

# IMPACT OF THE MEDICARE IMPROVEMENTS FOR PATIENTS AND PROVIDERS ACT ON MENTAL HEALTH SERVICE UTILIZATION AND SPENDING AMONG OLDER ADULTS

*Congress passed the Medicare Improvements for Patients and Providers Act (MIPPA) in 2008, in part to improve accessibility of outpatient mental health care for Medicare beneficiaries. While the overall impact of MIPPA on mental health care utilization appears mixed, the implementation of MIPPA is associated with a small increase in outpatient mental health service utilization during the period when outpatient mental health coinsurance rates reached the same level as other Part B medical coinsurance rates.*

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## KEY POINTS

- Mental health outpatient service utilization did not increase during the first three phases of MIPPA coinsurance reductions, relative to the pre-MIPPA period. However, in the final phase of outpatient mental health coinsurance reductions (Phase 4) was associated with a small increase.
- Between 2014 and 2017, we did not find that MIPPA was associated with a monthly decrease in mental health out-of-pocket (OOP) trends relative to the pre-MIPPA period. However, we did find a small monthly decrease.

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## BACKGROUND

Mental health conditions are common among older adult Medicare beneficiaries. In 2019, 34.3% of Medicare fee-for-service (FFS) beneficiaries aged 65 and older had a diagnosis of a mental health condition or otherwise used mental health services.<sup>1</sup> However, barriers to accessing mental health services, including out-of-pocket (OOP) costs, is a major concern for patients, providers, and policy makers.<sup>2,3</sup>

In 2008, Congress passed the Medicare Improvements for Patients and Providers Act (MIPPA), in part to improve access to outpatient mental health services for Medicare beneficiaries. Beginning in 2010, MIPPA gradually reduced outpatient mental health cost-sharing requirements over a 5-year period, from 50% to 20%, to be at the same level as other outpatient medical services. As high cost-sharing requirements can reduce access to mental health service use,<sup>4</sup> the passing of MIPPA was expected to facilitate increased access to treatment for Medicare beneficiaries with mental health conditions.

To estimate the impact of MIPPA's coinsurance reductions on mental health care service use, we addressed the following research questions:

1. What are the trends in mental health care service use and costs for older Medicare beneficiaries with a mental health diagnosis or mental health-related service use before, during, and after the implementation of cost-sharing reductions through MIPPA?

2. Are there differences in trends based on beneficiary characteristics such as age, race, dual eligibility, co-occurring substance use disorder (SUD), rurality, or comorbidity status?
3. Has there been a change in the types of mental health care services used by individuals with a mental health diagnosis or mental health-related service use following the passage of MIPPA?

## METHODS

We conducted descriptive and quasi-experimental regression analyses to estimate the impact of MIPPA on use and spending outcomes for Medicare FFS beneficiaries with a mental health diagnosis or mental health-related service use. We used Medicare claims and administrative data from 2008 through 2017. We classified 2008-2009 as the pre-implementation period and 2010-2017 as the post-MIPPA implementation period. We examined the impacts of MIPPA in four post-implementation phases: Phase 1, which introduced a coinsurance reduction from 50% to 45% (2010-2011); Phase 2 which introduced a coinsurance reduction from 45% to 40% (2012); Phase 3 which introduced a coinsurance reduction from 40% to 35% (2013); and Phase 4 which introduced a coinsurance reduction from 35% to 20% (2014-2017). The final phase of MIPPA coinsurance reductions (Phase 4) brought outpatient mental health coinsurance rates to the same level as other Part B medical services.

The study sample included Medicare beneficiaries who were: (1) 65 years and older; (2) enrolled in both Medicare Part A and Part B; (3) alive during the calendar year; (4) not enrolled in Medicare Advantage; and (5) residing in one of the 50 states or Washington, D.C. We used diagnosis codes (at least one claim in either the inpatient or outpatient files in the previous 12 months), procedure codes, and national drug codes to identify beneficiaries for inclusion in the analyses. Specifically, we included codes for or related to treatment of anxiety disorders, depressive disorders, bipolar disorders, attention-deficit/hyperactivity disorder, eating disorders, schizophrenia and other psychotic disorders, personality disorders, and post-traumatic stress disorder. Using drug claims means that the study population also likely includes a significant number of adults without mental health conditions, because a number of psychotropic medications have other indications and medical uses. We chose to take such an inclusive approach primarily because a number of Medicare beneficiaries who do have mental health conditions may receive treatment without having a diagnosis on their claim. The study population should not be interpreted as being strictly limited to beneficiaries with mental health conditions.

Our outcomes of interest included the monthly percent of beneficiaries with any mental health outpatient service, the rate of mental health outpatient service use per 1,000 beneficiaries with a mental health diagnosis or mental health-related service use, and mental health OOP payments per user for Part B services. We used an interrupted time series (ITS) regression analysis to determine the impact of MIPPA on these outcomes. We used both a pre (2008-2009) through post (2010-2017) model, and a model with multiple implementation phases to account for the four phases of coinsurance reductions (Phase 1: 2010-2011; Phase 2: 2012; Phase 3: 2013; Phase 4: 2014-2017).

## FINDINGS

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### **RESEARCH QUESTION 1: What are the trends in mental health service use before, during, and after the implementation of MIPPA?**

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**Figure 1** displays the monthly percentage of beneficiaries with a mental health diagnosis or mental health-related service use who experienced any mental health outpatient visits. The monthly percentage of beneficiaries with any mental health outpatient visit ranged from 5.7% to 7.8% over the study period (2008-2017). The unadjusted monthly trend in mental health visits decreased slightly from 2010 to 2014, in the early phases of MIPPA, but then increased steadily from 2014 to 2017, in the last phase of MIPPA implementation.

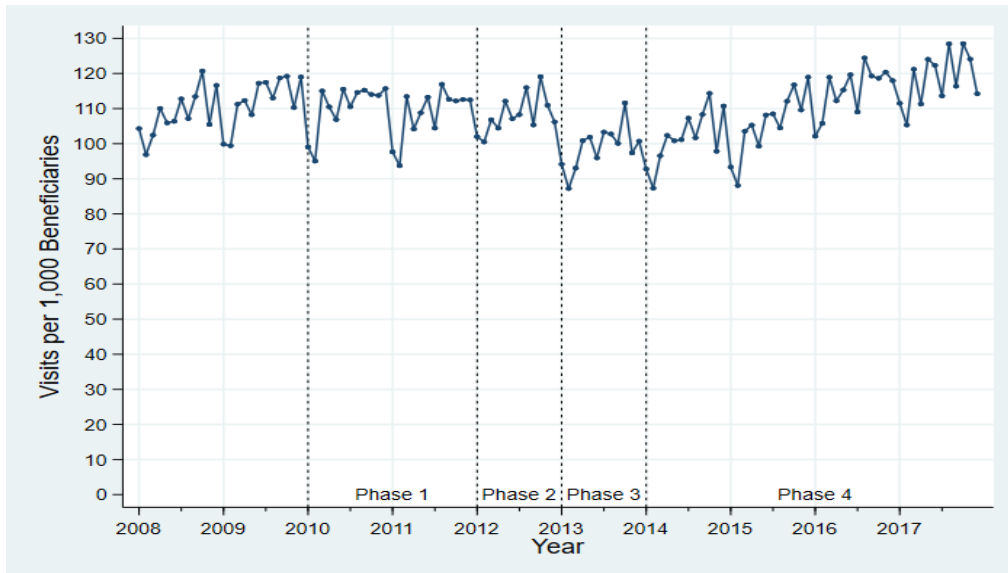
**Figure 1. Monthly Percentage of Medicare Beneficiaries with a Mental Health Diagnosis or Mental Health-Related Service Use Who had Any Mental Health Outpatient Visits, 2008-2017**



Source: RTI analysis of Medicare claims data.

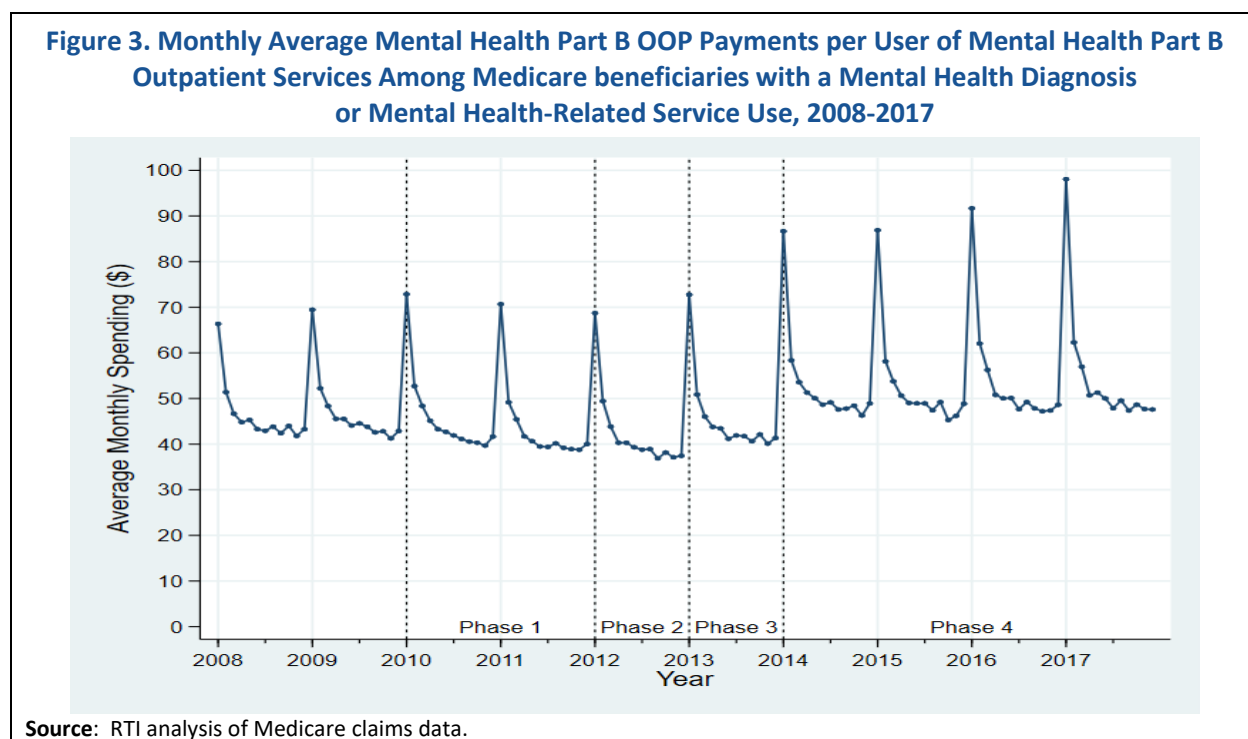
**Figure 2** displays the monthly average rate of mental health outpatient visits per 1,000 beneficiaries diagnosed with a mental health diagnosis or mental health-related service use. The rate of mental health outpatient visits ranged from 87.2 to 128.5 visits per 1,000 beneficiaries over the 2008-2017 study period. The rate of mental health outpatient visits declined slightly in the early phases of MIPPA, but increased steadily from 2014 to 2017, the last phase of MIPPA implementation.

**Figure 2. Monthly Average Rate of Mental Health Outpatient Visits per 1,000 Medicare Beneficiaries with a Mental Health Diagnosis or Mental Health-Related Service Use, 2008-2017**



Source: RTI analysis of Medicare claims data.

**Figure 3** displays the monthly average mental health Part B OOP payments made per service user among beneficiaries with a mental health diagnosis or mental health-related service use. The average mental health OOP payments per mental health outpatient service user ranged from \$37 to \$89 during the study period, 2008-2017, with annual spikes in payments associated with the Medicare deductible reset in January of each year. There appeared to be a continuous decline in average Part B OOP payments per use in the early stages of MIPPA implementation. Despite the 15 percentage point reduction in coinsurance requirements starting in 2014 (Phase 4), there was an observable increase in the average OOP payments from 2014 through 2017, likely due to increases in the use of mental health outpatient services during this time period, as illustrated in **Figures 1 and 2**.



**RESEARCH QUESTION 2: Are there differences in trends based on beneficiary characteristics such as age, race, dual eligibility, co-occurring SUD, rurality, or comorbidity status?**

There were limited differences in the trends in outcomes within subgroup categories. However, all subgroups had level differences in rates compared to their counterparts. For example, beneficiaries aged 65-74 (**Appendix Figure A-1**), Black beneficiaries (**Appendix Figure A-2**), those with SUD (**Appendix Figure A-4**), those residing in urban areas (**Appendix Figure A-5**), those with many or complex comorbidities (**Appendix Figure A-6**), and those with at least 1 month of full or partial dual eligibility status (**Appendix Figure A-3**) all had higher rates of mental health outpatient visits than other groups within their subcategory.

For those with either full or partial dual eligibility status, there appeared to be a shift in the trend in utilization outcomes starting during Phase 4 relative to beneficiaries without dual eligibility. The observed increase in mental health outpatient visits during Phase 4 among those with partial dual eligibility and those without dual eligibility was expected. However, beneficiaries with full dual eligibility typically have very limited or no cost-sharing requirements,<sup>5</sup> thus we would not expect an increase among the full dual eligible population. As such, other factors may have contributed to the observed increase in utilization among dually eligible beneficiaries, such as the indirect effects of Medicaid expansion.<sup>6</sup>

**RESEARCH QUESTION 3: Has there been a change in mental health service use among Medicare beneficiaries with a mental health diagnosis or mental health-related service use after the implementation of MIPPA?**

**Table 1** displays the immediate or level effect of MIPPA during the first month of implementation, and the average change in the trend during months between 2010 and 2017. There were level decreases in mental health visits and OOP payments in the first month of MIPPA implementation (**Table 1**). The percent of beneficiaries with any mental health visits decreased by 0.3 percentage points ( $p < 0.05$ ), relative to the pre-MIPPA average. The rate of mental health visits decreased in the first month by 9.2 visits per 1,000 beneficiaries, relative to the pre-MIPPA average ( $p < 0.01$ ), and mental health Part B OOP payments per service user decreased in the first month by \$7.25, relative to the pre-MIPPA average ( $p < 0.01$ ). There was no association of MIPPA with changes in the trend of mental health outpatient visits or Part B OOP payments from 2010 to 2017.

**Table 1. Association of MIPPA on the Immediate and Trend Difference in Mental Health Outpatient Use and Part B OOP Payments, 2008-2017**

Primary Outcomes	Immediate Difference in Level Pre- and Post-MIPPA	p-Value	Difference in Trend Pre- and Post-MIPPA	p-Value
Percent with any mental health-outpatient visit	-0.003	0.017	-0.000	0.302
Mental health-outpatient visits per 1,000 beneficiaries	-9.189	0.001	-0.171	0.110
Mental health-Part B OOP payments (\$)	-7.248	<0.001	-0.050	0.656

**Source:** RTI analysis of Medicare claims data.

**Table 2** illustrates the phase-specific impacts of MIPPA on mental health outpatient visits and OOP payments, relative to the pre-MIPPA trend. During the first 2 years of MIPPA implementation, there were small monthly decreases in the percent of beneficiaries with any mental health outpatient visit (-0.01 percentage points,  $p < 0.05$ ), the rate of monthly outpatient mental health visits (-0.36 visits per 1,000 beneficiaries,  $p < 0.01$ ), and monthly mental health Part B OOP payments per user (-\$0.27,  $p < 0.05$ ), relative to the pre-MIPPA trend. The rate of mental health visits continued to decrease during Phase 2 (-0.56 visits per 1,000 beneficiaries,  $p < 0.01$ ), relative to the pre-MIPPA trend. However, between 2014 and 2017 (Phase 4), MIPPA coinsurance reductions were associated with a monthly 0.02 percentage point increase in the percent of beneficiaries with any mental health outpatient use ( $p < 0.05$ ), relative to the pre-MIPPA trend. Over 4 years, this translates to a 0.7 percentage point increase in the percent of beneficiaries with any mental health outpatient services from the beginning of Phase 4, relative to the pre-MIPPA trend. In relative terms, this equates to 10% increase in any mental health outpatient use, relative to the pre-MIPPA monthly average.

**Table 2. Difference in Phase-Specific Trend on Mental Health Outpatient Use and Part B OOP Payments, Relative to Pre-MIPPA, 2008-2017**

Primary Outcomes	Difference in Trend between Phase 1 and pre-MIPPA	p-Value	Difference in Trend between Phase 2 and pre-MIPPA	p-Value	Difference in Trend between Phase 3 and pre-MIPPA	p-Value	Difference in Trend between Phase 4 and pre-MIPPA	p-Value
Percent with any mental health-outpatient visit	-0.000	0.012	<-0.000	0.073	-0.000	0.054	<0.000	0.002
Mental health-outpatient visits per 1,000 beneficiaries	-0.356	0.002	-0.557	0.009	-0.361	0.063	0.202	0.051
Mental health-Part B OOP payments (\$)	-0.273	0.024	-0.008	0.970	0.101	0.584	-0.151	0.163

**Source:** RTI analysis of Medicare claims data.

## DISCUSSION

We found some evidence that MIPPA was associated with increased mental health outpatient use, although estimated changes were small. Despite unexpected declines in outpatient mental health visits during the first two phases, we found that MIPPA was associated with an expected, but small, increase in the trend of the percentage of beneficiaries with any outpatient mental health visit once coinsurance rates reached the same rate as physical health coinsurance (Phase 4).

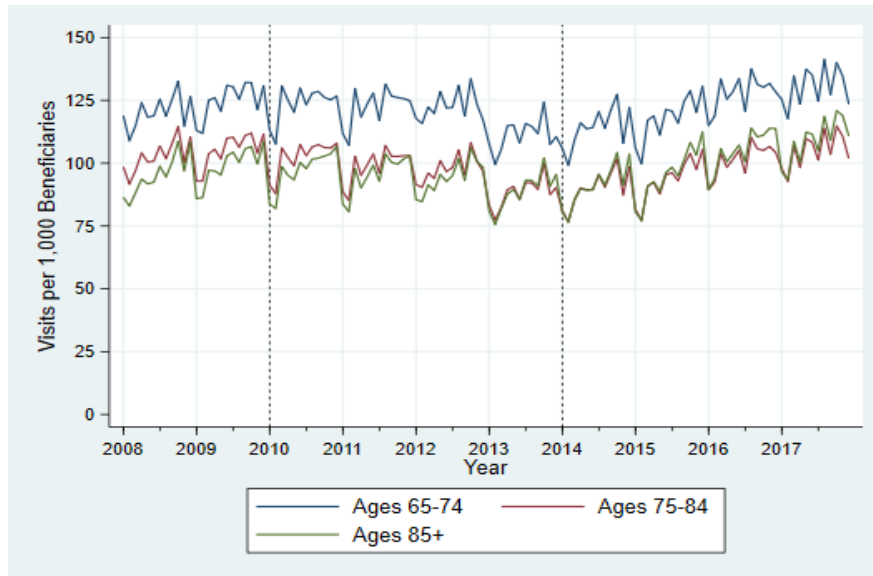
There are limitations to this study. The ITS model is vulnerable to other economic or policy changes occurring during the study period. Relevant changes during this time included the introduction of Part D coverage of benzodiazepines and barbiturates in 2013 and Medicaid expansion in 2014. For example, improved insurance coverage prior to turning 65 may have connected individuals to a mental health provider prior to becoming eligible for Medicare; approximately 15% to 18% of our monthly sample had at least 1 month of full dual eligibility during the year from 2014 to 2017. Additionally, we used a broad definition of outpatient mental health services; therefore, differences in service utilization by provider types such as psychiatrists or primary care physicians were not captured in this study. Finally, the study included beneficiaries dually eligible for Medicare and Medicaid, who theoretically should not be affected by MIPPA coinsurance reductions.<sup>a</sup>

Similar to other work, we found that reducing mental health coinsurance rates to coinsurance rates of medical services is a necessary but insufficient step toward improved accessibility of mental health services for older adults.<sup>7,8</sup> Other factors may negatively influence access to mental health services, such as shortages of behavioral health providers, particularly in rural and low-income settings,<sup>9</sup> and a fragmented care system. Efforts to improve the availability of providers, such as broadening scope-of-practice laws or increasing psychiatry payment rates,<sup>10</sup> and removing barriers such as travel time through expanding tele-mental health services, may be warranted.<sup>11</sup>

<sup>a</sup> A separate analysis of the non-full dual eligible population found MIPPA to be associated an increase in mental health outpatient visits of similar magnitude and significance as results for the overall mental health population.

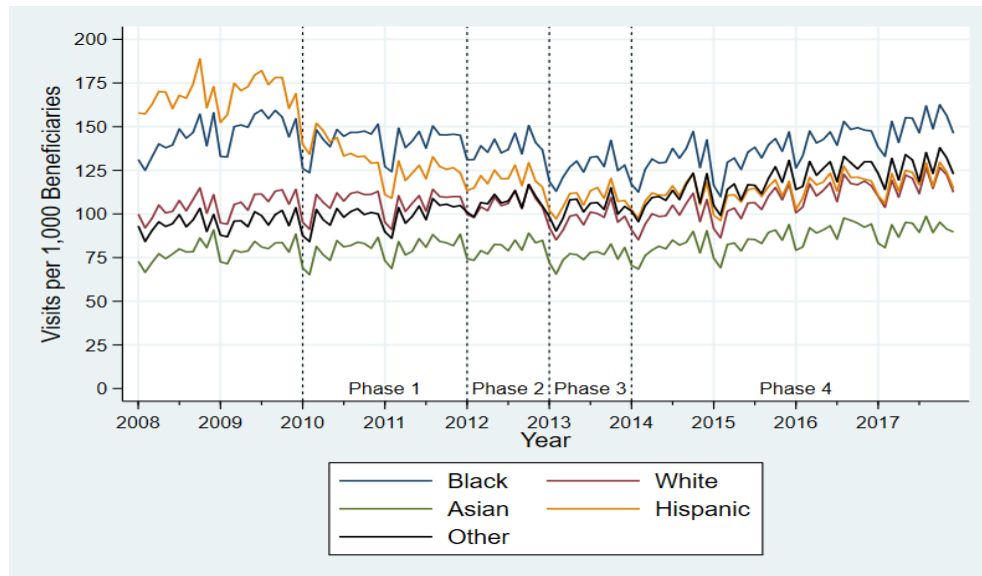
## APPENDIX A: SUPPLEMENTAL STATISTICS

**Figure A-1. Monthly Rate Mental Health Outpatient Visits per 1,000 Medicare Beneficiaries with a Mental Health Diagnosis or Mental Health-Related Service Use, by Age Group, 2008-2017**



Source: RTI analysis of Medicare claims and enrollment data.

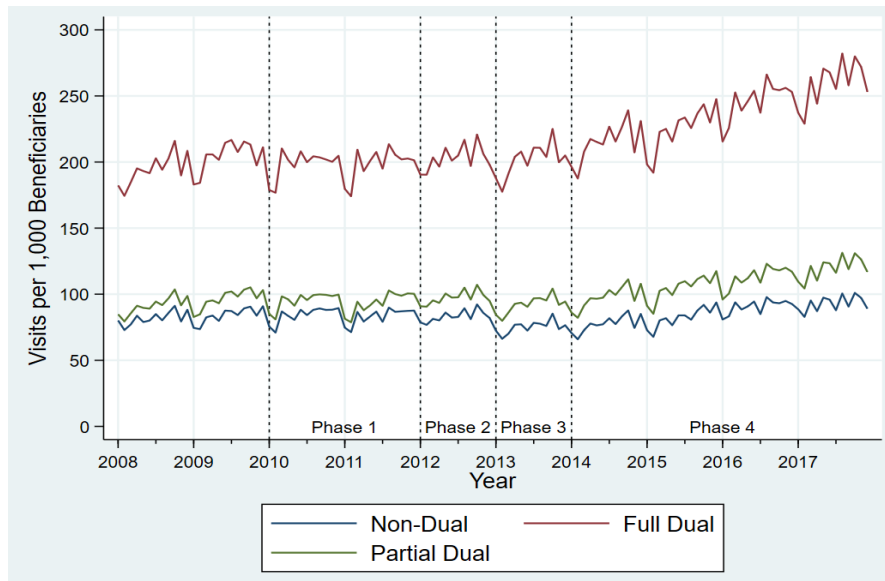
**Figure A-2. Monthly Rate Mental Health Outpatient Visits per 1,000 Medicare Beneficiaries with a Mental Health Diagnosis or Mental Health-Related Service Use, by Race, 2008-2017**



Source: RTI analysis of Medicare claims and enrollment data.

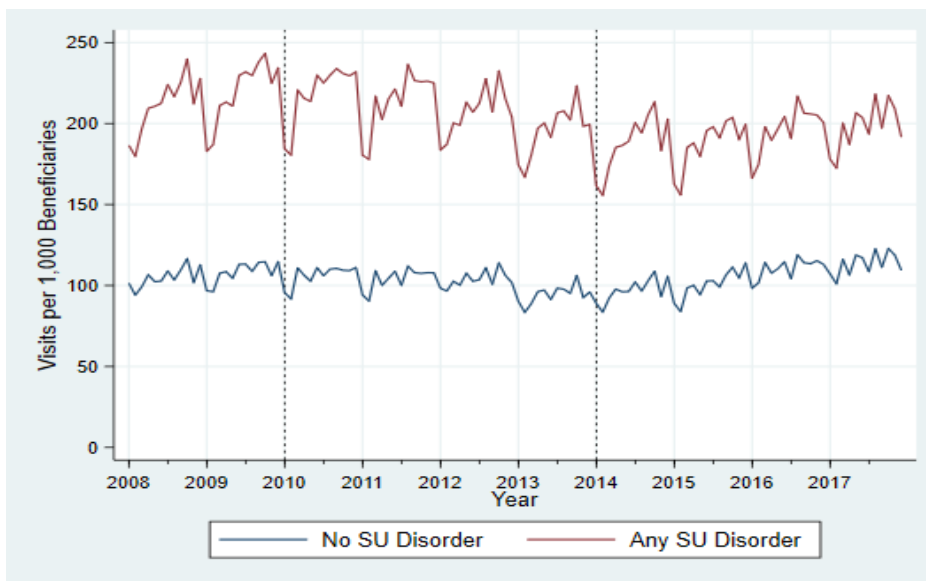
Note: Further investigation is needed to better understand the decrease in mental health visits among Hispanic mental health beneficiaries prior to 2010. We do not believe this decline is related to MIPPA.

**Figure A-3. Monthly Rate Mental Health Outpatient Visits per 1,000 Medicare Beneficiaries with a Mental Health Diagnosis or Mental Health-Related Service Use, by Dual Eligibility Status, 2008-2017**



Source: RTI analysis of Medicare claims and enrollment data.

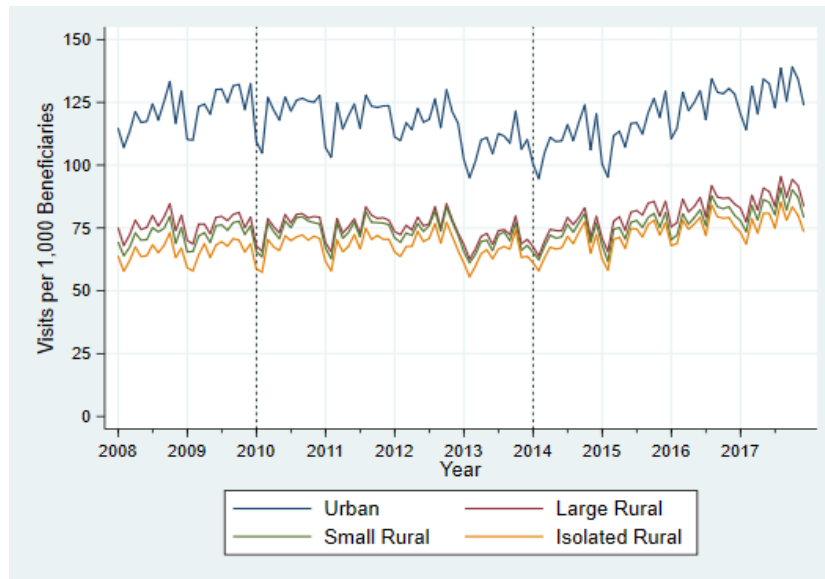
**Figure A-4. Monthly Rate Mental Health Outpatient Visits per 1,000 Medicare Beneficiaries with a Mental Health Diagnosis or Mental Health-Related Service Use, by SUD, 2008-2017**



Source: RTI analysis of Medicare claims and enrollment data.

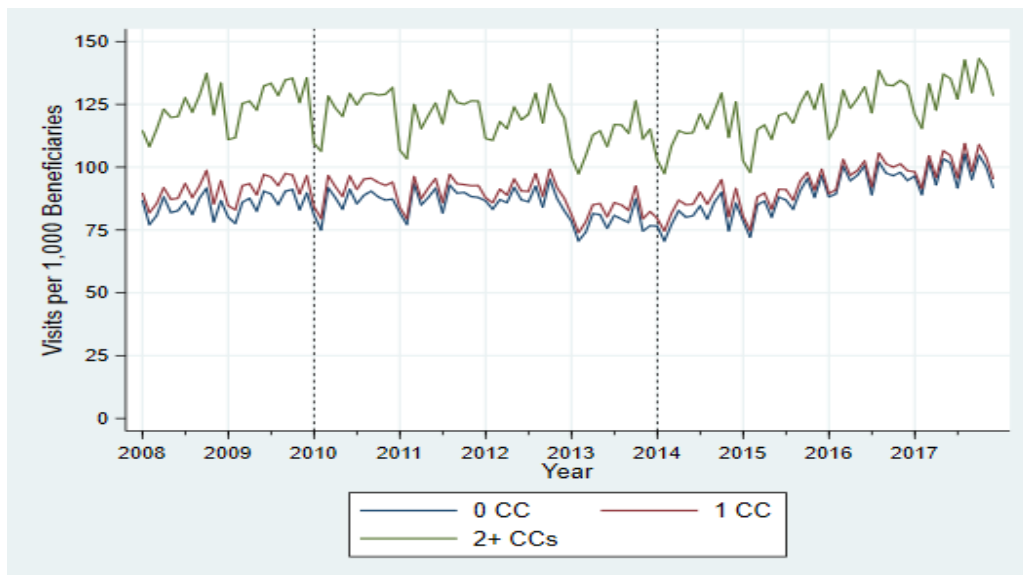


**Figure A-5. Monthly Rate Mental Health Outpatient Visits per 1,000 Medicare Beneficiaries with a Mental Health Diagnosis or Mental Health-Related Service Use, by Rural Status, 2008-2017**



**Source:** RTI analysis of Medicare claims and enrollment data. We used the Rural Urban Commuting Area (RUCA) codes to identify Urban (RUCA = 1, 1.1, 2, 2.1, 3, 4.1, 5.1, 7.1, 8.1, 10.1), Large Rural (4, 4.2, 5, 5.2, 6, 6.1), Small Rural (7, 7.2, 7.3, 7.4, 8, 8.2, 8.3, 8.4, 9, 9.1, 9.2), and Isolated rural (10, 10.2, 10.3, 10.4, 10.5, 10.6). RUCA classifications are based on the size and direction of primary and secondary commuting flows.

**Figure A-6. Monthly Rate Mental Health Outpatient Visits per 1,000 Medicare Beneficiaries With a Mental Health Diagnosis or Mental Health-Related Service Use, by Charlson Comorbidity Categories, 2008-2017**



**Source:** RTI analysis of Medicare claims and enrollment data.

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