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1. Introduction

The 2018-19 General Appropriations Act, Senate Bill 1, 85th Legislature, Regular Session, 2017 (Article II, Health and Human Services Commission), Rider 38 directs the Health and Human Services Commission (HHSC) to “submit a quarterly report reflecting the activities and findings of the Data Analysis Unit” created by Government Code, Section 531.0082. The following report fulfills this requirement for the fourth quarter of State Fiscal Year 2019 (SFY19 Q4).

During SFY19 Q4, the Medicaid CHIP Data Analytics (MCDA) Unit completed 50 projects or milestones supporting the direction of the statute for MCDA to "improve contract management, detect data trends, and 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 SFY19 Initiatives: Network Adequacy and Access to Care Monitoring, Complaints Data Trending and Analysis, and Strengthening Clinical Oversight.

The 2018-19 General Appropriations Act, Senate Bill 1, 85th Legislature, Regular Session, 2017 (Article II, HHSC), Rider 33, requires “collaboration between the Medicaid and CHIP data analytics unit and the HHSC actuarial staff to investigate and analyze any anomalies in the expenditure data used to set rates and to ensure the expenditure data being used to set rates is sound. 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 Actuarial Analysis meet monthly, as do MCDA and the Office of the Inspector General (OIG), to exchange updates on respective analyses.
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 substantial staff time that would otherwise have been spent manually processing the 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 of quality checks and feedback to the MCOs, the legacy system is inherently limited by the open nature of its file transfer protocol system. HHSC has begun the process of switching over to a newly developed portal (“TexConnect”) for MCO submissions. TexConnect will accept deliverables in text file formats that will be subject to front-end edits to check for proper data format and layout, including the forthcoming new deliverable of aggregated prior authorization data. MCDA is working with MCS to ensure early involvement in testing TexConnect, in a lead-up to designing, coding, testing, and implementing changes to the ETL process in order to accommodate the new portal process.

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 data in a user-friendly, flexible, and efficient format. The compliance dashboards continue to be used to facilitate the determination of corrective action, including the issuance of liquidated damages which, in turn, are being tracked in a dedicated dashboard of their own. The liquidated damages dashboard aggregates instances of non-compliance and associated damages. It allows contract management staff to easily identify trending non-compliance issues by subject, those MCOs receiving the most liquidated damages, and aggregated dollar amounts levied against said MCOs.

The compliance dashboard fed by the ETL database has been updated and revised to include all new data points through SFY19 Q3. The dashboard includes
compliance data at the detail level, with additional supporting data to enhance monitoring activities. Program staff use this dashboard as a tool to help determine the contract compliance of their assigned MCOs.

The executive compliance dashboard used to inform Medicaid and CHIP Services staff and leadership at Managed Care Oversight Committee meetings and is published to an internal server. It has been displayed in three Oversight Committee meetings this quarter and, due to positive feedback, will continue to be used moving forward. This dashboard conveys the overall health of each MCO and makes comparisons across programs and across the MCOs’ performance within each program.

Work has begun on a new dashboard to display data on provider terminations by program, SDA, reason, and specialty. Also included are counts of members impacted by provider terminations, broken down by some of these same factors. Like the compliance dashboard, this will streamline MCCO staff’s processes.

**Claims Administration Contract Oversight**

This quarter, MCDA again provided technical consultation to MCS Claims Administration Contract Oversight (CACO) on aspects of the current Texas Medicaid & Healthcare Partnership (TMHP) contract with Accenture. MCDA continued to participate in an ongoing series of meetings with Accenture in which CACO follows up on internal annual reviews of key contract requirements (“Key Measures”). In these meetings, MCDA serves as technical advisor to CACO as the Process and Calculation methodology documents (contract components) for Key Measures are reviewed with Accenture. Also this quarter, MCDA served a similar function as a subset of Key Measures were revised to incorporate expectations for Accenture’s responsibilities regarding Electronic Visit Verification vendors and associated data.

**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 has provided an analysis of CAD encounters that are in or out of compliance by MCO, which has allowed contract staff to educate low performing health plans, resulting in a decrease in the percentage of invalid paid CAD encounters from 16% in SFY16 Q4 to 3% in SFY18
Q4. MCCO and Vendor Drug are using the report to assess liquidated damages for non-compliance.

In this past quarter, MCDA collaborated with MCCO and Vendor Drug to refine the report methodology to better match the way MCOs process these claims. Beginning with SFY19 dates of service, the CAD report will no longer count CAD encounters listed with $0.00 payment amounts as invalid paid claims, as this is generally how the MCOs indicate Coordination of Benefits payments by Medicare or other insurance.

**Provider Network Adequacy**

One of MCDA’s high priority projects is serving as data experts on the Network Adequacy Steering Committee. In the past quarter, the committee began working 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. The purpose of the BI tool is to consolidate data from multiple areas to create a holistic view of factors that impact whether the Medicaid program has an adequate provider network. The BI tool will also automate manual monitoring and reporting processes to ensure MCO compliance with state and federal network adequacy standards.

Through Agile discovery sessions, the committee has been identifying potential “personas” (BI tool users) and their specific needs from the BI tool. These “user stories” will help inform the agency’s Statement of Work. MCDA is instrumental in this development process since it brings not only expert knowledge of the provider data sources but also experience linking the disparate provider data sources and building internal dashboards for monitoring provider network adequacy. The team’s experience will help the committee determine challenges the BI tool will need to overcome to deliver solutions to meet the agency’s business needs.
3. Tracking Service Utilization and Related Data

Service Utilization Dashboards

MCDA creates and maintains a library of dashboards displaying healthcare utilization by service topic. These dashboards are designed to simplify detection of trends and variations in the data. Examination of the dashboards leads to the identification of a range of anomalies, from billing issues to potential changes in service utilization levels or amount paid for services. The current update to the consolidated Service Utilization dashboard will be completed by the end of October 2019 and will extend to data from the first quarter of SFY19, including the following topics: dental; emergency department visits; inpatient stays; physical, occupational, and speech therapies; private duty nursing; personal care services; and durable medical equipment. In addition, behavioral health and related psychotropic medication dashboards will be added to the library, as well as Vendor Drug and Members with Special Health Care Needs. Beginning with the upcoming quarterly update, CHIP data will be incorporated with the existing Medicaid data in service utilization dashboards and subjected to the same advanced monitoring processes.

Increasingly, the utilization dashboards are providing a self-service mechanism for MCS program and policy staff and beyond, which frees up MCDA staff to conduct more complex analyses. HHSC Actuarial Analysis reports that it is actively using the MCDA dashboards as an additional tool to validate data and check trends they hear about from MCOs or other stakeholders.

Ongoing Trend and Anomaly Detection

MCDA receives input from a broad array of internal and external stakeholders, including MCS leadership, regarding the service types on which to focus within each managed care product. In particular, MCDA receives direction from the Service Utilization Workgroup under the Strengthening Clinical Oversight managed care oversight 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 rule out a reasonable 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 discontinuities in utilization data may be a result of such changes.

Another tool developed by MCDA to help investigate data variations is the Monthly Eligibility Report. The data in this report alerts the team to fluctuations in enrollment or Medicaid programs 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 eligibility report is frequently used by MCS and other HHSC staff for their own projects or to distribute externally as needed.

If, after further investigation, observed data variations are not explainable by data integrity issues or policy or program changes, MCDA presents its findings to the workgroup, which in turn provides further guidance on where to conduct deeper analysis. If findings may impact quality of care or cost to the state, leadership is briefed at a Managed Care Oversight Committee meeting. The following diagram shows the process flow for the review of service utilization data for trends and anomalies.

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**Strengthening Clinical Oversight**  
**Service Utilization Oversight**  
**Data Trends & Anomalies Process Flow**

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**Inputs**
- Legislative priorities
- MCS Leadership priorities
- MCDA Encounter review
- Complaints trends
- Utilization Review data & observations
- Policy Issues
- Actuarial Analysis questions
- Inspector General Concerns
- Literature on health trends & data issues

**Service Utilization Oversight Workgroup**
1. Review Initial Findings
2. Develop Action Plans for Additional Research
3. Identify trends and anomalies to escalate

**Appropriate Managed Care Oversight Committee**
1. Review results of analysis and provide direction
2. Provide direction regarding external communication and engagement, especially with MCOs
3. Routine review of previous action items

**MCDA**
1. Assimilates Input
2. Conducts analysis, including routine analysis of services by program
3. Identifies Observation

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A. MCDA compiles broad set of inputs  
B. MCDA and Service Utilization Oversight Workgroup collaborate to evaluate trends and prioritize services to evaluate  
C. Service Utilization Oversight Workgroup escalates trends for information sharing, leadership input, and follow up on previous action items  
D. Oversight Committee requests additional research
In a continuous improvement initiative designed to maximize the potential to identify important data variations, MCDA is expanding its internal procedures for making quarterly updates to the key service utilization dashboards. Dedicated analysts have been assigned to acquire specific expertise in the various areas of service. The primary analyst assigned to an area will lead the quarterly update, becoming highly familiar with the data. The analyst will utilize a control chart process to objectively identify signals of significant variations in the data, using their specialized knowledge of factors impacting the data to differentiate, for example, between variations resulting from policy changes and variations that will be escalated for further investigation and management review.

**Physical, Occupational, and Speech Therapy Monitoring**

MCDA continues to closely monitor physical, occupational, and speech therapy utilization rates in compliance with Rider 57, General Appropriations Act, Article II, 85th Texas Legislative Session. Because of our close monitoring and visualization tools we detected a decrease in active providers (i.e., providers with a billed encounter) that began in May 2016, which corresponds to when the therapy policy changes related to documentation and prior authorization were implemented. 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 eight months following December 2017, the number of active providers per month appears to have stabilized. For more information, the reader is referred to [https://hhs.texas.gov/laws-regulations/reports-presentations](https://hhs.texas.gov/laws-regulations/reports-presentations) for the pending release of the Quarterly Therapy Access Monitoring Report – September 2019.

**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) Waiver and the Medically Dependent Children’s Program (MDCP) in the STAR Health and STAR Kids programs. The purpose of these legislatively mandated reviews is to monitor the quality of the care delivered by MCOs. MCDA provides sampling consultation to ensure the reviews adequately represent the targeted
populations. In August, MCDA began creating a sample for the 2020 UR MDCP review, creating and refining the population data set of client records. The sample is being designed at the individual MCO level, rather than solely at the statewide level, allowing comparisons to be made among MCOs.
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 eligibility data, MCO self-reported quality measures, and professional licensure data. MCDA regularly tests system upgrades, performs quality control, and collaborates with TMHP staff to detect and correct errors and address any system performance issues.

Two recent improvements to the MCDA platform have been made to increase system efficiency. Provider data that previously had been held at a separate, external location has been migrated to the MCDA platform hardware, facilitating analysis. Additionally, a platform update was made that allows HHSC staff to add mapping tables so that they can run queries on the same server without having to do cross-server joins (thus greatly increasing efficiency).

**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 over five recent 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. MCDA’s business plan for SFY20 calls for internal development of a third subject-specific Data Mart developed by MCDA staff based on MCS priorities.
5. Goals for Next Quarter

In SFY20 Q1, MCDA will build on the work it is conducting on MCS’ key initiatives and other projects, including the following:

**Prior Authorization and Denial Data Collection**

This summer MCDA helped the Prior Authorization subcommittee of the MCS Improving Clinical Oversight initiative finalize a new data survey tool that is expanded to collect comprehensive data for all services requiring prior authorization (PA) from MCOs delivering all managed care products. The project scope included the development of systems to accept, validate, store and allow access to standardized PA data submitted by MCOs on a periodic basis, in contrast with the ad hoc basis by which PA data is currently collected. Goals of the project include more timely oversight and trend analysis, decreased administrative burden, and facilitated comparison of MCO PA processes.

The deliverable is in the process of undergoing final revisions based on comments from MCOs, to be followed by final internal approvals. Collection of aggregated data using the new tool is projected to begin in fall 2019. In the short term, MCDA is preparing for the new data delivery and analysis by meeting with MCCO regarding the TexConnect portal, through which the data will be transmitted. In the longer term, MCDA will lay the groundwork for a second phase of this project: the collection of client level PA data.

**Compliance Dashboards and ETL**

As MCS moves toward the phase-in of the new, web-based portal for the submission of MCO deliverables, TexConnect, MCDA will work with MCS to transition the ETL and dashboard processes to accommodate this new methodology and ensure the continued timely reporting of MCO measures. In the future, MCDA will leverage the work done during this period, as more deliverables are transitioned to the flat file/portal delivery system. Also, in SFY20 Q1, MCDA will continue to enhance the span of available compliance dashboards by completing work on the new provider termination dashboard.
Provider Network Adequacy

In the next quarter, MDCA will continue to collaborate with the Provider Network Adequacy Committee on developing the functional requirements of the forthcoming BI Tool. MCDA will be hiring two staff members to support these efforts, including a DBA who will help guide, implement and maintain the tool.

Trend and Anomaly Detection

Next quarter, MCDA will focus on developing a system for automating the detection of data variation signals using control charts within a visualization software environment. The system will help the team focus its resources on the most anomalous trends and guide ongoing discussions among MCS policy and program staff about the status of the Medicaid managed care programs. As has been MCDA’s past practice, unexplained observations will be escalated to MCS leadership.

Service Utilization Dashboards

MCDA will complete the addition of BH data to the utilization dashboard for more immediate access to fulfill data requests. Also, all service utilization dashboards will be updated with the most recently available final data, covering the first quarter of SFY19, with a target date for completion by the end of October 2019.

Enhancing Data Infrastructure

To leverage the usefulness of the MCDA Data Platform, MCDA will continue to train CADS staff outside of the MCDA unit on its use. Further, during SFY20 Q1 MCDA will undertake the development and testing of a new BH services table that will refresh as frequently as quarterly.