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Statistics and Analysis From the Hospital Industry Data Institute

AUGUST 2018 ■ **How Effective Are Medicaid MCOs At Managing Care In Missouri?**

Key Findings

- In May 2017, Medicaid managed care was expanded statewide in Missouri, adding 240,000 new MCO enrollees.
- Despite the rapid growth of managed Medicaid delivery models in the U.S. and Missouri, limited evidence exists on the actual effectiveness of MCOs to deliver efficiencies and cost savings while improving health outcomes for enrollees.
- Observed differences in hospital utilization for Medicaid beneficiaries in Missouri can be explained by higher rates of clinical, behavioral and social complexity among fee-for-service enrollees.
- Compared to fee-for-service, Medicaid managed care patients have significantly lower clinical and behavioral risk factors, yet higher rates of ED utilization and inpatient readmissions.

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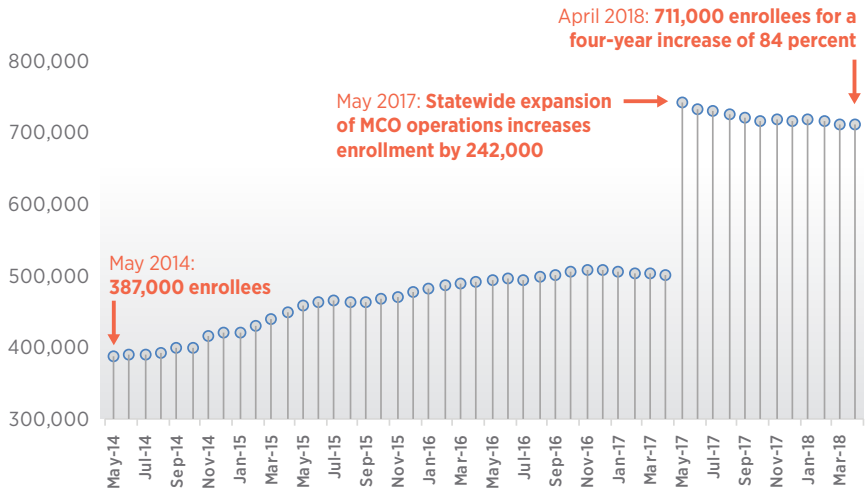
Background

The delivery of Medicaid services through third-party, for-profit managed care organizations continues to grow in popularity, with an estimated 71 percent of the nation's 74 million beneficiaries receiving coverage from an MCO in 2016.[i] The reasons for this trend vary by state and include perceived efficiencies delivered by MCOs with deep investments in health information technology, utilization management that can reduce unnecessary spending and potentially improve patient outcomes;[i] however, another attractant of third-party Medicaid delivery is budgetary predictability for state general revenue funds.

In May 2017, the Missouri general assembly expanded the Medicaid MCO service area from 54 counties, encompassing the Interstate 70 corridor to statewide coverage. This resulted in 240,000 individuals, primarily women and children in the expansion counties, who were shifted from traditional Medicaid to coverage from one of three for-profit corporations — WellCare, Centene or United Health Group.[ii] The shift resulted in a four-year increase of 84 percent in the number of Medicaid MCO enrollees in Missouri (Figure 1).

Despite the rapid growth of managed Medicaid delivery models in the U.S. and Missouri, limited evidence exists on the actual effectiveness of MCOs to deliver efficiencies and cost savings while improving health outcomes for enrollees. A recent systematic review found no peer-reviewed studies supporting any evidence of cost savings or quality improvement associated with Medicaid managed care compared to traditional fee-for-service Medicaid.[iii]

Figure 1: Monthly Medicaid MCO Enrollment in Missouri:
May 2014 – April 2018



Source: Missouri Department of Social Services, MO HealthNet Division. Annual Summaries for Enrollment Data 2014-2018. Available at https://dss.mo.gov/mhd/mc/pages/enroll.htm

Considering the rapid expansion of Medicaid managed care in Missouri, it is important to better understand the effectiveness of the state's contracted MCOs at reducing unnecessary utilization and associated costs. Previous studies of the Medicaid program in Missouri have shown the following.

- Managed care is associated with hospital superutilization after adjusting for clinical, behavioral and social risk factors.[iv]
- Hospital utilization by managed care patients grew much more quickly than fee for service during the previous decade in Missouri for any reason, and for mental health and substance use disorders in particular.[v]
- Recent MO HealthNet-contracted studies of the Medicaid program in Missouri by delivery model had questionable findings on the cost savings and quality outcomes associated with Medicaid MCOs in the state prior to expansion.[vi]

This report aims to evaluate recent trends in hospital utilization for the Medicaid managed care population compared to other Medicaid patients in Missouri, and to describe observed differences between the groups regarding clinical, behavioral and sociodemographic risk factors.

Differences in Medicaid Subpopulations

MO HealthNet, Missouri's Medicaid program, provides health insurance coverage to more than 900,000 low-income Missourians, including 40 percent of children,[vii] 8 percent of senior citizens and 60 percent of the state's nursing home residents.[viii]

The program accounts for nearly one-third of the total Missouri budget and features pronounced cost centers, primarily among individuals in the aged, blind and disabled eligibility category that is covered through the traditional fee-for-service delivery model. The managed care delivery model covers low-income families, children, pregnant mothers and newborns.[x]

With the statewide expansion of the managed care delivery model in May 2017, the differences in risk profiles between the Medicaid populations in Missouri that are covered by managed care and fee for service grew significantly.

Among hospital patients with Medicaid during the 12 months following MCO expansion, the differences between the two populations for clinical and behavioral risk factors increased significantly compared to the year preceding the expansion. Table 1 shows that compared to managed care, the rates of chronic disease among the fee-for-service population range from no difference in asthma, to five times the rate of cancer, to more than seven times the rates of both stroke and atherosclerosis. For behavioral risk factors, fee-for-service patients have nearly triple the rates of alcohol dependence and double the rates of opioid misuse and obesity diagnosis.

> "For such a high-profile policy question, the evidence for savings is surprisingly thin. There are no peer-reviewed studies that we can find documenting Medicaid MCO savings, but rather waves of studies by consulting firms, most of which worked for the state Medicaid agencies." – Goldsmith et al., Health Affairs Blog, May 4, 2018.

Table 1: Trends in Hospital Utilization for Missouri Medicaid Patients Ages 20 to 64, Excluding Obstetric and Churn Patients: May 2016 - April 2018

	May 2016 - April 2017		May 2017 - April 2018*	
	MCO	FFS	MCO	FFS
Inpatient and ED Utilization				
Unique patients	30,225	83,657	38,769	69,432
Inpatient visits	6,185	53,621	7,226	50,303
Mean per patient	*0.20*	*0.64*	*0.19*	*0.72*
30-day readmission rate (unadjusted)	*9.6%*	*16.8%*	*7.9%*	*17.1%*
Treat & release ED visits	76,443	199,103	91,055	157,166
Mean per patient	*2.53*	*2.38*	*2.35*	*2.26*
Percent superutilizer (10 or more visits)	*2.8%*	*4.5%*	*2.2%*	*4.6%*
Percent low-acuity (level 1 or 2)	*16.7%*	*13.3%*	*14.5%*	*10.5%*
Total charges (in millions)	$394.1	$2,772.2	$507.6	$2,720.2
Mean per patient	*$13,039*	*$33,138*	*$13,092*	*$39,177*
Clinical Complexity				
Hypertension	15.4%	35.7%	15.8%	39.5%
Heart Disease	14.8%	26.8%	14.8%	29.5%
Diabetes	6.5%	18.4%	6.8%	20.6%
COPD	4.8%	16.6%	4.4%	18.4%
Asthma	13.4%	12.8%	11.9%	11.7%
Cancer	1.5%	5.9%	1.3%	6.6%
Liver Disease	2.9%	6.7%	3.1%	7.5%
Kidney Disease	1.2%	6.5%	1.2%	7.7%
Stroke	0.5%	3.1%	0.5%	3.7%
Atherosclerosis	1.5%	9.2%	1.5%	10.8%
Sociodemographic Complexity				
Average age	33.3	42.1	33.4	43.9
Race - white	58.1%	73.4%	66.1%	69.9%
Race - black or African American	38.7%	24.2%	30.3%	27.6%
Other race	6.0%	3.9%	6.1%	4.2%
Female	78.0%	61.0%	78.7%	57.9%
Average number of ZIP Codes (housing stability)	1.14	1.13	1.12	1.13
Behavioral Complexity				
Psychological diagnosis	6.8%	12.2%	7.0%	13.6%
Alcohol-related diagnosis	3.6%	9.1%	3.5%	9.9%
Substance use disorder diagnosis	3.0%	4.7%	2.9%	5.0%
Prescription opioid use diagnosis	4.1%	7.4%	4.0%	8.1%
Illicit opioid use diagnosis	0.5%	0.4%	0.4%	0.5%
Tobacco use diagnosis	54.4%	61.1%	57.1%	63.0%
Obesity diagnosis	7.2%	11.1%	5.6%	11.4%

**April 2018 is incomplete due to partial participation in monthly data reporting. Patients with childbirth during the year or with both MCO and FFS coverage were excluded from this analysis.*

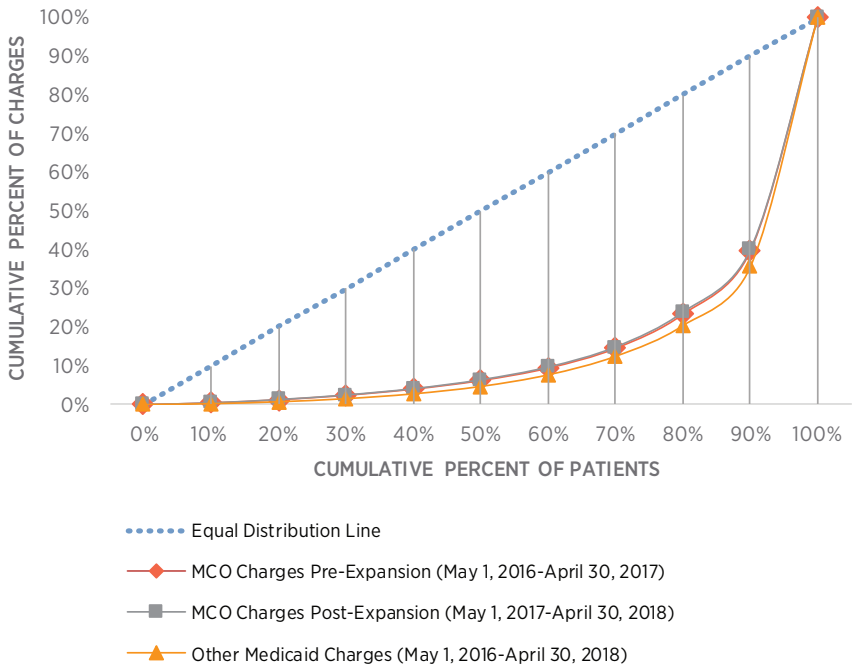
In addition to demographic characteristics, fee-for-service patients are significantly older — these clinical and behavioral risk factors can explain much of the observed differences in overall charges and inpatient hospital utilization detected between the two cohorts during the 12 months following expansion. What remains unexplained is why managed care patients have higher rates of emergency department utilization — particularly for behavioral disorders — and an equally concentrated cost distribution across the population compared to fee-for-service patients.

Similarities in Cost Centers

The disproportionate concentration of health care consumption and expenditures among a small portion of the population is a well-documented facet of the health system in the U.S. The top 1 percent of the population consistently consumes more than one-fifth of health care resources, while the bottom 50 percent of the population accounts for just 3 percent of health care utilization and expenditures.[xi] Medicaid hospital spending in Missouri reflects the national distribution.

Figure 2 shows the distribution of spending for Medicaid MCO enrollees in Missouri for the 12 months before and after statewide managed care expansion, compared to the distribution for all other Medicaid patients during the same time period. During the 12 months leading to expansion, the bottom half of MCO patients accounted for just 6.2 percent of spending, while the top 10 percent accounted for 60.3 percent.

Figure 2: Concentration Curve of Hospital Charges for Medicaid Patients in Missouri by Delivery Model



The curve did not bend during the 12 months after expansion, with the bottom half of MCO patients again accounting for 6.4 percent of hospital spending, while the top 10 percent accounted for 59.9 percent. By contrast, for all other Medicaid patients, primarily consisting of the complex aged, blind and disabled cohort, the bottom half consumed 4.7 percent of total spend, while the top 10 percent accounted for 64 percent.

The Gini coefficient is a common measure of inequality that calculates the area between the equal distribution line and the concentration curves in Figure 2.

A Gini coefficient of one indicates perfect inequality, and zero represents perfect equality in the consumption of hospital goods and services across beneficiaries. The Gini coefficients for Medicaid managed care during the year before expansion was 0.70, while the year after was 0.69 showing a slightly more even distribution of hospital consumption. During the two-year period, the coefficient for all other Medicaid patients was similar to MCO patients at 0.73. This included both fee for service and those who churned between managed care and fee for service during the two years.

For behavioral risk factors, fee-for-service patients have nearly triple the rates of alcohol dependence and double the rates of opioid misuse and obesity diagnosis.

Are Superutilizers Getting Managed Care?

Among the high-cost MCO patients during the 12 months after expansion were nearly 2,600 individuals with 10 or more hospital visits during the year. The range of hospital inpatient and ED visits for these patients during the 12-month period included 629 enrollees with 10 visits, to one enrollee with eight diagnosed chronic conditions and one behavioral risk factor who had 91 visits and $363,000 in hospital charges.

Figure 3 shows the distribution of Medicaid MCO enrollees with 10 or more hospital inpatient or ED visits during the 12 months following statewide managed care expansion in Missouri. The average number of clinical risk factors, as measured by the number of chronic conditions diagnosed during the year, increases significantly with the number of visits the patients experienced. While the number of behavioral risk factors increases modestly with the number of visits, 77 percent of these patients were diagnosed with at least one factor during the year, which is significantly higher compared to all MCO enrollees during the same period (Table 1). Among these risk factors, 27 percent were diagnosed with a psychological disorder such as depression, and 19 percent were diagnosed with alcohol dependence, substance use disorder or opioid misuse.

Access to Behavioral Health Services

Network adequacy for all Medicaid MCO enrollees with psychiatric or substance use disorders is another question raised by observing hospital utilization patterns for Medicaid patients in Missouri. Figure 4 shows the cumulative monthly percent change in hospital inpatient and ED visits for psychiatric and substance use-related reasons by Medicaid managed care and fee-for-service patients from May 2014 through March 2018. April 2018 data were not included due to incomplete participation in monthly data reporting by Missouri hospitals.

During the 36-month period leading to statewide expansion of Medicaid managed care in May 2017, hospital visits for behavioral health by MCO enrollees increased by 64 percent in Missouri, while fee-for-service visits increased 13 percent.

Figure 3: Distribution of Hospital Superutilizers with Medicaid Managed Care in Missouri by Their Number of Visits and Clinical or Behavioral Risk Factors: May 2017 - April 2018

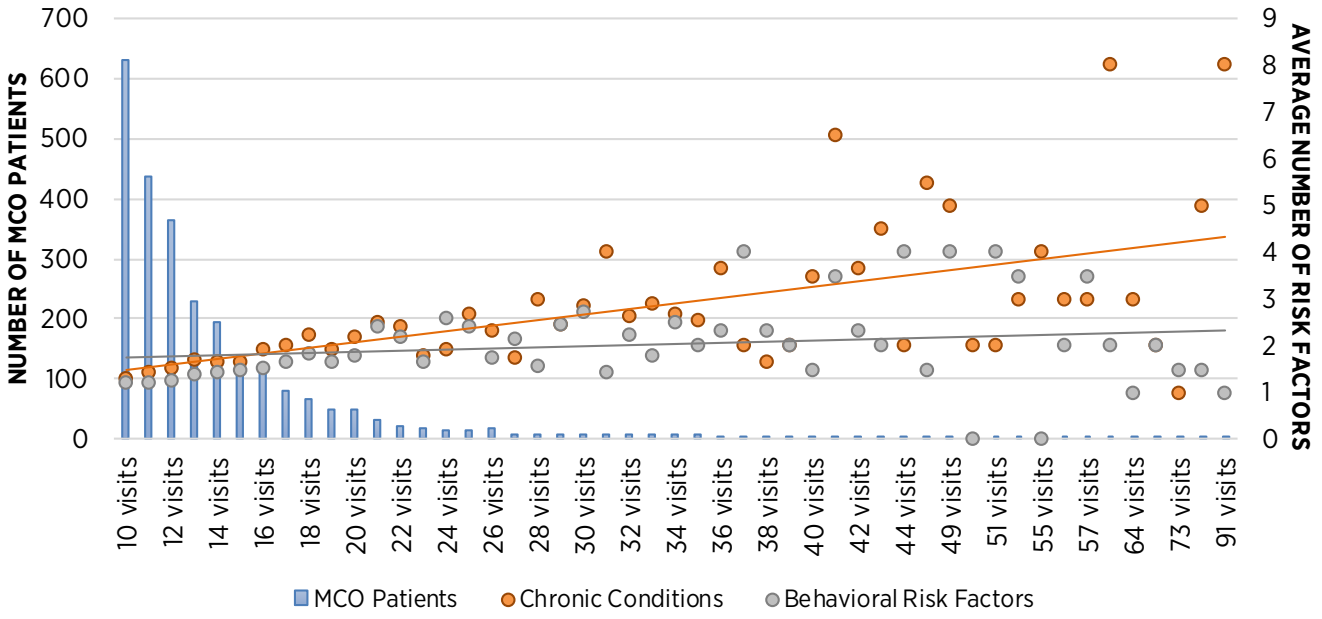
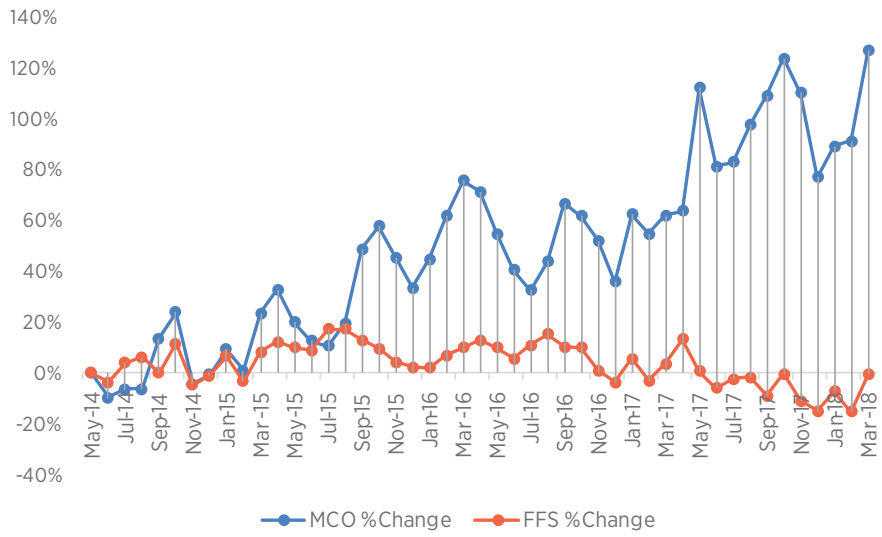


Figure 4: Monthly Hospital Visits for Psychiatric or Substance Use Disorder: May 2014 - March 2018



Between April 2017 and March 2018 — the first 11 months of expansion — these visits increased 39 percent for MCO enrollees and decreased 12 percent for fee-for-service patients. Overall, between May 2014 and March 2018, Medicaid managed care hospital visits for behavioral health have more than doubled with a 127 percent increase, while the same visits by fee-for-service patients have decreased by 1 percent.

During the 36-month period leading to statewide expansion of Medicaid managed care in May 2017, **hospital visits for behavioral health by MCO enrollees increased by 64 percent** in Missouri, while fee-for-service visits increased 13 percent.

Conclusion

The statewide expansion of Medicaid managed care in May 2017 had a profound impact on the actuarial risk pool of MCO and fee-for-service enrollees in Missouri. Now, the managed care program is populated by families, children, and new or expectant mothers, while the fee-for-service program is reserved exclusively for clinically and behaviorally complex patients and the elderly.

While this distinction imposes difficulty in drawing unadjusted comparisons between the two programs, the close resemblance of the distribution of hospital utilization across managed care and fee-for-service patients in Missouri is counterintuitive. And, while basic observed rates of hospital inpatient and ED utilization by MCO enrollees decreased slightly during the first 12 months of expansion, it is unclear whether these modest reductions were an artifact of the difficulty associated with changing enrollment or quality of the MCOs. It is clear that average hospital charges per MCO enrollee increased very slightly during the first year of expansion.

Similarly counterintuitive is the large number of superutilizing MCO enrollees with 10 or more hospital visits during the first year of expansion, and the continued unsustainable growth in primarily ED utilization for behavioral health services by Medicaid MCO enrollees in Missouri. Each of these observations raise important questions for policymakers around the adequacy of primary and behavioral health networks available to Medicaid MCO enrollees in Missouri.

Better understanding the extent to which MCOs are succeeding at their directive to "coordinate care to help individuals and families stay healthy"[xii] carries growing importance for Missouri's Medicaid program and health care system at large. Effectively managing and coordinating care will move the system toward the triple aim of health care. Constraining utilization to shift costs from shareholders to patients and providers will carry the opposite effect.

Suggested Citation

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