Medicaid CHIP Data Analytics Unit Quarterly Report of Activities State Fiscal Year 2020, Quarter 3

As Required by

2020-21 General Appropriations

Act, House Bill 1, 86th Legislature,

Regular Session, 2019

(Article II, HHSC, Rider 10)

Texas Health and Human Services

Commission

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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 Q3).

During SFY20 Q3, the Medicaid CHIP Data Analytics (MCDA) Unit within the Center for Analytics and Decision Support (CADS) completed 40 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 Medicaid and CHIP Services (MCS) divisions, 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, seven MCO deliverables scheduled for transition have been switched from the legacy system to TexConnect, taking the place of ten deliverables in the former system. While maintaining the original ETL process for the two remaining DTS deliverables with which it works, 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. MCDA has noted the following problems in the TexConnect deliverables:

- Hotline data not being properly aggregated per instructions.
- Pending appeals not being carried over into the next monthly report.
- Pending appeals carried over to the next month's report with a different received date than was originally reported.

- Appeals reported with a received date prior to the report date which do not appear in the previous month's report.
- Duplicate ID numbers for appeals.
- Pending complaints not being carried over into the next monthly report.
- Pending complaints carried over to the next month's report with a different received date than was originally reported.
- Complaints reported with a received date prior to the report date which do not appear in the previous month's report.
- Duplicate ID numbers for complaints.

MCDA is working closely with MCS to ensure accurate reporting of MCO compliance measures. MCS staff review MCDA's error findings and build tools and strategies to address many of these errors during the MCCO review period, including forwarding problems found to the MCOs and requesting resubmission of faulty data.
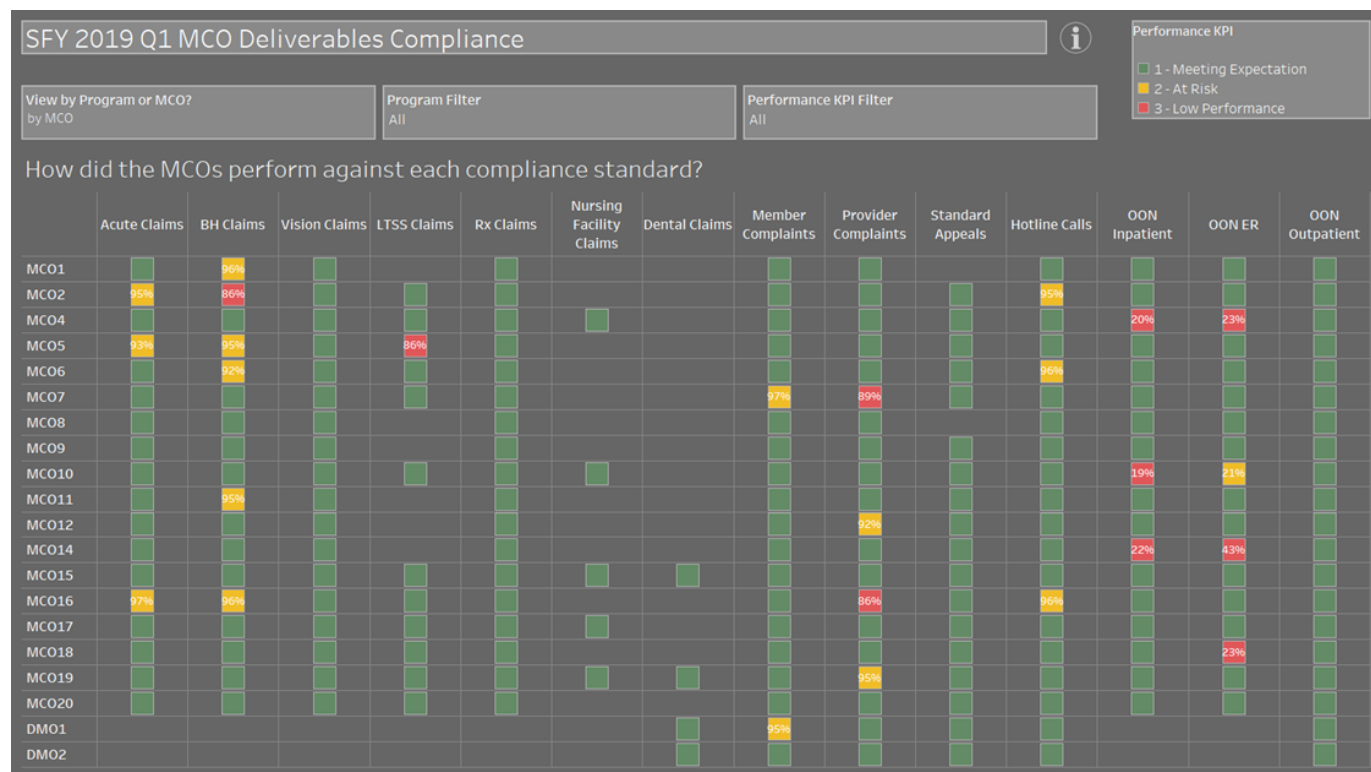
Compliance Dashboards

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.

Two compliance dashboards were updated in the quarter. The Quality Performance Report (QPR) compliance dashboard has been updated and revised to include all new data points through SFY20 Q2. 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.

The executive compliance dashboard is used to inform MCS staff and leadership at Managed Care Oversight Committee meetings and is published to an internal server. This dashboard (see Figure 1 below for a sample screen shot) conveys the overall health of each MCO, makes comparisons across programs and across the MCOs' performance measures within each program, and is updated on a quarterly basis.

SFY 2019 Q1 MCO Deliverables Compliance

Performance KPI
- ☐ 1 - Meeting Expectation
- ☐ 2 - At Risk
- ☐ 3 - Low Performance

View by Program or MCO?	Program Filter	Performance KPI Filter
by MCO	All	All

How did the MCOs perform against each compliance standard?

	Acute Claims	BH Claims	Vision Claims	LTSS Claims	Rx Claims	Nursing Facility Claims	Dental Claims	Member Complaints	Provider Complaints	Standard Appeals	Hotline Calls	OON Inpatient	OON ER	OON Outpatient
MCO1		96%												
MCO2	95%	86%									95%			
MCO4												20%	23%	
MCO5	93%	95%		86%										
MCO6		92%									96%			
MCO7								97%	89%					
MCO8														
MCO9														
MCO10												19%	21%	
MCO11		95%												
MCO12									92%					
MCO14												22%	43%	
MCO15														
MCO16	97%	96%							86%		96%			
MCO17														
MCO18													23%	
MCO19									95%					
MCO20														
DMO1								95%						
DMO2														

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.

Clinician Administered Drugs Monitoring

MCDA continues to produce several recurring reports to help MCS enhance MCO performance monitoring. One example is the quarterly Clinician Administered Drugs (CAD) report. Since January 2014, MCOs have been required to submit National Drug Codes for CADs along with associated Healthcare Common Procedure Coding. Non-compliance with this requirement impacts the state's ability to collect federal

vendor drug rebates. On a quarterly basis, MCDA provides an analysis of CAD encounter compliance by MCO, which allows contract staff to educate low performing health plans on proper coding. The percentage of invalid paid CAD encounters decreased from 16 percent in SFY16 Q4 to less than one percent in SFY19 Q2. The improved reporting translates into higher federal rebates collected by the state for these drugs, which increased 87% during this time from $8M to $15M. MCCO and Vendor Drug Program also use the report to assess liquidated damages for non-compliance.

Provider Network Adequacy

One of MCDA's high priority projects is serving as data experts on the Network Adequacy Steering Committee. The committee has worked intensively to identify the functional requirements of the forthcoming Business Intelligence (BI) tool funded as part of an exceptional item put forward by HHSC during the 86th Texas Legislative Session to further improve managed care oversight. The purpose of the BI tool is twofold. It will consolidate data from multiple areas to create a holistic view of factors impacting Medicaid provider network adequacy. The BI tool will also automate manual monitoring and reporting processes to ensure MCO compliance with state and federal network adequacy standards.

While the BI tool requirements are being developed, MCDA continues to provide a variety of analyses to guide policy decisions, to strengthen managed care provider networks, and to improve oversight of managed care organizations' contract compliance related to provider network adequacy standards. Examples of analyses this quarter include:

- MCDA produced a Tableau dashboard that illustrates the increase in the use of teleservices by county, as part of the agency's research into provider-related effects of COVID-19.
- The MCDA Geographic information System (GIS) specialist employs geocoded client and provider files in ArcMap to determine Medicaid and CHIP Primary Care Physician, Specialist, and Dental drive time compliance with requirements to maintain sufficient numbers of providers within certain drive times relative to clients' residence. Definitions of standards vary by provider type and geographical region. In April, the specialist delivered the final compliance tables for SFY19 Q2.
- Due to positive feedback from MCOs, MCS requested MCDA to extend to additional health plans an analysis piloted last quarter. The analysis, extended this quarter, is designed to help MCOs broaden their networks by providing lists of dentists and primary care physicians with the highest volume of services in their service delivery areas.

- MCDA updated the provider network dashboard, including provider type and open panel status, which is used by MCCO staff for monitoring and reporting purposes. Additionally, MCDA is developing dashboards to monitor provider terminations and provider time and distance compliance.

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. In April and May, 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.

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. Last quarter, MCDA began to process the first set of PA aggregated data deliverables from the Medicaid Managed Care Organizations (MCOs). MCDA 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. The newly received data will be subjected to quality checks prior to further analysis.

Simultaneously, the Prior Authorization subcommittee has been developing the Change Order Request (COR) for the second phase of the project, the Prior Authorization Member-Level Data Warehousing Project. Phase 2 is 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 has assisted MCS with the development of the Advance Planning Document that will be submitted to the Centers for Medicare and Medicaid Services to request federal financial participation. If 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.

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, 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 this quarter. In addition, a more elaborate SUD services dashboard was developed and a corresponding mental health (MH) services dashboard is under development. During the third quarter of SFY2020, dashboards were updated to include data from SFY19 Q3. The upcoming round of updates to the MCDA dashboard library will be completed by the end of SFY2020 and will extend to data from the fourth quarter of SFY19. 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. Since the report is vetted by Forecasting before its release, its use also improves consistency in reporting and it may be shared to external stakeholders.

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**
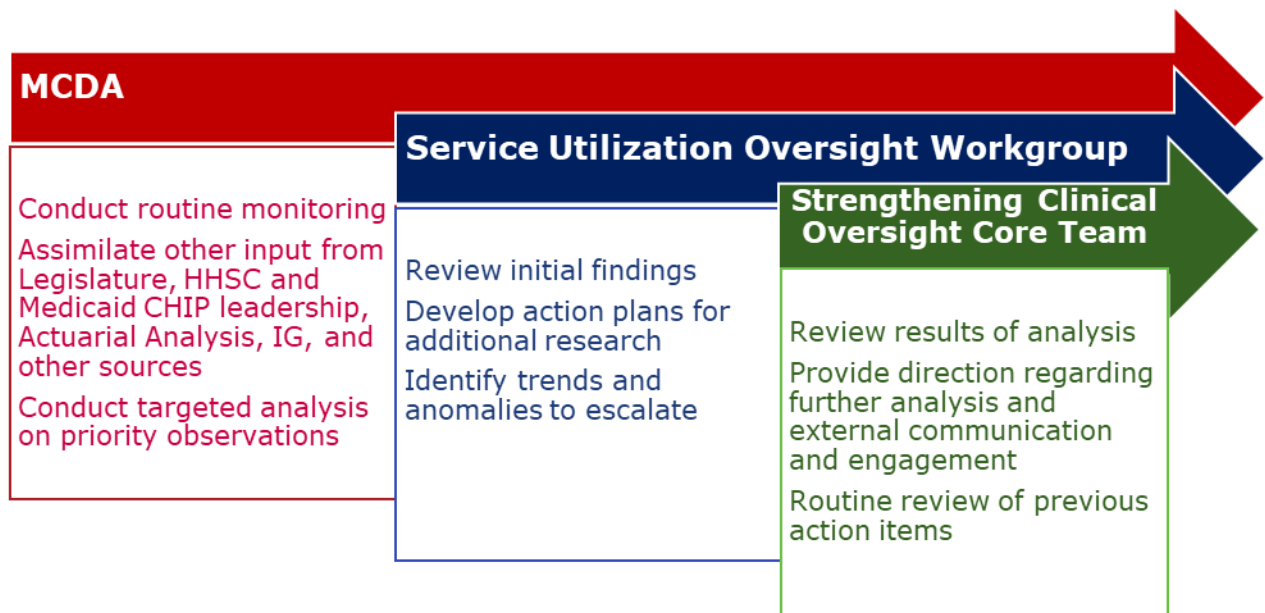
In a continuous improvement initiative designed to maximize the potential to identify important data variations, MCDA has refined its internal procedures for making and analyzing quarterly updates to the key service utilization dashboards. Analysts have been designated to acquire expertise in specific areas of service.

With focused subject matter expertise, the analyst can more readily interpret signals of significant variations in the data.

MCDA has expanded the capabilities of the dashboards to facilitate the detection of anomalies. Initially, the tool was designed to detect "Outliers" (i.e., data points outside the control limits) and "Long Runs" of seven or more consecutive data points on one side of the long-term average. Last quarter, MCDA added "Short Runs" to its detection tool (i.e., three of four consecutive values closer to a control limit than to the average value), which allows analysts to detect anomalies in a more timely fashion (see Figure 3 below for example).

Figure 3: Sample Screen Shot of Anomaly Detection Dashboard with Short Run
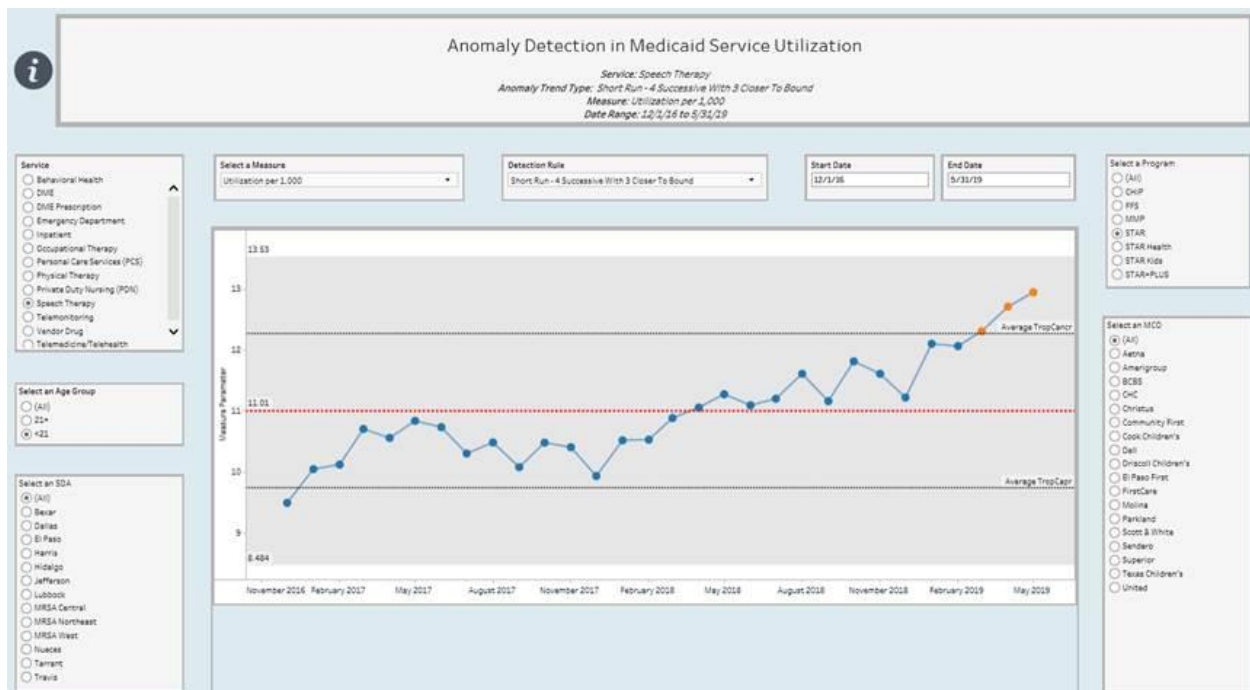
In the third quarter of SFY2020, the initial round of signal detection on updated dashboards revealed 127 new anomalies in the service utilization dashboard data. Of note, anomalies are counted at the managed care program and time period level to allow for unique explanations driving the anomalies. As 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. Since 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, 33 new data signals were classified as high priority. These signals existed across four service types: DME, PTOTST, PDN, and Teleservices/Telemonitoring.

In its June 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 (SFY2020 Q2). MCDA will brief the OIG and the Strengthening Clinical Oversight Core Team on the SFY2020 Q3 anomalies at upcoming meetings.

The following two tables break out anomalies identified in the past three 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-Q3 Data: by Program

Programs	Closed	Open	Total
All Programs	12	36	48
CHIP	5	10	15
Fee-for-Service	11	34	45
Medicare-Medicaid Program	8	28	36
STAR	17	30	47
STAR Health	7	28	35
STAR Kids	22	28	50
STAR+PLUS	4	28	32
Total	86	222	308

Table 2: Findings on SFY19 Q1-Q3 Data: by Service Type

Services	Closed	Open	Total
BH	11	25	36
DME	9	25	34
ED	12	12	24
Inpatient	0	17	17
PCS	6	9	15
PDN	3	16	19
Teleservices	0	61	61
Therapy – OT	12	13	25
Therapy – PT	11	8	19
Therapy – ST	7	19	26
Vendor Drug	15	17	32
Total	86	222	308

Physical, Occupational, and Speech Therapy Monitoring

MCDA continues to closely monitor physical, occupational, and speech therapy utilization rates in compliance with Rider 15, General Appropriations Act, Article II, 86th Texas Legislative Session (formerly Rider 57). 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. The number of active providers decreased steadily from 2,473 in April 2016 to 1,739 in December 2017. Other events that occurred during that time period which may or may not have had additional impacts include: the STAR Kids program implementation in November 2016, reimbursement rate changes in December 2016, and the deadline for provider reenrollment in February 2017. In the months following December 2017, the number of active providers per month appears to have stabilized. For more information, the reader is referred to the Quarterly Therapy Access Monitoring Report – March 2020.[1]

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[1] https://hhs.texas.gov/sites/default/files/documents/laws-regulations/reports-presentations/2020/quarterly-therapy-access-monitoring-march-2020.pdf

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

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.

This 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. MCDA has worked this quarter on preparing training materials on use of the ADS that will be shared with other HHSC analytic units. These materials include "cheat sheets" and examples of ADS SQL queries. More comprehensive training is also currently under development. In addition, MCDA will be conducting an analysis of the relative efficiency of pulling data from the ADS in comparison with using legacy methods for data acquisition.

5. Goals for Next Quarter

In SFY20 Q4, MCDA will build on the work it is conducting on MCS key initiatives and other projects, including the following:

Prior Authorization Data Collection

In the coming quarter MCDA will continue to check the quality of the aggregated PA data that is corrected and resubmitted by the MCOs. When usable data is acquired, MCDA will begin to analyze and visualize it in a dashboard. This analysis will occur monthly 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 this quarter. MCDA will continue to conduct careful quality assurance on the incoming deliverables and any resubmissions to ensure accurate measurement of MCO contract compliance.

Service Utilization Dashboards

In the coming quarter, all service utilization dashboards will be updated with the most recently available data, covering the fourth quarter of SFY19. Work will continue on the development of the mental health utilization dashboard.

Trend and Anomaly Detection

The fourth complete cycle of MCDA's quarterly control limits approach to detection of data variation signals will be implemented, culminating in a meeting in August 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 June meeting.

MCDA has two initiatives under development to increase the efficiency of the anomaly detection cycle. The first initiative will automate parts of the anomaly priority scoring system, using technology to inform assessment of the fiscal impact and scope of impact associated with identified anomalies. The second initiative

involves the development of a front end user interface to facilitate documentation of anomalies and their disposition.

Enhancing Data Infrastructure

As noted earlier, MCDA will maximize the benefit of the new ADS data store by developing comprehensive training for HHSC data analysts. MCDA will also take steps to ensure its readiness to respond effectively to anticipated requests for analyses related to COVID-19. For example, MCDA will proactively establish data stores to enable examination of utilization data with greater demographic granularity, incorporating such factors as race and gender.