 (Other Drug Abuse & Dependence)
    - Inpatient, alcohol and drug dependency, was defined by DRG 770 (Drug & Alcohol Abuse or Dependence, Left Against Medical Advice) and 772 (Alcohol & Drug Dependence with Rehab or Rehab/Detox Therapy)
- ASAM 3.5 (residential treatment) was defined by the presence of HCPCS H2034 (as directed by the State for billing purposes)
- ASAM 3.1 (residential treatment) was defined by the presence of HCPCS H0010 (as defined by the State for billing purposes)

For the populations in HHW, HIP and HCC combined, B&A identified the following number of individuals with episodes during the six-month period studied:

- 30 individuals had an ASAM 3.1 episode
- 608 individuals had an ASAM 3.5 episode
- 1,105 individuals had an ASAM 4.0 episode for alcohol only
- 930 individuals had an ASAM 4.0 episode for drugs only
- 1,429 individuals had an ASAM 4.0 episode for both alcohol and drugs

Although the counts above total 4,102 episodes, this comprises 3,808 unique individuals because some individuals had two or more anchor events during the six-month period. B&A only counted each member once in the study. If the member had more than one anchor event, B&A used the event that was closest to December 31, 2018.

B&A created a person-specific episode for each member. The individual was assigned to a delivery program (HHW, HIP or HCC) and an MCE based on the admission date of their anchor event. A 12-week time period was defined counting backwards from the admission date of the anchor event. A 12-week time period was also defined counting forward from the discharge date of the anchor event. This means that the amount of time across the episode may vary a bit person-to-person depending upon the amount of time the member was admitted during the anchor event. Paid claims for dates of service from April 1, 2018 through April 30, 2019 were considered for inclusion in each person's episode.

The individuals in the study were further segmented into two study groups. The first group contains all 3,808 individuals. The second group contains 2,708 individuals which is the subset of individuals from the 3,808 who were enrolled with the same MCE for the entire 12-week period *after* discharge from their anchor event. The purpose of analyzing the two groups separately was to discern if enrollment with the

MCE showed improvement in the coordination of care for members with an ASAM 4.0, 3.5 or 3.1 anchor event post-discharge.

Assessment of Utilization for All Services Among the Defined Population

Exhibit V.5.1 on the next page shows the percentage of individuals that utilized selected services in the 12 weeks prior to the admission date of the anchor event and the 12 weeks after the discharge date from the anchor event. The columns in blue represent Group 1 which is all 3,808 individuals studied. The columns in green represent Group 2 which is the subset of 2,708 individuals who were continuously enrolled with the MCE for the 12 weeks after the anchor event.

There are some notable findings when comparing utilization in the period before and after the anchor event. In both Groups 1 and 2, the percentage of members with an inpatient stay related to SUD fell in the period after the anchor event (either an inpatient stay or a residential stay). Withdrawal management also fell significantly in the post-anchor event time period in both groups. The percentage of individuals with emergency department (ED) utilization was reduced by more than half in the post-anchor event time period.

Exhibit V.5.2 displays the same utilization for the Group 1 population but by MCE. Although each MCE had different volume which reflects their overall volume of members in Indiana's Medicaid programs, the trends in the reduction in the percentage of their members in the study with inpatient stays related to SUD in the post-anchor event period compared to the pre-anchor event period were similar. The percentage of members with utilization of withdrawal management in the 12 weeks prior to the anchor event were also similar as was the corresponding reduction in the 12 weeks after the anchor event. There was some variation in the percentage of each MCE's study sample that had ED utilization in the 12 weeks prior to the anchor event (from a low of 31.4% of study sample for CareSource to a high of 46.3% for Anthem), but each saw a reduction of 50 percent or more in the 12 weeks after the anchor event which was shown in the overall statewide results.

Exhibit V.5.1
Utilization of Selected Services in the Two Study Populations, Statewide

	12 weeks before anchor event	12 weeks after anchor event	12 weeks before anchor event	12 weeks after anchor event
Total Denominator Population	**3,808**	**3,808**	**2,708**	**2,708**
Percent of Individuals with				
ASAM Level 3.1	0.2%	0.2%	0.2%	0.2%
ASAM Level 3.5	6.0%	1.4%	6.3%	1.5%
Early Intervention	0.1%	0.1%	0.1%	0.1%
Professional Claim other than above	93.5%	98.0%	93.5%	98.2%
Inpatient- SUD stay, Alcohol only	9.8%	3.0%	10.3%	2.8%
Inpatient- SUD stay, Drugs only	6.0%	1.2%	6.5%	1.3%
Inpatient- SUD stay, Alcohol and drugs	10.6%	1.3%	11.3%	1.3%
Inpatient- NonSUD stay	13.8%	11.6%	14.6%	13.1%
Outpatient hospital- SUD service	46.7%	40.4%	50.8%	45.3%
Intensive Outpatient / Partial Hosp	11.5%	11.1%	12.3%	12.3%
Withdrawal Management	23.7%	1.2%	25.3%	1.3%
ED Utilization	43.0%	19.9%	46.1%	21.9%
Other Outpatient	26.0%	37.8%	24.9%	35.5%
Medication Assistance Treatment	25.5%	29.2%	27.7%	31.9%
Any Other Pharmacy	66.7%	62.9%	67.8%	63.7%

Exhibit V.5.2
Utilization of Selected Services in the Group 1 Study Population, by MCE

	Total	Anthem	Care Source	MDwise	MHS
Total Denominator Population	**3,808**	**1,906**	**385**	**857**	**660**
	12 weeks before anchor event				
Percent of Individuals with					
Inpatient- SUD stay, Alcohol only	9.8%	11.2%	6.2%	9.3%	8.3%
Inpatient- SUD stay, Drugs only	6.0%	6.2%	3.6%	6.1%	6.7%
Inpatient- SUD stay, Alcohol and drugs	10.6%	10.7%	6.2%	13.1%	9.5%
Outpatient hospital- SUD service	46.7%	49.4%	35.3%	43.6%	49.7%
Intensive Outpatient / Partial Hosp	11.5%	12.9%	9.4%	10.3%	10.3%
Withdrawal Management	23.7%	26.0%	21.8%	22.6%	19.2%
ED Utilization	43.0%	46.3%	31.4%	39.8%	44.1%
Medication Assistance Treatment	25.5%	26.3%	17.1%	27.5%	25.3%
	12 weeks after anchor event				
Percent of Individuals with					
Inpatient- SUD stay, Alcohol only	3.0%	3.5%	1.8%	1.2%	4.5%
Inpatient- SUD stay, Drugs only	1.2%	1.2%	1.3%	0.7%	2.0%
Inpatient- SUD stay, Alcohol and drugs	1.3%	1.5%	0.5%	0.6%	2.3%
Outpatient hospital- SUD service	40.4%	41.5%	31.9%	42.4%	39.4%
Intensive Outpatient / Partial Hosp	11.1%	13.5%	9.1%	8.9%	8.2%
Withdrawal Management	1.2%	1.3%	1.6%	1.4%	0.5%
ED Utilization	19.9%	22.2%	14.3%	20.4%	15.9%
Medication Assistance Treatment	29.2%	30.2%	20.8%	30.9%	29.1%

Findings Related to Transitions from the Inpatient Setting (ASAM Level 4.0)

Exhibit V.5.3 shows the percentage of Group 1 members (total n = 3,808) in the study with an inpatient anchor event that utilized either residential treatment (ASAM level 3.1 or 3.5), intensive outpatient or partial hospitalization services (IOP), or medication assistance treatment (MAT) in the 12 weeks after discharge from their inpatient stay. The results were segmented first by the three types of inpatient trigger events (alcohol treatment only, drug treatment only, or alcohol and drug treatment). Then, the results were segmented by the three FSSA managed care programs (HHW, HIP and HCC) and by the MCEs under contract in each program. (There was no segmentation for HHW due to the low sample size).

Key findings in this exhibit include the following:

- There is little variation in the percentage of members that used residential services. The results are low (in the 1% - 2%) range regardless of the type of inpatient anchor, the FSSA program, or the MCE.
- The percentage of members who utilized IOP/PH in the 12 weeks after their inpatient anchor event varied between 8.3% and 13.6% depending upon the type of inpatient anchor event. Utilization was highest for individuals admitted inpatient for drug treatment only. Within this cohort population (the middle columns in the exhibit), there was also some variation in utilization of IOP/PH across the MCEs. Members of Anthem HIP had a higher rate than other MCEs.
- The percentage of members who utilized MAT after their anchor event was greatest for the cohort population with an anchor event for inpatient that included both alcohol and drug treatment (40.4% of the total) followed by members with an inpatient stay for drug treatment only (29.3%). The rate was lower for members with an inpatient anchor event for alcohol treatment only (16.0%). Within the cohort population with an anchor event for alcohol and drug treatment (the columns in the far right of the exhibit), the rate of MAT utilization was similar for three of the four MCEs in HIP (CareSource was lower than the other three). The rate was similar for the two MCEs contracted under HCC.

Exhibit V.5.3
Utilization of Residential (ASAM 3.1 or 3.5), Intensive Outpatient or Partial Hospitalization, and Medication Assistance Treatment For Individuals in Group 1 with an Anchor Event for Inpatient (ASAM 4.0)

	In 12 Weeks After Inpatient Stay											
	Entire Sample, No Minimum Enrollment with an MCE (n=3,808)											
	DRG = Alcohol Only				DRG = Drugs Only				DRG = Alcohol and Drugs			
	Total in Sample	Pct with 3.1 / 3.5	Pct with IOP/PH	Pct with MAT	Total in Sample	Pct with 3.1 / 3.5	Pct with IOP/PH	Pct with MAT	Total in Sample	Pct with 3.1 / 3.5	Pct with IOP/PH	Pct with MAT
Any Program	1,023	1.1%	8.3%	16.0%	852	1.1%	13.6%	29.3%	1,325	1.7%	9.4%	40.4%
HHW	2	0.0%	50.0%	0.0%	8	0.0%	12.5%	37.5%	8	0.0%	25.0%	62.5%
HIP	905	1.1%	8.3%	16.9%	764	1.2%	13.9%	30.8%	1,223	1.8%	9.6%	41.0%
Anthem	488	0.8%	9.0%	18.9%	406	1.0%	19.5%	36.7%	535	1.7%	9.9%	40.4%
CareSource	85	0.0%	2.4%	7.1%	95	2.1%	6.3%	23.2%	95	2.1%	11.6%	31.6%
MDwise	197	1.5%	5.6%	17.8%	159	0.0%	8.8%	21.4%	400	0.8%	10.0%	41.3%
MHS	135	2.2%	13.3%	14.8%	104	2.9%	6.7%	28.8%	193	4.1%	6.7%	47.2%
HCC	116	0.9%	7.8%	9.5%	80	0.0%	11.3%	15.0%	94	1.1%	5.3%	29.8%
Anthem	78	0.0%	9.0%	9.0%	51	0.0%	11.8%	15.7%	57	0.0%	8.8%	31.6%
MHS	38	2.6%	5.3%	10.5%	29	0.0%	10.3%	13.8%	37	2.7%	0.0%	27.0%

Exhibit V.5.4 shows the same information as displayed in the previous exhibit but limited to the Group 2 members (total n = 2,708) in the study. The trends in the utilization for residential, IOP/PH and MAT were similar in the subset population for Group 2 as was found in Group 1. The percentage of members using IOP/PH and MAT were slightly higher overall for the Group 2 population compared to what was found for Group 1.

Exhibit V.5.4
Utilization of Residential (ASAM 3.1 or 3.5), Intensive Outpatient or Partial Hospitalization, and Medication Assistance Treatment For Individuals in Group 2 with an Anchor Event for Inpatient (ASAM 4.0)

	In 12 Weeks After Inpatient Stay											
	Sample with Minimum Enrollment with an MCE 12 Weeks After Discharge from Inpatient Stay (n=2,708)											
	DRG = Alcohol Only				DRG = Drugs Only				DRG = Alcohol and Drugs			
	Total in Sample	Pct with 3.1 / 3.5	Pct with IOP/PH	Pct with MAT	Total in Sample	Pct with 3.1 / 3.5	Pct with IOP/PH	Pct with MAT	Total in Sample	Pct with 3.1 / 3.5	Pct with IOP/PH	Pct with MAT
Any Program	743	1.1%	9.0%	18.3%	594	0.8%	15.5%	30.1%	951	1.9%	10.1%	43.5%
HHW	2	0.0%	50.0%	0.0%	8	0.0%	12.5%	37.5%	8	0.0%	25.0%	62.5%
HIP	650	1.2%	9.1%	19.7%	517	1.0%	16.1%	32.1%	853	2.0%	10.4%	44.8%
Anthem	340	1.2%	10.0%	21.5%	281	0.4%	21.7%	38.4%	396	1.8%	11.1%	44.7%
CareSource	65	0.0%	3.1%	9.2%	59	3.4%	5.1%	18.6%	59	1.7%	11.9%	35.6%
MDwise	148	0.7%	7.4%	20.3%	107	0.0%	11.2%	26.2%	270	0.7%	10.0%	43.3%
MHS	97	3.1%	12.4%	19.6%	70	2.9%	10.0%	27.1%	128	5.5%	8.6%	52.3%
HCC	91	0.0%	7.7%	8.8%	69	0.0%	11.6%	14.5%	90	1.1%	5.6%	30.0%
Anthem	62	0.0%	8.1%	8.1%	45	0.0%	11.1%	17.8%	54	0.0%	9.3%	31.5%
MHS	29	0.0%	6.9%	10.3%	24	0.0%	12.5%	8.3%	36	2.8%	0.0%	27.8%

Exhibits V.5.5 and V.5.6 which appear on the next page examine the percentage of members with inpatient anchor events who utilized residential, IOP/PH or MAT but at the regional level. The 92 counties in Indiana were each mapped to eight regions of the state. Members are assigned to one of the regions based on their home address. The samples for HHW, HIP and HCC from all MCEs are combined in these exhibits.

In Exhibit V.5.5 which shows the results for Group 1 (n= 3,808), the utilization of residential is near the statewide average for all regions with the exception of members with an inpatient anchor for alcohol only in the West Central region of the state (6.5% of individuals used residential compared to 1.1% statewide). The sample in this region, however, is the lowest of any region.

The percentage of members utilizing IOP/PH in the Central region is higher compared to the rest of the state, particularly for members with an inpatient anchor event for alcohol treatment only or drug treatment only. Further, for members with an anchor for alcohol treatment only, the utilization of IOP/PH is lower in the North Central, Northeast and West Central regions. These findings may be a result of access to IOP/PH providers in regions of the state.

The utilization of MAT also had some variation across regions of the state. Members in the Central and North Central regions were higher utilizers than other regions of the state for individuals with anchors for drug treatment only or alcohol and drug treatment.

Exhibit V.5.6 displays findings in the same format as the previous exhibit but is limited to the individuals in the Group 2 cohort population. The findings in this exhibit are the same as shown in Exhibit V.5.5 with one exception. Among the Group 2 members, the percentage of members using MAT in the North Central region is notably higher than what was found for Group 1 members.

Exhibit V.5.5
Utilization of Residential (ASAM 3.1 or 3.5), Intensive Outpatient or Partial Hospitalization, and Medication Assistance Treatment
For Individuals in Group 1 with an Anchor Event for Inpatient (ASAM 4.0)

	In 12 Weeks After Inpatient Stay											
	Entire Sample, No Minimum Enrollment with an MCE (n=3,808)											
	DRG = Alcohol Only				DRG = Drugs Only				DRG = Alcohol and Drugs			
	Total in Sample	Pct with 3.1 / 3.5	Pct with IOP/PH	Pct with MAT	Total in Sample	Pct with 3.1 / 3.5	Pct with IOP/PH	Pct with MAT	Total in Sample	Pct with 3.1 / 3.5	Pct with IOP/PH	Pct with MAT
Any Program	1,019	1.1%	8.3%	16.1%	850	1.1%	13.6%	29.4%	1,322	1.7%	9.4%	40.4%
Northwest	126	0.0%	4.8%	15.9%	34	2.9%	5.9%	20.6%	81	1.2%	8.6%	34.6%
North Central	58	1.7%	1.7%	12.1%	28	0.0%	7.1%	35.7%	115	0.0%	12.2%	49.6%
Northeast	162	0.6%	1.2%	11.7%	93	0.0%	0.0%	15.1%	68	0.0%	0.0%	32.4%
West Central	46	6.5%	0.0%	6.5%	54	1.9%	3.7%	14.8%	123	2.4%	5.7%	27.6%
Central	303	0.7%	16.5%	20.5%	312	1.6%	25.0%	41.3%	572	0.7%	11.2%	45.3%
East Central	86	1.2%	3.5%	17.4%	108	1.9%	5.6%	28.7%	150	2.7%	2.7%	36.7%
Southwest	134	1.5%	9.7%	15.7%	112	0.0%	16.1%	24.1%	117	4.3%	18.8%	31.6%
Southeast	104	1.0%	9.6%	16.3%	109	0.0%	7.3%	22.0%	96	6.3%	6.3%	43.8%

Exhibit V.5.6
Utilization of Residential (ASAM 3.1 or 3.5), Intensive Outpatient or Partial Hospitalization, and Medication Assistance Treatment
For Individuals in Group 1 with an Anchor Event for Inpatient (ASAM 4.0)

	In 12 Weeks After Inpatient Stay											
	Sample with Minimum Enrollment with an MCE 12 Weeks After Discharge from Inpatient Stay (n=2,708)											
	DRG = Alcohol Only				DRG = Drugs Only				DRG = Alcohol and Drugs			
	Total in Sample	Pct with 3.1 / 3.5	Pct with IOP/PH	Pct with MAT	Total in Sample	Pct with 3.1 / 3.5	Pct with IOP/PH	Pct with MAT	Total in Sample	Pct with 3.1 / 3.5	Pct with IOP/PH	Pct with MAT
Any Program	742	1.1%	9.0%	18.3%	592	0.8%	15.5%	30.2%	949	1.9%	10.1%	43.6%
Northwest	95	0.0%	5.3%	17.9%	30	3.3%	6.7%	20.0%	64	0.0%	9.4%	32.8%
North Central	43	2.3%	0.0%	14.0%	18	0.0%	11.1%	44.4%	71	0.0%	15.5%	56.3%
Northeast	112	0.9%	1.8%	14.3%	57	0.0%	0.0%	14.0%	49	0.0%	0.0%	30.6%
West Central	34	8.8%	0.0%	5.9%	40	0.0%	2.5%	17.5%	70	4.3%	5.7%	41.4%
Central	215	0.9%	18.6%	23.3%	219	1.4%	27.9%	42.0%	421	0.7%	12.1%	49.2%
East Central	67	0.0%	3.0%	19.4%	66	1.5%	7.6%	31.8%	123	3.3%	3.3%	37.4%
Southwest	105	1.0%	9.5%	17.1%	82	0.0%	17.1%	23.2%	81	3.7%	17.3%	28.4%
Southeast	71	0.0%	11.3%	19.7%	80	0.0%	8.8%	22.5%	70	7.1%	8.6%	47.1%

Findings Related to Transitions from the Residential Setting (ASAM Level 3.5)

B&A also examined the utilization of IOP/PH and MAT services for individuals in the 12 weeks after their residential ASAM level 3.5 anchor event. (The individuals with an anchor event in ASAM level 3.1 were not separately examined due to the low sample size). As was shown in the exhibits for the inpatient anchor events, results were tabulated separately for the Group 1 and Group 2 cohort populations.

The results of this analysis are shown in Exhibit V.5.7 below. The key finding is that there is no distinction in the rate of utilization for IOP/PH and MAT for members either in the 12 weeks prior to their ASAM 3.5 residential stay or the 12 weeks after discharging from their ASAM 3.5 residential stay. This was true for both the Group 1 and Group 2 populations.

There was some difference the rate of utilizers by MCE. Members enrolled with MDwise and MHS had a lower rate of IOP/PH utilization after than ASAM 3.5 anchor stay than members enrolled with Anthem and CareSource. The percentage of utilizers of MAT was more similar across the MCEs in the period after the ASAM 3.5 anchor stay, but a higher proportion of MDwise members utilized MAT in period before the ASAM 3.5 anchor stay than what was found for other MCEs.

Exhibit V.5.7
Utilization of Intensive Outpatient or Partial Hospitalization and Medication Assistance Treatment
For Individuals in Group 1 with an Anchor Event for Residential (ASAM 3.5)

	Individuals with a 3.5 Residential Anchor Stay									
	Entire Sample, No Minimum Enrollment with an MCE (n=3,808)					*Sample with Minimum Enrollment with an MCE 12 Weeks After Discharge from Inpatient Stay (n=2,708)*				
	Total in Sample	Pct with IOP/PH Prior to 3.5	Pct with IOP/PH After 3.5	Pct with MAT Prior to 3.5	Pct with MAT After 3.5	Total in Sample	Pct with IOP/PH Prior to 3.5	Pct with IOP/PH After 3.5	Pct with MAT Prior to 3.5	Pct with MAT After 3.5
Any Program	577	18.0%	14.9%	30.2%	27.0%	393	19.8%	17.3%	35.6%	32.1%
HIP	539	17.1%	13.7%	30.8%	27.1%	357	18.8%	15.7%	37.0%	32.5%
Anthem	248	16.1%	19.0%	30.6%	29.0%	177	16.9%	20.9%	37.9%	36.2%
CareSource	100	12.0%	11.0%	20.0%	21.0%	48	14.6%	12.5%	25.0%	29.2%
MDwise	93	22.6%	10.8%	40.9%	30.1%	64	29.7%	14.1%	46.9%	29.7%
MHS	98	19.4%	6.1%	32.7%	25.5%	68	16.2%	5.9%	33.8%	27.9%
HCC	38	31.6%	31.6%	22.2%	27.8%	36	30.6%	33.3%	22.2%	27.8%
Anthem	24	29.2%	37.5%	20.8%	25.0%	24	29.2%	37.5%	20.8%	25.0%
MHS	14	35.7%	21.4%	25.0%	33.3%	12	33.3%	25.0%	25.0%	33.3%

Note that there was only 1 HHW member with an ASAM 3.5 stay in the study period.

Exhibit V.5.8 on the next page shows the results of utilization for IOP/PH and MAT after an ASAM 3.5 residential anchor stay but by region in the state. The first notable finding is the volume of ASAM 3.5 anchor events themselves across the regions. Almost two-thirds of all ASAM 3.5 anchor events are in the Northwest, Southwest and Southeast regions even though these regions do not represent that percentage of the statewide population. The Central region of the state comprises almost one-third of the state's population, yet very few ASAM 3.5 anchor events were identified in this region.

In the three regions with the most ASAM 3.5 anchor events, there was a higher percentage of members in the Northwest and Southwest regions who used IOP/PH after their ASAM 3.5 residential stay than before their stay. The opposite was true in the Southeast region.

For MAT, the only region that had members who used more MAT after their ASAM 3.5 stay than before their anchor stay was the Southwest region. This region, however, had one of the lowest percentages of MAT users overall.

The findings reported above were similar for both the Group 1 and Group 2 cohort populations.

Exhibit V.5.8
Utilization of Intensive Outpatient or Partial Hospitalization and Medication Assistance Treatment
For Individuals in Group 1 with an Anchor Event for Residential (ASAM 3.5)

	Individuals with a 3.5 Residential Anchor Stay									
	Entire Sample, No Minimum Enrollment with an MCE (n=3,808)					*Sample with Minimum Enrollment with an MCE 12 Weeks After Discharge from Inpatient Stay (n=2,708)*				
	Total in Sample	Pct with IOP/PH Prior to 3.5	Pct with IOP/PH After 3.5	Pct with MAT Prior to 3.5	Pct with MAT After 3.5	Total in Sample	Pct with IOP/PH Prior to 3.5	Pct with IOP/PH After 3.5	Pct with MAT Prior to 3.5	Pct with MAT After 3.5
Any Program	577	18.0%	14.9%	30.2%	27.2%	394	19.8%	17.3%	35.5%	32.2%
Northwest	113	20.4%	25.7%	27.4%	21.2%	90	22.2%	28.9%	30.0%	24.4%
North Central	12	16.7%	0.0%	50.0%	33.3%	12	16.7%	0.0%	50.0%	33.3%
Northeast	46	15.2%	0.0%	26.1%	32.6%	29	13.8%	0.0%	31.0%	41.4%
West Central	10	0.0%	0.0%	40.0%	10.0%	5	0.0%	0.0%	60.0%	0.0%
Central	54	27.8%	9.3%	40.7%	37.0%	40	25.0%	10.0%	45.0%	45.0%
East Central	83	4.8%	3.6%	32.5%	19.3%	52	5.8%	5.8%	34.6%	23.1%
Southwest	135	16.3%	22.2%	16.3%	22.2%	76	19.7%	23.7%	25.0%	26.3%
Southeast	124	25.0%	15.3%	40.3%	37.9%	90	26.7%	18.9%	44.4%	43.3%

Note that there was only 1 HHW member with an ASAM 3.5 stay in the study period.

Findings Related to Enrollment in Case or Care Management at the MCE

B&A requested from each MCE the rosters of all members enrolled in complex case or care management at any time in Calendar Year 2018. These rosters were cross-tabulated to the individuals identified in Group 1 of this study. Overall, 15.6% of members in B&A's study were enrolled in case or care management with the MCEs. However, there was wide variation among the MCEs on this statistic. MHS reported 86.0% of its members in the B&A study were enrolled in case or care management, whereas the other three MCEs each reported under 2.5% of their members enrolled.

Exhibit V.5.9
Enrollment in Case or Care Management, by MCE

MCE	Members in the Study	Number of Individuals in Case or Care Management in CY18	Percent in Case or Care Management
Anthem	1,907	12	0.6%
CareSource	384	9	2.3%
MDwise	858	7	0.8%
MHS	659	567	86.0%
Total	**3,808**	**595**	**15.6%**

VI. CONCLUSIONS

Summary of Results

In the 11 months since the waiver was implemented[1], early trends on metrics are encouraging but also provide evidence of areas where performance could improve. In the first annual period post-waiver, period (CY 2018) compared to the corresponding pre-waiver annual period (CY 2017), the state performed as expected on 64% of the metrics evaluated (18 out of 28).

Exhibit VI.1.1 summarizes the number of metrics for the key domains under this Interim Evaluation (quality, cost and access to SUD care) and whether the observed trend between CY2017 (pre-waiver) and CY2018 (post-waiver) was as desired or not as desired. It should be noted that additional metrics will be reported on in the Summative Evaluation, but data was not yet available for all metrics in this Initial Evaluation.

Among quality metrics, eight out of 11 (73%) were as desired. Among cost metrics, four out of seven (57%) were as desired. Among access metrics, six out of ten (60%) were as desired.

Exhibit VI.1.1
Summary of Count of Metrics by Desired Observed Trend
For the Full Demonstration Population, CY2017 to CY2018

Domain	Quality	Cost	Access	Total
# of Metrics[1,2]	11	7	10	**28**
# Observed Trend=Desired	8	4	6	**18**
# Observed Trend=Not Desired	3	3	4	**10**

[1] Count includes only those metrics computed in the interim evaluation.
[2] Metrics 15a, 15b, 17a, and 17b are counted separately for this purpose.

Dashboard of Results for Demonstration Population by Domain

Exhibits VI.1.2 and VI.1.3 that appear on the next two pages display dashboards of the conclusions for the first three hypothesis questions investigated. The dashboards use a mix of red, yellow and green coloring to indicate whether the observed trend in the CY 2017 period compared to the CY 2018 is as desired for the demonstration population and sub-populations. Specifically, the green shading indicates that the observed trend between was as expected, yellow is neutral, and red is not as expected.

Conclusions by Research Question

Based on the results summarized in the dashboards, combined with the understanding of the methodology limitations described in Section IV, conclusions for each research question evaluated are summarized in Exhibit VI.1.4 starting on page VI-4.

[1] The effective date of Indiana's 1115 SUD waiver was February 1, 2018; however, to ensure comparable time periods, a full calendar year of CY 2017 and CY 2018 data were used to compute the pre- and post- waiver period. See Section III Methodology for more details.

Exhibit VI.1.2
Dashboard of Desired versus Observed Trends, CY2017 to CY2018
For Quality and Cost Metrics by Sub-population

Quality Metrics											
Population	#2 Number of SUD Benefici-aries #3	#2 Number of New Diagnosed SUD Beneficiaries	#15a Rate of Initiation	#15b Rate of Engage-ment	#5 Number of Beneficiaries Treated in IMD	#17a Rate of Follow-up after AODD ED 7 days	#17b Rate of Follow-up after AODD ED 30 days	#22 Continuity of Pharma-cotherapy for Opioid	#21 Concurrent Use of Opioid and Benzo	#18 Use of Opioids in High Dose	#19 Use of Opioids from Multiple Providers
Demonstration	Increase	Increase	Decrease	Increase	Decrease	Increase	Increase	Increase	Decrease	Increase	Decrease
Model	Increase	Increase	Decrease	Increase	Decrease	Increase	Increase	Decrease	Decrease	Increase	Decrease
Duals	Increase	Increase	Increase	Decrease	Decrease	Increase	Decrease	Neutral	Decrease	Increase	Decrease
OUD	Increase	Increase	Decrease	Increase	Decrease	Increase	Increase	Decrease	Decrease	Decrease	Decrease
Pregnant	Increase	Increase	Increase	Increase	Increase	Increase	Increase	Increase	Decrease	Neutral	Decrease
Criminally Involved	Decrease	Decrease	Increase	Increase	Decrease	Increase	Increase	Decrease	Decrease	Increase	Increase
MRO	Increase	Increase	Decrease	Decrease	Decrease	Increase	Increase	Decrease	Decrease	Decrease	Decrease

Cost Metrics							
Population	#28 Total SUD Expenditures	#29 Per Capita SUD Expenditures	#30 SUD Expenditures in IMD	#31 Per Capita SUD Expenditures in IMD	#23 Emergency Department Utilization for SUD per 1,000	#24 Inpatient Utilization for SUD per 1,000	#25 Readmissions for SUD population
Demonstration	Increase	Increase	Increase	Increase	Increase	Increase	Increase
Model	Increase	Increase	Decrease	Increase	Increase	Decrease	Increase
Duals	Increase	Decrease	Increase	Decrease	Increase	Increase	Decrease
OUD	Increase	Decrease	Decrease	Increase	Decrease	Decrease	Increase
Pregnant	Increase	Increase	Increase	Increase	Increase	Increase	Decrease
Criminally Involved	Increase	Decrease	Increase	Increase	Increase	Increase	Increase
MRO	Increase	Decrease	Decrease	Decrease	Decrease	Decrease	Decrease

Exhibit VI.1.3
Dashboard of Desired versus Observed Trends, CY2017 to CY2018
For Access Metrics by Sub-population

Access to Care Metrics										
Population	**#13 SUD Provider Availability**	**#32 Preventative Care**	**#6 Number of Beneficiaries Using Any SUD Treatment**	**#7 Number of Beneficiaries Using Early Intervention**	**#8 Number of Beneficiaries Using Outpatient**	**#9 Number of Beneficiaries Using IOP/PHP**	**#10 Number of Beneficiaries Using Residential and Inpatient**	**#11 Number of Beneficiaries Using Withdrawal Management**	**#12 Number of Beneficiaries Using MAT**	**#36 Average Length of Stay in an IMD**
Demonstration	Increase	Increase	Increase	Decrease	Increase	Decrease	Increase	Increase	Increase	Decrease
Model	Increase	Increase	Increase	Decrease	Increase	Decrease	Increase	Increase	Increase	Decrease
Duals	Increase	Decrease	Increase	Increase	Increase	Decrease	Increase	Decrease	Increase	Increase
OUD	Increase	Increase	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease
Pregnant	Increase	Increase	Increase	Increase	Increase	Increase	Increase	Increase	Increase	Increase
Criminally Involved	Increase	Decrease	Decrease	Neutral	Decrease	Decrease	Increase	Increase	Decrease	Decrease
MRO	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Increase	Increase	Decrease

Exhibit VI.1.4
Summary of Conclusions of the Interim Evaluation
For Quality, Cost and Access by Research Questions
Descriptive Trend CY 2017 to CY 2018

Research Question	Desired Trend(s)	Observed Trend(s)	Conclusion(s)
1.1.2 Does the level and trend of initiation and engagement in treatment increase in the SUD population in the post-waiver period?	Increase	Mixed	***Partially.*** The number of beneficiaries with SUD and newly diagnosed SUD grew 5.1% and 12.6%, respectively, in the CY 2017 pre-waiver period compared to the CY 2018 post-waiver period. The rates of initiation of SUD treatment decreased in the same time period by -3.6%. The rate of initiation in CY 2018 was more than half of the potential population initiating treatment, or 55%. There was an increase in the rate of engagement following initiation, which stands at 30% in CY 2018. Although there has been only limited time in the post-waiver period, the number of beneficiaries being treated in IMDs is not increasing. In fact, a small decrease was observed. There were 4,026 beneficiaries treated in IMDs in CY 2018 in the demonstration population. Almost 75% of those beneficiaries also had an OUD diagnosis.
1.1.3 Does the level and trend of follow-up after discharge from the ED for SUD increase among the SUD population in the post waiver period?	Increase	Increase	***Yes.*** The rates of follow-up after discharge from an ED for AODD after 7 and 30 days, respectively, increased by 17% between the CY 2017 pre-waiver period and the CY 2018 post-waiver period. The overall rates, however, were low. For 7-day, the rate was 11% overall; for 30-day, the rate was 16% overall.
1.1.4 Does the level and trend in continuity of pharmacotherapy for opioid use disorder increase among the OUD population in the post waiver period?	Increase	Increase	***Yes.*** The rate of continuity of pharmacotherapy for opioid use disorder increased by 1% between CY 2017 and CY 2018. The overall rate, however, was low (18% in CY 2018 among the demonstration population).
1.1.5 Does the level and trend in concurrent use of opioids and benzodiazepines decrease in the OUD population in the post waiver period?	Decrease	Decrease	***Yes.*** The rate of concurrent use of opioids and benzodiazepines decreased by 12% between CY 2017 and CY 2018. The overall rate of concurrent use, however, was high (17% in CY 2018 among the demonstration population). It was observed that the rate was substantially lower in the pregnant, criminally involved and dual-eligible populations. Two MCEs have almost double the rates of the other two MCEs.
1.1.6 Does the level and trend in the rate of use of opioids at high dosage in persons without cancer decrease in the post waiver period?	Decrease	Mixed	***Partially.*** The rate of use of opioids at high dosage increased by 5% between CY 2017 and CY 2018. The rate of opioids from multiple providers decreased by 39% between CY 2017 and CY 2018. The overall rates were low for both metrics in CY 2018 among the demonstration population (4% and 3%, respectively).

Research Question	Desired Trend(s)	Observed Trend(s)	Conclusion(s)
1.2.2 Does the level and trend in overall spending for the SUD population increase in the post waiver period?	Increase	Increase	***Yes.*** Total SUD spending increased by 15.4% from $505 million CY 2017 to $583 million in CY 2018. Per capita SUD spending also increased by 4.2% from $5,451 in CY 2017 to $5,682 in CY 2018. Approximately 4.4% of SUD spending was in IMDs in CY 2018, a decrease from 5.0% of SUD spending in CY 2017. IMD spending did increase, however, by 2.7% in CY 2018 to $25.7 million.
1.2.6 Does the level and trend in acute utilization for SUD, potentially preventable emergency department or potentially preventable hospital readmissions decrease in the SUD population in the post waiver period?	Decrease	Increase	***No.*** ED visits and inpatient stays per 1,000 beneficiaries increased by 5% and 14%, respectively, from CY 2017 to CY 2018. The ED visit rate for the OUD sub-population, however, decreased by 34%. The inpatient rate per 1,000 for the OUD sub-population decreased by 44%. Interesting, the only metric for which the managed care model trend was different than the overall demonstration is for inpatient stays per 1,000. In this case, the model (managed care) decreased by 23% whereas the overall demonstration increased 14%. Also, readmissions among beneficiaries with SUD increased by 2.3% in the demonstration and 3.4% in the managed care model.
2.1.1 Does the level and trend in the number of SUD and primary care providers and the number of providers per capita in the SUD population increase in the post waiver period for each ASAM level of care?	Increase	Increase	***Yes.*** SUD provider availability increased by 9.4% between CY 2017 and CY 2018. Access to preventative/ambulatory health services also improved.
2.1.2 Does the utilization of SUD services and primary care in the SUD population increase in the post waiver period for each ASAM level of care?	Increase	Mixed	***Partially.*** The number of beneficiaries receiving any SUD services increased by 16% between CY 2017 and CY 2018. Outpatient services, residential and inpatient, and withdrawal management services increased by 15%, 10% and 7%, respectively. The number of beneficiaries receiving MAT increased by 32% between CY 2017 and CY 2018. The average length of stay in an IMD, of which the OUD sub-population represents the majority, decreased by 5.9%. Early intervention and intensive outpatient / partial hospitalization services, however, decreased by 46% and 9%, respectively, from CY 2017 to CY 2018. The large change in early intervention specifically is attributable to very low numbers (only 20 observations captured in CY 2018).

Conclusions from the Focus Studies

Prior Authorization

Given that the experience period for this focus studied covered only the first 11 months of the waiver, final conclusions cannot yet be drawn. B&A was able to observe some findings, however, which will serve as benchmark data when results continue to be trended over the course of the waiver.

Research Question 5.2.1 Are the rates of prior authorizations (PA) submitted and PA requests that are denied in the SUD population, controlling for volume, relatively consistent by MCE and over time?

Finding: No and No.
No, the rates of inpatient requests submitted, when controlled for volume, are not consistent across MCEs. When comparing the count of unique members with a SUD inpatient request to the total population within each MCE identified with SUD in CY 2018, Anthem had 7.0% of its members with a request, CareSource had 9.5%, MDwise had 6.9%, and MHS had 1.9%. When comparing the percent of SUD-identified members to unique members with a residential treatment request, Anthem had 2.3% of its members with a request, CareSource had 4.8%, MDwise had 1.9%, and MHS had 0.7%. For outpatient services, Anthem had 2.6% of its members with a request whereas the other three MCEs were closer to 1.4%.

No, the rates of denied authorization requests were also not consistent by MCE. When SUD-related authorizations were specifically considered, 18% of requests in the first year of the waiver were denied by MCEs. By MCE, the denial rates were 21% for Anthem and CareSource, 13% for MDwise, and 3% for MHS. When authorizations for inpatient and residential were reviewed independently, there was also variation found in the denial rates across the MCEs.

Research Question 5.2.2 Are PA denials predominantly for reasons directly related to not meeting clinical criteria as opposed to administrative reasons such as lack of information submitted?

Finding: Yes.
For inpatient, the citation for 92% of authorizations denied was lack of medical necessity. For residential treatment, 68% were due to lack of medical necessity.

Care Coordination and Transitions to Care

Similar to the prior authorization study, specific conclusions on care coordination and transitions to care cannot yet be drawn. B&A was able to observe some findings, however, which will serve as benchmark data when results continue to be trended over the course of the waiver.

Research Question 6.1.1 Does the proportion of beneficiaries receiving ASAM designation who had a claim in that ASAM level within the next two consecutive months following the month of ASAM assignment increase over time?

Finding: Mixed.
B&A examined individuals with an anchor stay in ASAM levels 4.0 (inpatient) and level 3.5 (residential). We followed these individuals for three months, not two, after this anchor event. When stepping down from ASAM level 4.0, very few (under 2%) had a follow-up stay in a residential treatment setting. The percentage of members who utilized Intensive Outpatient / Partial Hospitalization (IOP/PH) in the 12

weeks after their inpatient anchor event varied between 8.3% and 13.6% depending upon the type of inpatient anchor event (alcohol-related, drug-related, or alcohol and drug-related). Forty percent of individuals in an inpatient anchor event for alcohol and drug-related reasons received medication assisted treatment (MAT) within 12 weeks after their inpatient stay. Transitions to these different ASAM levels varied across regions in the state for IOP/PH and MAT.

When the ASAM level 3.5 was considered as the anchor, there is little distinction in the rate of utilization for IOP/PH and MAT for members either in the 12 weeks prior to their ASAM 3.5 residential stay or the 12 weeks after discharging from their ASAM 3.5 residential stay. For IOP/PH, the rates were 18.0% prior to and 14.9% after the residential stay. For MAT, the rates were 30.2% prior to and 27.0% after the residential stay.

There are notable differences by region, however. Part of this appears to be due to the location of the residential treatment centers. Almost two-thirds of all ASAM 3.5 anchor events are in the Northwest, Southwest and Southeast regions even though these regions do not represent that percentage of the statewide population. The Central region of the state comprises almost one-third of the state's population, yet very few ASAM 3.5 anchor events were identified in this region.

In the three regions with the most ASAM 3.5 anchor events, there was a higher percentage of members in the Northwest and Southwest regions who used IOP/PH after their ASAM 3.5 residential stay than before their stay. The opposite was true in the Southeast region.

For MAT, the only region that had members who used more MAT after their ASAM 3.5 stay than before their anchor stay was the Southwest region. This region, however, had one of the lowest percentages of MAT users overall.

VII. INTERPRETATIONS

Key Interpretations

The key interpretations from the interim evaluation conclusions are as follows:

1. The number of beneficiaries diagnosed with SUD continues to grow, but the number receiving services and the provider capacity to deliver services is scaling up in response.

1.1 In the first year of waiver implementation, the SUD population grew 5.1% compared to the year just prior to implementation. The percentage newly diagnosed with SUD grew by 12.6%.

1.2 SUD provider availability, excluding MAT providers, grew by 9.4% in the first year of the waiver, while spending on SUD services grew by 15.4%. Since spending grew faster than the increase in the number of individuals diagnosed, the trend suggests that SUD services have expanded and/or there have been increases in reimbursement for existing SUD services. This is confirmed by the fact that spending per SUD beneficiary increased 4.2% in the first year of the waiver (CY 2018) compared to the most recent year prior to the waiver (CY 2017).

1.3 The number of beneficiaries with SUD that accessed residential and inpatient services in CY 2018 increased by almost 10% compared to CY 2017. This suggests that that network expansion (particularly for residential treatment), administrative changes and stakeholder engagement efforts were effective. The overall number of residential treatment providers, however, compared to other provider types in the system of care, remains low. This was found in B&A's study of transitions to care where less than 2% of beneficiaries with a SUD-related inpatient stay accessed residential services after their inpatient discharge. Given the underlying growth in the SUD/OUD population, demand for access to these services and sustainable financing are likely to continue to grow in the remaining waiver demonstration period, but perhaps at a slower pace than observed in CY 2016 – CY 2018.

1.4 There were fewer beneficiaries, approximately 9% less, receiving IOP and PHP services in CY 2018 compared to CY 2017. This decrease in use could be attributable to MCEs and FFS implementing similar assessment of appropriate levels of care, unprocessed administrative claims or encounter data in the data warehouse, or limited or decreasing access. However, the state submitted a State Plan Amendment in October 2018 which should open up eligibility beyond the MRO, which may reverse this trend. Therefore, continued monitoring of demand and access for these services is recommended in the remaining waiver demonstration period.

1.5 Total and per user spending on IMD services increased during the first year of the waiver, while fewer beneficiaries received IMD services during this time and the average length of stay in IMDs decreased. This suggests that IMDs are receiving higher reimbursement in CY 2018 than in CY 2017 for similar services. Increased reimbursement should facilitate continued expansion of IMD services in the remaining waiver demonstration period. The State considered moving to a per diem payment methodology for IMDs, but this has yet to occur. B&A's study of authorizations showed that 90% of all inpatient days requested were authorized by the MCEs in the first year of the waiver. Since beneficiaries with an OUD represent 75% of IMD use in CY 2018 and this population grew by 50% between CY 2017 and CY 2018, it is expected that demand for access to IMD services and sustainable financing are likely to continue to grow in the remaining waiver period. Barriers to access to care should be continually monitored.

1.6 The number of beneficiaries receiving MAT services grew by 32% from 6,733 in CY 2017 to 8,863 in CY 2018. Also, in CY 2018, there were 725 MAT providers in CY 2018. These providers were distributed proportionate to SUD population density across the state. This is not unexpected given new Indiana Administrative Code changes effective in September 2017 which helped facilitate a large number of new MAT providers to enroll with FSSA. Moreover, as part of waiver implementation activities, the FSSA continues to support the buprenorphine waiver process and training to physicians, both of which are secondary drivers of MAT access. Given the underlying growth in the SUD/OUD population, demand for access to MAT services and sustainable financing are likely to continue to grow in the remaining waiver period, but perhaps at a slower pace than observed in CY 2016 – CY 2018.

2. The state performed as desired on most primary and secondary drivers evaluated, but there are potential areas of consideration across all three domains--quality, cost and access--to monitor and potentially address in future demonstration years.

2.1 On the four metrics related to appropriate use of opioids, all of which are primary drivers of a primary aim of the waiver, the FSSA performed as desired on three of them. In addition to Indiana's continued use of its prescription drug monitoring system (INSPECT) for improving the use of opioids, the State continues to provide training to physicians on opioid use as part of support for buprenorphine waivers. Desired performance on all four measures may require additional support on the use of INSPECT by all provider types as well as provider training on the appropriate use of opioids.

2.2 The rate of follow-up after discharge and rate of engagement in treatment increased, as desired, between CY 2018 and CY 2017. However, the absolute rates for both metrics were low in all years evaluated. Further, the rate in the initiation of treatment decreased in the first year of the waiver decreased, not as desired. The increase in the rate of engagement in treatment, particularly among the OUD population, may be at least partially attributable to waiver implementation activities such as the State's expansion of addiction recovery management services to the OUD and dual populations and continued use of the recovery programs available to the MRO population. Trending on these measures throughout the waiver is warranted to assess if meaningful improvement is occurring and where within the delivery system.

2.3 One year since waiver implementation may not be sufficient time to detect changes in the use of acute care, such as ED visits, inpatient stays and readmissions. However, the trends in these metrics were not as desired and therefore warrant additional consideration.

2.4 There was little to no reporting of early intervention services in the first year of the waiver. Whether this is an artifact of the data specification being too narrow or truly very little provision of early intervention services may require additional review and support.

3. Operational procedures are in place for authorization approval, but consistency across the delivery systems and additional provider education is warranted.

3.1 In 91% of inpatient episodes studied in the first year of the waiver, at least some portion of the stay was approved. For individual providers among the top 10 by volume, however, the rate varied from 78% to 95%. In 80% of residential treatment episodes studied in the first year of the waiver, at least some portion of the stay was approved. For individual providers among the top 10 by volume, however, the rate varied from 72% to 91%.

3.2 B&A's review of 120 sample authorizations found varying levels of detail in authorization submissions by providers and often key elements missing for authorization determination. This is impacting the rate of authorization approvals.

3.3 The MCEs that make the authorization decisions had been using different clinical criteria to make determinations in the first year of the waiver which may have impacted the varying levels of approval and denial rates as well. In early CY 2019, the FSSA addressed this variance by moving to a common set of criteria and a common authorization request form for SUD services.

4. Protocols to transition beneficiaries across the ASAM continuum of care were immature in the first year of the waiver. This appears to be a result of a growing provider base across the ASAM continuum and learning from both MCEs and providers.

4.1 The utilization of residential treatment in the first 12 weeks after an inpatient stay was under 2% for all demonstration beneficiaries with an inpatient stay in the July to December 2018 time period. This includes beneficiaries continuously enrolled with the same MCE during that time period. The rate was higher, however, in regions where provider availability for residential treatment is stronger, suggesting that access may be more of a barrier than beneficiary interest.

4.2 For beneficiaries who utilized MAT services in the first year of the waiver that also had a residential treatment stay, there was little difference in MAT use between the 12 weeks before or after the residential stay. MAT utilization was near 30% in both instances. Intensive outpatient / partial hospitalization also showed little change before and after a residential stay (near 18% in both instances).

Interpretations by Hypothesis and Research Question

An explanation of the key interpretations by hypothesis and research question addressed are summarized below.

Interpretation
Hypothesis 1.1, Research Question 1.1.2 Does the level and trend of initiation and engagement in treatment increase in the SUD population in the post-waiver period?
The trend in newly diagnosed SUD beneficiaries between the pre- and post-waiver period is higher than the trend in the total diagnosed SUD population. This suggest that that providers are increasing the proportion of SUD beneficiaries being flagged with a SUD diagnosis when seeking care. The SUD population however, continues to grow year over year despite prevention and early intervention efforts. In addition to overall growth in the underlying population, there was redistribution at the MCE-level. MDwise withdrew from Hoosier Care Connect effective April 2017, so it is not unexpected to see a decrease in their SUD population given the large number of beneficiaries with SUD in Hoosier Care Connect. These members were reassigned to Anthem and MHS. Also, CareSource just came under contract in HHW and HIP in January 2018. With a low baseline in the pre-waiver period, this MCE's trends may differ from their peers in the post-waiver period.
There was a decrease in rate of initiation in the overall model which is not desired. This is of concern as it may be an indicator of decreased quality and access to care. Anthem had the highest rate of initiation in CY 2018 of all the MCEs although it also had the largest decrease from CY 2017, likely in part due to the increase in its SUD population in the same time frame. The absolute rates of initiation were highest in the OUD, MRO, pregnant, criminally involved populations which may reflect expansion of addiction recovery management services and/or access to services through the Recover Works program. Dual-eligible beneficiaries have the lowest absolute rates of initiation. Given that this population has different and more complex physical health, may transition in and out of institutions, may not be enrolled in managed care, and may have a lower overall rate of SUD diagnosis, this finding was not unexpected. However, dual eligible were one of the only sub-populations with a positive trend in the initiation rate between CY 2017 and CY 2018. Despite a decrease in the rate of initiation in the demonstration population, there was an increase in the rate of engagement for those initiated into treatment. This is an indicator of increased quality of care and may reflect expansion of addiction recovery management services for OUD and dual-eligible beneficiaries as well as access to "Recovery Works" in the MRO and criminally involved populations. With the exception of MHS, the percentage of members identified with SUD at each MCE enrolled in complex case or care management was low. The MCEs did state, however, that they are actively using approaches to better manage the SUD population. Examples include: • Anthem: Anthem has dedicated utilization management staff for each IMD and are building relationship with each provider. Also, Anthem case managers reach out to every member who is denied inpatient admission. • CareSource: All denied prior authorizations for inpatient stays are referred to a transition of care and case coordination team. These teams work to connect with the member to assist them to step-down to an appropriate level of care. The transitions team also reaches out within two days of admission to a treatment facility in order to begin discharge planning. A transitions coordinator is assigned to each IMD. • MDwise: Many of the IMDs MDwise contracts with have other levels of care. MDwise's care management department is available to assist with transitioning a member to an appropriate level of care and has provided education to all the providers creating how to access case management.

Interpretation
Hypothesis 1.1, Research Question 1.1.3 Does the level and trend of follow-up after discharge from the ED increase among the SUD population in the post waiver period?
A key point of entry into the SUD system of care is following an ED visit for an AODD diagnosis. The rates of follow-up after discharge from an ED for AODD in the demonstration population increased in CY 2018 compared to CY 2017, but the overall rates were low.
Hypothesis 1.1, Research Question 1.1.4 Does the level and trend in continuity of pharmacotherapy for OUD increase in the post waiver period? and *Hypothesis 1.1, Research Question 1.1.5 Does the level and trend in concurrent use of opioids and benzodiazepines decrease in the OUD population in the post waiver period?*
Progress is being made on ensuring better and more rational use of opioids as well as better quality of OUD care. However, opportunities for improvement were identified.
Hypothesis 1.2. Research Question 1.2.2 Does the level and trend in SUD service spending for the SUD population increase in the post waiver period?
Total and per capita costs are higher for SUD services overall and in IMDs in the first year of the waiver period compared to the year immediately prior to waiver implementation. All sub-populations saw an increase in SUD spending in CY 2018, but there were increases and decreases compared to CY 2017 in per capita spending at the sub-population level. This may be more an artifact of low samples in some of the sub-populations.
Hypothesis 1.2. Research Question 1.2.6 Does the level and trend in acute utilization for SUD, potentially preventable emergency department or potentially preventable hospital readmissions decrease in the SUD population in the post waiver period?
Overall utilization per 1,000 members is up in the ED and inpatient for the SUD demonstration population in CY 2018 compared to CY 2017. The OUD and MRO is the exception. The high rate of utilization per 1,000 in some regions may reflect fentanyl use. Potentially preventable ED visits and hospital readmissions have yet to be analyzed.
Hypothesis 2.1. Research Question 2.1.1 Does the level and trend in the number of SUD and primary care providers and the number of providers per capita in the SUD population increase in the post waiver period for each ASAM level of care? and *Hypothesis 2.1. Research Question 2.1.2 Does the utilization of SUD services and primary care in the SUD population increase in the post waiver period for each ASAM level of care?*
Most access to care trends in the SUD system of care are as desired. Many activities likely contributed to this finding as described below. There was also the introduction of a state-led, cross-divisional SUD Work Group to identify and address improvement opportunities in the SUD delivery system and continue the State's efforts to engage and support SUD stakeholders representing all areas of the SUD continuum of care. CY 2019 includes additional planned MCE and provider trainings (such as ASAM training) which should continue to support access to care. Overall, access to SUD providers is improving, particularly for MAT. Since the overall the number of beneficiaries receiving any SUD treatment increased in CY 2018 compared to CY 2017, underlying trends at the ASAM level represent shifts in services rather than a decrease in total services. Specifically, the number of beneficiaries receiving intensive outpatient and partial hospitalization services decreased in the CY 2017 to CY 2018. However, the number of beneficiaries receiving MAT, outpatient, residential and inpatient services increased. At the same time, the average length of stay in IMDs is decreasing. It is possible that the improved use of assessment criteria to identify the appropriate level of care as well as scaled up or scaled down services in response to those needs explain these findings. The observed growth in beneficiaries receiving MAT services was not unexpected given that, until August 2017, Indiana Medicaid did not provide coverage for opioid treatment program (OTP) services. There were 13 OTPs certified historically since 2008 and five additional new OTPs were authorized. Indiana Senate Enrolled Act 464 (2015) allowed the Division of Mental Health and Addiction (DMHA) to approve up to five new OPTs prior to 6/30/2018. Indiana Senate Enrolled Act 297 (2016) required that, as of July 1, 2017, established additional requirements for OTPs which draw on 6401 of the Patient Protection and Affordable Care Act. Therefore, DMHA updated the Indiana Administrative Code to clarify sections of the code and modify outdated sections. It clarified State and ASAM level placement criteria. Finally, a new billing and daily bundled reimbursement system was implemented for OTPs.

Interpretation
A provider bulletin (BT201755) was published on August 17, 2017 finalizing all of the billing guidance and enrollment information for OTP services. The effective date of implementation, after a short delay, was September 1, 2017. Meanwhile, the State Plan Amendment (SPA) authorizing the use of the bundled payment structure was submitted to CMS on September 8, 2017 and approved on December 4, 2017. ASAM 4.0, 3.1, 3.5, and 4.0, Residential and inpatient services. Growth in beneficiaries receiving residential treatment and inpatient services is encouraging. DMHA began providing ASAM designations for the State's residential providers on March 1, 2018. This specialty was required for billing as of July 1, 2018. There were 37 providers in the most recent data provided by the state, up from 31 reported in the DY4 Q1 monitoring reports. ASAM 2.1 and 2.5, IOP/PH. Indiana submitted a SPA for Intensive Outpatient Program (IOP)/Crisis/Peers on 10/3/2018 to remove intervention services, IOP services, and peer recovery services from the Medicaid Rehabilitation Option (MRO) program and put those services into the State Plan benefits. This opens up eligibility to all Medicaid members who meet medical necessity criteria. ASAM 0.5, Early Intervention. The number of beneficiaries with a SUD diagnosis using early intervention and ambulatory care services was low and decreased in CY 2018 compared to CY 2017. This warrants more focus. Indiana Medicaid provides coverage for several individual services around early intervention, including smoking cessation counseling and screening, brief intervention, and referral to treatment (SBIRT). These services are available to all Indiana Medicaid members without prior authorization. It is unclear, however, what may be the limitation(s) related to access to these services.
Hypothesis 5.2. Research Question 5.2.1 Are the rates of prior authorizations (PA) submitted and PA requests that are denied in the SUD population, controlling for volume, relatively consistent by MCE and over time?
When comparing the count of unique members with a SUD inpatient request to the total population within each MCE identified with SUD in CY 2018, Anthem had 7.0% of its members with a request, CareSource had 9.5%, MDwise had 6.9%, and MHS had 1.9%. When comparing the percent of SUD-identified members to unique members with a residential treatment request, Anthem had 2.3% of its members with a request, CareSource had 4.8%, MDwise had 1.9%, and MHS had 0.7%. Denial rates varied between 3% for MHS to 13% for MDwise to 21% for Anthem and CareSource. The variation in MCE denial rates was true for all SUD-related authorizations in the first year of the waiver as well as rates specific to inpatient authorization requests and residential treatment requests. From the MCE's self-reported data reviewed by B&A, it also appears that there are different interpretations of the term modified with respect to authorization request status. The rate of denials varied among the top 10 inpatient and top 10 residential providers, based on volume, in the first year of the waiver.
Hypothesis 5.2. Research Question 5.2.1 Are PA denials predominantly for reasons directly related to not meeting clinical criteria as opposed to administrative reasons such as lack of information submitted?
For inpatient, the citation for 92% of authorizations denied was lack of medical necessity. For residential treatment, 68% were due to lack of medical necessity. For residential, the majority of requests were submitted to Anthem. For this MCE, 31 percent of their authorizations were self-reported to B&A with a reason for denial of 'Other' (i.e., neither administrative nor medical necessity was specified).
Hypothesis 6.1. Research Question 6.1.1 Does the proportion of beneficiaries receiving ASAM designation who had a claim in that ASAM level within the next two consecutive months following the month of ASAM assignment increase over time?
When stepping down from ASAM level 4.0, very few (under 2%) had a follow-up stay in a residential treatment setting. There are notable differences by region, however. Part of this appears to be due to the location of the residential treatment centers. Almost two-thirds of all ASAM 3.5 anchor events are in the Northwest, Southwest and Southeast regions even though these regions do not represent that percentage of the statewide population. Utilization was higher in ASAM 3.5 in the Southwest region after an inpatient stay than other regions. More investigation is also warranted to assess the rate of bounce-backs to inpatient in the weeks after a previous inpatient stay.

Interpretation
The percentage of members who utilized IOP/PH in the 12 weeks after their inpatient anchor event varied between 8.3% and 13.6% depending upon the type of inpatient anchor event (alcohol-related, drug-related, or alcohol and drug-related). Forty percent of individuals in an inpatient anchor event for alcohol and drug-related reasons received medication assisted treatment (MAT) within 12 weeks after their inpatient stay. Transitions to these different ASAM levels varied across regions in the state for IOP/PH and MAT. When residential treatment was examined as the anchor period, there was little difference in the percentage of beneficiaries who utilized IOP/PH or MAT in the periods before and after their residential stay.

Policy Implications

Based on these initial conclusions and our interpretations, B&A identified a number of policy implications that could influence future results. These include the following:

1. Attention to resources and workforce development to support sustained system-capacity growth.

2. A review of licensing and other regulations pertaining to structural development of system capacity, particularly as it relates to residential treatment facilities.

3. The continued need to focus resources and strategies on prevention and early intervention.

4. The necessity to monitor quality, cost and access as a means to ensure that resources are allocated in a way to best meet the needs and improve performance on the six CMS milestones for the waiver.

5. The need for continued improvements, support and expansion of addiction recovery management services and programs such as Recovery Works.

6. The need for additional guidance and/or requirements for the MCEs to streamline the process and documentation necessary when submitting authorization requests at each ASAM level where prior authorization is required. Additionally, the need for additional education to providers on when prior authorization is not required.

7. Attention to guidance or expectations of MCEs related to tracking outreach to and improving the quality of complex case and care management services for their members with SUD.

8. Assess the potential to improve quality and decrease costs by improving the transition of care following discharge from an ED for an AODD diagnosis.

9. The ED department and inpatient hospitals continue to be key point of entry for beneficiaries with SUD into the SUD system of care.

10. Assess ways to incentivize providers to deliver the most appropriate level of care to beneficiaries.

11. The need to develop strategies to support the rational use of opioids and OUD treatment.

Interactions with Other State Initiatives

The Indiana FSSA's SUD waiver demonstration is one key component among a broad statewide approach to combat the opioid crisis. Some of the other contemporaneous activities occurring in Indiana along with the waiver demonstration are described below.

Drug Abuse Task Force(s)

The Governor's Task Force on Drug Enforcement, Treatment and Prevention was established on September 1, 2015 to identify best practices and informed recommendations to policy makers. Membership on the Task Force included the following individuals from the General Assembly; Governor's Office; State Department of Health; Department of Corrections; Department of Child Services; Family and Social Services Administration; and other organizations and associations. The task force concluded its work on December 5, 2016 and issued a final report detailing findings and actionable recommendations. In total, 17 recommendations were made—three recommendations related to enforcement and 14 recommendations related to treatment. One of these was for the state to pursue this Section 1115 Demonstration Waiver.

The Indiana Attorney General's Prescription Drug Abuse Prevention Task Force was a separate task force created in September 2012. It published a report in December 2016 that included many of the same objectives identified by the Governor's Task Force.

Naloxone for First Responders

During 2018, Indiana was notified that it was awarded a second 21st Century Cures Act grant from the Substance Abuse and Mental Health Services Administration (SAMHSA). Part of the funding is to provide Naloxone kits to first responders and law enforcement. The initial grant period was May 1, 2017 through April 30, 2018. During that time period, 6,566 kits were issued. For the period beginning May 1, 2018, the State is on track to exceed the number of kits issued in the initial grant period.

The Indiana State Department of Health (ISDH) has several projects to improve access to Naloxone, including Naloxone distribution programs for local health departments and first responders, training programs (including statewide training opportunities), and a dedicated Naloxone workgroup. In addition, Indiana Public Law 32 (Senate Bill 406) effective on April 17, 2015 created the opportunity for health care prescribers to prepare a standing order for an overdose prevention drug.

INSPECT

The Prescription Drug Monitoring Program was announced on August 24, 2017 by Governor Eric Holcomb in a major statewide initiative to incorporate the State's prescription drug monitoring program (INSPECT) into health care systems' electronic health records. Once fully integrated, practitioners will have a single portal to access information about prescribing and dispensing of a controlled substance. Indiana hopes to have all of its hospitals fully integrated within three years.

SUD Capacity Planning Grant

Indiana was one of 15 states (including DC) awarded grants by CMS in September 2019 under the Substance Use Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities (SUPPORT) Act to increase access to evidence-based treatment and recovery services for Medicaid beneficiaries with SUD. Indiana will use this grant to assess provider capacity, provide training and technical assistance to providers, and explore enhanced provider reimbursement.

VIII. LESSONS LEARNED AND RECOMMENDATIONS

Lessons Learned

1. Computing SUD metrics for an individual state Medicaid program is nuanced and requires rigorous comparison between national specifications and state-specific billing practices and guidance.

2. There must be sufficient time required in order to ensure data used in metric computations are valid and robust.

3. For a comprehensive evaluation that analyzes findings across multiple sub-populations, additional data sources beyond enrollment, claims and encounter data are often required. These additional data sources may not be readily available to a State Medicaid Agency. Prior to developing an evaluation design, sufficient due diligence must be completed to map not only the feasibility but the reliability of data sources that will be integrating into the evaluation from sources outside of the State Medicaid Agency.

4. SUD waiver implementations, in particular, require a systematic and coordinated approach across multiple state agencies not only in the development of the waiver but throughout the implementation period.

5. Engagement with stakeholders who will deliver services—namely SUD providers and managed care entities (MCEs)—is essential on an ongoing basis throughout the demonstration. For Indiana, some SUD providers enrolled with Medicaid for the first time and required education not only on the waiver but also Medicaid operational procedures such as enrollment, authorization requests and billing. Careful planning on training and communications is needed to set expectations on implementation activities.

6. Due to the aggressive timeframe of the rollout of waiver implementation activities immediately after notice of award from CMS, the FSSA's Office of Medicaid Policy and Planning and Division of Mental Health and Addiction developed workgroups with its MCEs and providers to work through operational tasks and policies in relative real time. The FSSA has been active in continuing these workgroups and have evolved the information and training sessions that serve as agenda items at workgroup meetings as the waiver implementation continues to mature.

Recommendations

Burns & Associates' (B&A's) independent evaluation of SUD waiver activities to date has included computation and trending of metrics at the demonstration and sub-population levels, conducting focus studies of prior authorization and care coordination activities, and participation in workgroup sessions with the FSSA, SUD providers and MCEs. Additional targeted feedback will be reported on from stakeholders in the Mid Point Assessment report. With the information learned to date, B&A offers the following recommendations to the FSSA as waiver implementation activities continue to evolve.

<u>Quality of Care</u>

1. Identify enabling policies and resources to improve impact of early intervention services to reverse the trend in SUD population growth.

2. Identify the drivers of why the rates of initiation of treatment and follow-up after inpatient discharge are low and not consistently improving. Develop a strategy to improve rates where the greatest improvement is needed, which could be regionally, by MCE and/or by sub-population. Activities related to this recommendation could include, but not be limited to:
    a. Disseminate best practices in the field related to follow-up after discharge.
    b. Offer additional support to primary care providers in SUD screening and navigation to the appropriate level of care.
    c. Continue expansion of addiction recovery care management support to providers at all ASAM levels.
    d. Establish protocols for improving the use of care management where already available.
    e. Establish requirements for MCEs aimed at the quality of SUD care management services and/or transitions of care.

3. Continue to work with other government partners in engaging providers in the use of INSPECT.

4. Continue and improve efforts to train physicians through the buprenorphine waiver process but, more broadly, across all settings of care.

5. Develop a strategy to improve regional or MCE performance on opioid use measures including, at minimum, increasing outreach about INSPECT and care management of beneficiaries with poor performance on opioid use.

6. Monitor inpatient detoxification treatment services in light of the CY 2018 policy change.

7. Monitor the impact of support of naloxone use by emergency responders.

8. Build mechanisms to track individuals who bounce back to ASAM 4.0 and 3.5 levels of care and the level of ED utilization to assess trends at the individual provider level or MCE level. Assess if there are trends among individuals based on the type of addiction being treated.

<u>Cost of Care</u>

1. Continue to monitor SUD spending and per capita spending overall and in IMDs specifically.
    a. When trending these results, isolate individuals who were previously diagnosed from those who are newly-diagnosed with SUD.
    b. In the model population of the demonstration (managed care), compare results for individuals who are longer-term enrollees with the same MCE to individuals with shorter-term enrollment.

2. Develop a strategy to decrease use of ED, inpatient stays and readmissions in the SUD population to target improved quality and downstream spending on acute care. This may include adjustments to provider rates and/or incentives to SUD providers. The FSSA should ensure consistency in any reimbursement changes across the managed care and fee-for-service delivery models.

3. If a per diem payment is ultimately reconsidered and adopted for IMDs, study the impact and conduct MCE and provider engagement on the changes.

Access to Care

1. Identify provider capacity/workforce targets that match the trended SUD population need over time and by ASAM level. Consider regional and sub-population composition to ensure appropriate level of care is available for each population.

2. Continue to implement the existing strategy to enroll more IMDs, residential and MAT providers. Evaluate non-traditional avenues to expand capacity where opportunities may be leveraged. For example, assess any excess capacity among Medicaid providers to convert existing nursing facilities, assisted living centers or I/DD residential group homes into residential treatment centers.

3. Explore new policies and licensing regulations to provide additional avenues for expanding capacity that may be limited today due to regulations. Specific changes could be tested on a pilot basis where access is at the greatest need at a regional or sub-population level.

4. Monitor the use of intensive outpatient and partial hospitalization services in relationship to the use of services at other levels of care. Identify the root cause, if possible, to determine if the placement of beneficiaries is due more to the alignment into the most appropriate level of care or due to limited access in other ASAM levels.

5. Consider developing a strategy to continue to engage primary care and urgent acute care systems to integrate and participate in the SUD system of care. One example would be to adopt a health home model and/or SUD-specialized community health team support to primary care acute care settings.

6. If coverage expands, add the impact of supportive housing services to the Summative Evaluation.

Ongoing Operations and Evaluation

1. Continue to support ongoing initiatives for the MCEs to adopt similar criteria for authorization determinations and notifications to SUD providers about determinations.

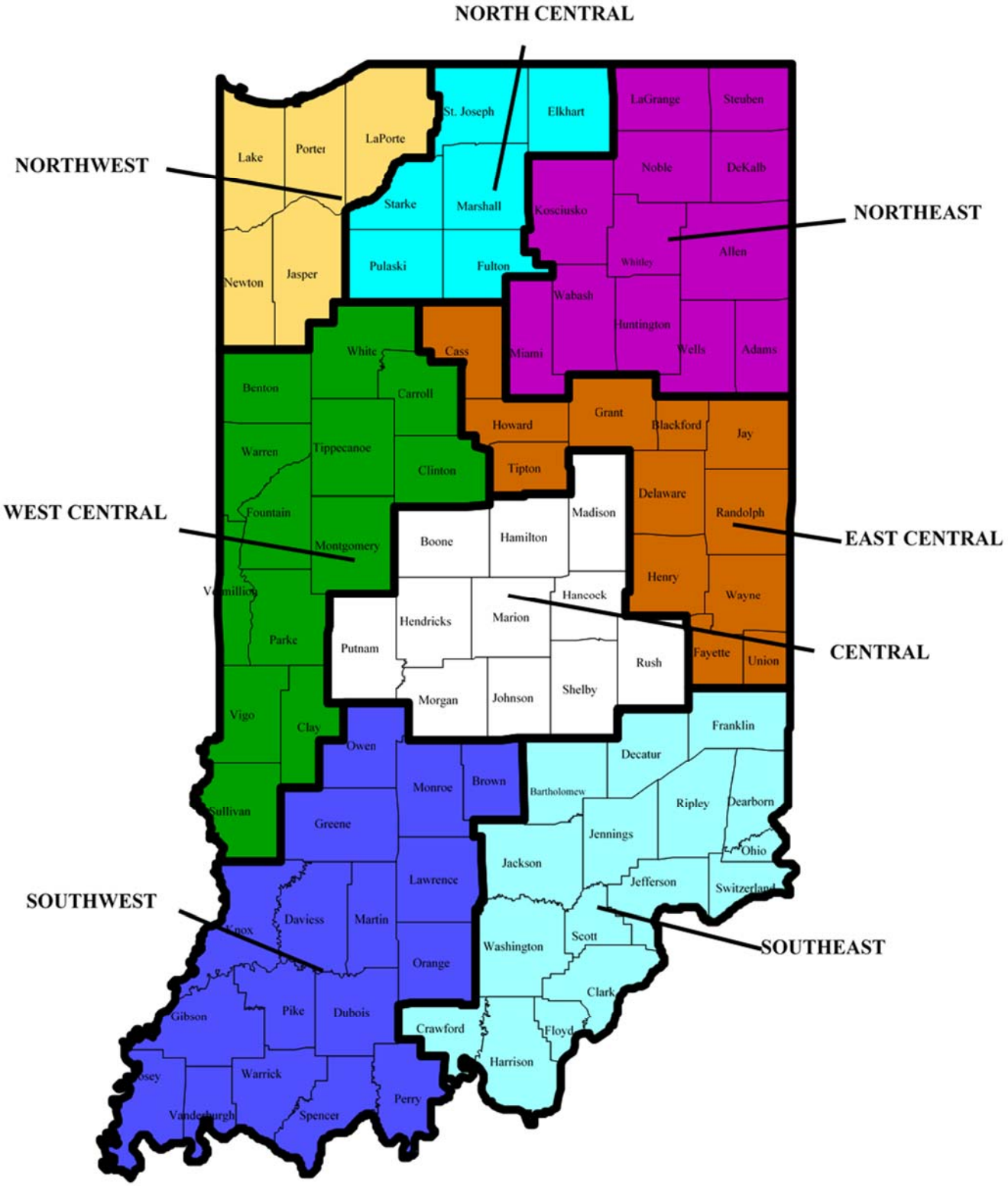
2. As the base of SUD providers expand, develop and implement onboarding training to new providers. Specific topics should include billing requirements (level of specificity and timeliness), authorization requirements (when required and when not, what should be submitted with a request), ASAM training (how to assess the appropriate level of care), and when/how to engage with MCEs (case and care management coordination, discharge planning, dissemination of dashboard reports, enhanced or 1:1 training).

3. Build specific measures and requirements related to SUD encounter timeliness and accuracy.

4. Evolve internal state monitoring efforts to develop ways to target scarce resources towards areas identified as not trending as desired.
    a. Create a dashboard for state regulatory and policymakers.
    b. Add to metrics a breakdown of service intensity within ASAM levels.
    c. Ensure regular reporting on the use of INSPECT is tracked and trended.

5. Consider adding total Medicaid spending including non-SUD medical and pharmacy spending to ongoing monitoring. Understanding the baseline and early trends in advance of analysis will be advantageous when evaluating if offsets from non-SUD spending are covering the increasing cost of the SUD system of care.

Appendix A. Map of Indiana's 92 Counties to Eight Regions



APPENDIX B

Approved Evaluation Design Plan

DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Medicare & Medicaid Services
7500 Security Boulevard, Mail Stop S2-25-26
Baltimore, Maryland 21244-1850

CENTERS FOR MEDICARE & MEDICAID SERVICES
CENTER FOR MEDICAID & CHIP SERVICES

State Demonstrations Group

JUN 0 6 2019

Allison Taylor
Medicaid Director
Indiana Family and Social Services Administration
402 W. Washington Street, Room W461, MS25
Indianapolis, IN 46204

Dear Ms. Taylor:

On March 21, 2019, the state of Indiana submitted to the Centers for Medicare & Medicaid Services (CMS) a final evaluation design for the substance use disorder (SUD) component of the state's section 1115(a) demonstration, entitled "Healthy Indiana Plan (HIP)," (Project No. 11-W-00296/5), approved on February 1, 2018. The design, which responded to CMS comments provided to the state on March 1, 2019, was submitted in fulfillment of the requirement for an SUD evaluation design as described in the special term and condition (STC) #9 of section X.

I am pleased to inform you that CMS has approved Indiana's evaluation design for the SUD demonstration. The design is consistent with the requirements outlined in the applicable demonstration STCs and the State Medicaid Director Letter SMD # 17-003, "Strategies to Address the Opioid Epidemic". We sincerely appreciate the state's commitment to a rigorous evaluation approach of their initiative.

CMS has added the approved SUD evaluation design to the demonstration STCs as part of Attachment C. A copy of the STCs that includes the new attachment is enclosed with this letter. Per 42 CFR 431.424(c), the approved evaluation design may now be posted to the state's Medicaid website within thirty days of CMS approval. CMS will also post the approved evaluation design as a standalone document separate from the STCs on Medicaid.gov.

On May 14, 2019, CMS received Indiana's revised draft HIP evaluation design, which addresses the remaining components of the HIP demonstration, including community engagement. This deliverable was submitted in accordance with the requirements described in STCs #3 and #4 of section XV. The revisions are currently under review by CMS.

We look forward to our continued partnership with you and your team on the Indiana HIP section 1115 demonstration evaluation. If you have any questions, please contact your project officer, Jennifer Maslowski, at Jennifer.Maslowski@cms.hhs.gov.

Sincerely,

Andrea J. Casart
Director
Division of Medicaid Expansion Demonstrations

Enclosure

cc: Ruth Hughes, Deputy Director of Field Operations North

EVALUATION DESIGN PLAN FOR INDIANA'S 1115 SUBSTANCE USE DISORDER (SUD) WAIVER

FINAL DRAFT
MARCH 21, 2019

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SECTION I: GENERAL BACKGROUND INFORMATION

I.A Introduction

Indiana, along with a number of states, is in the midst of a substantial drug abuse epidemic. The magnitude of the epidemic is demonstrated by the following facts:

- Nearly six times as many Hoosiers died from drug overdoses in 2014 as did in 2000, and the number of heroin overdose deaths increased by nearly 25 times between 2000 and 2014.[1]
- In 2014, Indiana had the 16th highest drug overdose death rate in the nation, which represented a statistically significant increase in the rate from 2013.[2]
- Since 2009, more Hoosiers have lost their lives due to a drug overdose than in automobile accidents on state highways.[3]
- The State's Medicaid population has been particularly impacted by the crisis: nearly 100,000 individuals were treated for a diagnosis of substance use disorder in 2016.[4]

As an outgrowth of recommendations made by the State's Taskforce on Drug Enforcement, Treatment, and Prevention, the Family and Social Services Administration (FSSA) requested a waiver from the Centers for Medicare and Medicaid (CMS) under the authority of section 1115(a) of the Social Security Act. The waiver request was to add new evidence-based substance use disorder (SUD) treatment services and to expand access to qualified providers through a waiver of the Institution for Mental Diseases (IMD) exclusion. As proposed, the SUD services would be available to all Medicaid beneficiaries, not just those eligible as a result of the demonstration waiver. The waiver application was submitted on January 31, 2017 and amended on July 20, 2017. CMS subsequently approved the extension request on February 1, 2018 (Project No. 11-W-00296/5). The approved waiver is effective from February 1, 2018 through December 31, 2020 and will provide access to the enhanced SUD benefit package for all Indiana Medicaid recipients. Services will be delivered through fee for service (FFS) and managed care delivery systems.

On February 1, 2018, Indiana also received approval of its SUD Implementation Protocol as required by special terms and conditions (STC) X.10 of the state's section 1115 Health Indiana Plan (HIP)

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[1] INDIANA STATE DEPARTMENT OF HEALTH, INDIANA: SPECIAL EMPHASIS REPORT, DRUG OVERDOSE DEATHS, 1999-2013 (2016), available at http://www.in.gov/isdh/files/2016_SER_Drug_Deaths_Indiana.pdf.

[2] R. Rudd et al., Increases in drug and opioid overdose deaths — United States, 2000–2014, 64(50) MORBIDITY AND MORTALITY WEEKLY REPORT 1378 (2016).

[3] INDIANA STATE DEPARTMENT OF HEALTH, INDIANA: SPECIAL EMPHASIS REPORT, DRUG OVERDOSE DEATHS, 1999-2013 (2015), available at http://www.in.gov/isdh/files/2015_SER_Drug_Deaths_Indiana_Updated.pdf

[4] State of Indiana 1115 SUD Waiver Implementation Plan, page 4, available at https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/in/Healthy-Indiana-Plan-2/in-healthy-indiana-plan-support-20-sud-implementation-prtcl-appvl-02012018.pdf

demonstration. As set forth in the Implementation Plan, Indiana is aligning the six goals for the SUD waiver component with the milestones outlined by CMS as follows:[5]

1. Increased rates of identification, initiation, and engagement in treatment;
2. Increased adherence to and retention in treatment;
3. Reductions in overdose deaths, particularly those due to opioids;
4. Reduced utilization of emergency departments and inpatient settings for treatment where the utilization is preventable or medically inappropriate through improved access to other continuum of care services;
5. Fewer readmissions to the same or higher level of care where the readmission is preventable or medically inappropriate; and
6. Improved access to care for physical health conditions among beneficiaries.

To accomplish these six goals, Indiana Medicaid is focusing on the three following areas[6]:

- Expanded SUD treatment options for as many of its members as possible;
- Stronger, evidence-based certification standards for its SUD providers, particularly its residential addiction providers; and
- Consistency with prior authorization criteria and determinations among its health plans.

In support of these focus areas, Indiana Medicaid and CMS identified six key milestones, as described in their approved Implementation and Monitoring Plan, which include:[7].

1. Access to critical levels of care for SUD treatment;
2. Use of evidence-based SUD-specific patient placement criteria; prior-authorization, providers, payers; matching need to capacity
3. Use of nationally recognized SUD-specific program standards to set provider qualifications for residential treatment facilities;
4. Sufficient provider capacity at critical levels of care, including medication assisted treatment for opioid use disorder (OUD);
5. Implementation of comprehensive treatment and prevention strategies to address opioid abuse and OUD; and
6. Improved care coordination and transition between levels of care.

[5] State Medicaid Director Letter #17-003 RE: Strategies to Address the Opioid Epidemic, November 1, 2017, available at https://www.medicaid.gov/federal-policy-guidance/downloads/smd17003.pdf

[6] Indiana 1115 SUD Waiver Implementation Plan, Updated January 2018, page 4, available at https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/in/Healthy-Indiana-Plan-2/in-healthy-indiana-plan-support-20-sud-implementation-prtcl-appvl-02012018.pdf

[7] Indiana 1115 SUD Waiver Implementation Plan, Updated January 2018, pages 4 – 30, available at https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/in/Healthy-Indiana-Plan-2/in-healthy-indiana-plan-support-20-sud-implementation-prtcl-appvl-02012018.pdf

I.B Indiana Medicaid's Six Milestones

A detailed description of activities related to each milestone are below.

1. Improve access to critical levels of care for SUD treatment

- Indiana will align current and expanded or new services along the American Society of Addiction Medicine (ASAM) level of care continuum.
- See Figure 1 for a summary of the ASAM levels of care and Figure 2 for a summary of the key SUD waiver policy changes to improve access, including the timing for implementation and populations impacted, by ASAM level of care.

2. Use of evidence-based SUD-specific patient placement criteria

- Patient Assessment
  - Individuals seeking treatment will be required to undergo a psychosocial assessment that will be used to develop a treatment plan.
  - Providers will be required to submit assessments that address the six dimensions of ASAM patient placement criteria which will be critical in determining the appropriate level of care.
- Utilization Management
  - ASAM levels 2 and above will require prior authorization through either the fee-for-service vendor or one of the managed care entities (MCEs).
  - A single prior authorization form will be developed to assist providers in requesting approval for the most appropriate level of care.

3. Use of nationally recognized SUD-specific program standards for residential treatment

- Develop new administrative rules that align residential facility certification with ASAM patient placement criteria for levels 3.1 and 3.5.
- Require residential facilities to offer medication assisted treatment (MAT) either on-site or through facilitated access off-site.

4. Sufficient provider capacity at critical levels of care

- Pursue stronger data analytics around provider capacity by creating reporting by provider specialty and ASAM level of care.
- Complete an assessment of ASAM providers and services, including availability of MAT.
- Create a new provider specialty for residential addictions facilities, and consider adding additional provider specialties to account for more mid-level practitioners.

5. Implementation of comprehensive treatment and prevention strategies to address opioid abuse

- Governor's Task Force on Drug Enforcement, Treatment and Prevention
  - Established on September 1, 2015 to identify best practices and informed recommendations to policy makers.
  - Membership included the following: General Assembly; Governor's Office; State Department of Health; Department of Corrections; Department of Child Services; Family and Social Services Administration; and other organizations and associations.
  - Task force concluded its work on December 5, 2016, and issued a final report detailing findings and actionable recommendations:

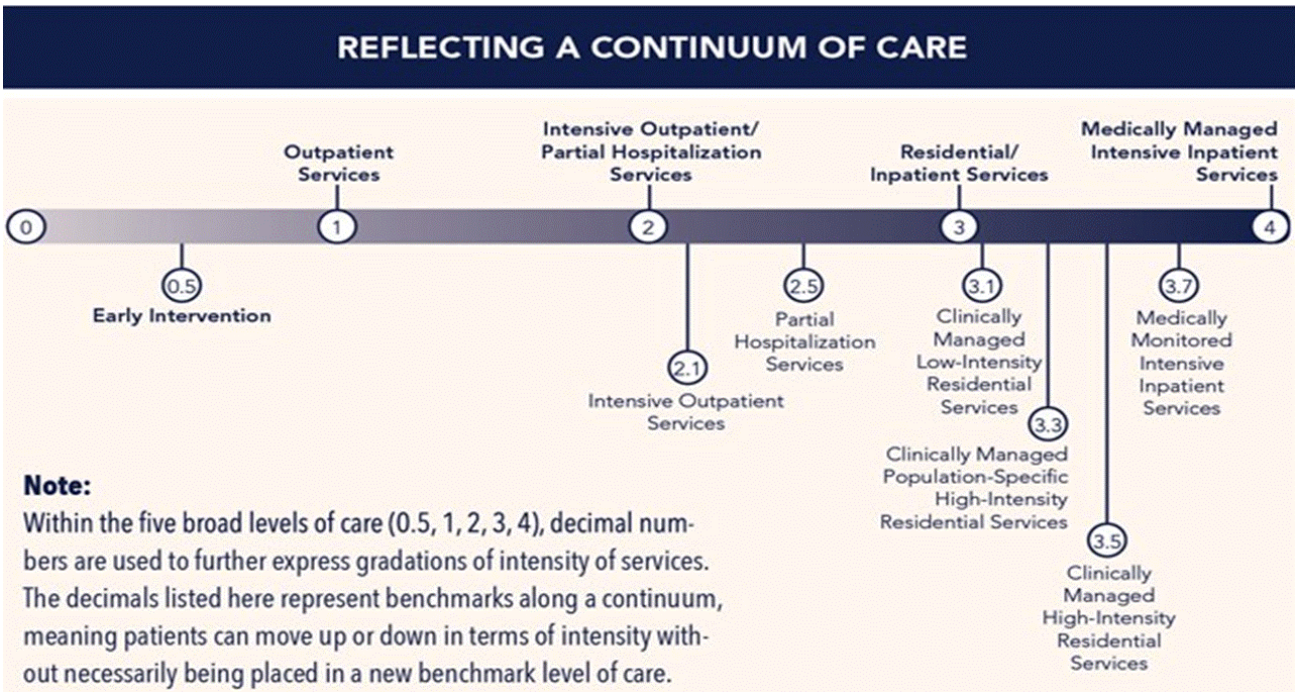
        - 17 recommendations in total;
        - 3 recommendations related to enforcement; and
        - 14 recommendations related to treatment, including pursuit of a Medicaid 1115 Demonstration Waiver for individuals with SUD.
- Gold Card Program
    - Implemented late 2015.
    - Program allows qualified Medicaid prescribers to be exempt from prior authorization document submission requirements when prescribing buprenorphine and buprenorphine/naloxone.
- Buprenorphine Prior Authorization Criteria
    - Established specific prior authorization criteria for prescribers who are not Gold Card members.
    - Criteria is used by all of the MCEs' pharmacy benefit managers to allow for authorization up to six months at a time, and a 34-day supply at a time per member.
- Indiana Attorney General's Prescription Drug Abuse Prevention Task Force
    - Separate task force created in September 2012.
    - Published a four-year report in December 2016, with many of the same objectives identified by the Governor's Task Force acted upon by this task force.
- Prescribing Guidelines
    - Established standards and protocols (844 IAC 5-6) for physicians prescribing opioid controlled substances for pain management treatment.
    - Indiana Senate Enrolled Act 297 (2016) created clinical practice guidelines for office-based opiate treatment.
    - Indiana Senate Enrolled Act 226 (2017) limited prescription supply to seven days for first time opioid prescriptions for adults and children under age 18.
- Expanded Access to Naloxone
    - Indiana Senate Enrolled Act 406 (2015) expanded access to persons at risk for overdose or any individual who knows someone who may be at risk for overdosing.
    - Indiana Senate Enrolled Act 187 (2016) expanded access to allow any individual to walk into a pharmacy for a prescription of Naloxone without having to first see a prescriber.
- Prescription Drug Monitoring Program
    - On August 24, 2017, Governor Eric Holcomb announced a major statewide initiative to incorporate the State's prescription drug monitoring program (INSPECT) into health care systems' electronic health records.
    - Once fully integrated, practitioners will have a single portal to access information about prescribing and dispensing of a controlled substance.
    - Indiana hopes to have all of its hospitals fully integrated within three years.

<u>6. Improved care coordination and transitions between levels of care</u>

- In addition to current MCE contractual requirements for case management, pursue extending the care settings transitioning from inpatient to include residential treatment facilities.
- Expand access to peer recovery coaches across delivery systems.

Since receiving approval of the SUD waiver, Indiana FSSA has been engaged in implementation activities as shown in Figure 3. Additionally, Indiana FSSA completed the procurement of an independent evaluator to develop the SUD Evaluation Design Plan, as required in STC X.9. Burns & Associates, Inc. (B&A), a health care consulting firm with headquarters in Phoenix, Arizona, was contracted by the FSSA to serve in that capacity and, as such, has led development of the initial draft of the Evaluation Design Plan.

Figure 1. ASAM Levels Reflect a Continuum of Care[8]



[8] State of Indiana 1115 SUD Waiver Implementation Plan, page 5, available at https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/in/Healthy-Indiana-Plan-2/in-healthy-indiana-plan-support-20-sud-implementation-prtcl-appvl-02012018.pdf

Figure 2. Current and Proposed Coverage for Indiana Medicaid, and Implementation Timeline, by ASAM level of care[9]

ASAM Level of Care	Service Title	Description	Current Coverage	Future Coverage	Implementation Timeline
OTP	Opioid Treatment Program	Pharmacological and non-pharmacological treatment in an office-based setting (methadone)	Currently covered for all (as of September 2017)	Continued oversight of new policy	December 31, 2018
0.5	Early Intervention	Services for individuals who are at risk of developing substance-related disorders	Currently covered for all	No change expected	
1	Outpatient Services	Outpatient treatment (usually less than 9 hours a week), including counseling, evaluations, and interventions	Currently covered for all	No change expected	
2.1	Intensive Outpatient Services	9-19 hours of structured programming per week (counseling and education about addiction-related and mental health programs)	Currently MRO-only	Will be covered for all individuals	December 31, 2018
2.5	Partial Hospitalization	20 or more hours of clinically intensive programming per week	Covered for all	No change expected	
3.1	Clinically Managed Low- Intensity Residential	24-hour supportive living environment; at least 5 hours of low-intensity treatment per week	No coverage	Bundled daily rate for residential treatment	March 1, 2018
3.5	Clinically Managed High- Intensity Residential	24-hour living environment, more high-intensity treatment (level 3.7 without intensive medical and nursing component)	No coverage	Bundled daily rate for residential treatment	March 1, 2018
3.7	Medically Monitored Intensive Inpatient	24-hour professionally directed evaluation, observation, medical monitoring, and addiction treatment in an inpatient setting	Covered for all (based on medical necessity)	Align authorization criteria with ASAM	Fall 2018
4	Medically Managed Intensive Inpatient	24-hour inpatient treatment requiring the full resources of an acute care or psychiatric hospital	Covered for all (based on medical necessity)	Align authorization criteria with ASAM	Fall 2018
Sub-Support	Addiction Recovery Management Services	Services to help people overcome personal and environmental obstacles to recovery, assist the newly recovering person into the recovering community, and serve as a personal guide and mentor toward the achievement of goals	No coverage	Covered for all individuals	December 31, 2018
Sub-Support	Supportive Housing Services	Services for individuals who are transitioning or sustaining housing.	No coverage	Explore options for coverage	Begin in 2018

[9] State of Indiana 1115 SUD Waiver Implementation Plan, pages 5-30, available at https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/in/Healthy-Indiana-Plan-2/in-healthy-indiana-plan-support-20-sud-implementation-prtcl-appvl-02012018.pdf

Figure 3. Indiana SUD Waiver Implementation Activities and Timeline[10]

Waiver Goal	Activities	Implementation Timeline
Improve access to critical levels of care for SUD treatment	Pursue Indiana Administrative Code (IAC) change for coverage and reimbursement of OTPs	Will be filed by December 31, 2018
	Pursue IAC amendments to Mental Health Services Rule for outpatient services	Will be filed by December 31, 2018
	Pursue IAC and SPA amendments to move IOT coverage from MRO to State Plan	IAC will be filed by December 31, 2018. SPA amendment filed by June 30, 2018.
	Pursue amendment to 1915(b)(4) waiver	Will be filed by June 30, 2018
	Make necessary systems changes to CoreMMIS related to IOT coverage change	Will be completed by June 30, 2018
	Develop provider communication over new IOT benefits	Contingent upon approval of SPA (formal notification will be delivered at least 30 days prior to launch)
	Make necessary system changes to CoreMMIS to enroll residential addiction facilities and to reimburse for residential treatment	Will be completed by March 1, 2018
	Develop provider communication over new residential treatment facility benefits	Ongoing as part of roll-out; formal communication will be released with at least 30
	Determine final action and necessary system changes to CoreMMIS to allow reimbursement for inpatient SUD stays on a per diem basis	Fall 2018
	Develop provider communication over changes in reimbursement structure	Ongoing as part of roll-out; formal communication will be released with at least 30 days-notice ahead of launch
	Make necessary system changes to allow reimbursement for Addiction Recovery Management	Spring 2018
	Pursue State Plan Amendment (SPA) to add coverage and reimbursement of services. Coverage of services will begin upon approval of SPA	Spring 2018
	Pursue IAC changes to add coverage of Addiction Recovery Management Services	Will be filed by December 31, 2018
	Develop provider communication over new addiction recovery management benefits	Ongoing as part of roll-out; formal communication will be released with at least 30 days-notice ahead of launch
Use of evidence-based SUD-specific patient placement criteria	Provider education on ASAM Criteria	Ongoing throughout 2018
	Development of standard prior authorization SUD treatment form	Will be completed by July 1, 2018
	Review contracts and pursue amendments where necessary	Will be filed by July 1, 2018
	Review CANS/ANSA for alignment with ASAM Criteria	Will be completed by December 31, 2018
Use of nationally recognized SUD-specific program standards for residential treatment	Finalize process for provisional ASAM designation	Will be completed by December 31, 2017
	Insert permanent certification language in Indiana Administrative Code	Will be filed by December 31, 2018
Sufficient provider capacity at critical levels of care	Create new provider specialty for residential addictions facilities	Will be completed by March 1, 2018
	Data reporting by provider specialty and ASAM level of care	Will be completed by March 31, 2018
	Assessment of ASAM providers and services	Will be completed by December 31, 2018
Implementation of comprehensive treatment and prevention strategies to address opioid abuse	Consider options for emergency responder reimbursement of naloxone	Will be completed in early 2018

[10] State of Indiana 1115 SUD Waiver Implementation Plan, pages 5-30, available at https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/in/Healthy-Indiana-Plan-2/in-healthy-indiana-plan-support-20-sud-implementation-prtcl-appvl-02012018.pdf

SECTION II: EVALUATION QUESTIONS AND HYPOTHESES

II.A Defining Relationships: Aims, Primary Drivers, and Secondary Drivers

B&A examined the relationships between the CMS goals and Indiana Medicaid-delineated interventions included in the 1115 waiver and approved Implementation Plan. As part of the examination of the relationships between goals and the interventions, B&A constructed two driver diagrams identifying primary and secondary drivers of two principle aims: 1) reducing overdose death; and 2) reducing costs. The driver diagrams are summarized in Figure 4 and Figure 5 on the following two pages of the Evaluation Design Plan.

B&A chose overdose deaths as the first aim because it is a measurable health outcome. CMS goals related to improved quality of care were determined to all have the potential to contribute to a reduction in overdose deaths and therefore are included as primary drivers. And in turn, the specific actions described in the implementation plan, which would be designed to improve these measures of quality of care, were considered as secondary drivers.

Reductions in per capita costs of the SUD population is the second defined aim based on CMS interest on whether the investments in SUD services made as part of the waiver, result in demonstrable reductions in non-SUD services spending. Similar to the approach above, upon examination, B&A identified relationships between goals related to improving physical health and reductions in the use of acute care services as the key primary drivers of achieving a reduction in overall spending, net of SUD investments.

In order to translate these aims, and primary and secondary drivers into measurable results, we compared these items against the measures included in the Monitoring Plan and identified whether new measures may be needed. B&A found that existing, nationally recognized measures were available for the aims and primary drivers; moreover, the specifications and data sources were already described as part of Indiana Medicaid's CMS-approved Monitoring Plan. The one exception is that B&A will add two "potentially preventable" measures. To fill gaps in measuring secondary drivers, B&A added custom measures where needed. These measures, in the post-waiver period, will be used as targets such that performance in the post-waiver period will be considered positive should changes occur in the post- versus pre- waiver period.

A more detailed description of the data, measures and analysis to be used are described in Section III. Methodology.

Figure 4. Driver Diagram 1.1 Target Health Outcome: Reductions in the Overdose Rate

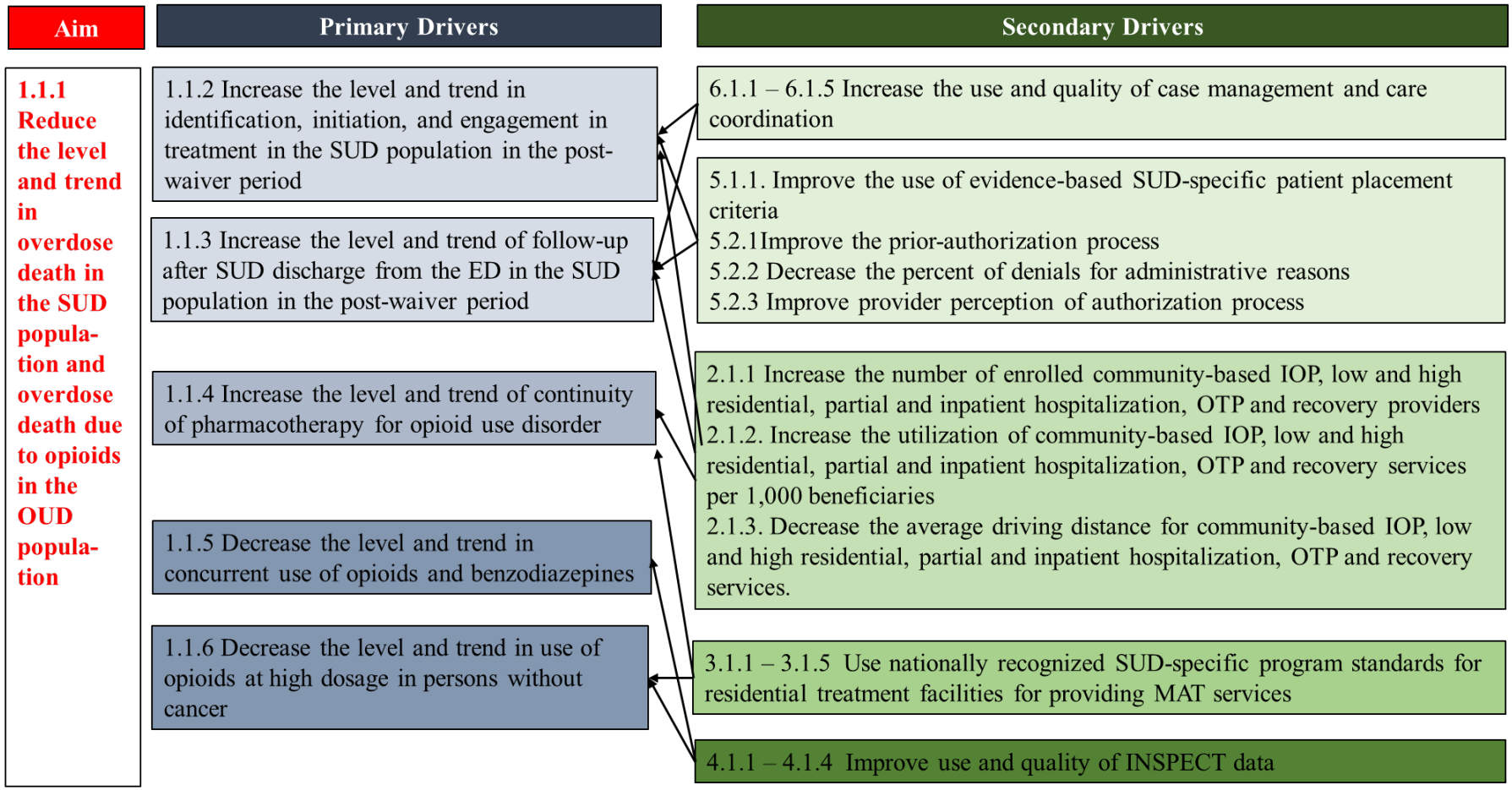
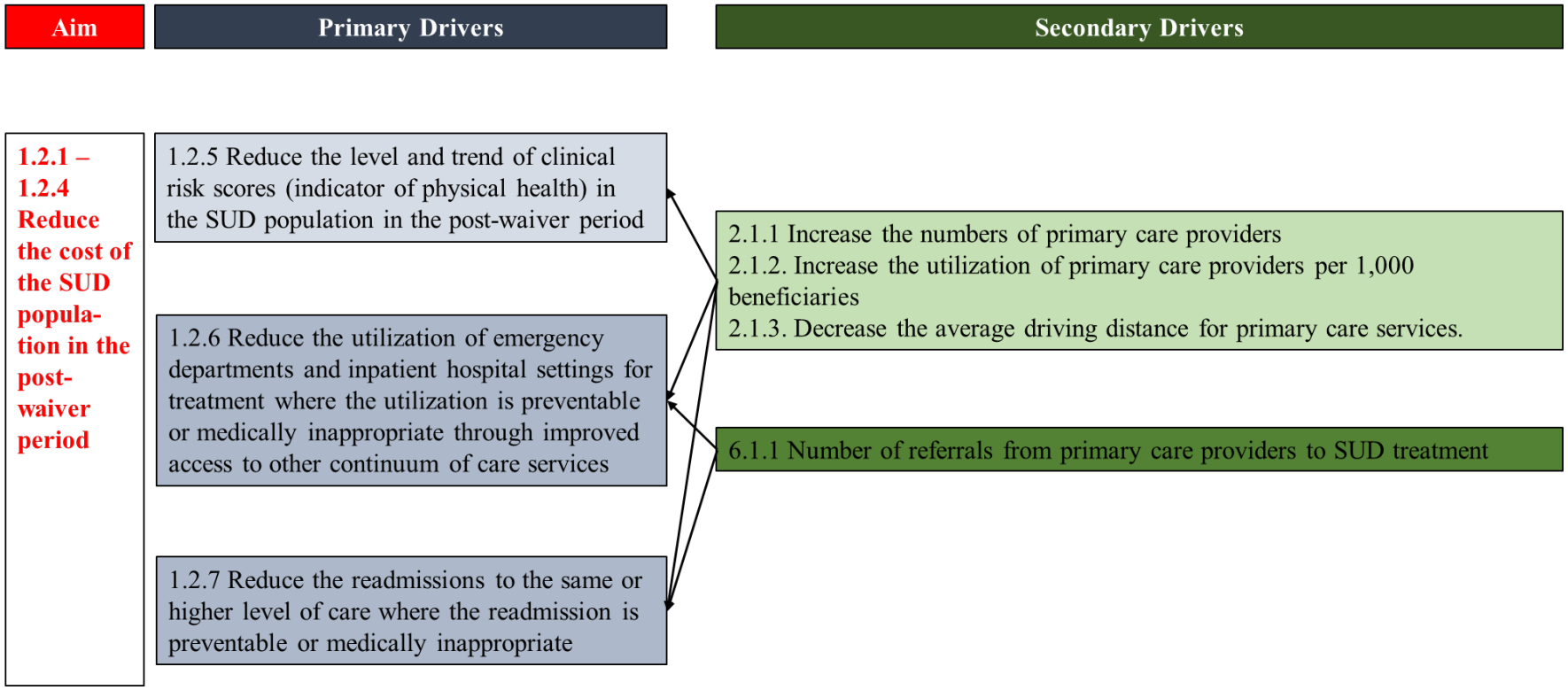


Figure 5. Driver Diagram 1.2 Target Health Outcome: Reductions in Per Capita Cost



II.B Hypotheses (H) and Research Questions (Q)

Aims and Primary Drivers

The identified aims, primary and secondary drivers were converted into a series of hypotheses (H) and research questions (Q); and the latter each assigned measures and targeted analytic methodology, described in detail in Section III. Methodology.

Hypothesis 1.1 and 1.2 focus on the aims and primary drivers depicted in the revised driver diagrams. These are the targets for testing using interrupted time series (ITS) as described in Section III. Methodology. The two aims and eight primary drivers will be tested in order to detect statistically significant changes in the pre- and post-waiver period.

The hypotheses and research questions specific to the aims and primary drivers include:

H 1.1 Key health outcomes improve in the SUD population in the post-waiver period.

- Q 1.1.1 Does the level and trend of overdose deaths and overdose due to opioids decrease among the SUD population in the post-waiver period?
- Q 1.1.2 Does the level and trend of initiation and engagement in treatment increase in the SUD population in the post waiver period?
- Q 1.1.3 Does the level and trend of follow-up after discharge from the Emergency Department (ED) for SUD increase among the SUD population in the post waiver period?
- Q 1.1.4 Does the level and trend in continuity of pharmacotherapy for opioid use disorder increase among the OUD population in the post waiver period?
- Q 1.1.5 Does the level and trend in concurrent use of opioids and benzodiazepines decrease in the OUD population in the post waiver period?
- Q 1.1.6 Does the level and trend in the rate of use of opioids at high dosage in persons without cancer decrease in the post waiver period?

H 1.2 Costs of care decreases in the SUD population in the post waiver period.

- Q 1.2.1 Does the level and trend in overall spending for the SUD population decrease in the post waiver period?
- Q 1.2.2 Does the level and trend in SUD service spending for the SUD population increase in the post waiver period?
- Q 1.2.3 Does the level and trend in non-SUD service spending for the SUD population decrease in the post waiver period?
- Q 1.2.4 Does the level and trend in the percentage of SUD facilities who report they accept Medicaid as a payer increase in the post waiver period?
- Q 1.2.5 Does the level and trend in Clinical Risk Group (CRG) risk scores decrease among the SUD population in the post waiver period?
- Q 1.2.6 Does the level and trend in acute utilization for SUD, potentially preventable emergency department or potentially preventable hospital readmissions decrease in the SUD population in the post waiver period?

Secondary Drivers

Hypotheses 2.1 through 6.1 focus on the secondary drivers as depicted in the revised driver diagram and are organized to be consistent with Indiana Medicaid's CMS-approved Implementation Plan. Unlike those aims and primary drivers in Hypothesis 1.1 and 1.2, the secondary drivers are targets for continuous monitoring and quality improvement, and require information beyond what is available in claims or other public data sets, nationally recognized measures, and thus, performance will be assessed using a set of mixed methods to evaluate progress on the secondary drivers. Where possible, measures will be incorporated into a reporting dashboard of the pre- and the to-date post-waiver periods and reported on a quarterly basis, with a refresh every six months. A summary of methods is detailed in Section III. Methodology.

The hypotheses and research questions specific to the secondary drivers include:

H 2.1 Access to care improved in the SUD population in the post-waiver period.

- Q 2.1.1. Does the level and trend in the number of SUD and primary care providers and the number of providers per capita in the SUD population increase in the post waiver period for each ASAM level of care?
- Q 2.1.2 Does the utilization per 1,000 of SUD services and primary care in the SUD population increase in the post waiver period for each ASAM level of care?
- Q 2.1.3 Does the average driving distance for SUD services and primary care decrease in the SUD population in the post waiver period for each ASAM level of care?

H 3.1 Implementing residential treatment facility provider certification requirements based on ASAM level 3.1 and 3.5 criteria will improve provision of care.

- Q 3.1.1 Does provider certification shift from resident and facility-based criteria to treatment-based certification criteria using ASAM level of care over the length of the waiver?
- Q 3.1.2 Does the ability to measure utilization by ASAM facility level improve program monitoring?
- Q 3.1.3 Does provider awareness and use of ASAM Patient Placement Criteria increase over the length of the waiver?
- Q 3.1.4 Do providers offer medication-assisted treatment (MAT)?
- Q 3.1.5 Do residential facilities not currently enrolled in Indiana Medicaid have the opportunity to meet standards for enrollment leading to increased enrollment of residential addictions facilities?

H 4.1 The quality and use of INSPECT data will improve in the post waiver period.

- Q 4.1.1 Were changes to INSPECT made according to the Implementation Plan?
- Q 4.1.2 Did changes to INSPECT result in meaningful reporting capabilities?
- Q 4.1.3 Has the number of prescribers using INSPECT increased over time?
- Q 4.1.4 Has the volume of inquiries into the INSPECT database increased over time?

H 5.1 The Child and Adolescent Needs and Strengths (CANS) and Adult Needs and Strengths Assessment (ANSA) tools are being used to place beneficiaries in ASAM levels of care.

- Q 5.1.1 Are clinical criteria for authorization review for services delivered to beneficiaries with SUD being applied consistently across Indiana's Health Coverage Programs (Hoosier Healthwise, Healthy Indiana Plan, Hoosier Care Connect, and Traditional Medicaid)?

H 5.2 Prior authorization (PA) requirements do not negatively impact access to residential or inpatient services (ASAM 3.1, 3.5 and 4.0).

- Q 5.2.1 Are the rates of prior authorizations (PAs) submitted and PA requests that are denied in the SUD population, controlling for volume, relatively consistent by MCE and over time?
- Q 5.2.2 Are prior authorization (PA) denials predominately for reasons directly related to not meeting clinical criteria as opposed to administrative reasons such as lack of information submitted?
- Q 5.2.3 Is provider administrative burden associated with PA requests cited as a perceived barrier to access to care?

H 6.1 Care coordination and transitions between ASAM levels of care will increase in the post-waiver period.

- Q 6.1.1 Does the proportion of beneficiaries receiving ASAM designation who had a claim in that ASAM level within the next two consecutive months following the month of ASAM assignment increase over time?
- Q 6.1.2 Does the proportion of beneficiaries with a SUD diagnosis who are receiving care coordination increase over time?
- Q 6.1. 3 Do Indiana's MCEs facilitate more active engagement in the case/care management process between behavioral health/substance abuse providers and primary care/other physical health providers for their patients with a SUD diagnosis?

SECTION III: METHODOLOGY

III.A Evaluation Design

The evaluation design is a mixed-methods approach, drawing from a range of data sources, measures and analytics to best produce relevant and actionable study findings. B&A tailored the evaluation approach for each research question described in Section II, Evaluation Hypothesis and Research Questions. The evaluation plan reflects a range of data sources, measures and perspectives. It also defines the most appropriate study population and sub-populations, as well as describes the six analytic methods included in the evaluation design.

The six analytic methods proposed for use across the six goals include:

1. single segment interrupted time series (ITS),
2. descriptive statistics (DS),
3. provider surveys (PS)
4. onsite reviews (OR)
5. desk reviews (DR) and,
6. facilitated interviews (FIs) and/or focus groups (FGs).

Figure 6 on the next page presents a chart displaying which method(s) are used for each hypothesis. It also includes a brief description of the indicated methods, as well as the sources of data on which they rely. The six methods are ordered and abbreviated as described in the first sentence of this paragraph.

As described in Section II.B, the first two hypothesis [1.1. and 1.2] and the 12 associated research questions focus on whether the 1115 SUD waiver provision made an impact on key CMS goals (i.e., aims and primary drivers). In order to facilitate evaluation on whether a statistically significant difference between the pre- and post- waiver period can be detected, the data, measures and methods for these research questions will be tested using healthcare claims and enrollment data, nationally recognized measure specifications, and ITS.

For the remainder of the hypotheses (2.1 – 6.1) and the associated research questions, the focus will shift to the secondary drivers. Given these are targets for continuous monitoring and quality improvement, and require information beyond what is available in claims or other public data sets, this section draws upon a set of mixed methods to evaluate progress on the secondary drivers. Where possible, measures will be incorporated into a reporting dashboard of the pre- and the to-date post-waiver periods and reported on a quarterly basis, with refreshes every six months.

Figure 6. Summary of Six Methods by Hypotheses

Hypo-theses	Method						Description
	1	2	3	4	5	6	
	ITS	DS	PS	OR	DR	FI/FG	
1.1 – 1.2	X	X					ITS will be used. Data sources primarily include claims and enrollment data. The National Survey of Substance Abuse Treatment Services (N-SSATS) data will be used in one instance. As part of the ITS model specification, descriptive statistics will be generated and reported as well.
2.1		X					Claims data will be used to compute a set of access to care measures and reported descriptively and stratified by region, managed care plan or fee for service, and by ASAM level.
3.1		X	X	X	X	*X*	An onsite and a desk review, coupled with the residential provider survey will be used.
4.1		X			X	*X*	This study question will be evaluated using a desk review of externally provided descriptive studies on number of INSPECT users and queries.
5.1 – 5.2		X	X	X		*X*	Onsite reviews will be used to assess the adoption of ANSA and assignment to ASAM by MCEs and FFS. MCE and FFS-supplied data will be used to review prior authorizations for residential and inpatient hospital levels of care. This summary will include: the rate of prior authorization, the rate of prior authorization denials, and the frequency of authorization denial reason code by MCE. A residential and inpatient provider survey will be used to collect data on overall provider perceptions as well as information specific to prior authorization and adoption of ANSA criteria.
6.1		X	X	X		*X*	Claims data and MCE and FFS-supplied care coordination data will be used to calculate descriptive statistics. A cross-sectional provider survey and an onsite review of MCEs and the OMP will also be used to evaluate care coordination activities.

ITS = Interrupted Time Series; DS = Descriptive Statistics; PS = Provider Survey; OR = Onsite Review; DR = Desk Review; FI/FG = Facilitated Interviews and/or Focus Groups

Italics indicate the method will be used "as needed"

III.B Target and Comparison Populations

Target Population

The target population is any Indiana Medicaid beneficiary with Substance Use Disorder (SUD) in the study period. B&A will use the approved specification, described in the CMS-approved Monitoring Plan, for identification of beneficiaries with SUD. Having a positive SUD Indicator Flag will serve as an indicator of exposure to the changes in the waiver. The specification to be used to create the SUD Indicator Flag is included in Attachment D.

While the key study population is the overall SUD population, a standardized set of sub-populations will be identified and examined. B&A will sub-set the SUD population at minimum, by common demographic groups, payer (i.e., MCE or OMPP), and geographic regions. In addition, there are nuances in the 1115 waiver changes, which warrant identification and stratification of the data into a number of sub-populations. See Figure 2 in Section I of the evaluation plan for a summary of the waiver policy changes.

- ASAM Levels: 2.1; 3.1; 3.5; 4; OTP; RS. It is possible that outcomes may differ among the SUD population based on their access to services. B&A will examine the outcomes by those accessing a particular level of care for differences in health outcomes or cost in the post-waiver period compared to the pre-wavier period.

- Risk Scores: Similarly, outcomes may differ among the SUD population for some types of clinically similar groups compared to others. Therefore, B&A will examine outcomes by categorized groups of clinically similar beneficiaries based on the 3M™ Clinical Risk Groups (CRG) to examine whether there are differences in health outcomes or cost among clinically similar groups of SUD beneficiaries.

- ASAM 2.1 Intensive Outpatient Services: coverage is expanding beyond the community-based treatment or Medicaid Rehabilitation Option (MRO); those previously receiving IOP via the MRO option therefore, may not be impacted as much as others not previously eligible for MRO.

- Opioid Use Disorder (OUD): It is likely that those beneficiaries with OUD, compared to those with other types of SUD, may have different health outcomes and access a different mix of services. Therefore, it is possible that the waiver impacts these populations differently and those beneficiaries will be identified and examined as a sub-population. B&A will use the specification for OUD described in the CMS-approved Monitoring Plan.

To fully study the secondary drivers, three surveys will target all identified Indiana Medicaid enrolled providers. In addition, B&A will use Indiana-specific N-SSATS data, which is self-reported provider survey data collected nationally, to explore statewide, multi-payer trends.

The matrices included in Section III.G identify the target population and stratification proposed for each hypothesis and research question.

Comparison Groups

Two ideal comparison groups described in the CMS technical advisory guidance on selection of comparison groups include another state Medicaid population and/or prospectively collected information

prior to the start of the intervention.[11] Specifically, a SUD population with similar demographics, in another state without those waiver flexibilities described in Indiana, would be an ideal comparator. However, identifying whether such a state exists or that data could be obtained given the sensitivity of SUD privacy concerns as it relates to data sharing is outside the scope of the evaluation and therefore not feasible. Similarly, the other example of a control from the design guide is to collect prospective data and to our knowledge, there is no known prospective data collection on which to build baselines.

One exception to this would be for the three reported measures using N-SSATS data, which are collected nationally and reported at a statewide level. In this case, comparator states could be identified and possibly included within the analysis. B&A will compare these trends for up to two other states if desired; the two states will be chosen in consultation with Indiana Medicaid, CMS and other stakeholders.

Given the lack of an available and appropriate comparison group, B&A will use an analytic method which creates a pre- and post- waiver (intervention) group upon which to compare outcomes. See Section III.F for more details on the analytic methods.

III.C Evaluation Period

A pre- and post- wavier period will be defined as three calendar years before and three calendar years after waiver implementation. The waiver period is three years and therefore, the pre-period will also be for three years. The pre-waiver period, therefore, is defined as enrollment or dates of service of January 1, 2015 through December 31, 2017. The post-waiver period is defined as enrollment or dates of service of January 1, 2018 through December 31, 2020. Also, in support of the analytic methods described in Section III.F, the calendar year data will be sub-set into both monthly and quarterly segments such that both the pre- and post- waiver periods will include 12 quarters or 36 months each.

To simplify the analytic plan, B&A is making an assumption about the first month of 2018. Although CMS approved the SUD provisions of Indiana's 1115 waiver in February 2018, not in January 2018, waiver-related activities were moving forward in anticipation of approval and for ease of conducting and describing the analysis, the evaluation period will include the one month of the post-intervention period following submission of the waiver but prior to February 2018 approval.

Similarly, while this is the expected post-evaluation period, modifications may be warranted to better reflect differences in the time period upon which one would expect to see a change in outcome resulting from waiver activities. At this time, there was little data or similar studies on which to base specific alternatives to the proposed post-evaluation period. B&A will therefore, examine time series data in order to identify whether the post-evaluation period should be delayed. For example, if review of the data shows a distinctive change in the third quarter of 2018, the post-period would be adjusted such that the first and second quarter data would not be considered in the interrupted time series analysis described in Section III.F.

III.D Evaluation Measures

The measures included in the evaluation plan directly relate to the aims, primary and secondary drivers described in Section II. The measures fall into three primary domains: quality, access and financial. All

[11] Comparison Group Evaluation Design. https://www.medicaid.gov/medicaid/section-1115-demo/downloads/evaluation-reports/comparison-grp-eval-dsgn.pdf.

the measures in Indiana's existing Monitoring Plan are included as well as additional measures including average driving distance, potentially preventable emergency department visits and hospital readmissions.

Figure 7 summarizes the list of measures included in the evaluation plan. A comprehensive summary of measures, which includes measure stewards as well as a description of numerators and denominators can be found in the detailed matrices in Section III.G.

Figure 7. List of Measures by Domain

Quality

- Potentially Preventable Emergency Department Visits
- Potentially Preventable Re-Admissions
- Initiation and Engagement of Alcohol and Other Drug (AOD) Dependence Treatment
- Follow-Up After Discharge from the ED for Alcohol or Other Drug Dependence
- Use of Opioids at High Dosage in Persons Without Cancer
- Concurrent Use of Opioids and Benzodiazepines
- Continuity of Pharmacotherapy for Opioid Use Disorder
- Emergency Department Utilization for SUD Per Member Month
- Inpatient Admissions for SUD Per Member Month
- Readmissions for SUD
- Overdose Deaths
- Opioid Overdose Deaths
- Average Clinical Risk Group (CRG) Score

Access

- Utilization of ASAM-specific Services per 1,000
- Count of ASAM-specific Providers
- Average Driving Distance for ASAM-specific Services
- Number of Prior Authorizations
- Number and Reason for Denial of Prior Authorization

Financial

- Total costs
- Total federal costs
- SUD-IMD
- SUD-other
- Non-SUD
- Outpatient costs – non ED
- Outpatient costs – ED
- Inpatient costs
- Pharmacy costs
- Long-term care costs

III.E Data Sources

As described in section III.A, Evaluation Design, B&A will use existing secondary data sources as well as collect primary data. The evaluation design relies most heavily on the use of Indiana Medicaid administrative data, i.e., enrollment, claims and encounter data. Supplemental administrative data, such as prior approval denials and authorizations, will also be incorporated. Primary data will be limited and include data created by surveys, desk review and facilitated interview instruments. A brief description of these data and their strengths and weaknesses are below.

Indiana Medicaid Administrative Data

Claims and encounters with dates of service (DOS) from January 1, 2015 – December 31, 2020 will be collected from the OMPP Enterprise Data Warehouse (EDW), facilitated by OMPP's EDW vendor, Optum. Managed care encounter data has the same record layout as fee-for-service, and includes variables such as charges and payments at the header and line level. Payment data for MCE encounters represents actual payments made to providers, including SUD and related services payments. Three of the four MCEs in Indiana were contracted through the entire study period, with the fourth, CareSource, added effective January 1, 2017.

A data request specific to the 1115 SUD Evaluation Design Plan, will be given to Optum and the data will be delivered to B&A in an agreed upon format. The initial EDW data set will include historical data up to the point of the delivery, with subsequent data sent on a monthly basis. All data delivered to B&A from the OMPP will come directly from the EDW. B&A will leverage all data validation techniques used by Optum before the data is submitted to the EDW. When additional data is deemed necessary for the evaluation, B&A will outreach directly to the MCEs to obtain the necessary data for the evaluation, including running the required data validations. A refresh of the EDW for additional claims with these dates of services will be done at six month and twelve-month intervals; the last query of the EDW will occur on January 1, 2022 for claims with DOS in the study period.

Additional data from the MCEs and the State will be collected on prior authorizations, denials, denial reason codes as well as data on care coordination activities. There could be some data validity or quality issues with these sources as they are not as rigorously collected as claims and encounters data. That being said, we will use a standard quality review and data cleaning protocol in order to validate these data, as well as provide detailed specifications and reporting tools to the MCEs and the state to minimize potential for differences in reporting of the requested ad-hoc data.

Survey and Facilitated Interview Data

N-SSATS

The National Survey of Substance Abuse Treatment Services (N-SSATS) is an annual survey of service providers. This data is reported at a statewide level and therefore, this data does not allow states to isolate demonstration populations. Moreover, the CMS technical guidance states that this survey is known to undercount Medicaid providers. Therefore, this data is used as supplement and will be used to review for descriptive trends over time.

Provider Survey or Interview Guides

B&A will construct standardized instruments in order to create primary data. The instruments will be provided to CMS for their feedback in advance of fielding. The instruments will be created after doing preliminary desk reviews and analysis, and therefore, are not included in the evaluation plan. It is

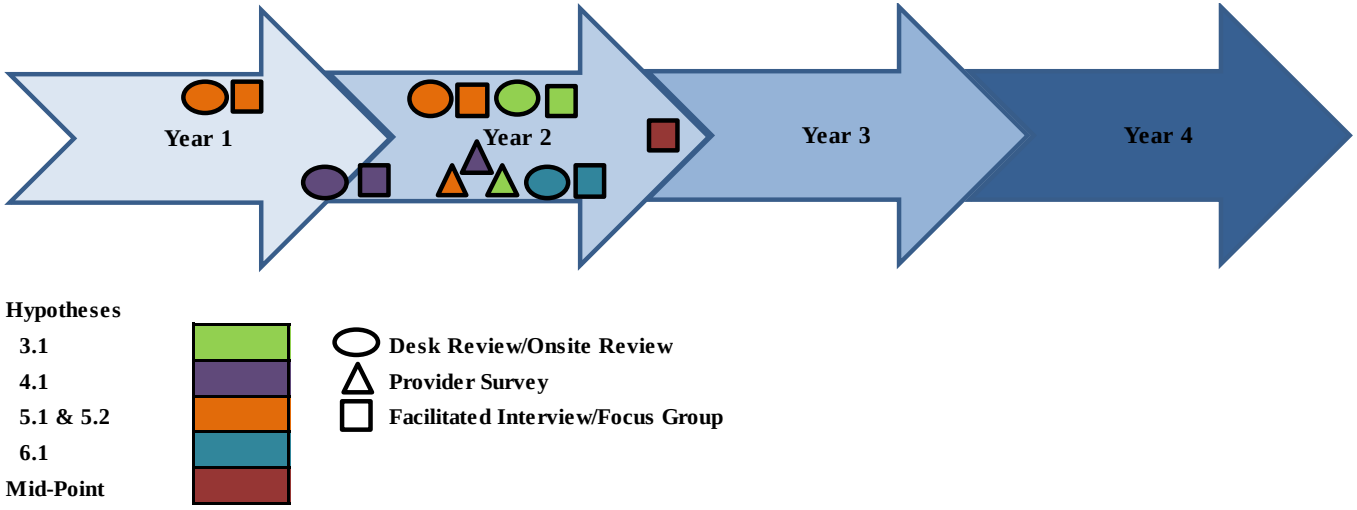
anticipated that once the survey instruments are approved by CMS, they will be fielded for one month before initial results would be tabulated. Where focused interviews are used to collect data, B&A will hold a sufficient number of sessions to collect the required data in accordance with the research question and CMS deliverable. Figure 8 contains the proposed primary data collection activities by source, year, and hypotheses. Figure 9 demonstrates the proposed primary data collection timeline by type, year, and hypotheses.

Figure 8. Proposed Primary Data Collection Activities, by Source, Year and Hypotheses

		Desk / Onsite Review			Survey	Facilitated Interviews / Focus Groups			
Hypotheses	Source	MCEs	CMCS	State Agencies	Providers	Beneficiaries	Providers	CMCS	MCEs
	Contract Year 1								
	3.1	X		X					
	4.1			X					
	5.1 and 5.2	X	X	X				X	X
	6.1								
	Contract Year 2								
	3.1				X		X		
	4.1				X		X		
	5.1 and 5.2	X	X	X	X			X	X
	6.1	X		X			X		X
Mid-Point Assessment						X	X		X

*** Years correspond to B&A contract, and run June 1 through May 30. Year 1 began in 2018.**

Figure 9. Proposed Primary Data Collection Timeline, by Type, Year and Hypotheses



*** Years correspond to B&A contract, and run June 1 through May 30. Year 1 began in 2018.**

III.F Analytic Methods

Figure 6 in Section III.A, Evaluation Design, depicts the six analytic methods to be used in the analysis. A detailed review of each are included in this section.

Method 1: Interrupted Time Series (ITS)

Interrupted time series (ITS) is a quasi-experimental method used to evaluate health interventions and policy changes when randomized control trials (RTC) are not feasible or appropriate.[12,13,14] As it would not be ethical or consistent with Medicaid policy to withhold services resulting from waiver changes from a sub-set of SUD beneficiaries for purposes of evaluation, an RTC is therefore, not possible. Per CMS technical guidance, the ITS is the preferred alternative approach to RTC in the absence of an available, adequate comparison group. And finally, the ITS method is particularly suited for interventions introduced at the population level which have a clearly defined time period and targeted health outcomes.[15,16 ,17]

An ITS analysis relies on a continuous sequence of observations on a population taken at equal intervals over time in which an underlying trend is "interrupted" by an intervention. In this evaluation, the waiver is the intervention and it occurs at a known point in time. The trend in the post-waiver is compared against the expected trend in the absence of the intervention.

While there are no fixed limits regarding the number of data points because statistical power depends on a number of factors like variability of the data and seasonality, it is likely that a small number of observations paired with small expected effects may be underpowered.[18] The expected change in many outcomes included in the evaluation are likely to be small and therefore, B&A will use 72 monthly observations where possible and 24 quarterly observations where monthly are not deemed reliable.

In order to determine whether monthly or quarterly observations will be created, a reliability threshold of having a denominator of a minimum number of 100 observations at the monthly or quarterly level will be used. If quarterly reporting is not deemed reliable under this threshold, the measure and/or stratification will not be tested using interrupted time series and instead, these measures will be computed using calendar year data in the pre- and post-period and reported descriptively.

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[12] Bonell CP, Hargreaves J, Cousens S et al.. Alternatives to randomisation in the evaluation of public health interventions: Design challenges and solutions. J Epidemiol Community Health 2009;65:582-87.

[13] Victora CG , Habicht J-P, Bryce J. Evidence-based public health: moving beyond randomized trials. Am J Public Health 2004;94:400–05.

[14] Campbell M , Fitzpatrick R, Haines A, Kinmonth AL, Sandercock P, Spiegelhalter D, et al. . Framework for design and evaluation of complex interventions to improve health. BMJ 2000;321:694.

[15] Soumerai SB. How do you know which health care effectiveness research you can trust? A guide to study design for the perplexed. Prev Chronic Dis 2015;12:E101.

[16] Wagner AK , Soumerai SB, Zhang F, Ross-Degnan D. Segmented regression analysis of interrupted time series studies in medication use research. J Clin Pharm Ther 2002;27:299-309.

[17] James Lopez Bernal, Steven Cummins, Antonio Gasparrini; Interrupted time series regression for the evaluation of public health interventions: a tutorial, International Journal of Epidemiology, Volume 46, Issue 1, 1 February 2017, Pages 348–355, https://doi.org/10.1093/ije/dyw098

[18] James Lopez Bernal, Steven Cummins, Antonio Gasparrini; Interrupted time series regression for the evaluation of public health interventions: a tutorial, International Journal of Epidemiology, Volume 46, Issue 1, 1 February 2017, Pages 348–355, https://doi.org/10.1093/ije/dyw098

ITS Descriptive Statistics

All demographic, population flags, and measures will be computed and basic descriptive statistics created: mean, median, minimum, maximum, standard deviation. These data will be inspected for identification of anomalies and trends.

To identify underlying trends, seasonal patterns and outliers, scatter plots of each measure will be created and examined. Moreover, each outcome will undergo bivariate comparisons; a Pearson correlation coefficient will be produced for each measure compared to the others as well as each measure in the pre- and post- periods.

Regression Analysis

Wagner et al. described the single segmented regression equation as[19]:

$$\hat{Y}_t = \beta_0 + \beta_1 * time_t + \beta_2 * intervention_t + \beta_3 * time\_after\_intervention_t + e_t$$

Where: Y_t is the outcome

time indicates the number of months or quarters from the start of the series

intervention is a dummy variable taking the values 0 in the pre-intervention segment and 1 in the post-intervention segment

time_after_intervention is 0 in the pre-intervention segment and counts the quarters in the post-intervention segment at time t

β_0 estimates the base level of the outcome at the beginning of the series

β_1 estimates the base trend, i.e. the change in outcome in the pre-intervention segment

β_2 estimates the change in level from the pre- to post-intervention segment

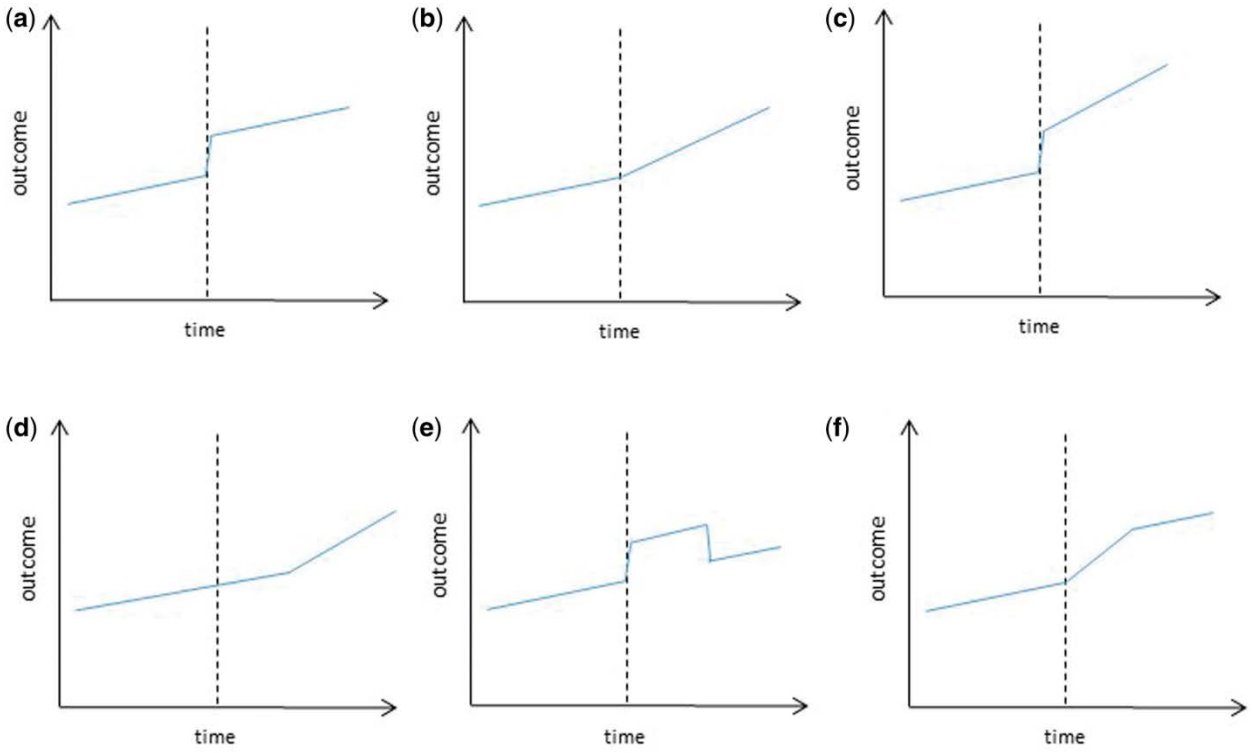
β_3 estimates the change in trend in the post-intervention segment

e_t estimates the error

Visualization and interpretation will be done as depicted in the Figure 10. Each outcome will be assessed for one of the following types of relationships in the pre- and post- wavier period: (a) Level change; (b) Slope change; (c) Level and slope change; (d) Slope change following a lag; (e) Temporary level change; (f) Temporary slope change leading to a level change.

[19] Wagner AK , Soumerai SB, Zhang F, Ross-Degnan D. Segmented regression analysis of interrupted time series studies in medication use research. J Clin Pharm Ther 2002;27:299-309.

Figure 10. Illustration of Potential ITS Relationships[20]



Seasonality and Autocorrelation

One strength of the ITS approach is that it is less sensitive to typical confounding variables which remain fairly constant such as population age or socio-economic status as these changes relatively slowly over time. However, ITS may be sensitive to seasonality. To account for seasonality in the data, the same time period, measured in months or quarters, will be used in the pre- and post-waiver period. Should it be necessary, a dummy variable can be added to the model to account for the month or quarter of each observation thereby controlling for the seasonal impact.

An assumption of linear regression is that errors are independent. When errors are not independent, as is often the case for time series data, alternative methods may be warranted. To test for the independence, B&A will review a residual time series plot and/or autocorrelation plots of the residuals. In addition, a Durbin-Watson test will be constructed to detect the presence of autocorrelation. If the Durbin-Watson test statistic value is well below 1.0 or well above 3.0, there is an indication of serial correlation. If autocorrelation is detected, an autoregressive regression model, like the Cochrane-Orcutt model, will be used in lieu of simple linear regression.

Other assumptions of linear regression are that data are linear and that there is constant variance in the errors versus time. Heteroscedasticity will be diagnosed by examining a plot of residuals verses predicted values. If the points are not symmetrically distributed around a horizontal line, with roughly constant

[20] From: Interrupted time series regression for the evaluation of public health interventions: a tutorial Int J Epidemiol. 2016;46(1):348-355. doi:10.1093/ije/dyw098. Int J Epidemiol.

variance, then the data may be nonlinear and transformation of the dependent variable may be warranted. Heteroscedasticity often arises in time series models due to the effects of inflation and/or real compound growth. Some combination of logging and/or deflating may be necessary to stabilize the variance in this case.

For these reasons and in accordance with CMS technical guidance specific to models with cost-based outcomes, B&A will use log costs rather than untransformed costs, as costs are often not normally distributed. For example, many person-months may have zero healthcare spending and other months very large values. To address these issues, B&A will use a two-part model that includes zero costs (logit model) and non-zero costs (generalized linear model).

Controls and Stratification

As described in Section III.B, the regression analysis will be run both on the entire SUD target population and stratified by relevant sub-populations. The sub-population level analysis may reveal waiver effects that would otherwise be masked if only run on the entire SUD population. Similarly, common demographic covariates such as age, gender, and race will be included in these models to the extent they improve the explanatory power of the ITS models.

Method #2: Descriptive Statistics

In order to facilitate ongoing monitoring, all measures will be summarized on an ongoing basis over the course of the waiver. The descriptive statistics will be stratified by ASAM level of care, by MCE and FFS delivery systems, and/or by region where possible. For reporting purposes, the descriptive studies will be subject to determination of a minimum number of beneficiaries in an individual reported cell (i.e., minimum cell size) and subject to blinding if the number falls below this threshold. While a conventional threshold is 10 or fewer observations, given the sensitivity of SUD and the public dissemination of report findings, a higher threshold may be established by B&A upon review of the final data.

Results will primarily be reported in terms of longitudinal descriptive statistics of defined groups of SUD beneficiaries and using regional maps where possible.

Method #3: Provider Surveys (PS)

In order to fill gaps and address questions for which claims-based data is insufficient, one-time, cross-sectional provider surveys will be fielded. The surveys will be sent via an online survey tool. The survey will be sent to 100 percent of targeted providers. The provider groups include residential providers, inpatient providers and those serving patients with SUD who are receiving care coordination.

The surveys will collect anonymous information related to perceptions of barriers, value and efficiency of improvements under the waiver. Dissemination of the survey and efforts to improve response rates will be coordinated with the OMPP and applicable Indiana provider and/or professional associations. The response rate will be clearly stated and considered when evaluating and/or presenting any findings. The survey questions will be presented to CMS in advance of fielding for their feedback and approval.

A detailed overview of each survey along the dimensions of interest to CMS (defining cohort, study period, analytics, etc.) are included for each research question using survey findings in Section III.G.

Method #4: Onsite Reviews (OR)

In order to fill gaps and address questions for which claims-based data and provider surveys are insufficient, a number of onsite reviews are proposed. These onsite reviews will seek to gain insight on nuanced differences in approach, use and effectiveness of different MCE and FSSA approaches to the following topics:

- Adoption of ANSA screening criteria and subsequent ASAM placement
- Credentialing of residential providers
- SUD care coordination activities

The onsite reviews rely on creating a standardized set of questions that will capture information on process, documentation and medical records. The questions may include onsite documentation gathering and data validation related to those topics described above.

In some cases, the onsite reviews will employ a sampling approach whereby a limited number of beneficiaries are selected based on a set of criteria, and internal records specific to those beneficiaries will be reviewed. The sample criteria would be developed to reflect the representativeness with the SUD population served by each MCE, which will help aid in the comparability of the results of the onsite across MCEs. Finally, the same reviewer (or group of reviewers) will be used for all MCE reviews, strengthening inter-reliability.

A detailed overview of each onsite review along the dimensions of interest to CMS (defining cohort, study period, analytics, etc.) are included for each research question using onsite review findings in Section III.G.

Method #5: Desk Reviews (DR)

A limited number of desk reviews will supplement the other study methods included in the evaluation. These reviews will focus on hypotheses which are directed at assessment of process outcomes like avoidance of implementation delays, system changes according to schedules, transparency of policy and rates, and utility of stakeholder tools and analytics. Each desk review will use a questionnaire that asks for the information sought, the documentation reviewed, and the finding. Any gaps in information will also be noted as findings. The evaluator will review publicly available information and/or documentation specifically requested from the OMPP and/or the MCEs.

A detailed overview of each survey along the dimensions of interest to CMS (defining cohort, study period, analytics, etc.) are included for each research question using desk review findings in Section III.G.

Method #6 Facilitated and/or Focus Group Interviews (FI/FG)

As needed, the evaluator will supplement all study methods using facilitated interviews and/or focus groups. Like the onsite reviews, facilitated interviews and focus groups will be done by first creating a standardized questionnaire that will be used to validate or elucidate gaps in information related to findings of any of the study methods. Since these would be done on an ad-hoc basis, no sampling design would be used; however, at minimum, the evaluator will ensure a broad representation of perspectives when doing additional research about a particular topic. An independent focus group facilitator has been engaged by the evaluation team to conduct these focus groups.

III.G Other Additions

Starting on the next page, a matrix summarizing the methods for each hypothesis and research question described in Section III.A – III.F is presented.

1.1 Key health outcomes improve in the SUD population in the post-waiver period.				
Research Question	**Evaluation Measure(s)**	**Study Population**	**Data Sources and Measure Steward**	**Analytic Methods**
1.1.1. Does the level and trend of overdose deaths and overdose due to opioids decrease among the SUD population in the post-waiver period?	• Overdose Deaths • *Opioid Overdoes Deaths* Description The number of overdose deaths per 1,000 Medicaid beneficiaries *Description* *The number of opioid overdose deaths per 1,000 Medicaid beneficiaries* Computed Monthly or Quarterly **if denominator is <100 at this level, compute annual and use for descriptive analysis only*	Numerator 1. Members who died of overdose in month or quarter. Denominator Number of beneficiaries eligible in month or quarter/1000 Age 18 years and older *Numerator* *1. Members who died of overdose due to opioid in month or quarter.* *Denominator* *Number of beneficiaries eligible in month or quarter/1000* *Age* *18 years and older*	OMPP Enterprise Data Warehouse (EDW) Vital Statistics/Indiana State Department of Health (ISDH)	• Interrupted Time Series o Examine whether statistically significant differences exist in the rates of change in overdose deaths in the pre- and post-intervention periods. Pre-intervention Timeframe Monthly or Quarterly CY2015-CY2017 Post-intervention Timeframe Monthly or Quarterly CY2018-CY2020* **refreshed every six months until after six months following run-out.* Stratification Demographics and Geography Clinical Risk Group (CRG) Previous MRO Use MCE and OMPP Opioid Use ASAM Levels [2.1; 3.1; 3.5; 4; OTP; RS]

1.1 Key health outcomes improve in the SUD population in the post-waiver period.				
Research Question	**Evaluation Measure(s)**	**Study Population**	**Data Sources and Measure Steward**	**Analytic Methods**
1.1.2 Does the level and trend of initiation and engagement in treatment increase in the SUD population in the post waiver period?	• Initiation and Engagement of Alcohol and Other Drug (AOD) Dependence Treatment Description Number of Indiana Medicaid members who have initiated treatment through an inpatient AOD admission, outpatient visit, intensive outpatient encounter, or partial hospitalization within 14 days of a diagnosis (or two or more additional services within 30 days of the visit). Computed Monthly or Quarterly **if denominator is <100 at this level, compute annual and use for descriptive analysis only*	Numerator 1. Members who initiated treatment within 14 days of the diagnosis 2. Members who initiated treatment and who had two or more additional services with a diagnosis within 30 days of the initiation visit Denominator Individuals who were diagnosed with alcohol or drug dependency during a visit within the previous rolling 11 months Age 18 years and older	OMPP Enterprise Data Warehouse (EDW) NCQA	• Interrupted Time Series o Examine whether statistically significant differences exist in the rates of change in initiation and engagement in the pre- and post- intervention periods. Pre-intervention Timeframe Monthly or Quarterly CY2015-CY2017 Post-intervention Timeframe Monthly or Quarterly CY2018-CY2020* **refreshed every six months until after six months following run-out.* Stratification Demographics and Geography Clinical Risk Group (CRG) Previous MRO Use MCE and OMPP Opioid Use ASAM Levels [2.1; 3.1; 3.5; 4; OTP; RS]

1.1 Key health outcomes improve in the SUD population in the post-waiver period.				
Research Question	**Evaluation Measure(s)**	**Study Population**	**Data Sources and Measure Steward**	**Analytic Methods**
1.1.3 Does the level and trend of follow-up after discharge from the ED for SUD increase among the SUD population in the post waiver period?	• Follow-Up After Discharge from the Emergency Department for Alcohol or Other Drug (AOD) Dependence <u>Description</u> The percentage of ED visits for members 18 years of age and older with a primary diagnosis of alcohol and other drug (AOD) dependence, who had an outpatient visit, an intensive outpatient encounter, or a partial hospitalization for AOD. Computed Monthly or Quarterly **if denominator is <100 at this level, compute annual and use for descriptive analysis only*	<u>Numerator</u> 1. Members who had a follow-up visit to an ED visit with a SUD indicator within 7 days of discharge within the previous rolling 12 months. 2. Members who had a follow-up visit to and ED visit with a SUD indicator within 30 days of Discharge within the previous rolling 12 months. <u>Denominator</u> Individuals with an ED visit (with SUD indicator) within the previous rolling 12 months <u>Age</u> 18 years and older	OMPP Enterprise Data Warehouse (EDW) NCQA	• Interrupted Time Series o Examine whether statistically significant differences exist in the rates of change in follow up after discharge in the pre- and post- intervention periods. <u>Pre-intervention Timeframe</u> Monthly or Quarterly CY2015-CY2017 <u>Post-intervention Timeframe</u> Monthly or Quarterly CY2018-CY2020* **refreshed every six months until after six months following run-out.* <u>Stratification</u> Demographics and Geography Clinical Risk Group (CRG) Previous MRO Use MCE and OMPP Opioid Use ASAM Levels [2.1; 3.1; 3.5; 4; OTP; RS]

1.1 Key health outcomes improve in the SUD population in the post-waiver period.				
Research Question	**Evaluation Measure(s)**	**Study Population**	**Data Sources and Measure Steward**	**Analytic Methods**
1.1.4 Does the level and trend in continuity of pharmacotherapy for opioid use disorder increase among the OUD population in the post waiver period?	• Continuity of Pharmacotherapy for Opioid Use Disorder Description The percentage of adults (18 through 64) with pharmacotherapy for opioid use disorder who have at least 180 days of continuous treatment. Computed Monthly or Quarterly **if denominator is <100 at this level, compute annual and use for descriptive analysis only*	Numerator Individuals who have had at least 180 days of continuous pharmacotherapy with a medication prescribed for OUD without a gap of more than seven days Denominator Individuals with a diagnosis of opioid use disorder and at least one claim for opioid use disorder medication in the previous rolling 12 months. Age 18 – 64 years and older	OMPP Enterprise Data Warehouse (EDW) RAND	• Interrupted Time Series o Examine whether statistically significant differences exist in the rates of change of continuity of pharmacotherapy for opioid use disorder in the pre- and post-intervention periods. Pre-intervention Timeframe Monthly or Quarterly CY2015-CY2017 Post-intervention Timeframe Monthly or Quarterly CY2018-CY2020* **refreshed every six months until after six months following run-out.* Stratification Demographics and Geography Clinical Risk Group (CRG) Previous MRO Use MCE and OMPP Opioid Use ASAM Levels [2.1; 3.1; 3.5; 4; OTP; RS]

1.1 Key health outcomes improve in the SUD population in the post-waiver period.				
Research Question	**Evaluation Measure(s)**	**Study Population**	**Data Sources and Measure Steward**	**Analytic Methods**
1.1.5 Does the level and trend in concurrent use of opioids and benzodiazepines decrease in the OUD population in the post waiver period?	• Concurrent Use of Opioids and Benzodiazepines Description The percentage of beneficiaries 18 years and older with concurrent use of prescription opioids and benzodiazepines. Computed Quarterly **if denominator is <100 at this level, compute annual and use for descriptive analysis only*	Numerator The number of individuals with: 1. 2 or more prescription claims for any benzodiazepine filled on two or more separate days; AND 2. Concurrent use of opioids and benzodiazepines for 30 or more cumulative days Denominator Any member with two or more prescription claims for opioids filled on at least two separate days, for which the sum of the days supply is >= 15 Age 18 years and older	OMPP Enterprise Data Warehouse (EDW) PQA/CMT –Measure 903	• Interrupted Time Series o Examine whether statistically significant differences exist in the rates of change of concurrent opioid and benzodiazepines in the pre- and post- intervention periods. Pre-intervention Timeframe Quarterly CY2015-CY2017 Post-intervention Timeframe Quarterly CY2018-CY2020* **refreshed every six months until after six months following run-out.* Stratification Demographics and Geography Clinical Risk Group (CRG) Previous MRO Use MCE and OMPP Opioid Use ASAM Levels [2.1; 3.1; 3.5; 4; OTP; RS]

1.1 Key health outcomes improve in the SUD population in the post-waiver period.				
Research Question	**Evaluation Measure(s)**	**Study Population**	**Data Sources and Measure Steward**	**Analytic Methods**
1.1.6 Does the level and trend in the rate of use of opioids at high dosage in persons without cancer decrease in the post waiver period?	• Use of Opioids at High Dosage in Persons Without Cancer Description The proportion (out of 1,000) of beneficiaries without cancer receiving a daily dosage of opioids greater than 120mg morphine equivalent dose (MED) for 90 consecutive days or longer with and without a SUD diagnosis. Computed Quarterly **if denominator is <100 at this level, compute annual and use for descriptive analysis only*	Numerator Any member in the denominator with greater than 120 MME for >= 90 days in the quarter. Denominator Any member with two or more prescription claims for opioids filled on at least two separate days, for which the sum of the days supply is >= 15 in the quarter. Age Ages 18 years and older	OMPP Enterprise Data Warehouse (EDW) PQA, CMT-884	• Interrupted Time Series o Examine whether statistically significant differences exist in the rates of change of the use of opioids at a high dosage in the pre- and post- intervention periods. Pre-intervention Timeframe Quarterly CY2015-CY2017 Post-intervention Timeframe Quarterly CY2018-CY2020* **refreshed every six months until after six months following run-out.* Stratification Demographics and Geography Clinical Risk Group (CRG) Previous MRO Use MCE and OMPP Opioid Use ASAM Levels [2.1; 3.1; 3.5; 4; OTP; RS]

1.2 Costs of care decreases in the SUD population in the post waiver period.				
Research Question	**Evaluation Measure(s)**	**Study Population**	**Data Sources and Measure Steward**	**Analytic Methods**
1.2.1. Does the level and trend in overall spending for the SUD population decrease in the post waiver period?	• Total Spending o Estimated State and Federal Share • Per Capita Spending o Estimated State and Federal Share <u>Description</u> Total spending and per capita total spending broken down by estimated federal and state share using an average FMAP for the study period. Computed Quarterly **if denominator is <100 at this level, compute annual and use for descriptive analysis only*	<u>Numerator</u> All paid claims based on service date for any beneficiary with SUD indicator in month or quarter. Excludes crossovers. <u>Denominator (Per Capita)</u> Number of enrolled beneficiaries in month or quarter <u>Age</u> All ages	OMPP Enterprise Data Warehouse (EDW) B&A	• Interrupted Time Series o Examine whether statistically significant differences exist in the rates of change of total and per capita spending in the pre- and post- intervention periods. <u>Pre-intervention Timeframe</u> Monthly or Quarterly CY2015-CY2017 <u>Post-intervention Timeframe</u> Monthly or Quarterly CY2018-CY2020* **refreshed every six months until after six months following run-out.* <u>Stratification</u> Demographics and Geography Clinical Risk Group (CRG) Previous MRO Use MCE and OMPP Opioid Use ASAM Levels [2.1; 3.1; 3.5; 4; OTP; RS]

1.2 Costs of care decreases in the SUD population in the post waiver period.				
Research Question	**Evaluation Measure(s)**	**Study Population**	**Data Sources and Measure Steward**	**Analytic Methods**
1.2.2 Does the level and trend in SUD service spending for the SUD population increase in the post waiver period?	• Any SUD Spending • SUD Spending in IMDs • Per Capita Any SUD Spending • Per Capita SUD Spending in IMDs <u>Description</u> Any SUD and IMD spending in total and per capita. Computed Monthly or Quarterly **if denominator is <100 at this level, compute annual and use for descriptive analysis only*	<u>Numerator</u> All SUD and IMD paid claims based on service date for any beneficiary with SUD indicator in month or quarter. Excludes crossovers. <u>Denominator (Per Capita)</u> Number of enrolled individuals in month or quarter. <u>Age</u> All ages	OMPP Enterprise Data Warehouse (EDW) B&A	• Interrupted Time Series o Examine whether statistically significant differences exist in the rates of change of total SUD and SUD per capita spending in the pre- and post- intervention periods. <u>Pre-intervention Timeframe</u> Monthly or Quarterly CY2015-CY2017 <u>Post-intervention Timeframe</u> Monthly or Quarterly CY2018-CY2020* **refreshed every six months until after six months following run-out.* <u>Stratification</u> Demographics and Geography Clinical Risk Group (CRG) Previous MRO Use MCE and OMPP Opioid Use ASAM Levels [2.1; 3.1; 3.5; 4; OTP; RS]

1.2 Costs of care decreases in the SUD population in the post waiver period.				
Research Question	**Evaluation Measure(s)**	**Study Population**	**Data Sources and Measure Steward**	**Analytic Methods**
1.2.3. Does the level and trend in non-SUD service spending for the SUD population decrease in the post waiver period?	• Any non-SUD Spending • Per Capita non-SUD Spending o Non-emergency Outpatient o Emergency Department Outpatient o Inpatient o Pharmacy o Long Term Care o Professional Services: Primary versus Specialty o Other <u>Description</u> Any non-SUD spending in total and per capita. Broken down by key categories of services. Computed Monthly or Quarterly **if denominator is <100 at this level, compute annual and use for descriptive analysis only*	<u>Numerator</u> All non-SUD paid claims based on service date for any beneficiary with SUD indicator in month or quarter. Excludes crossovers. <u>Denominator (Per Capita)</u> Number of enrolled individuals in month or quarter. <u>Age</u> All ages	OMPP Enterprise Data Warehouse (EDW) B&A	• Interrupted Time Series o Examine whether statistically significant differences exist in the rates of change of total SUD and SUD per capita spending in the pre- and post- intervention periods. <u>Pre-intervention Timeframe</u> Monthly or Quarterly CY2015-CY2017 <u>Post-intervention Timeframe</u> Monthly or Quarterly CY2018-CY2020* **refreshed every six months until after six months following run-out.* <u>Stratification</u> Demographics and Geography Clinical Risk Group (CRG) Previous MRO Use MCE and OMPP Opioid Use ASAM Levels [2.1; 3.1; 3.5; 4; OTP; RS]

1.2 Costs of care decreases in the SUD population in the post waiver period.				
Research Question	**Evaluation Measure(s)**	**Study Population**	**Data Sources and Measure Steward**	**Analytic Methods**
1.2.4. Does the level and trend in the percentage of SUD facilities who report they accept Medicaid as a payer increase in the post waiver period?	• Proportion of SUD Providers Who Report Accepting Medicaid *If Quarterly reporting not available, this measure will be reported annually and use for descriptive analysis only*	Indiana SUD providers who respond to N-SSATS survey.	National Survey of Substance Abuse Treatment Services (N-SSATS)	• Interrupted Time Series/*Descriptive* o Examine whether statistically significant differences exist in the rates of change of total SUD and SUD per capita spending in the pre- and post- intervention periods. <u>Pre-intervention Timeframe</u> Quarterly or Annually CY2015-CY2017 <u>Post-intervention Timeframe</u> Quarterly or Annually CY2018-CY2020* **refreshed every six months until after six months following run-out.* <u>Stratification</u> N/A

1.2 Costs of care decreases in the SUD population in the post waiver period.				
Research Question	**Evaluation Measure(s)**	**Study Population**	**Data Sources and Measure Steward**	**Analytic Methods**
1.2.5. Does the level and trend in average CRG risk scores decrease among the SUD population in the post-waiver period?	• Average Clinical Risk Group (CRG) Score <u>Description</u> The average CRG score for Medicaid beneficiaries with a SUD diagnosis in the month or quarter. Computed Monthly or Quarterly **if denominator is <100 at this level, compute annual and use for descriptive analysis only*	<u>Numerator</u> Total CRG risk score for members with SUD in month or quarter. <u>Denominator</u> Members with SUD in month or quarter. <u>Age</u> 18 – 64 years and older	OMPP Enterprise Data Warehouse (EDW) 3M/B&A	• Interrupted Time Series o Examine whether statistically significant differences exist in the level and trend in average CRG risk score in the pre- and post- intervention periods. <u>Pre-intervention Timeframe</u> Monthly or Quarterly CY2015-CY2017 <u>Post-intervention Timeframe</u> Monthly or Quarterly CY2018-CY2020* **refreshed every six months until after six months following run-out.* <u>Stratification</u> Demographics and Geography Clinical Risk Group (CRG) Previous MRO Use MCE and OMPP Opioid Use ASAM Levels [2.1; 3.1; 3.5; 4; OTP; RS]

1.2 Costs of care decreases in the SUD population in the post waiver period.				
Research Question	**Evaluation Measure(s)**	**Study Population**	**Data Sources and Measure Steward**	**Analytic Methods**
1.2.6 Does the level and trend in acute utilization for SUD, potentially preventable emergency department or potentially preventable hospital readmissions decrease in the SUD population in the post waiver period?	• PPVs and PPRs Description Rate of potentially preventable emergency department visits (PPVs) and hospital readmissions (PPRs) among Indiana Medicaid members with SUD. • ED, Admission and Readmission per member month Description The total number of emergency department visits, hospital admissions and readmissions for SUD diagnosis in the reporting month (per 1,000 enrolled Medicaid members) in previous three months (separate count for each month). Computed Quarterly **if denominator is <100 at this level, compute annual and use for descriptive analysis only*	Numerator Number of potentially preventable visits and/or readmissions Denominator Individuals who were diagnosed with alcohol or drug dependency during the calendar year. Age 18 – 64 years and older Numerator Number of ED visits, hospital admissions, and readmissions with SUD diagnosis. Denominator Enrolled Medicaid members/1000 Age 18 – 64 years and older	OMPP Enterprise Data Warehouse (EDW) 3M PPV and PPR Software B&A	• Interrupted Time Series o Examine whether statistically significant differences exist in the rates of change in acute utilization in the pre- and post-intervention periods. Pre-intervention Timeframe Quarterly CY2015-CY2017 Post-intervention Timeframe Quarterly CY2018-CY2020* **refreshed every six months until after six months following run-out.* Stratification Demographics and Geography Clinical Risk Group (CRG) Previous MRO Use MCE and OMPP Opioid Use ASAM Levels [2.1; 3.1; 3.5; 4; OTP; RS]

2.1 Access to care improved in the SUD population in the post-waiver period.				
Research Question	**Evaluation Measure(s)**	**Study Population**	**Data Sources and Measure Steward**	**Analytic Methods**
2.1.1. Does the level and trend in the number of SUD and primary care providers and the number of providers per capita in the SUD population increase in the post waiver period for each ASAM level of care?	• Count of ASAM-specific Medicaid enrolled providers • Number of ASAM-specific Medicaid enrolled providers per 1,000 SUD population Computed Quarterly	<u>Numerator</u> Number of providers enrolled as of last day of quarter. <u>Denominator</u> Individuals with SUD as of the last day of the quarter. <u>Age</u> 18 and older	OMPP Enterprise Data Warehouse (EDW)	• Descriptive Statistics o Examine trends in counts of Medicaid-enrolled providers by ASAM level and per capita in the SUD population, MCE and region. <u>Pre-intervention Timeframe</u> Quarterly CY2015-CY2017 <u>Post-intervention Timeframe</u> Quarterly CY2018-CY2020* **refreshed every six months until after six months following run-out.* <u>Stratification</u> Demographics and Geography Clinical Risk Group (CRG) Previous MRO Use MCE and OMPP Opioid Use ASAM Levels [2.1; 3.1; 3.5; 4; OTP; RS]
	• Count of ASAM-specific statewide self-reported provider (N-SSATS)	Indiana SUD providers who respond to N-SSATS survey.	National Survey of Substance Abuse Treatment Services (N-SSATS)	• Descriptive Statistics o Examine changes in statewide trends in counts of providers by ASAM level, MCE and region.

2.1 Access to care improved in the SUD population in the post-waiver period.				
Research Question	**Evaluation Measure(s)**	**Study Population**	**Data Sources and Measure Steward**	**Analytic Methods**
2.1.2 Does the utilization per 1,000 of SUD services and primary care in the SUD population increase in the post waiver period for each ASAM level of care?	• Utilization of ASAM-specific services per 1,000 • Utilization of primary care services per 1,000 Computed Quarterly	<u>Numerator</u> Number of unique SUD and primary care services as of last day of quarter. <u>Denominator</u> Individuals with SUD as of the last day of the quarter. <u>Age</u> 18 and older	OMPP Enterprise Data Warehouse (EDW)	• Descriptive Statistics o Examine trends in utilization of services per 1,000 SUD population by ASAM level, MCE and region. <u>Pre-intervention Timeframe</u> Quarterly CY2015-CY2017 <u>Post-intervention Timeframe</u> Quarterly CY2018-CY2020* **refreshed every six months until after six months following run-out.* <u>Stratification</u> Demographics and Geography Clinical Risk Group (CRG) Previous MRO Use MCE and OMPP Opioid Use ASAM Levels [2.1; 3.1; 3.5; 4; OTP; RS]

2.1 Access to care improved in the SUD population in the post-waiver period.				
Research Question	**Evaluation Measure(s)**	**Study Population**	**Data Sources and Measure Steward**	**Analytic Methods**
2.1.3. Does the average driving distance for SUD services and primary care decrease in the SUD population in the post waiver period for each ASAM level of care?	• Average driving distance for ASAM-specific services • Average driving distance for primary care Computed Quarterly	Numerator Number of unique SUD and primary care services as of last day of quarter. Denominator Individuals with SUD as of the last day of the quarter. Age 18 and older	OMPP Enterprise Data Warehouse (EDW) B&A	• Descriptive Statistics o Examine trends in the average driving distance to SUD and primary care services by ASAM level, MCE and region. Pre-intervention Timeframe Quarterly CY2015-CY2017 Post-intervention Timeframe Quarterly CY2018-CY2020* **refreshed every six months until after six months following run-out.* Stratification Demographics and Geography Clinical Risk Group (CRG) Previous MRO Use MCE and OMPP Opioid Use ASAM Levels [2.1; 3.1; 3.5; 4; OTP; RS]

3.1 Implementing residential treatment facility provider certification requirements based on ASAM level 3.1 and 3.5 criteria will improve provision of care.				
Research Question	**Evaluation Measure(s)**	**Study Population**	**Data Sources and Measure Steward**	**Analytic Methods**
3.1.1. Does provider certification shift from resident and facility-based criteria to treatment-based certification criteria using ASAM level of care over the length of the waiver?	• Document process to phase in and adopt certification criteria based on ASAM level of care • Number of providers pre-waiver • Number of providers certified • Number of providers denied certification and why	OMPP and DMHA certification policies and procedures. MCEs credentialing policies and procedures	Desk Review of OMPP, DMHA, MCE	• Descriptive Statistics o Examine results of process review and measures and develop trend over waiver
3.1.2. Does the ability to measure utilization by ASAM facility level will improve program monitoring?	• Document that ASAM level captured in EDW • Document reports created to track by ASAM level of care and by which metrics • Document use of reports through waiver period to monitor	OMPP and DMHA reporting measures MCEs reporting measures	Desk Review of OMPP, DMHA, MCE	• Descriptive Statistics o Examine results of process review and measures and develop trend over waiver

3.1 Implementing residential treatment facility provider certification requirements based on ASAM level 3.1 and 3.5 criteria will improve provision of care.				
Research Question	**Evaluation Measure(s)**	**Study Population**	**Data Sources and Measure Steward**	**Analytic Methods**
3.1.3. Does provider awareness and use of ASAM Patient Placement Criteria increase over the length of the waiver?	• Document knowledge of criteria • Number of providers using criteria	Residential services providers	Provider Focus Study or Provider Survey* *subject to CMS approval	• Cross-sectional, online, census provider survey. o Examine results of provider focus study or online provider survey and measures and develop trend over waiver
3.1.4. Do providers offer medication-assisted treatment (MAT)?	• Document process to phase in and adopt MAT. • Number of providers pre-waiver • Number of providers offering MAT onsite. • Number of providers offering access to MAT at an affiliated location	Residential services provider	Provider Survey* or Onsite *subject to CMS approval	• Cross-sectional, online, census provider survey. o Examine results of provider focus study or online provider survey and measures and develop trend over waiver

3.1 Implementing residential treatment facility provider certification requirements based on ASAM level 3.1 and 3.5 criteria will improve provision of care.				
Research Question	**Evaluation Measure(s)**	**Study Population**	**Data Sources and Measure Steward**	**Analytic Methods**
3.1.5. Do residential facilities not currently enrolled in Indiana Medicaid have the opportunity to meet standards for enrollment leading to increased enrollment of residential addictions facilities?	• Document process to outreach to unenrolled providers to make them aware of the new enrollment opportunities. • Number of known providers who were not enrolled pre-waiver • Number of providers that enrolled during the waiver period • Number of providers denied enrollment and why	OMPP and DMHA certification policies and procedures. MCEs credentialing policies and procedures	Desk Reviews of OMPP, DMHA, MCE	• Descriptive Statistics o Examine results of process review and measures and develop trend over waiver

4.1 The quality and use of INSPECT data will improve in the post waiver period.				
Research Question	**Evaluation Measure(s)**	**Study Population**	**Data Sources and Measure Steward**	**Analytic Methods**
4.1.1. Were changes to INSPECT made according to the Implementation Plan?	• Number of Changes Implemented as Expected • Number of Changes Implemented, but with less than a year delay • Number of Changes Not Implemented or delayed > 1 year	INSPECT	Desk Review of admin documentation and interview notes	• Desk review of administrative documentation between proposed and actual implementation dates • As needed, conduct supplemental facilitated interviews with OMPP staff, fiscal agent staff, and/or INSPECT users
4.1.2. Did changes to INSPECT result in meaningful reporting capabilities?	• Perceptions of Usefulness of INSPECT Reporting Capabilities • Estimated Frequency of Use • Recommended Improvements	INSPECT	Facilitated Interviews	• Review findings of facilitated interviews with IPLA and Indiana Board of Pharmacy staff. • As needed, conduct supplemental facilitated OMPP interviews with broader group of stakeholders including INSPECT users.
4.1.3. Has the number of prescribers using INSPECT increased over time?	• Number of prescribers using INSPECT	All providers using inspect	INSPECT	• Descriptive Statistics o Review trends in use number of prescribers using INSPECT over time.
4.1.4. Has the volume of inquiries into the INSPECT database increased over time?	• Number of queries against INSPECT	All providers using inspect	INSPECT	• Descriptive Statistics o Review trends in use of querying of INSPECT over time.

5.1 The Child and Adolescent Needs and Strengths (CANS) and Adult Needs and Strengths Assessment (ANSA) tools are being used to place beneficiaries in ASAM levels of care.				
Research Question	**Evaluation Measure(s)**	**Study Population**	**Data Sources and Measure Steward**	**Analytic Methods**
5.1.1. Are clinical criteria for authorization review for services delivered to beneficiaries with SUD being applied consistently across Indiana's Health Coverage Programs (Hoosier Healthwise, Healthy Indiana Plan, Hoosier Care Connect, and Traditional Medicaid)?	• Average turnaround time for authorization decisions • For denied authorizations, the percentage of denials based on application of medical necessity criteria • For denied authorizations, the percentage of denials in which the specific reason/criteria were cited to the requesting provider	MCE and FFS	Onsite Review of MCE and FFS Documentation and System B&A	• Develop standardized data request to the MCEs/OMPP to analyze all authorization records related to SUD services • Develop standardized tool with which to evaluate a sample of authorization records related to SUD services in the field at each MCE and at OMPP • In person interviews with the MCE/OMPP (or its contractor) staff who review authorization requests for SUD services to assess their capacity and training

5.2 Prior authorization (PA) requirements do not negatively impact access to residential or inpatient services (ASAM 3.1, 3.5 and 4.0).				
Research Question	**Evaluation Measure(s)**	**Study Population**	**Data Sources and Measure Steward**	**Analytic Methods**
5.2.1. Are the rates of prior authorizations (PAs) submitted and PA requests that are denied in the SUD population, controlling for volume, relatively consistent by MCE and over time?	• Number of Prior Authorizations (PA) for ASAM 3.1, 3.5 and 4.0 • Number of PA Denials for ASAM 3.1, 3.5 and 4.0 • Rate of Approved and Denied SUD Authorizations for ASAM 3.1, 3.5 and 4.0	Numerator The total number of prior approved and denied authorizations for ASAM 3.1, 3.5 and 4.0 in a calendar year. Denominator Total number of authorizations for ASAM 3.1, 3.5 and 4.0 in a calendar year. Age All ages	OMPP Enterprise Data Warehouse (EDW)/OMPP Data B&A	• Descriptive Statistics o Examine trends in the rate of prior authorizations and denials among stratified populations, over time and by region and MCE.
5.2.2. Are prior authorization denials predominately for reasons directly related to not meeting clinical criteria as opposed to administrative reasons such as lack of information submitted?	• Frequency of Denial Reasons Codes for ASAM 3.1, 3.5 and 4.0 • Percent of Total Denials for ASAM 3.1, 3.5 and 4.0	Numerator Count of denials with each reason for denial for ASAM 3.1, 3.5 and 4.0 in a calendar year. Denominator Total number of denials for ASAM 3.1, 3.5 and 4.0 in a calendar year. Age All ages	OMPP Enterprise Data Warehouse (EDW)/OMPP Data B&A	• Descriptive Statistics o Examine the frequency of denial codes among stratified populations over time and by region and MCE.

5.2 Prior authorization (PA) requirements do not negatively impact access to residential or inpatient services (ASAM 3.1, 3.5 and 4.0).				
Research Question	**Evaluation Measure(s)**	**Study Population**	**Data Sources and Measure Steward**	**Analytic Methods**
5.2.3. Is provider administrative burden associated with PA requests cited as a perceived barrier to access to care?	• Rate of participation in the FSSA Gold Card program (status to reduce burden on authorization requests) • Provider satisfaction rates with the Gold Card application process	Residential and inpatient service providers.	Online Survey	• Cross-sectional, census provider of survey. o Examine rate of growth among participating providers in the Gold Card program o Examine results of point in time survey of provider perceptions

6.1 Care coordination and transitions between ASAM levels of care will increase in the post-waiver period.				
Research Question	**Evaluation Measure(s)**	**Study Population**	**Data Sources and Measure Steward**	**Analytic Methods**
6.1.1. Does the proportion of beneficiaries receiving ASAM designation who had a claim in that ASAM level within the next two consecutive months following the month of ASAM assignment increase over time?	• Rate of beneficiaries who received ASAM service within two months following screening and ASAM designation	<u>Numerator</u> Number of beneficiaries who received an ASAM in a given calendar year and received a service within two months within that ASAM level. <u>Denominator</u> Number of beneficiaries who received each ASAM designation in a calendar year. <u>Age</u> All ages	OMPP Enterprise Data Warehouse (EDW) B&A	• Descriptive Statistics o Examine changes in statewide, regional and payer trends in proportion of beneficiaries with an ASAM designation receiving that level of care within the two following months.

6.1 Care coordination and transitions between ASAM levels of care will increase in the post-waiver period.				
Research Question	**Evaluation Measure(s)**	**Study Population**	**Data Sources and Measure Steward**	**Analytic Methods**
6.1.2. Does the proportion of beneficiaries with a SUD diagnosis who are receiving care coordination increase over time?	• Number of beneficiaries receiving care coordination • Proportion of SUD population receiving care coordination • Percent of all SUD providers reporting using case management (N-SSATS)	Numerator Number of beneficiaries who received care coordination in a calendar year. Denominator Number of beneficiaries with SUD in a calendar year. Age All ages Numerator Number of providers reporting offering case management services. Denominator Number of SUD providers who responded to the survey.	OMPP Enterprise Data Warehouse (EDW) B&A N-SSATS	• Descriptive Statistics o Examine the absolute number of beneficiaries receiving care by MCE over time o Examine the proportion of the SUD population receiving care by ASAM and MCE over time. o Compare Medicaid trends to those reported in all-payer survey. o Stratify SUD and OUD populations if feasible.

6.1 Care coordination and transitions between ASAM levels of care will increase in the post-waiver period.				
Research Question	**Evaluation Measure(s)**	**Study Population**	**Data Sources and Measure Steward**	**Analytic Methods**
6.1.3. Do Indiana's MCEs facilitate more active engagement in the case/care management process between behavioral health/substance abuse providers and primary care/other physical health providers for their patients with a SUD diagnosis?	• Number of care plan meetings between the MCE, primary care and BH/SA providers for patients with a SUD diagnosis • Number of protocols in place for coordination between providers (required by OMPP contract) • Number of referrals from primary care providers for treatment for SUD members • Number of behavioral health provider notifications to the MCE (required by contract)	MCE and OMPP	Onsite Review of MCE and FFS Documentation and Systems	• Descriptive Statistics o Examine trends in reports of count of care plan meetings documented o Examine trends in behavioral health provider reports submitted per SUD member per year o Examine trends in referrals from primary care providers for treatment for SUD

SECTION IV: METHODOLOGICAL LIMITATIONS

There are inherent limitations to both the study design and its specific application to the SUD waiver evaluation. That being said, the proposed design is feasible, and is a rational explanatory framework for evaluating the impact of the SUD waiver on the SUD population. Moreover, to fill gaps left by the limitations of this study design, a limited number of provider surveys, onsite reviews, desk reviews, and facilitated interviews/focus groups are proposed to provide a more holistic and comprehensive evaluation.

Another limitation is the length of time of the evaluation period. It is not expected that a two-year evaluation period, assuming year one is the benchmark period, would be sufficient time to observe changes in all measures of interest. In some cases, the time period may be insufficient to observe descriptive or statically significant differences in outcomes in the SUD population. Therefore, it is expected that not all outcomes included in the study will show a demonstrable change descriptively, although we do expect some process measures to show a change during this time frame.

Moreover, with any study focused on the SUD population and potentially rare outcome measures, such as overdose rates, insufficient statistical power to detect a difference is a concern. For any observational studies, especially if the exposures and the outcomes being assessed are rare, it is difficult to find statistically significant results. It is not unexpected, therefore, that many of the outcome measure sample sizes will be too small to observe statistically significant results.

Related to the issues mentioned above, many of the outcome measures are multi-dimensional and influenced by social determinants of health. While changes under the waiver related to access to care may be one dimension of various outcomes of interest, and may contribute to improvements, it may be difficult to achieve statistically significant findings in the absence of data on other contributing dimensions, like social determinants of health such as housing, employment, and previous incarcerations.

Section V, Special Considerations, will summarize the unique challenges in this study, reemphasizing the need for a mix-methods approach.

SECTION V: SPECIAL METHODOLOGICAL CONSIDERATIONS

Given that the waiver is new, and there are no identified implementation delays, or any other outstanding concerns, the proposed Evaluation Design Plan provides more than adequate rigor in the observational study design, especially when considering the range of supplemental evaluation methods proposed for inclusion. As described in detail in Section IV, Methodological Limitations, the study mitigates known limitations to the extent feasible drawing upon the range of options to fill gaps in the observational study design. Moreover, this Evaluation Design Plan is consistent with, and expands upon, CMS approved 1115 demonstration waiver SUD evaluation plans available on the CMS State Waivers List.[21]

Another special consideration is in the case of residential treatment in IMDs. While the waiver change is stated as "no coverage" to "coverage for all", B&A identified that IMD residential services may have been provided in the pre-waiver period, but these would be funded by100% state funds as opposed to matched federal dollars. Therefore, it is unclear whether a detectable change will be seen related to IMDs specifically, or whether change is created by the availability of new funds to be invested in other waiver services. This nuance will be considered when evaluating the results.

[21] Medicaid State Waivers List can be accessed at: https://www.medicaid.gov/medicaid/section-1115-demo/demonstration-and-waiver-list/index.html

ATTACHMENT A: INDEPENDENT EVALUATOR

Process

On February 8, 2018, the Indiana Department of Administration, on behalf of Indiana Family and Social Services Administration, issued a Request for Proposal (RFP) 18-061 to solicit responses from vendors experienced in performing large-scale health care program evaluations to provide an evaluation of Indiana's 1115 Substance Use Disorder (SUD) Waiver based upon the criteria set forth in the waiver's Special Terms and Conditions as approved by the Centers for Medicare and Medicaid Services (CMS). A total of five vendors submitted proposals. After evaluation, and a request for a best and final offer from respondents, Burns & Associates, Inc. (B&A) was selected to act as the independent evaluator based on scores determined by the state review team on April 23, 2018.

Vendor Qualifications

B&A has served as the evaluator for the Independent Assessment for Indiana's 1915(b) waiver for Hoosier Care Connect and has served as the External Quality Review Organization (EQRO) for Indiana since 2007. B&A has written an External Quality Review (EQR) report each year since that time which has been submitted to CMS. With this experience, the B&A team is very familiar with the Indiana Medicaid program, the managed care entities (MCEs) under contract with the Office of Medicaid Policy and Planning (OMPP), and the unique issues related to SUD treatment. The team that developed the Evaluation Design Plan has also worked on numerous EQRs, including a baseline study on the initiation and engagement of treatment for SUD for Indiana Medicaid as part of the EQR 2015 report.

Assuring Independence

As the State EQRO, B&A has already established its independence as required of all EQROs for this engagement. Additionally, in accordance with standard term and condition (STC) Attachment A – Developing the Evaluation Design, B&A has signed "No Conflict of Interest" statements regarding its work as the selected independent evaluator.

ATTACHMENT B: EVALUATION BUDGET

As part of the procurement process, respondents to RFP 18-061 were required to submit a best and final offer. Figure 1 summarizes the total amount agreed to between the State and B&A for each deliverable due to CMS. Figure 2 enumerates the proposed staffing, level of effort by labor category, and total budget. The total estimated cost of the Evaluation Design Plan is $1,196,180.

Figure 1. Cost Proposal Summary

Summary of Cost Proposal	Costs					Hours
Deliverable (Draft and Final)	Contract Year 1	Contract Year 2	Contract Year 3	Contract Year 4	Contract Year 5	Contract Years 1-5
2.4.1 Evaluation Design	$ 27,500.00					132.00
2.4.2 Quarterly Monitoring Reports - Q1		$ 57,325.00	$ 57,325.00			578.00
2.4.2 Quarterly Monitoring Reports - Q2	$ 57,325.00	$ 57,325.00	$ 57,325.00			867.00
2.4.2 Quarterly Monitoring Reports - Q3	$ 57,325.00	$ 57,325.00	$ 57,325.00			867.00
2.4.3 Annual Monitoring Reports		$ 105,595.00	$ 105,595.00	$ 105,595.00		1,620.00
2.4.4 Mid-Point Assessment		$ 121,830.00				621.00
2.4.5 Interim Evaluation Report		$ 132,485.00				663.00
2.4.6 Final Summative Evaluation Report					$ 138,990.00	693.00
Total for all Deliverables	**$ 142,150.00**	**$ 531,885.00**	**$ 277,570.00**	**$ 105,595.00**	**$ 138,990.00**	**6,041.00**

Total Bid Amount	$ 1,196,190.00

Blended Hourly Rate	$ 198.01

Figure 2. Proposed Staffing Costs and Hours Allocation

Position Title	Staff Member	Hourly Rate	Hours	Pct of Hours	Dollars
Project Director	Mark Podrazik	$ 250.00	897.00	15.1%	$224,250
Project Manager	Debbie Saxe	$ 230.00	986.00	16.6%	$226,780
Senior Data Scientist	Kara Morgan, PhD.	$ 255.00	106.00	1.8%	$27,030
Senior Policy Analyst	Kara Suter	$ 230.00	800.00	13.5%	$184,000
Data Manager	Ryan Sandhaus	$ 210.00	756.00	12.8%	$158,760
SAS Programmer	Jesse Eng, Akhilesh Pasupulati	$ 210.00	418.00	7.1%	$87,780
Consultant	Barry Smith	$ 190.00	261.00	4.4%	$49,590
Validation Testing Manager	Bruce Newcome	$ 180.00	50.00	0.8%	$9,000
Validation Testing Programmer	Business Analyst	$ 110.00	676.00	11.4%	$74,360
Business Analyst	Programmer	$ 80.00	200.00	3.4%	$16,000
Policy Analyst / WBE Subcontractor	Kristy Lawrance	$ 190.00	521.00	8.8%	$98,990
Data Analyst / Veteran Subcontractor	Daniel Traub	$ 180.00	148.00	2.5%	$26,640
Focus Group Facilitator / Veteran Subcontractor II	Fred Bingle	$ 125.00	104.00	1.8%	$13,000
			5923.00	**100.0%**	**$1,196,180**

ATTACHMENT C: TIMELINE AND MILESTONES

As part of the procurement process, respondents to RFP 18-061 were required to submit a work plan, including major tasks and milestones to complete the scope of work. B&A submitted a work plan which has been agreed to by the FSSA team. The work plan is divided into Sections A, B and C and has 31 tasks. Following is a high-level summary of each section of the work plan.

- Section A, Project Initiation and Ongoing Project Management, includes Tasks 1, 2 and 3.

- Section B, Ongoing Tasks to Support Deliverables to CMS, includes Tasks 4 through 16. This is where most of the work will occur. Included in these tasks are data analytics, measure development, computing measure results ongoing, and specific focus studies related to aspects of the FSSA SUD Implementation that will be important to the overall waiver evaluation.

- Section C, Prepare Deliverable to CMS, include Tasks 17 through 31 representing each of the deliverables to CMS. It should be noted that B&A intends to build upon the cumulative work captured to date at the time that each CMS deliverable is due.

A listing of the 31 tasks with the timeframe anticipated to perform each task appears in Figure 1.

Figure 1. Proposed Timeline and Milestones

Task Number	Task Name	Contract Year(s)	Estimated Timeframe	CMS Due Date
SECTION A: PROJECT INITIATION AND ONGOING PROJECT MANAGEMENT				
1	Kickoff Meeting	Year 1	1 month	
2	Project Management	Years 1 through 4	Weekly	
3	Obtain and Read in Data for Project	Years 1 through 4	Monthly	
SECTION B: ONGOING TASKS TO SUPPORT DELIVERABLES TO CMS				
4	Introductory Meetings with Stakeholders	Year 1	2 Months	
5	Ongoing Meetings with Stakeholders	Years 1 through 4	1 Month	
6	Track and Maintain Library of Actions within Indiana and Other States	Years 1 through 4	Weekly	
7	Build Databook of Utilization, Members, Provider Network	Years 1 and 2	7 Months	
8	Develop Measures	Year 1	3 Months	
9	Compute Measures and Ongoing Peer Review	Years 1 through 4	3 Months	
10	Systems Testing	Years 1 and 2	4 Months	
11	Focus Study: Review Gold Card Program	Year 1	2 Months	
12	Focus Study: Review Authorization Criteria	Year 1	3 Months	
13	Focus Study: Revisions to Assessment Tools	Years 1 and 2	6 Months	
14	Focus Study: Care Management	Year 2	6 Months	
15	Focus Study: INSPECT	Year 2	6 Months	
16	Focus Study: Reimbursement	Year 2	3 Months	
SECTION C: PREPARE DELIVERABLES TO CMS				
17 - draft	Develop Evaluation Design - draft	Year 1	6 Months	7/31/2018
17 - final	Develop Evaluation Design - final	Year 1	6 Months	60 days after CMS feedback
18	Prepare Quarterly Report DY4 Q2	Year 1	4 Months	8/31/2018
19	Prepare Quarterly Report DY4 Q3	Year 1	4 Months	11/30/2018
20	Prepare Quarterly Report DY5 Q1	Year 2	4 Months	9/30/2019
21	Prepare Quarterly Report DY5 Q2	Year 2	4 Months	10/31/2019
22	Prepare Quarterly Report DY5 Q3	Year 2	4 Months	11/30/2019
23	Prepare Quarterly Report DY6 Q1	Year 3	4 Months	5/31/2020
24	Prepare Quarterly Report DY6 Q2	Year 3	4 Months	8/31/2020
25	Prepare Quarterly Report DY6 Q3	Year 3	4 Months	11/30/2020
26	Prepare Annual Report DY4	Years 1 to 2	6 Months	8/30/2019
27	Prepare Annual Report DY5	Years 2 to 3	6 Months	3/31/2020
28	Prepare Annual Report DY6	Years 3 to 4	6 Months	3/31/2021
29	Prepare Mid Point Assessment	Year 2	8 Months	1/31/2020
30 - draft	Prepare Interim Evaluation - draft	Year 2	6 Months	1/31/2020
30 - final	Prepare Interim Evaluation - final	Year 2	6 Months	60 days after CMS feedback
31 - draft	Prepare Summative Evaluation - draft	Years 4 and 5	10 Months	7/31/2022
31 - final	Prepare Summative Evaluation - final	Years 4 and 5	10 Months	60 days after CMS feedback

ATTACHMENT D: SUD INDICATOR FLAG DEVELOPED BY FSSA WITH BURNS & ASSOCIATES

Category	Code	Description
ICD-9 Diagnosis		
	303	Alcohol dependence syndrome
	304	Drug dependence
	305	Nondependent abuse of drugs
ICD-10 Diagnosis		
	F10	Alcohol related disorders
	F11	Opioid related disorders
	F12	Cannabis related disorders
	F13	Sedative, hypnotic, or anxiolytic related disorders
	F14	Cocaine related disorders
	F15	Other stimulant related disorders
	F16	Hallucinogen related disorders
	F18	Inhalant related disorders
	F19	Other psychoactive substance related disorders
Revenue Codes		
	116	Detox/Private Room
	126	Detox/Two Beds
	136	Detox/Three to Four Beds
	146	Detox/Deluxe Private Room
	156	Detox/Ward
	906	Behavioral Health Treatment-Intensive Outpatient Services Chemical Dependency
	944	Other Therapeutic Services - Drug Rehabilitation
	945	Other Therapeutic Services - Alcohol Rehabilitation
	1002	Behavioral Health Accomodation Residential Chemical Dependency
ICD-9 Procedure Codes		
	94.61	Alcohol rehabilitation
	94.62	Alcohol detoxification
	94.63	Alcohol rehabilitation and detoxification
	94.64	Drug rehabilitation
	94.65	Drug detoxification
	94.66	Drug rehabilitation and detoxification
	94.67	Combined alcohol and drug rehabilitation
	94.68	Combined alcohol and drug detoxification
	94.69	Combined alcohol and drug rehabilitation and detoxification
ICD-10 Procedure Codes		
	HZ2xx	Detoxification Services
	HZ3xx	Individual Counseling
	HZ4xx	Group Counseling
	HZ5xx	Individual Psychotherapy
	HZ6xx	Family Counseling
	HZ8xx	Medication Management
	HZ9xx	Pharmacotherapy

Category	Code	Description
HCPCS/CPT Procedure Codes		
	G0396	Alcohol and/or substance abuse (other than tobacco) structured assessment, 15-30 minutes
	G0397	Alcohol and/or substance abuse (other than tobacco) structured assessment, >30 minutes
	G0443	Behavioral counseling for alcoholic misuse, 15 mins
	H0001	Alcohol and/or drug assessment
	H0004	Behavioral health counseling and therapy, per 15 mins
	H0005	Alcohol and/or drug services; Group counseling by a clinician
	H0006	Alcohol and/or drug services; case management
	H0007	Alcohol and/or drug services; crisis intervention (outpatient)
	H0008	Alcohol and/or drug services; sub-acute detox (hospital inpatient)
	H0009	Alcohol and/or drug services; Acute detox (hospital inpatient)
	H0010	Alcohol and/or drug services; Sub-acute detox (residential addiction program inpatient)
	H0011	Alcohol and/or drug services; acute detox (residential addiction program inpatient)
	H0012	Alcohol and/or drug services; Sub-acute detox (residential addiction program outpatient)
	H0013	Alcohol and/or drug services; acute detox (residential addiction program outpatient)
	H0014	Alcohol and/or drug services; ambulatory detox
	H0015	Alcohol and/or drug services; intensive outpatient
	H0016	Alcohol and/or drug services; medical intervention in ambulatory setting
	H0017	Behavioral health; residential wout room & board
	H0018	Behavioral health; short-term residential
	H0019	Behavioral health; long-term residential
	H0020	Alcohol and/or drug services; methadone administration and/or service (provisions of the drug by a licensed program)
	H0022	Alcohol and/or drug interven
	H2034	Alcohol and/or Drug Service, Halfway House, per diem
	H2035	Alcohol and/or drug treatment program, per hour
	H2036	Alcohol and/or drug treatment program, per diem
	J0572	BUPRENORPHINE/NALOXONE, <= 3 mg
	J0573	BUPRENORPHINE/NALOXONE, 3- 6 mg
	J0574	BUPRENORPHINE/NALOXONE, 6-10 mg
	J0575	BUPRENORPHINE/NALOXONE, > 10 mg
	J0592	Buprenorphine hydrochloride
	J2315	Naltrexone, depot form
	T1006	Alcohol and/or substance abuse services, family/couple counseling
	T1012	Alcohol and/or substance abuse services, skill development

Category	Code	Description
Generic Product Codes - Pharmacy		
		Vivitrol
		Suboxone
		Subutex
		Acamprosate
		Disulfram
		Methadone (methadose)
DRG Codes		
	770	Drug & Alcohol Abuse or Dependence. Left Against Medical Advise
	772	Alcohol & Drug Dependence with Rehab or Rehab/Detox Therapy
	773	Opioid Abuse & Dependence
	774	Cocaine Abuse & Dependence
	775	Alcohol Abuse & Dependence
	776	Other Drug Abuse & Dependence

APPENDIX C

Guide to Evaluation of Substance Use Disorder Service Authorization Processes and Results In Calendar Year 2018

Guide to Evaluation of Substance Use Disorder (SUD) Service Authorization Processes and Results in Calendar Year (CY) 2018

As part of the waiver evaluation for SUD services, Burns & Associates (B&A) will be conducting two reviews of SUD service authorizations. The first review will be conducted in the first quarter of CY 2019. The second review will be conducted in the first quarter of CY 2020. The Family and Social Services Administration (FSSA) has asked B&A to consider conducting two reviews in light of the fact that there is guidance being provided to the managed care entities (MCEs) related to creating more consistency on the authorization processes across the MCEs specific to SUD services. As such, B&A's first review in CY 2019 will focus on SUD service authorization processes and results prior to the guidance from FSSA. The second review in CY 2020 will focus on the same elements during the period after this guidance from the FSSA has been implemented.

Both studies will examine:

- MCE process flows for SUD service authorization determinations
- Staffing at each MCE for the service authorization function specific to SUD
- Training and monitoring of staff performing service authorization functions specific to SUD
- The volume of SUD authorization requests, by type of service, and the MCE's determination related to each request

B&A's review will include the following components:

- An onsite interview to discuss policies and procedures related to SUD authorization;
- A quantitative analysis (desk review) of SUD service authorization requests made to each MCE in CY 2018; and
- An onsite review of a sample of service authorizations to review procedures used and the information considered in the MCE's determination of the authorization request. At this time, it is anticipated that the sample drawn for each MCE will be 30 SUD authorization requests that are inclusive of approved and denied authorization requests.

The B&A team that will participate in this review include Mark Podrazik (Project Director), Kristy Lawrance (subcontractor to B&A), Barry Smith (B&A data analyst), and a yet-to-be named clinician from the Indianapolis area that has expertise in the SUD service array (subcontractor to B&A).

Steps of Review

1. Mark Podrazik and Kristy Lawrance will meet with each MCE in a 1-on-1 session on February 6 or 7, 2019. The purpose of this meeting will be conducted an interview pertaining to the MCE's authorization process for SUD service requests and to review the data request that will be made of each MCE. Refer to Appendix A (at the end of this file) for the questions that will be asked of each MCE at this session. Refer to Appendix B (in the separate Excel file) for the draft of the data request related to SUD service authorizations.

2. B&A anticipates that there will be a need to revise the data request template after consultation with each MCE. A final data request will be released to each MCE by Monday, February 11, 2019. The due date for submission of the data to B&A will be **Friday, February 22, 2019**.

3. B&A's data analyst will intake, compile and analyze the SUD service authorizations form each MCE. In consultation with the Project Director, a sample of cases will be drawn from each

MCE's total pool of SUD authorizations in CY 2018. This sample will be given to each MCE by Monday, March 4.

4. B&A will create a review tool to capture information about each service authorization that will be reviewed in the sample.

5. The onsite sessions to review the sample cases are tentatively scheduled for the week of March 18. It is our intent that Mark Podrazik, Kristy Lawrance and our clinical expert will attend these sessions. B&A will spend three hours at each MCE. The non-clinical team will review the cases for process-related items. The clinician will provide an opinion if he/she concurs or not with the MCE's decision based on the information provided and the guideline(s) applied.

The results of the quantitative analysis, the qualitative review, and the review of sample cases will be summarized in a report specific to this focus study. Each MCE will be provided feedback on the overall findings and, if necessary, MCE-specific feedback.

Appendix A
MCE Interview Questions Related to Service Authorizations for SUD Services

1. Describe the team that reviews service authorization requests for SUD services.

    a. Are they a specialized unit in your PA group or could all PA staff review SUD requests?
    b. If it is a separate unit, how many individuals work in it (admin, nurse reviewers, physician/other professionals)?
    c. Where are they located?
    d. Do you delegate and/or sub-contract the any of this function? If so, to whom?

2. In last year's EQR, you walked us through the responsibilities of the staff within the service authorization unit (initial intake to administrative approvals/denials to initial clinical review to final clinical review/determination).

    a. Is the process for SUD authorizations similar to non-SUD authorizations?
    b. If it does differ, in what way does it differ?

3. What modes can providers submit SUD service authorization requests? What is the most common?

4. What documentation is required to complete a SUD service authorization request?

    a. Is there anything specific to inpatient SUD requests?
    b. Does the information request vary if the request is pre-service vs. concurrent review?

5. What information or verification is completed upon initial intake of a service authorization request?

6. Is there follow-up with a provider if the auth request submission is incomplete? Or does it go immediately to administrative denial?

7. Are the turnaround times for SUD auth determinations the same as other auths? If not, how are they different for SUD?

8. Describe the process of final determination and provider notification related to denied authorization requests.

9. Who is authorized to do denials due to lack of medical necessity?

10. What clinical criteria do you utilize for SUD authorizations? Does the criteria differ based on the type of authorization request (e.g. inpatient vs. other services?)

11. What is your opinion of the utility of the ASAM criteria with respect to service authorization determinations?

12. If you use/consider ASAM criteria, are there certain elements within the six dimensions that carry more weight in the decision-making process for authorization requests than others?

13. How would you characterize the level of appeals from providers (members) for SUD denied authorization—more, less or about the same as other non-SUD services?

14. Do you track and trend providers from the perspective of frequency of denials/appeals/hearings?

15. What, in your opinion, has been the greatest challenge (if any) pertaining to working with providers on SUD authorization requests?

16. Please provide your opinion, if you have one, on recent direction you have been given from FSSA on the following:

    a. 14 days for initial inpatient auth approvals
    b. Migration to Milliman criteria
    c. Universal SUD PA form

17. Has there been other guidance/direction from FSSA of significance not mentioned above that the waiver evaluators should be aware of?

18. Are there any other pertinent points you want to convey to the waiver evaluators specific to the service authorization process not covered already?

Instructions for Submitting Data Elements Related to CY 2018 SUD Service Authorization Requests

This tab provides the working definitions for the data elements requested in the tab called "Auths template".

Instructions on Submission

Burns & Associates, Inc. is requesting an itemized listing of all SUD auths received by the MCE from Feb 1 - Dec 31, 2018, regardless of the final determination date.
If multiple requests (lines) are on the same auth, be sure to enter each line separately on the template. B&A recognizes that when this occurs, it may be that multiple lines on the spreadsheet will have the same internal auth ID.

For purposes of this study, "auths" include pre-service, concurrent and retrospective authorizations.

The order in which the auths are listed in your output file is not important. For example, the auths do not need to be listed in chronological order by Date Requested if it is easier for the MCE to output in some other manner.

Please submit back to the OMPP SharePoint site no later than ***Friday, February 22, 2019.***
Place this file under SharePoint folder for HIP\2019\February.
For questions on this data request, please call Mark Podrazik at Burns & Associates at (703) 785-2371.

Definitions of Data Elements Requested

A	Date Auth Requested	Indicate the initial date that the request was made for pre-service, or the date assigned for concurrent or retrospective authorizations. B&A recognizes that the initial date does not necessarily indicate the date that all information was received for the MCE to make an authorization determination.
B	Internal ID for the Auth	The unique ID assigned by the MCE for the authorization request. This ID will be used by B&A to communicate back to the MCE the final sample of auths that will be reviewed for this project.
C	Requesting (Service) Provider ID	Enter either the IHCP/OMPP Legacy ID or an MCE internal provider ID assigned to the provider.
D	Crosswalk to Legacy ID	If the MCE did not enter the Service Provider's IHCP/OMPP Legacy ID in the previous column, then please crosswalk your internal provider ID to the Legacy ID.
E	Member RID	The ID of the member that the service authorization is being requested on behalf of. If the OMPP-assigned RID is not readily available, please use the MCE internal member ID assigned to the member.
F	Program	Enter the program that the member is enrolled in (HHW, HIP or HCC).
G	Service Type	Enter IP for inpatient hospital (ASAM level 4), RTC for residential treatment (ASAM level 3.1 or 3.5), or OP for outpatient (ASAM level 1, 2.1 or 2.5).
H	Auth Type	Indicate if this authorization was Pre-Service (P), Concurrent (C) or Retrospective (R).
I	Days Requested	If IP or RTC was entered in Column G, enter the number of days requested. Otherwise, leave blank.
J	CPT or HCPCS	If OP was entered in Column G, enter the CPT or HCPCS requested. Otherwise, leave blank.
K	Administrative Review Only	Indicate Yes or No if the authorization was only reviewed by administrative staff.
L	Reviewed by RN/LPN	Indicate Yes or No if the authorization was reviewed at any time by an RN or LPN.
M	Reviewed by MD/BH professional	Indicate Yes or No if the authorization was reviewed at any time by an MD or a licensed BH professional who, under NCQA rules, has the authority to deny service requests.
N	Date of Determination	Indicate the date that final determination was made for the auth request. B&A understands that there may be a significant number of days between the Determination Date and the Date Auth Requested if all of the information was not provided by the Requesting Provider in a timely manner.
O	Disposition Code	Enter one of the letters A, D, M or V that stand for Approved, Denied, Modified or Voided.
P	Denial Reason Code	When Disposition = Denied, enter the most appropriate reason code from the list below.
	1	Administrative denial- untimely filing
	2	Administrative denial- all other than untimely filing
	3	Not medically necessary
	4	All other

Template for Request for SUD Service Authorizations Review

REPORT #1 All SUD Authorizations Requested from 2/1/18 - 12/31/18

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Date Auth Requested [mm/dd/yy]	Internal ID for the Auth	Requesting (Service) Provider ID	Crosswalk to OMPP Legacy ID (only fill in if Column C is not the LID)	Member RID	Program (HHW, HIP, HCC)	Service Type Enter IP, RTC or OP	Auth Type P = Preservice; C = Concurrent; R = Retrospective	If Col G = IP or RTC, enter #days requested	If Col G = OP, enter CPT or HCPCS	Auth Reviewed by Admini-strative Staff Only? Enter Yes or No	Reviewed by RN/LPN? Enter Yes or No	Reviewed by MD or BH professional? Enter Yes or No	Date of Determination of the Auth [mm/dd/yy]	Disposition Code A = Approved; D = Denied; M = Modified; V = Void	Denial Reason Code Enter 1, 2, 3 or 4

Instructions for Submitting Data Elements Related to Itemized SUD Appeals

This tab provides the working definitions for the data elements requested in the tab called "Itemized Appeals".

Purpose of the File Submission

The purpose of the file submission is to ensure that a representative sample of authorizations that were appealed is included in sample of total auths reviewed. Note that only SUD appeals related to authorizations are being requested here.

Instructions on Submission

For purposes of this study, "auths" include pre-service, concurrent and retrospective authorizations.

Please submit back to the OMPP SharePoint site no later than ***Friday, February 22, 2019.***
Place this file under SharePoint folder for HIP\2019\February.
For questions on this data request, please call Mark Podrazik at Burns & Associates at (703) 785-2371.

Definitions of Data Elements Requested

Internal ID for the Auth	Reference the same ID that was assigned to the auth in the "Auths Template" tab.

or

Member RID	If the MCE does not track the auth ID in their appeals tracking system, reference the Member RID that the auth that is being appealed is on behalf of. B&A recognizes that appeals can be made by members or by providers on behalf of members.
Date Auth Requested	Reference the Date Auth Requested that was assigned to the auth in the "Auths Template" tab.

Complete the following data elements for all appeals:

Date Initial Denial Letter was Sent Out	Indicate the date on the letter that was sent to the provider/member when the initial denial was determined.
General Description of what is Appealed	[optional field] If, in your grievance and appeals tracking system, you have a field that provides a general description of the appeal, please provide it here. Otherwise, leave this field blank. For example, the general description may simply state the service authorization type that was requested by denied.
Highest Level of Appeal Action Taken	Enter the code based on the level of appeal action taken:
IA	Internal Appeal
IER	Independent External Review
SFH	State Fair Hearing
	In other words, if an appeal went through the internal process but ultimately was decided through the IER process, then indicate IER in this field. Do not enter the same authorization on multiple lines on this report to reflect each level of appeal. Internal appeals are those that were submitted to the MCE that did not go outside the MCE to the IER or State Fair Hearing process. The use of outside medical practitioners to assist in an appeal determination may stil be considered internal appeals.
Decision from Highest Level of Appeal Action Taken	Indicate if the denial by the MCE was ultimately upheld or overturned.

Sample Template for Request for SUD Service Authorization Appeals in CY 2018

Either		or			Fill in these columns for all entries			
A		B	C	D	E	F	G
Internal ID for the Auth		Member RID	Date Auth Requested	Date Initial Denial Letter was Sent Out	General Description of what is Appealed	Highest Level of Appeal Action Taken (IA, IER, SFH)	Decision from Highest Level of Appeal Action Taken

APPENDIX D

Prior Authorization Audit Tool

SUD AUTHORIZATION REVIEW TOOL

B&A Reviewer Initials _____ Date B&A Reviewed _____

MCE Auth ID _____ Member RID _____

1. Indicate MCE
   ☐ Anthem ☐ CareSource ☐ MHS ☐ MDwise

2. Record relevant dates related to this authorization (mm/dd/yy)
   a. Date Auth was Requested _____ b. Date of Final Determination _____

3. Mode of Initial Auth Request? (place an X in only 1 box)
   ☐ Fax ☐ Phone ☐ Email ☐ Cannot be determined

4. Type of Auth Request? (place an X in only 1 box)
   ☐ Pre Service ☐ Concurrent Review ☐ Retrospective ☐ Cannot be determined

5. Place an X in the most appropriate box to indicate the service category for auth request.
   ☐ Inpatient hospital ☐ Residential treatment ☐ Any outpatient service ☐ Other

   5a. If Inpatient, # of days requested _____ If any were approved, how many? _____

   5b. If RTC, # of days requested _____ If any were approved, how many? _____

   5c. If Outpatient, enter CPT code _____ If no CPT code, write description _____

6. Who is the highest level staff member to reviewed the Auth Request? (place an X in only 1 box)
   ☐ Administrative staff *only* ☐ Nurse/Mid Level BH Prof ☐ Physician/MH Professional ☐ Cannot be determined

7. Clinical documentation was supplied with the initial auth request by the provider (either via fax or by phone and recorded by MCE)
   ☐ Yes ☐ No ☐ Cannot be determined

8. What was the *Initial* Determination for the Auth Request? (place an X in only 1 box)
   ☐ Approved ☐ Denied ☐ Modified ☐ Cannot be determined

9. ☐ Check if evidence in file that requesting provider asked for reconsideration after initial detemination was made.

10. ☐ Check if evidence in file that a physician peer-to-peer was conducted (either before or after determination made).

11. If answer to #9 or #10 is Yes, what was the *Final* Determination for the Auth Request? (place an X in only 1 box)
    ☐ Approved ☐ Denied ☐ Modified ☐ Cannot be determined

Complete Questions 12-16 only if the authorization request was <u>denied</u> or <u>modified</u>.

12. Denial Reason:
    ☐ Admin untimely filing ☐ Admin any other reason ☐ Not Medically Necessary
    ☐ Other (describe) _____

13. If reason for denial was "not deemed medically necessary", what criteria was used to justify this? (check <u>all</u> that apply)
    ☐ Milliman (MCG) ☐ Interqual ☐ MCE Clinical Guidelines ☐ ASAM

14. Who signed the denial/modified disposition letter to the requesting provider? (Check only 1) ☐ No written letter found
    ☐ MD or BH professional ☐ Nurse or BH mid-level ☐ No signature (generic such as "from Medical Management")

15. Indicate the level of detail provided in the letter pertaining to clinical criteria. ☐ Language from MCE guideline
    ☐ Specific citation for MCG, Interqual or ASAM stated ☐ Specific citation not provided, just general reference

16. Clinician's independent review. Given the information presented in the file for this authorization requested, was the denial appropriate?
    ☐ Yes
    ☐ No Why? _____
    ☐ Unable to determine Why? _____

APPENDIX E

Complex Case or Care Management Data Request

MCE Name:

Active Enrollees in Complex Case or Care Management During CY 2018

Notes:

1. Please provide the names of each individual you counted in the QR-C3MR under 'Active Ever Enrolled' in the reports you submitted to OMPP on
   April 30, 2018 July 31, 2018
   Oct 31, 2018 Jan 31, 2019
2. Individual members can be shown on more than one line in this report if:
   The member moved up from care management to complex case management and you track the duration of these events separately.
   The member moved down to care management from complex case management and you track the duration of these events separately.
   There was a gap during CY 2018 when the member was in case or care management, disenrolled, then re-enrolled later in the year.
3. For Column F, it is expected that some Date Began Enrollment dates will be in CY 2017.
4. For Column G, it is expected that some Date Disenrolled dates will be in CY 2019. If the member is still enrolled as of 4/30/19, enter "Still Enrolled".

CR = care mgmt
CM = complex case mgmt

Place an X in every column that is applicable to the member for the condition(s) of interest that pertain to why the member is in Case or Care Management.

Medicaid RID (not MCE's unique ID)	Member Last Name	Member First Name	Program (enter HHW, HIP or HCC)	Participation Level (enter CR or CM)	Date Began Enrollment mm/dd/yy	Date Disenrolled mm/dd/yy	*Pregnancy*	*Asthma*	*Diabetes*	*COPD*	*Coronary Artery Disease*	*Congestive Heart Failure*	*Chronic Kidney Disease*	*Right Choices Program*	*MCE-specific Acute Care Condition(s)*	*Depression*	*ADHD*	*Autism/ Pervasive DD*	*Inpatient Discharges from Psychiatric Hospital*	*Bipolar Disorder*	*SUD*	*MCE-specific BH Condition(s)*