

**Medicaid CHIP Data
Analytics Unit
Quarterly Report of
Activities State Fiscal
Year 2020, Quarter 4**

As Required by

**2020-21 General Appropriations
Act, House Bill 1, 86th Legislature,
Regular Session, 2019**

(Article II, HHSC, Rider 10)

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1. Introduction

The 2020-21 General Appropriations Act, House Bill 1, 86th Legislature, Regular Session, 2019 (Article II, Health and Human Services Commission, Rider 10) directs the Health and Human Services Commission (HHSC) to “report to the Legislative Budget Board on a quarterly basis the activities and findings of the Data Analysis Unit” created by Government Code, §531.0082. The following report fulfills this requirement for the third quarter of State Fiscal Year 2020 (SFY20 Q4).

During SFY20 Q4, the Medicaid CHIP Data Analytics (MCDA) Unit within the Center for Analytics and Decision Support (CADS) completed 31 projects or milestones supporting the direction of the Government Code to “...(1) improve contract management, (2) detect data trends, and (3) identify anomalies relating to service utilization, providers, payment methodologies, and compliance with requirements...” in the state's Medicaid and CHIP programs. The status of major projects and activities, along with findings, is described in three sections of the report: 1) Monitoring MCO Contract Compliance, 2) Tracking Service Utilization and Related Data, and 3) Enhancing Data Infrastructure.

MCDA collaborates closely with many units within Medicaid and CHIP Services (MCS), including Policy and Program, Managed Care Compliance and Operations (MCCO), Medical Director’s Office, Operations Management, Quality Assurance, and Utilization Review (UR). Much coordination occurs through MCDA’s participation in committees for the following MCS SFY20 Initiatives: Network Adequacy and Access to Care Monitoring, Complaints Data Trending and Analysis, and Strengthening Clinical Oversight.

Beyond collaboration with MCS, Rider 10 directs that “...any anomalies identified related to service utilization, providers, payment methodologies, and compliance with the requirements in Medicaid and CHIP shall be reported to the Office of the Inspector General for further review.” MCDA and the Office of the Inspector General (OIG) communicate monthly to exchange updates on respective analyses. In addition, while no longer legislatively mandated, MCDA and Actuarial Analysis continue to meet monthly, collaborating to investigate anomalies in expenditure data and to ensure the soundness of data used for rate setting.

2. Monitoring MCO Contract Compliance

Extract, Transform, and Load Automation

MCDA is a key partner in HHSC's efforts to increase the data-driven efficiency of monitoring managed care organization (MCO) contract compliance. Due to the original Extract, Transform, and Load (ETL) automation developed by MCDA, MCS has saved staff time that would otherwise have been spent manually processing thousands of reports MCOs submit in Excel format. The ETL has also facilitated MCDA's handling of MCO deliverable data for purposes of responding to ad hoc data requests and creating data visualizations in the form of compliance dashboards.

While the quality of the data received from the MCOs has been improved by the ETL system, the legacy Data Tracking System (DTS) lacks the quality checks and feedback loops of the ETL because of its open file transfer protocol. HHSC has implemented a newly developed portal ("TexConnect") that supports MCO deliverable submissions and improves the quality of MCO transmitted data. TexConnect accepts deliverables in text file formats that are subject to front-end review for proper data format and layout.

At this time, all MCO deliverables scheduled for transition have been switched from the legacy system to TexConnect. MCDA has implemented a second ETL process that utilizes Access, SQL, Python, and Visual Basic to transform data received via TexConnect and stored in the TexConnect Oracle database and to load it onto the MCDA Oracle data platform. MCO data received via the legacy system and MCO data received via TexConnect are combined in the production of MCDA's compliance dashboards.

Several of the deliverables which were reported at an aggregated level in the legacy system are now being collected at a detail level, which has allowed MCDA to do more thorough quality assurance. Data quality checks by MCDA have identified problems in certain MCO data coming through TexConnect, such as pending appeals not being carried over into the next monthly report or reporting duplicate ID numbers. MCDA provides MCS staff with lists of MCO reporting errors and helps them build tools and strategies to address these errors in time for MCOs to resubmit corrected data.

Complaints Dashboards

As a result of findings from the report responsive to Rider 61 of the 2018-2019 General Appropriations Act, House Bill (HB) 1, 85th Legislature, Regular Session, 2017 (Article II, HHSC) on Medicaid Managed Care Oversight, MCS initiated a project to revise the managed care member complaints process to streamline intake and tracking, more effectively leverage complaints data to identify risks, and ultimately improve quality of services. In the 86th Legislative Session, HB 4533 included related requirements, including making aggregated data available to the legislature and public.

In SFY20 Q4, MCDA, in collaboration with MCS, completed the dashboard mock-ups for MCS review and approval. In the meantime, MCDA continues to clean and consolidate the complaints data, which is captured from three different sources: the MCOs, MCS, and the Office of the Ombudsman.

Compliance Dashboards

The goal of the MCDA compliance dashboards is to enhance contract oversight by trending MCOs' compliance with standards required by MCO contracts and the Medicaid Uniform Managed Care Manual, such as claims adjudication timeliness and hotline call pick-up rate standards. The dashboards provide HHSC staff with access to compliance data in a user-friendly, flexible, and efficient format. The compliance dashboards are used to facilitate data-driven decisions concerning the need for corrective actions, including the issuance of liquidated damages. As the dashboards contain confidential agency data, they are for internal use only.

The Quality Performance Report (QPR) compliance dashboard has been updated and revised to include all new data points through SFY20 Q3. The dashboard includes compliance results at the detail level, with additional supporting details to enhance monitoring activities. Program staff use this dashboard as a tool to determine contract compliance of their assigned MCOs.

Claims Administration Contract Oversight

This quarter, MCDA provided ongoing technical consultation to MCS Claims Administration Contract Oversight (CACO) on aspects of the current Texas Medicaid & Healthcare Partnership (TMHP) contract with Accenture. MCDA serves as technical advisor to CACO on the Process and Calculation (P&C) methodology documents for Key Measures. Negotiated modifications to the P&C documents are incorporated into the claims administration contract by means of Minor Administrative Change (MAC) procedures. MCDA reviews proposed MACs, as well as a variety of periodic

reports from the claims administrator. Effective monitoring of the claims administrator's performance on Key Measures helps assure the validity and availability of certain data used by MCDA in monitoring MCO contract compliance.

Teleservices

Closely tied to the topic of provider network adequacy, teleservices utilization has been the subject of several recent analyses conducted by MCDA.

- HHSC recently adopted codes 99441-99443 for telephone (audio-only) telemedicine and telehealth services as part of the COVID-19 response. MCDA ran a query requested by MCS to check whether any providers have billed these codes from March 1, 2020 to the present.
- MCDA assisted MCS in meeting the requirements of SB 748, 86th Legislature, Regular Session, 2019 by pulling historical data on the use of teleservices for specific subpopulations of clients receiving services under Type Program (TP) 40 and by analyzing the distribution of certain TP40 prenatal services between teleservices and in-person services.
- The Teleservices Biennial report was developed and submitted in accordance with SB 789, 77th Legislature, Regular Session, 2001.
- MCDA completed the fifth update to the Teleservices Quarterly Dashboard. This dashboard presents telemedicine costs, claims, clients, and providers, allowing filtering by such factors as client age and program.
- MCDA updated its COVID-19 teleservices dashboard that compares utilization trends before and during COVID-19 in order to evaluate the changing dynamics of provider utilization during the epidemic.
- MCDA is providing encounter and claims data, as well as consultation, to Texas A&M University, which is under contract with HHSC to conduct the Teleservices Cost Effectiveness and Cost Savings Study. This project stems in part from HB 1063, 86th Legislature, Regular Session, 2019. HB 1063 requires HHSC to calculate cost savings resulting from the delivery of health teleservices.

In addition to the legislation noted above, the project supports the MCS initiative to help ensure network adequacy and that members are receiving timely access to the services they need. The use of health teleservices is a potential solution for

improving access to care in underserved areas of the state and may alleviate barriers to office-based care during the COVID-19 pandemic for some clients.

Utilization Review

MCDA continues to help the UR Team conduct their annual reviews of clients receiving services under the STAR+PLUS Home and Community Based Services (HCBS) program and the Medically Dependent Children Program (MDCP) Waiver within the STAR Health and STAR Kids programs. The purpose of these legislatively mandated reviews is to monitor the appropriateness of care delivered by MCOs. MCDA provides sampling consultation to ensure the reviews adequately represent the targeted populations. As previously reported, in SFY20 Q3 MCDA conducted preliminary consultation with UR regarding the sampling plan for the 2021 UR MDCP and HCBS reviews, providing feedback on the sample size effects of a UR proposal to carry out sampling on a quarterly basis. In SFY20 Q4 MCDA continued to provide technical assistance to UR, coordinating data acquisition for estimating sample sizes based on alternative population definitions and sampling parameters, running sets of estimates, and enabling UR to run further sets of estimates independently.

Prior Authorization Data Collection

In the summer of 2019, MCDA helped the Prior Authorization subcommittee of the MCS Improving Clinical Oversight initiative finalize a new data survey tool to collect comprehensive aggregated data for all services requiring prior authorization (PA) from MCOs delivering managed care products on a monthly basis. Prior to the development of this tool, MCO prior authorization data was not available to HHSC unless requested on an ad hoc basis. Obtaining valid aggregated data will enhance contract oversight by allowing MCS and MCDA to track unusual trends over time and potential variations between MCO prior authorization processes. When MCDA began to process the first set of PA aggregated data deliverables from the MCOs, the unit identified problems with the data from a majority of the MCOs and participated in MCCO's calls with MCOs to discuss how to improve the data quality of their submissions. In May, MCDA received more recent data from most MCOs covering March 2020 prior authorizations and subjected it to quality checks prior to further analysis. In the current quarter, MCDA has posted internally a new Prior Authorization dashboard built from aggregated data deliverables, for review by UR.

Simultaneously, the Prior Authorization subcommittee developed the Change Order Request (COR) for the second phase of the project, the Prior Authorization Member-Level Data Warehousing Project. COR 19-013 PA Member-Level Data Mart was executed on August 6, 2020. Phase 2 will be focused on collecting data at the level of the individual transaction, rather than aggregated data. The more granular data

will allow MCDA to connect client level prior authorizations to actual services delivered as reported in the encounters. The subcommittee assisted MCS with the development of the Advance Planning Document (APD) that was submitted to the Centers for Medicare and Medicaid Services (CMS) to request federal financial participation. The APD was subsequently approved by CMS on June 15, 2020. As the APD was approved, federal funding will be available to support the costs associated with automated data processing hardware and services, and HHSC will coordinate with TMHP on the development of the project, beginning in SFY21 Q1.

STAR+PLUS 30-Day Spell of Illness

Per Section 29(a) of HB 4533, 86th Legislature, Regular Session, 2019, HHSC must report to the legislature available data on the 30-day limitation on reimbursement for inpatient hospital care provided to Medicaid recipients enrolled in the STAR+PLUS Medicaid managed care program. In addition, the report must also include the number of Medicaid recipients affected by the limitation and their clinical outcomes, the impact of the limitation on reducing unnecessary Medicaid inpatient hospital days, and any cost savings achieved by the limitation under Medicaid.

In Q4, MCDA collected MCO self-reported aggregated data for inpatient hospital stays that violate the STAR+PLUS 30-Day Spell of Illness rule. MCDA is currently cleaning and analyzing the data; the HB 4533 report is due in December 2020.

3. Tracking Service Utilization and Related Data

Service Utilization Dashboards

MCDA creates and maintains a library of dashboards displaying healthcare utilization by service type. These dashboards are designed to simplify detection of trends and variations in the data. Examination of the dashboards leads to the identification of anomalies, from billing issues to changes in service utilization levels or amounts paid for services. Currently, dashboards are maintained for internal agency use on the following services: telemedicine, emergency department (ED) visits; inpatient stays; physical therapy (PT), occupational therapy (OT), and speech therapy (ST); private duty nursing (PDN); personal care services (PCS); dental services; durable medical equipment (DME); vendor drug program (VDP); and substance use disorder (SUD).

In addition, an aggregated master utilization dashboard is published combining all these topics into one view. Behavioral health (BH) data was added to the master dashboard last quarter. Also, a more elaborate SUD services dashboard has been developed and a corresponding mental health (MH) services dashboard is under development. During the fourth quarter of SFY20, dashboards were updated to include data from SFY19 Q4. The upcoming round of updates to the MCDA dashboard library will be completed by the end of SFY21 Q1 and will extend to data from the first quarter of SFY20. While most utilization dashboards are updated on a quarterly basis, MCDA has a separate, dedicated dashboard on psychotropic medications that will be refreshed annually.

Ongoing Trend and Anomaly Detection

MCDA receives input from MCS leadership and program staff regarding the service types on which to focus within each managed care product. In particular, MCDA receives direction from the internal Service Utilization Workgroup under the Strengthening Clinical Oversight managed care initiative led by MCS. The workgroup provides a forum for a group of clinical, program, and policy experts to leverage Medicaid CHIP utilization data and guide MCDA in its charge to identify anomalies in service utilization and cost.

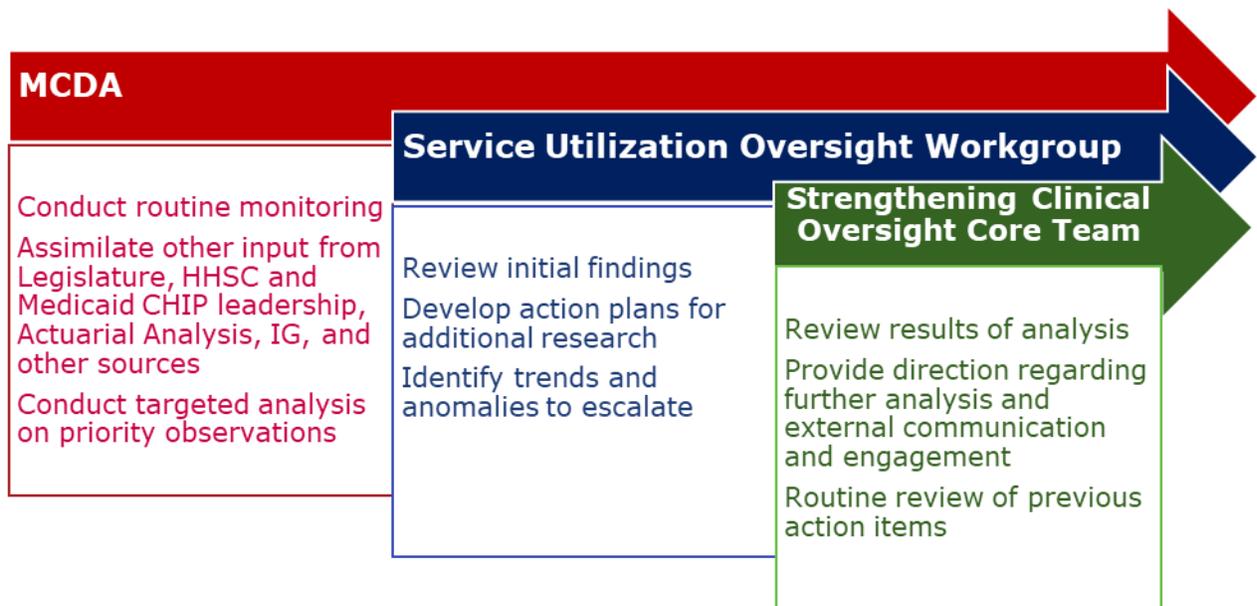
Once MCDA detects a potential anomaly, analysts take several steps to identify an explanation for the data variation. First, data quality is reviewed. Additionally, MCDA developed and updates a chronological dashboard that denotes when significant Medicaid and CHIP program and policy changes have been implemented.

This dashboard helps determine whether observed irregularities in utilization data may be a result of such changes.

Another tool developed by MCDA to help investigate data variations is the Monthly Enrollment Report. The data in this report alerts the team to fluctuations in enrollment or Medicaid program roll-outs which might impact service utilization. Enrollment data also provides denominators used in utilization rates, normalizing the rates to aid in direct comparisons between, for example, MCOs. The one-page enrollment report is distributed widely to MCS and other HHSC staff. Its use has resulted in efficiencies by replacing ad hoc data requests historically managed by CADS and HHSC Forecasting with a self-service alternative. Because the report is vetted by Forecasting before its release, its use also improves consistency in reporting.

If, after further investigation, observed data variations are not explainable by data integrity issues, policy or program changes, or predictable patterns such as seasonality, MCDA presents its findings to the Service Utilization workgroup, which in turn provides further guidance on where to conduct deeper analysis. If findings have the potential to impact quality of care or cost to the state, MCS leadership is briefed. The following diagram (Figure 2) shows the process flow for the review of service utilization data for trends and anomalies.

Figure 2: Process Flow for Trends and Anomalies in Service Utilization Data



In a continuous improvement initiative designed to maximize the potential to identify important data variations, MCDA has refined its internal procedures for

making and analyzing quarterly updates to the key service utilization dashboards. Analysts have been designated to acquire expertise in specific areas of service. With focused subject matter expertise, the analyst can more readily interpret signals of significant variations in the data. Detection of three types of signals has been automated: (1) "Outliers" (data points outside the control limits), (2) "Long Runs" of seven or more consecutive data points on one side of the long-term average, and (3) "Short Runs" (three of four consecutive values closer to a control limit than to the average value). See Figure 3 below for an example.

Figure 3: Sample Screen Shot of Anomaly Detection Dashboard with Short Run



In the fourth quarter of SFY20, the initial round of signal detection on dashboards updated through SFY19 Q4 revealed 79 new anomalies in the service utilization dashboard data. Of note, anomalies are counted at the managed care program and time period level to allow for unique explanations driving the anomalies. As a result, the number of anomalies is inflated considering what is likely the same explanation for multiple anomalies. An example would be seasonality that impacts many programs within a specific service. Because not all programs are impacted and even those that are impacted exhibit slightly different seasonal patterns, the anomalies are counted and tracked separately.

MCDA staff convened to review the anomalies to identify data patterns that were explicable through such factors as policy changes and seasonality. Staff also rated the anomalies on the following factors to derive "Low," "Medium," and "High"

priority classifications: Quality of Care, Access to Services, Fiscal Impact, Contract Compliance, High Profile, Data Quality, and Scope of Impact. Upon completion of this preliminary review, 35 new data signals were classified as high priority. These signals existed across the following service types: DME, DME Prescription, ED, Inpatient, VDP, PTOTST, PDN, and Telemedicine.

In its August 2020 meeting, MCDA presented the new high priority signals to the Service Utilization Workgroup and received input on possible explanations for the signals and direction on which anomalies require further investigation. MCDA also presented the results of further investigation conducted on anomalies from the previous quarter (anomalies in data through SFY19 Q3 identified in SFY20 Q3). MCDA will brief the OIG and the MCS Strengthening Clinical Oversight Core Team on the anomalies identified in SFY20 Q4 at upcoming meetings.

The following two tables break out anomalies identified in the past four quarterly analyses by program (Table 1) and by service type (Table 2). Within each table, counts are further broken down by “closed” and “open,” indicating the current status of investigations into individual findings. An investigation is closed when the observation no longer requires research, due, for example, to a sufficient explanation for the variance. However, even if an observation is “closed”, MCDA continues to monitor it on a regular basis.

Table 1: Findings on SFY19 Q1-Q4 Data: by Program

Programs	Closed	Open	Total
All Programs	19	44	63
CHIP	11	11	22
Fee-for-Service	27	28	55
Medicare-Medicaid Program	9	32	41
STAR	27	33	60
STAR Health	20	27	47
STAR Kids	29	33	62
STAR+PLUS	9	27	36
Total	151	235	386

Table 2: Findings on SFY19 Q1-Q4 Data: by Service Type

Services	Closed	Open	Total
BH	11	25	36
DME	9	29	38
DME Prescriptions	0	25	25
ED	17	11	28
Inpatient	15	7	22
PCS	15	0	15
PDN	7	14	21
Telemedicine	2	53	55
Telemonitoring	2	16	18
Therapy – OT	21	15	36
Therapy – PT	18	10	28
Therapy – ST	15	13	28
VDP	19	17	36
Total	151	235	386

COVID-19 Service Utilization Monitoring

In Q4, MCDA began to leverage its service utilization dashboard library to prepare to address anticipated inquiries from MCS, HHSC leadership, and the legislature about the impact of COVID-19 on Medicaid and CHIP service utilization trends. Dashboards are being expanded to include demographics for comparison of utilization patterns across various groups of clients. Another new feature will be a breakout of services delivered in person versus teleservices to understand the role the latter has played in service continuity.

Additionally, MCDA has been developing new dashboards displaying the numbers and rates of clients receiving COVID-19 tests and receiving a service with a diagnosis of COVID-19, particularly emergency department visits and inpatient stays.

Physical, Occupational, and Speech Therapy Monitoring

MCDA continues to closely monitor physical, occupational, and speech therapy utilization rates in compliance with Rider 15 of the 2020-21 General Appropriations Act, HB 1, 86th Legislature, Regular Session, 2019 (Article II, HHSC). A decrease was detected in active providers (i.e., providers with a billed encounter) beginning in May 2016. This date corresponds to implementation of therapy policy changes related to documentation and prior authorization.

From December 2016 to December 2017, the number of active providers per month appears to stabilize at a lower level before dipping another six percent from December 2017 to June 2019. However, from June 2019 through September 2019, the number of active providers increased by eight percent.

The trend of overall number of active therapy providers mainly reflects the number of active independent therapists. The trends of other provider types (e.g., Home Health Agency; Hospital) are relatively flat from September 2014 through September 2019. For more information, the reader is referred to the [Quarterly Therapy Access Monitoring Report – June 2020](#).¹

MCDA prepared analyses on client service utilization, provider network adequacy, and services provided to clients while on wait lists for inclusion in the September 2020 Rider 15 report.

¹ <https://hhs.texas.gov/sites/default/files/documents/laws-regulations/reports-presentations/2020/quarterly-therapy-access-monitoring-june-2020.pdf>

4. Enhancing Data Infrastructure

MCDA Platform

The work MCDA conducts depends on a robust, reliable, and flexible data system. In conjunction with TMHP, MCDA developed a platform that allows analysts to access data stored at TMHP more quickly than the original process of pulling the data over an internet connection. The platform contains two servers, numerous software applications used by MCDA staff to perform analysis and reporting, and a Tableau server used by MCDA staff to produce dashboards. The platform houses other data produced by MCDA staff, such as Medicaid and CHIP enrollment data, MCO self-reported quality measures, professional licensure data, and the new Analytic Data Store (ADS, described under Data Marts in the following section). MCDA regularly tests system upgrades, performs quality control, and collaborates with TMHP staff to detect and correct errors and address any system performance issues.

Data Marts

MCDA's TMHP platform houses the Physical, Occupational, and Speech Therapy (PTOTST) and Behavioral Health (BH) Data Marts, designed to allow quick and detailed analysis of trends and variations. The PTOTST Data Mart contains the most recent seven years of data on therapy encounters, forming the basis for analysis and visualization of such variables as cost and utilization measures by factors such as year, MCO, Service Delivery Area, and Managed Care program. The current BH Data Mart, updated annually, houses behavioral health related services and non-behavioral health data to allow analysis of co-morbidities.

Last quarter, the new Analytical Data Store (ADS) was rolled out. The ADS is a 'Best Picture' view of the claim and encounter data, meaning that it contains only the most current version of a transaction. The ADS offers a cohesive blend of managed care and fee-for-service medical and pharmacy data allowing a holistic view of a provider or member at the time a service took place for a particular claim or encounter. This past quarter, MCDA analysts started to transition from pulling and joining data across multiple sources to pulling the data more efficiently from ADS.

5. Goals for Next Quarter

In SFY21 Q1, MCDA will build on the work it is conducting on MCS key initiatives and other projects, including the following:

COVID-19 Analysis

The COVID-19 testing and diagnosis dashboards, as well as the enhanced service utilization dashboard designed to monitor the impact of COVID-19 on service utilization, will be completed during SFY21 Q1.

Complaints Dashboards

HB 4533 requires HHSC to make aggregated complaint data available to the legislature and public. Dashboard mockups are in review and the first dashboards are anticipated to be published on HHSC's website by the end of 2020.

Prior Authorization Data Collection and Dashboard

Pending UR approval of the new dashboard, in the coming quarter MCDA will continue to perform ETL on the MCO deliverables and refresh the new PA dashboard with data from May and June 2020, at a minimum. This refresh process will occur on a mutually agreed upon schedule until the design for the system for collecting client level PA data is finalized and implemented.

Compliance Dashboards and ETL

The final two deliverables scheduled to be submitted by MCOs through TexConnect (Out-of-Network Utilization data and Provider Network and Capacity data) were both received last quarter. MCDA will continue to conduct careful quality assurance on the incoming deliverables and any resubmissions to ensure accurate measurement of MCO contract compliance. Also, the 30-day deliverable refreshes for SFY20 Q4 will begin in October 2020.

Service Utilization Dashboards

In the coming quarter, all service utilization dashboards will be updated with the most recently available data, covering the first quarter of SFY20. Work will continue on the development of the mental health utilization dashboard.

Trend and Anomaly Detection

The fifth complete cycle of MCDA's quarterly control limits approach to detection of data variation signals will be implemented, culminating in a meeting in November 2020 of the Service Utilization Workgroup. Specific findings from the quarter's analysis will be discussed by the workgroup and decisions made regarding escalation of selected findings. Also in the coming quarter, MCDA staff will conduct follow-up investigations recommended by the workgroup in its August meeting.

Enhancing Data Infrastructure

Given the breadth of the MCDA dashboard library, it is a resource intensive endeavor to continuously carry out the ongoing data updates necessary keep the data in each dashboard as current as possible. To increase the efficiency of this process, MCDA is investigating the feasibility of using Tableau Python Server (TabPy) to automate these dataset refreshes. TabPy is an external server implementation which allows the execution of Python scripts on Tableau.