Whole Person Care Improves Quality and Outcomes in Medicaid

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Elevance Health | Public Policy Institute

CONTENTS

KEY HIGHLIGHTS

- States are increasingly integrating mental health and substance use disorder benefits with physical health services through Medicaid MCOs, instead of "carving out" these services to separate managed behavioral health organizations.
- IBM Watson Health analyzed the impact of moving from a carve-out model to a fully carved-in model—finding that beneficiaries experienced increases in outpatient visits and improvements in quality following integration.
- States looking to improve care and outcomes for individuals enrolled in Medicaid should consider approaches that promote whole person health.

Overview

Extensive research demonstrates the benefits of integrating physical health services with mental health and substance use disorder (MH/SUD) services and supports.[1] In particular, integration can eliminate silos that exist between physical health providers and MH/SUD providers, reduce fragmentation, and improve care coordination for individuals.[2]

A study released by the Elevance Health Public Policy Institute found that implementation of carved-in (or integrated) MH/SUD services into Medicaid managed care plans in South Carolina led to lower utilization of the emergency department (ED) for MH/SUD-related reasons and improved adherence to antidepressant medications.[3] Other studies on integrating physical health and MH/SUD have shown similar findings including less reliance on institutional settings, improvements in preventive services, and better coordination of care.[4,5]

States' goals are to promote coordinated care and improve outcomes, yet little research has been conducted to quantify the impact of a carve-in (MCO) model.

There is wide variation in payers' and providers' approaches to integration.[6,7] However, states are increasingly integrating MH/SUD and physical healthcare benefits through comprehensive Medicaid managed care organizations (MCOs) rather than carving out MH/SUD benefits to a separate managed behavioral health organization (MBHO).[8] States' goals are to promote coordinated care and improve outcomes for individuals, yet little research has been conducted to quantify the impact of a carve-in (MCO) model versus a carve-out (MBHO) model. Gaps in the research also exist with respect to outcomes for children, adolescents, and individuals with serious mental illness (SMI).[9]

Elevance Health's Public Policy Institute commissioned IBM Watson Health to quantify the impact of moving Medicaid MCO enrollees from a carve-out to a carve-in model for MH/SUD benefits using data from multiple states.

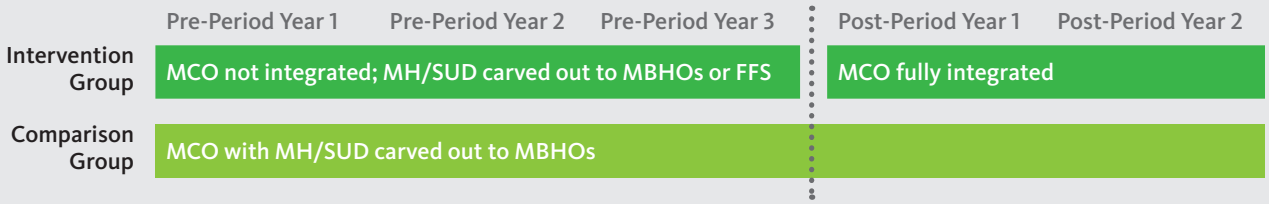
Methodology

The study analyzed the impact of integration over a two-year period following the move from a carve-out model to a fully carved-in model.

Using data from the 2006-2014 IBM® MarketScan® Multi-State Medicaid Database, the study included adults (ages 19 to 64) and children (ages 6 to 18) who were continuously enrolled in Medicaid coverage for at least a full calendar year.[10] Individuals dually eligible for Medicare and Medicaid or enrolled in long-term care facilities were excluded from the analysis.[11]

IBM Watson Health assigned state Medicaid plans/programs to one of three relevant categories: fee-for-service (FFS), fully integrated managed care (MCO), and carve-out arrangement to a MBHO. Assignments were made using information collected via a review of Medicaid health plan documents and informational interviews. The intervention group consisted of individuals served by plans that transitioned from a carve-out to a carve-in (i.e., fully integrated) model, while the comparison group was those served by plans that carved out MH/SUD services in full or in part to an MBHO. (Figure 1)

Figure 1 Analytic Groups and Timeline



The study compares outcomes for three cohorts: individuals with any MH/SUD diagnosis, individuals with serious mental health conditions (serious mental illness, or SMI, among adults and serious emotional disturbance, or SED, among children), and individuals with co-occurring MH conditions and SUD. IBM Watson Health used a matched study design to control for differences between the intervention and comparison groups in demographic and individual characteristics, area characteristics, and health status/clinical characteristics.

Difference-in-differences regression models were used to estimate the impact of transitioning Medicaid MH/SUD benefits from a carve-out to a carve-in model for the three study cohorts. Outcomes analyzed included: MH/SUD-related service utilization, general healthcare utilization, and medication management.

Findings

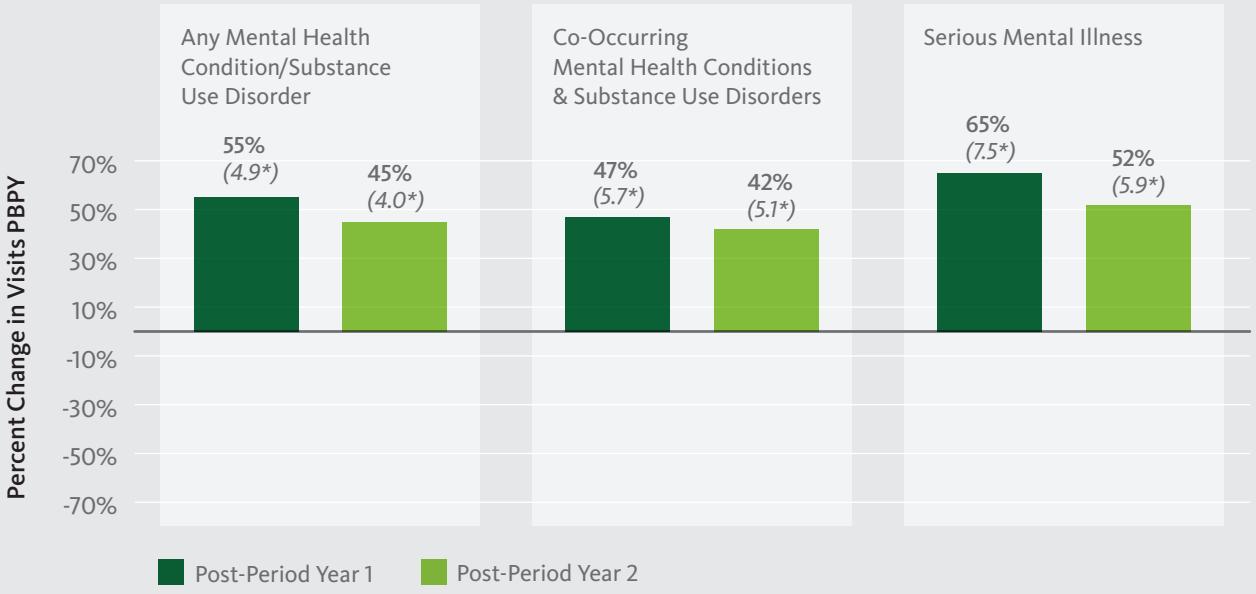
Transitioning to a model where comprehensive, risk-based MCOs manage all physical health services and MH/SUD benefits can achieve positive outcomes for beneficiaries. The findings from IBM Watson Health's evaluation suggest that integration improves the use of outpatient MH/SUD services and strengthens medication management for children and adults.

Psychotherapy Visits Increased for Adults and Children After the Carve-In

Among adults with any MH condition/SUD, psychotherapy visits per beneficiary per year (PBPY) increased by 4.9 and 4.0 visits in Post-Period Year 1 and Post-Period Year 2, respectively. (Figure 2) These increases were substantial compared to the pre carve-in period—equating to a 55 percent increase in Post-Period Year 1 and a 45 percent increase in Post-Period Year 2. Adults with co-occurring MH conditions and SUD and adults with SMI had even larger increases in the number of psychotherapy visits.

Figure 2 **Change in Psychotherapy Visits Compared to Pre Carve-In Period**

Adults



Source: IBM Watson Health analysis using data from the MarketScan Multi-State Medicaid Database.

Results of the difference-in-differences analysis are net of the contemporaneous trend in the comparison group (in addition to showing the change in the post period compared to the pre period).

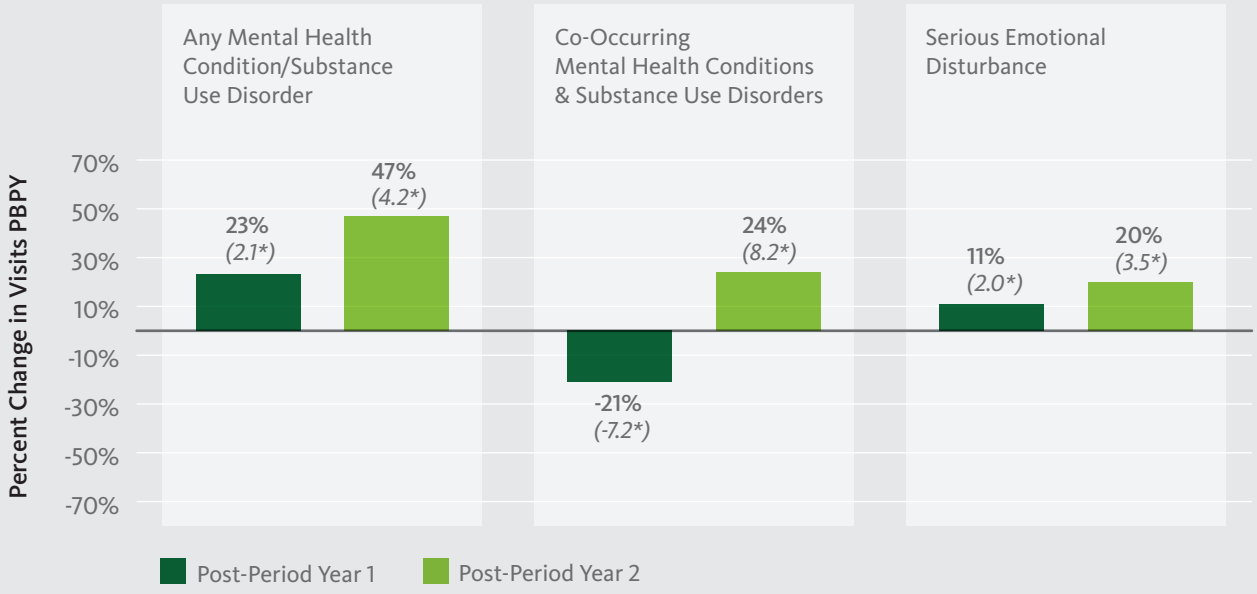
Absolute change in the number of visits per beneficiary per year is shown in parentheses.

* Indicates that difference is statistically significant at $p < 0.05$.

Psychotherapy visits also increased notably among children in both post-period years. (Figure 3) Children with any MH condition/SUD and children with SED had approximately 2 additional psychotherapy visits PBPY in Post-Period Year 1 and approximately 4 additional visits PBPY in Post-Period Year 2. Results were mixed for children with co-occurring conditions.

Figure 3 **Change in Psychotherapy Visits Compared to Pre Carve-In Period**

Children



Source: IBM Watson Health analysis using data from the MarketScan Multi-State Medicaid Database.

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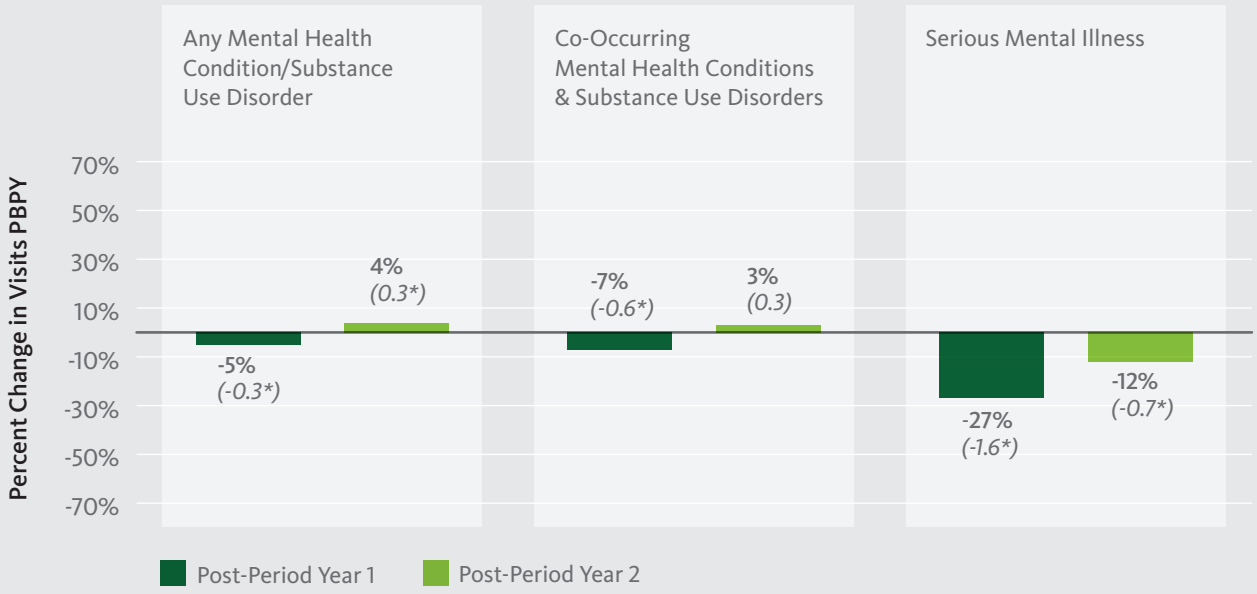
All-Cause Outpatient Visits Mostly Decreased for Adults and Increased for Children After the Carve-In

In Post-Period Year 1, outpatient office visits for any reason declined among adults in all three study cohorts. (Figure 4) Adults with SMI had the greatest decline in office visits with a 27 percent decrease in Post-Period Year 1. They were also the only group with a decline in Post-Period Year 2 (12%), while adults with any MH condition/SUD had a small increase (4%).

Figure 4 **Change in All-Cause Outpatient Visits Compared to Pre Carve-In Period**

Adults



Source: IBM Watson Health analysis using data from the MarketScan Multi-State Medicaid Database.

Results of the difference-in-differences analysis are net of the contemporaneous trend in the comparison group (in addition to showing the change in the post period compared to the pre period).

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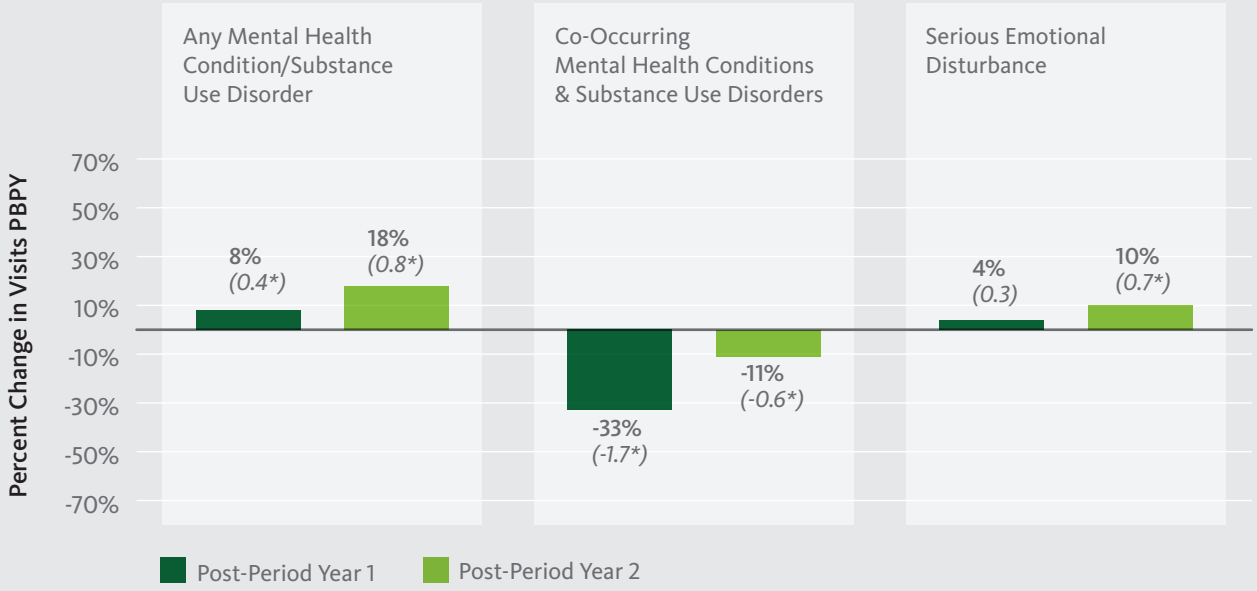
In contrast to adults, after the carve-in, most children had greater use of outpatient services for their overall healthcare needs. (Figure 5) For instance, children with any MH condition/SUD had 8 percent more office visits in Post-Period Year 1 and 18 percent more office visits in Post-Period Year 2. Outpatient visits also increased by 10 percent in Post-Period Year 2 for children with SED, though no statistically significant change was observed for this group in Post-Period Year 1. However, for children with co-occurring MH conditions and SUD, utilization of overall outpatient services declined in both post-period years.

Figure 5 **Change in All-Cause Outpatient Visits Compared to Pre Carve-In Period**

Children



Source: IBM Watson Health analysis using data from the MarketScan Multi-State Medicaid Database.

Results of the difference-in-differences analysis are net of the contemporaneous trend in the comparison group (in addition to showing the change in the post period compared to the pre period).

Absolute change in the number of visits per beneficiary per year is shown in parentheses.

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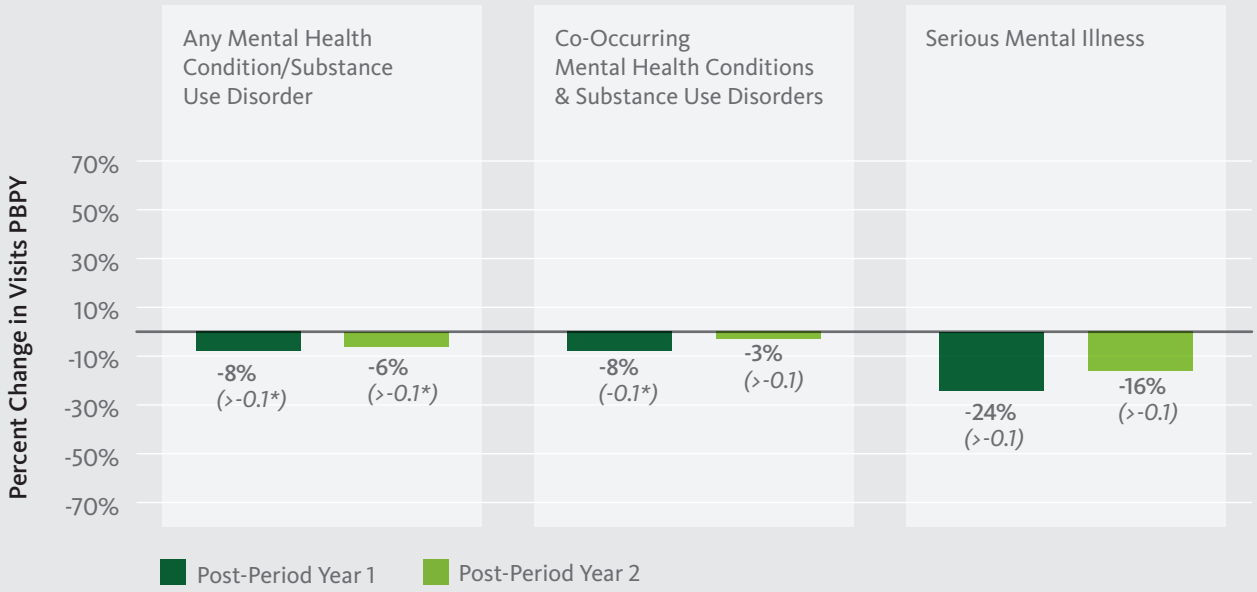
Emergency Department Use After the Carve-In Was Mixed

ED visits for MH/SUD reasons declined significantly in Post-Period Year 1 for both adults with any MH condition/SUD and adults with co-occurring MH conditions and SUD—falling by 8 percent for both groups. (Figure 6)

Figure 6 **Change in MH/SUD-Related ED Visits Compared to Pre Carve-In Period**

Adults



Source: IBM Watson Health analysis using data from the MarketScan Multi-State Medicaid Database.

Results of the difference-in-differences analysis are net of the contemporaneous trend in the comparison group (in addition to showing the change in the post period compared to the pre period).

Absolute change in the number of visits per beneficiary per year is shown in parentheses.

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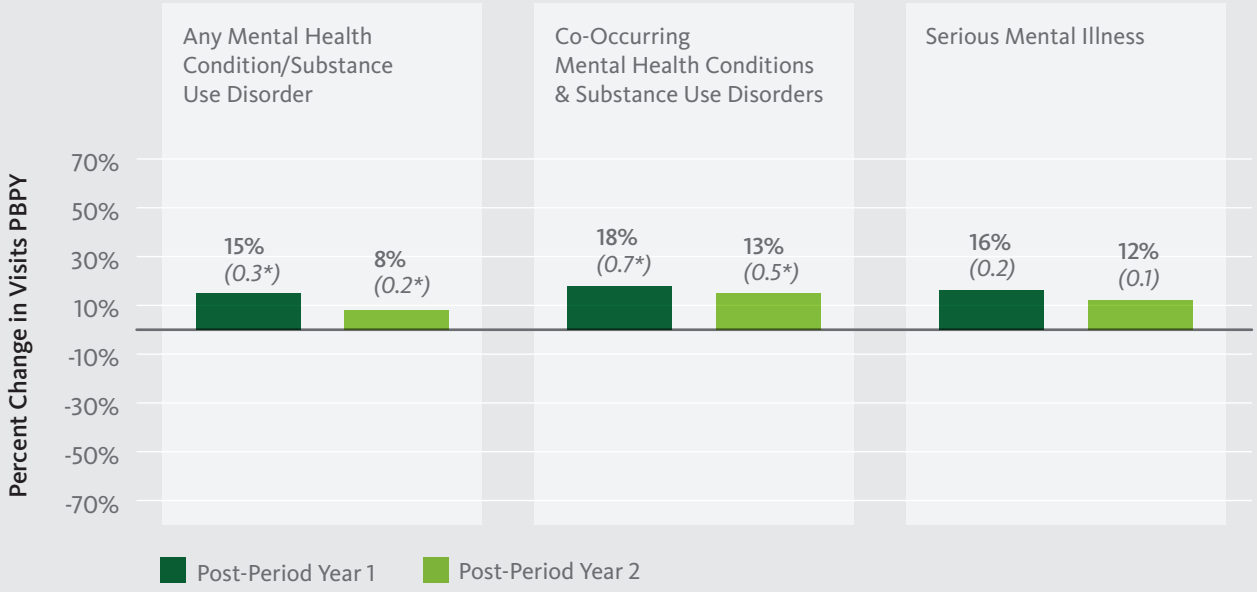
However, adults with any MH condition/SUD and adults with co-occurring MH conditions and SUD experienced significant increases in ED visits for any reason in both post-period years. (Figure 7)

Figure 7 **Change in All-Cause ED Visits Compared to Pre Carve-In Period**

Adults



Source: IBM Watson Health analysis using data from the MarketScan Multi-State Medicaid Database.

Results of the difference-in-differences analysis are net of the contemporaneous trend in the comparison group (in addition to showing the change in the post period compared to the pre period).

Absolute change in the number of visits per beneficiary per year is shown in parentheses.

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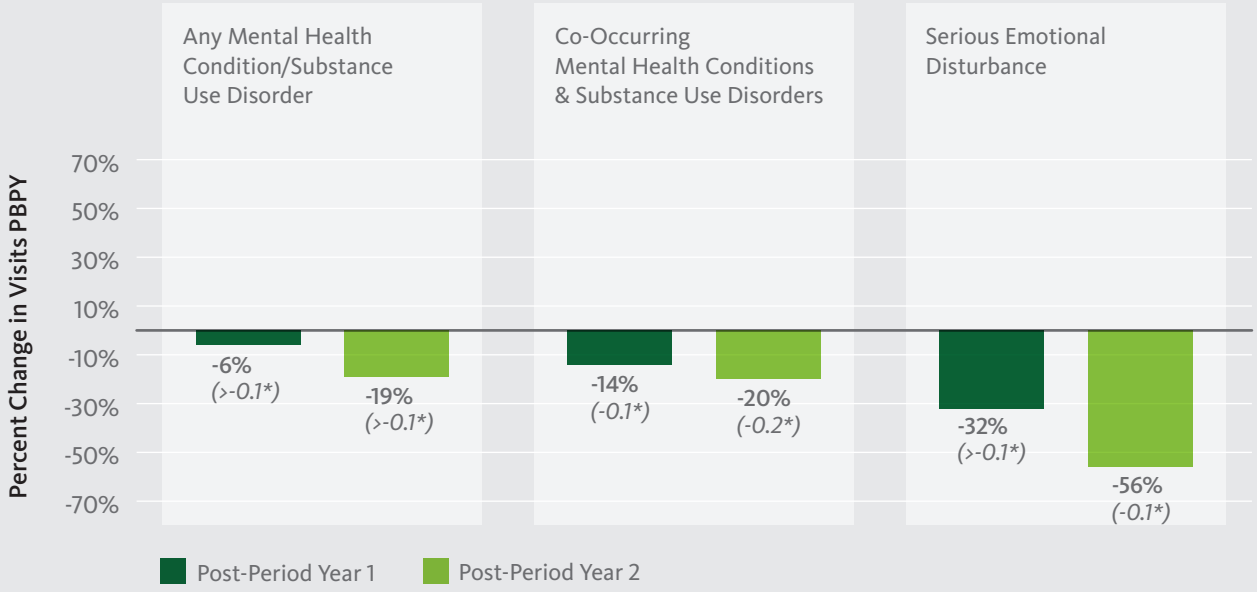
ED visits PBPY for MH/SUD-related reasons declined in both post-period years for children in all three of the study cohorts. (Figure 8) The impact of integration was most pronounced for children with SED in Post-Period Year 2, when they had 56 percent fewer MH/SUD-related visits even though the absolute change in the number of visits PBPY was small.

Figure 8 **Change in MH/SUD-Related ED Visits Compared to Pre Carve-In Period**

Children



Source: IBM Watson Health analysis using data from the MarketScan Multi-State Medicaid Database.

Results of the difference-in-differences analysis are net of the contemporaneous trend in the comparison group (in addition to showing the change in the post period compared to the pre period).

Absolute change in the number of visits per beneficiary per year is shown in parentheses.

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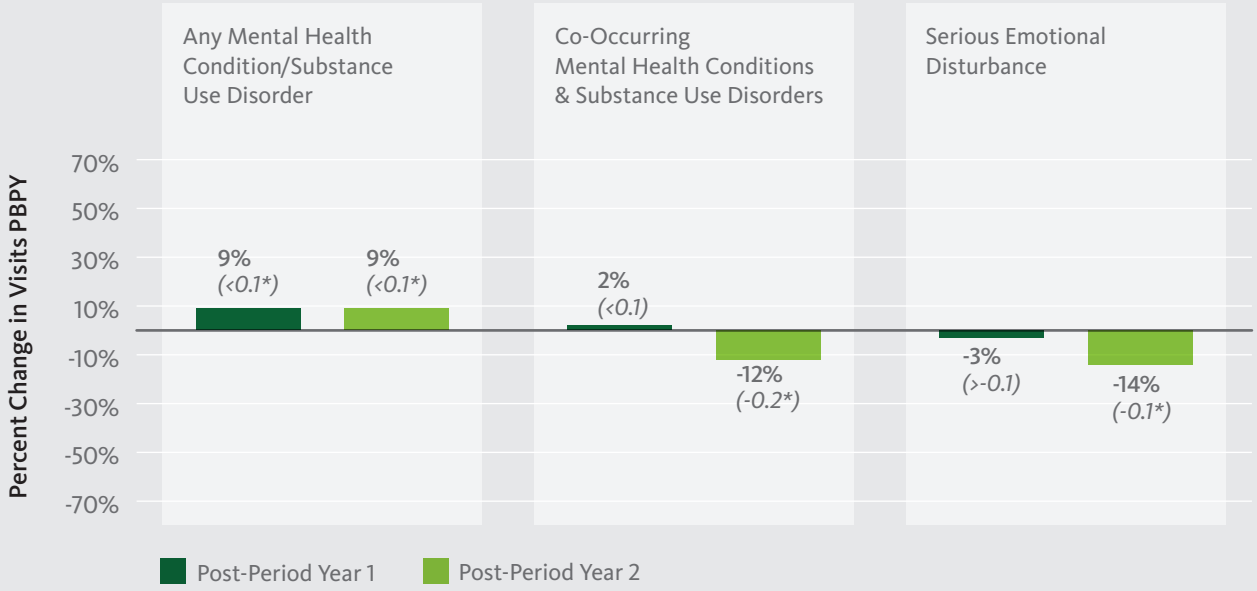
In contrast, ED visits for any reason PBPY increased in both post-period years among children with any MH condition/SUD, but decreased in Post-Period Year 2 for children with SED and children with co-occurring MH conditions and SUD. (Figure 9)

Figure 9 **Change in All-Cause ED Visits Compared to Pre Carve-In Period**

Children



Source: IBM Watson Health analysis using data from the MarketScan Multi-State Medicaid Database.

Results of the difference-in-differences analysis are net of the contemporaneous trend in the comparison group (in addition to showing the change in the post period compared to the pre period).

Absolute change in the number of visits per beneficiary per year is shown in parentheses.

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Medication Management Improved After the Carve-In

Among adults, the analysis examined changes in prescription fills PBPY for antipsychotics, antidepressants, and stimulants as well as adherence to antidepressants.[12] The number of fills for antidepressant medications increased in Post-Period Years 1 and 2 for adults with any MH condition/SUD and those with co-occurring MH conditions and SUD. Adherence to antidepressants, as measured by percent of days covered, also improved in Post-Period Year 1 for adults with co-occurring MH conditions and SUD.

The change in the number fills for antipsychotics was mixed, decreasing for adults with any MH condition/SUD in Post-Period Year 2 as well as for adults with SMI in both post-period years. In contrast, adults with co-occurring conditions had more fills PBPY in Post-Period Year 2. Stimulant fills decreased in Post-Period Year 2 among adults with any MH condition/SUD and those with co-occurring conditions and in Post-Period Year 1 for adults with SMI.

In both post-period years, a higher percentage of children with any MH condition/SUD received follow-up care for ADHD medication use.

For children, the study also examined changes in prescription fills as well as follow-up care for attention-deficit/hyperactivity disorder (ADHD) medication use. Changes in fills for antidepressants and antipsychotics for children with any MH condition/SUD were mixed. Antidepressant fills PBPY increased in Post-Period Year 1, but had no statistically significant change in Year 2. Changes in the number of fills PBPY for antipsychotics decreased in Post-Period Year 2, but had no significant change in Year 1. In addition, fills for stimulants PBPY also declined in both post-period years.

In both post-period years, a higher percentage of children with any MH condition/SUD received follow-up care for ADHD medication use.[13]

Limitations

Although the findings indicate positive changes within the two years following integration, the long-term impact of full integration on utilization and quality could not be evaluated due to the short two-year study period. Additionally, the study population may over-represent higher-cost, higher-need Medicaid beneficiaries. Only individuals continuously enrolled were included in the analysis, and healthy individuals tend to disenroll from Medicaid more frequently than those with chronic health conditions.[14]

Conclusion

This study demonstrates initial improvements in care following integration of MH/SUD services and physical health benefits—primarily increases in outpatient service use and medication management.

Evidence suggests that enhanced care coordination contributes to improvements in service use and quality, particularly among children.

Increases in psychotherapy visits for both adults and children, for example, demonstrate that integration is achieving one of its goals—increasing use of needed MH/SUD services. This is meaningful because psychotherapy visits can provide individuals with an opportunity to talk through anxiety, depression, and other potential mental health needs before more intensive treatment and services are required.[15]

In many instances, the positive impacts of integration were more pronounced for adults and children who have more complex MH/SUD needs, such as serious mental health conditions or co-occurring conditions. Evidence suggests that enhanced care coordination under an integrated approach, including linkages between physical health and MH/SUD providers, contributes to improvements in service use and quality, particularly among children. Additionally, integrating benefits aligns financial incentives for MCOs and encourages them to take a holistic approach to care and service delivery—emphasizing preventive care and community-based care to avoid more intensive treatment settings.

Overall, the findings suggest that integrating physical health services and MH/SUD services using comprehensive, risk-based MCOs can have an immediate and positive impact for Medicaid beneficiaries. However, benefits of a comprehensive managed care approach can often take several years to be fully realized. Therefore, it is likely that additional positive outcomes associated with an integrated approach will emerge beyond the first two years studied by IBM Watson Health.

States looking to improve care and outcomes for individuals enrolled in Medicaid should consider approaches that promote whole person health, including integration of all physical health benefits and MH/SUD benefits through MCOs.

Endnotes

1 Butler, M., et al. (2008, October). Integration of Mental Health/Substance Abuse and Primary Care: Evidence Report/Technology Assessment No. 173. Prepared by the Minnesota Evidence-Based Practice Center for the Agency for Healthcare Research and Quality, U.S. Department of Health and Human Services. Retrieved August 5, 2019 from: https://www.ahrq.gov/downloads/pub/evidence/pdf/mhsapc/mhsapc.pdf.

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[9] Medicaid and CHIP Payment and Access Commission. (2016, March).

[10] The study design did allow for a 45-day gap in coverage for the study population.

[11] IBM Watson Health excluded Medicaid beneficiaries in long-term care facilities from the study, in order to focus on the impact of MH/SUD integration in the community. The study also excluded dual eligibles, given the absence of Medicare data in the MarketScan Multi-State Medicaid Database.

[12] Prescription fills were standardized for the purposes of this analysis, counting one fill as a 30-day equivalent on the basis of days supplied. IBM Watson Health created prescription drug measures by type of prescription: antidepressants, antipsychotics, stimulants, and other MH/SUD medications.

[13] IBM Watson Health analyzed a quality metric specific to ADHD medication management, which is a standard measure included in the Core Set of Behavioral Health Measures for Medicaid and CHIP.

[14] See for example: Allison, A., et al. (2019, March). Reducing Lapses in Healthcare Coverage in the Individual and Medicaid Markets. McKinsey & Company. Retrieved October 18, 2019 from: https://healthcare.mckinsey.com/sites/default/files/Reducing-lapses-in-healthcare-coverage-in-the-Individual-and-Medicaid-markets.pdf.

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ABOUT US

Elevance Health Public Policy Institute

The Public Policy Institute (PPI) was established to share data and insights that inform public policy and shape the healthcare programs of the future. PPI strives to be an objective and credible contributor to healthcare transformation through the publication of policy-relevant data analysis, timely research, and insights from Elevance Health's innovative programs.

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