Effect of State Policies Allowing Medicaid Payment in Mental Health Treatment Facilities: Evidence from Section 1115 IMD Waivers

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Abstract

The Institutions for Mental Diseases (IMD) Exclusion is a federal law prohibiting Medicaid from paying for services delivered to nonelderly adults in large mental health treatment facilities. In 2018, states were given the opportunity to apply for a Section 1115 waiver that removes the IMD Exclusion. Ten states have received the waiver, but the waiver's effect on facilities is unknown. Using difference-in-differences models and data from the National Mental Health Services Survey, this research assessed the waiver's effect on Medicaid acceptance at mental health treatment facilities. This research found that, surprisingly, states with waivers appeared to experience smaller increases in the percent of facilities accepting Medicaid compared to states without waivers. This research found that, conversely, states with waivers experienced relative increases in the percent of facilities accepting Medicaid compared to states with high pre-waiver precent of facilities accepting Medicaid and states that self-select to apply for waivers. However, this research indicated that existing differences between states may be more important than waivers in determining Medicaid acceptance at facilities. Waivers may be a useful step in removing a barrier to mental health care for Medicaid beneficiaries, but further research is needed to determine if waivers are sufficient to encourage mental health facilities to accept Medicaid.

Introduction

Medicaid is the United States' public health insurance option for low-income individuals and covers 1 in 5 Americans. The federal and state governments share the programs' costs and determine the programs' coverage, so Medicaid differs by state. Across states, Medicaid covers a variety of health care services, including some mental health care services (Garfield et al., 2019). Although mental illnesses are more prevalent among Medicaid beneficiaries, compared to privately insured and uninsured individuals, Medicaid beneficiaries face some barriers to mental health care (Saunders & Rudowitz, 2022).

Since Medicaid's creation, the Institutions for Mental Diseases Exclusion (IMD Exclusion) has constituted a barrier to mental health care for Medicaid beneficiaries. The IMD Exclusion is a federal law prohibiting Medicaid from paying for services delivered to patients aged 21 to 64 in mental health treatment facilities with over 16 beds (Eide & Gorman, 2021). The IMD Exclusion is the only part of Medicaid that prohibits care solely based on the type of illness being treated and creates difficulties for Medicaid beneficiaries to access the mental health care they may need (National Alliance on Mental Illness, n.d.).

In 2018, a Section 1115 waiver was created to remove the IMD Exclusion (Guth et al., 2020). Section 1115 waivers provide opportunities for states to apply for federal permission to implement projects aimed at better serving Medicaid beneficiaries (Medicaid, n.d.). The IMD Payment Exclusion for Mental Health Treatment Waiver is a Section 1115 waiver allowing Medicaid to pay for services delivered to patients aged 21 to 64 in mental health treatment facilities with over 16 beds, effectively removing the IMD Exclusion (Guth et al., 2020). Currently, 10 states have received the waiver, allowing their state's large mental health treatment facilities to accept Medicaid for nonelderly adults (Kaiser Family Foundation, 2022).

Existing literature shows that Section 1115 waivers aimed at increasing Medicaid acceptance at facilities were successful (Wen et al., 2015; Tormohlen et al.; 2019; Tarazi et al. 2018). Furthermore, a Section 1115 waiver removing the IMD Exclusion for substance use disorder treatment increased Medicaid acceptance at large substance use disorder treatment facilities (Maclean et al., 2021; Britton, 2022; Cunningham et al., 2020). However, effects of the Section 1115 waiver removing the IMD Exclusion for mental health treatment are unknown.

To examine effects of the waiver removing the IMD Exclusion for mental health treatment, this research asks, "How does the percent of large mental health treatment facilities accepting Medicaid change in states with the waiver compared to states without the waiver?". The U.S. Department of Health and Human Services' National Mental Health Services Survey is used to assess Medicaid acceptance at large mental health treatment facilities (Substance Abuse and Mental Health Services Administration, n.d.) and Kaiser Family Foundation's Waiver Tracker and Medicaid's Waiver List are used to assess states with waivers and states without waivers (Kaiser Family Foundation, 2022; Medicaid, 2022). Difference-in-differences models are used to assess the percent of large mental health treatment facilities accepting Medicaid in 3 states with waivers and 47 states without waivers over the pre-waiver years of 2014, 2016, and 2018 and the post-waiver year of 2020.

This research hypothesized that states with waivers would experience larger increases in the percent of large mental health treatment facilities accepting Medicaid compared to states without waivers. Contrary to the hypothesis, this research finds that states with waivers appeared to experience smaller increases in the percent of facilities accepting Medicaid compared to states without waivers. This research finds that, conversely, states with waivers experienced relative increases in the percent of facilities accepting Medicaid compared to states with high pre-waiver

precent of facilities accepting Medicaid and states that self-select to apply for waivers. However, this research indicates that existing differences in states may be more important than waivers in determining Medicaid acceptance at large mental health treatment facilities. Thus, the waiver's effect appears to be nuanced and different by state.

The waiver removing the IMD Exclusion for mental health treatment allows large mental health treatment facilities to accept Medicaid for nonelderly adults, which may be a useful step in removing a barrier to mental health care for Medicaid beneficiaries. However, further research is needed to determine if waivers are sufficient to encourage large mental health treatment facilities to accept Medicaid.

Background and Literature Review

Medicaid covers 23% of nonelderly adults with mental illnesses compared to 18% of the general nonelderly adult population, thus, mental illnesses are more prevalent among Medicaid beneficiaries (Saunders & Rudowitz, 2022). Although mental health care is not a defined benefit category in Medicaid, the federal government does mandate states to cover some mental health care, and states can cover additional mental health care through optional benefit categories. Medicaid's coverage of mental health care has been considered better than private insurance, however, the IMD Exclusion constitutes a barrier for nonelderly adults to receive care in large mental health treatment facilities. Recently, a Section 1115 waiver was created to allow Medicaid to pay for services delivered to nonelderly adults in large mental health treatment facilities, effectively removing the IMD Exclusion, which creates an opportunity for states to remove a barrier to mental health care for Medicaid beneficiaries (Guth et al., 2020).

Section 1115 waivers provide opportunities for states to apply for federal permission to implement projects aimed at better serving Medicaid beneficiaries. The federal government creates Section 1115 waivers with different guidelines, states choose to apply for these waivers by submitting program proposals, and the federal government determines if the waiver will be granted to the state (Medicaid, n.d). Currently, there are 65 Section 1115 waivers across 47 states (Kaiser Family Foundation, 2022). Because states develop their own programs, waivers with the same federal guidelines may have different effects in different states. For example, one study explained that although Maryland and Virginia were granted a waiver with the same federal guidelines to increase access to care for substance use disorder treatment, Maryland used its waiver to bolster an existing system, while Virginia used its waiver to create a new system. The different programs created different effects as Virginia experienced higher initiation and engagement in treatment and Maryland experienced higher utilization of residential treatment services (Cunningham et al., 2020). Although waivers with the same federal guidelines may have different effects in different states, research across states can help determine the effect of Section 1115 waivers on healthcare outcomes, such as access to care.

Existing literature has shown that Section 1115 waivers aimed at increasing access to care are successful. A study that examined a Section 1115 waiver's effect on access to care among low-income adults with behavioral health conditions found that waivers were associated with a decrease in probability of perceiving an unmet need for mental health treatment and an increase in the probability of receiving mental health treatment (Wen et al., 2015). Another study that examined a Section 1115 waiver's effect on access to care for substance use disorder treatment found that waivers were associated with an increase in admissions for patients with Medicaid (Tormohlen et al., 2019). Additionally, researchers that examined Section 1115

waivers' effects on access to care in relation to waiver generosity found that moderate waivers were associated with increases in having a usual source of care and longer waiver durations were associated with better access to care (Tarazi et al., 2018). The Section 1115 waivers examined in these studies were successful in increasing access to care, and, although, less is known about Section 1115 waivers aimed at increasing access to care by removing the IMD Exclusion, existing literature has shown similar success.

Existing literature has shown that a Section 1115 waiver aimed at increasing access to care by removing the IMD Exclusion for substance use disorder treatment was successful in increasing Medicaid acceptance at substance use disorder treatment facilities. There are two Section 1115 waivers removing the IMD Exclusion: the IMD Payment Exclusion for Substance Use Disorder (SUD) Treatment waiver and the IMD Payment Exclusion for Mental Health Treatment waiver. The two waivers have the same federal guidelines, except the SUD waiver removes the IMD Exclusion for substance use disorder treatment, not mental health treatment. Research has shown that the SUD waiver increased Medicaid acceptance at substance use disorder treatment facilities. A study found that the waiver was associated with a 34% increase in Medicaid acceptance at residential substance use disorder treatment facilities and 9% increase in Medicaid acceptance at intensive outpatient substance use disorder treatment facilities (Maclean et al., 2021). Another study found that, in Virginia, the waiver was associated with an 8% increase in Medicaid acceptance at substance use disorder treatment facilities (Britton, 2022). Additionally, a report found that the waiver was associated with an 9 % increase in Medicaid acceptance at substance use disorder treatment facilities in Maryland and a 77% increase in Medicaid acceptance at substance use disorder treatment facilities in Virginia (Cunningham et al., 2020). The waiver removing the IMD Exclusion for substance use disorder treatment was

successful in increasing Medicaid acceptance at substance use disorder treatment facilities, and the waiver has the same federal guidelines as the waiver removing the IMD Exclusion for mental health treatment. However, the effect of the waiver removing the IMD Exclusion for mental health treatment is unknown.

Existing literature has shown that Section 1115 waivers aimed at increasing access to care are successful, and a Section 1115 waiver removing the IMD Exclusion for substance use disorder treatment was successful in increasing Medicaid acceptance at substance use disorder treatment facilities. Based on existing research, the Section 1115 waiver removing the IMD Exclusion for mental health treatment is expected to increase Medicaid acceptance at mental health treatment facilities, but further research must support this expectation. This research aimed to start examining the effects of the waiver removing the IMD Exclusion for mental health treatment on Medicaid acceptance at mental health treatment facilities.

This research hypothesized that waivers would increase Medicaid acceptance at large mental health treatment facilities. Because the IMD Exclusion prohibits Medicaid from paying for services delivered to nonelderly adults in large mental health treatment facilities, large mental health treatment facilities can only accept Medicaid for young and elderly patients. The waiver allowed large mental health treatment facilities to accept Medicaid for larger portion of Medicaid beneficiaries, and this expansion may have encouraged more facilities to accept Medicaid. However, large mental health treatment facilities may still have not chosen to accept Medicaid after being allowed to accept Medicaid for a larger portion of Medicaid beneficiaries because incentives were not strong enough. For example, low reimbursement rates may have kept facilities from accepting Medicaid (Holgash & Heberlein, 2019). This research aims to determine if waivers are sufficient to encourage large mental health treatment facilities to accept Medicaid.

Although the waiver's effect on Medicaid acceptance at mental health treatment facilities was unknown, it was expected that waivers would increase the percent of large mental health treatment facilities accepting Medicaid compared to states without waivers.

Data

Medicaid acceptance at large mental health treatment facilities was measured using the U.S. Department of Health and Human Services' National Mental Health Services Survey and state waiver status was assessed using the Kaiser Family Foundation's Medicaid Waiver Tracker and Medicaid's Section 1115 Demonstration State Waiver List. Data was available as the percent of Medicaid acceptance in 2014, 2016, 2018, and 2020 for 3 states with waivers in 2020 and 43 states without waivers.

The National Mental Health Services Survey (N-MHSS) is an annual survey conducted by the U.S. Department of Health and Human Services that collects data on all known mental health treatment facilities in the United States. The N-MHSS is the only source of state-level data for both public and private mental health treatment facilities and has collected data each year from 2014 to 2020 (Substance Abuse and Mental Health Services Administration, n.d.). Although N-MHSS is a voluntary survey, it collects a reliable sample of mental health treatment facilities. From 2014 to 2020, N-MHSS had a response rate between 87.1% and 90.7% each year, totaling approximately 12,000 responses each year (Substance Abuse and Mental Health Services Administration, 2020). The N-MHSS asks about Medicaid acceptance at mental health treatment facilities as "Accepts Medicaid as source of payment for mental health treatment services," and records responses as "Yes" or "No" each year and "Missing," "Don't Know," or "Refused," depending on the year. (Substance Abuse and Mental Health Services

Administration, 2021). From 2014 to 2020, only 2.4% or less of facilities answered differently than "Yes" or "No," meaning there is data on most facilities' Medicaid acceptance. Whether a facility answers "Yes" or "No" to "Accepts Medicaid as source of payment for mental health treatment services," was used to measure Medicaid acceptance at facilities in this research.

The facilities recorded in N-MHSS represent all mental health treatment facilities, not only facilities subject to the IMD Exclusion and therefore affected by the waiver. The IMD Exclusion and waiver apply to mental health treatment facilities in the United States over 16 beds that serve patients aged 21 to 64, so, ideally, those would have been the only facilities included for analysis. The facilities recorded in N-MHSS were adjusted to align with the facilities affected by the waiver more validly, and after the adjustment, the data includes 5167 mental health treatment facilities from all 50 states and Washington D.C. over 2014, 2016, 2018, and 2020.

To best adjust the data to include facilities with under 16 beds, facilities that have fewer than 30 beds were removed from the data. The N-MHSS collects data on the "Number of hospital inpatient beds at this facility designated for providing mental health treatment" and "Number of residential beds at this facility designated for providing mental health treatment" (Substance Abuse and Mental Health Services Administration, 2021). These two measures were combined to calculate the total number of beds in each facility. The measures are recorded as ranges, so the exact sum of beds could not be assessed. The ranges include "None," "1 to 10," "11 to 20," and so on. If a facility responded "None" for both measures, it was removed from the data because it does not have inpatient beds or residential beds. If a facility responded "1 to 10" for both measures, it was removed from the data because the sum of beds may be less than 16. If a facility responded "11 to 20" for one measure and responded "None" or "1 to 10" for the other

measure, it was removed from the data because its sum of beds may be less than 16. The maximum number of beds a facility removed from the data may have had was 30, because if a facility responded "1 to 10" for one measure and responded "11 to 20" for the other measure, the facility could have had 10 beds and 20 beds respectively, totaling 30. Because the exact number of beds is unknown, there was a potential for facilities over 16 beds to be excluded from the data. By excluding all facilities that may have less than 30 beds, it was assured that the remaining data only represents facilities over 16 beds, and because facilities over 16 beds are the target of the waiver, it was important to only analyze these facilities for this research.

To best adjust the data to include facilities that serve Medicaid patients aged 21 to 64, facilities that do not accept adults were removed from the data. The N-MHSS collects data on "Accepts adults (aged 26-64 years old) for treatment" (Substance Abuse and Mental Health Services Administration, 2021). This measure was used to determine if a facility accepts patients 26 to 64 years old. This measure did not include patients aged 21 to 25 years old, who are also affected by the IMD Exclusion and waiver. The N-MHSS collects data on "Accepts young adults (aged 18-25 years old) for treatment," which includes patients aged 21 to 25 years old (Substance Abuse and Mental Health Services Administration, 2021). However, this measure also includes patients 18 to 20 years old, who are not affected by the waiver. Because a facility may only accept a portion of patients in the 18 to 25 age range and it is impossible to discern if that portion includes patients aged 21 to 25 years old, accepting young adults was not sufficient to guarantee that a facility would be affected by the waiver. By guaranteeing the mental health treatment facility accepts adults, it is assured that the remaining data only represents facilities that serve patients aged 21 to 64, and because facilities that serve patients aged 21 to 64 are the target of the waiver, it was important to only analyze these facilities for this research.

The N-MHSS only collects data on the number of beds in facilities and ages of patients served in facilities every other year starting in 2014, thus, the data available for this research was from 2014, 2016, 2018, and 2020.

The waiver only applies to states in the United States, including Washington D.C., thus, the data should represent states in the United States, including Washington D.C. The N-MHSS reports on some territories outside of the United States, including Puerto Rico, Guatemala, Virgin Islands, American Samoa, and other jurisdictions (Substance Abuse and Mental Health Services Administration, 2021). These territories were removed from the data, so the data analyzed only included the 50 states and Washington D.C. where the waiver applies.

The N-MHSS records deidentified data from a different number of facilities each year, so the data was adjusted to assess changes in facilities at the state-level overtime. Because each state's facilities are deidentified and each state may have a different number of facilities respond to N-MHSS each year, changes in facilities cannot be assessed overtime. Thus, the data was aggregated at the state-level and calculated as precents using the number of facilities accepting Medicaid each year in each state as the numerator and the total number of facilities that are affected by the waiver each year in each state as a denominator. By aggregating the data at the state-level and calculating the data as precents, changes in Medicaid acceptance at facilities were able to be assessed overtime as the percent of facilities accepting Medicaid in each state.

The Medicaid Waiver Tracker: Approved and Pending Section 1115 waivers by State compiled by Kaiser Family Foundation and the Section 1115 Demonstration State Waiver List compiled by Medicaid record Section 1115 waivers for each state (Kaiser Family Foundation, 2022; Medicaid, 2022). The Medicaid Waiver Tracker records which states have received a waiver, and the Section 1115 Demonstration State Waiver List records what date the waiver

became active. These sources were used to identify which states have waivers and what date the waivers became active. Ten states had waivers: Vermont, Indiana, District of Columbia, Idaho, Washington, Utah, Oklahoma, Maryland, Alabama, and New Hampshire and the dates the waivers became active ranged from December 9, 2019, to June 2, 2022.

Because of the data available at the time of this research, 3 states with waivers were analyzed. Medicaid acceptance at facilities is reported a year after the year it represents, so Medicaid acceptance at facilities is not available for the post-waiver period of some states with waivers. Medicaid acceptance data was available until 2020, so states that received waivers after 2020 did not have post-waiver Medicaid acceptance data available. To account for this, states that received waivers after 2020 were included in a "states with pending waiver" group, meaning that the state had applied for the waiver by 2020, but the states had not received the waiver yet. There are also 5 states that had pending waivers, and these were also included in the "states with pending waiver" group. Additionally, Medicaid acceptance data is collected over a few months, but the dates when states receive waivers are sporadic. Therefore, the Medicaid acceptance data from one year could represent time before and after the waiver was active if the state received the waiver during the data collection period. To assure that each year of data represents only the time before or time after the waiver was active, states that received waivers during the time of data collection were be omitted from the data. In 2020, Medicaid acceptance at facilities was collected March 26, 2020 through January 8, 2021. Therefore, the 4 states that received waivers during this period were omitted from the data. After including some states in the pending waiver group and omitting others, 3 states were available for analysis: Vermont, Indiana, Washington D.C. A summary of waiver statuses including of the groups of states, the dates when states'

waivers became active, and the year of data representing time after the waiver was active can be found in Table A1 in the appendix.

After aligning states with waivers with the available Medicaid acceptance data, the data included the percent of Medicaid acceptance in large mental health treatment facilities for 3 states with waivers and 43 states without waivers in 2014, 2016, 2018, and 2020.

Methods

Difference-in-differences models are used to assess changes between groups overtime and are often used to assess quasi-experimental policy events. These models compare a treatment group that was affected by a policy with a control group that was not affected by a policy over a pre-policy period and post-policy period. The waiver removing the IMD Exclusion for mental health treatment is a policy that affects states with a waiver and does not affect states without a waiver, creating a treatment group and control group. Medicaid acceptance in facilities can be assessed before the waiver became active and after the waiver became active, creating a pre-waiver period and post-waiver period. By using a difference-in-differences model to compare Medicaid acceptance in facilities between states with waivers and without waivers overtime, the waiver's effect on Medicaid acceptance in facilities can be assessed.

The available data included the percent of Medicaid acceptance in large mental health treatment facilities for 3 states with waivers and 43 states without waivers in 2014, 2016, 2018, and 2020. The 3 states with waivers were used as the treatment group and the 43 states without waivers were used as the control group. The average percent of Medicaid acceptance in 2014, 2016, and 2018 was used as the pre-waiver period, and the percent of Medicaid acceptance in 2020 was used as the post-waiver period. The average percent of facilities that accept Medicaid

over 2014, 2016, and 2018 was used for the pre-policy period because the number of facilities responding to N-MHSS differed by year, creating inconsistent trends overtime. Thus, the average percent of facilities that accept Medicaid over 2014, 2016, and 2018 better represented Medicaid acceptance pre-policy than the individual percent of facilities that accepted Medicaid in 2014, 2016, and 2018.

The differences-in-differences model compared the difference in Medicaid acceptance in facilities for the 3 states with waivers in 2014, 2016, 2018 to Medicaid acceptance in facilities for the 3 states with waivers in 2020 and compared the difference in Medicaid acceptance in facilities for the 43 states without waivers in 2014, 2016, 2018 to Medicaid acceptance in facilities for the 43 states without waivers in 2020. The model then compared the difference between these differences to determine if states with waivers experienced a larger increase in the percent of mental health treatment facilities accepting Medicaid than states without waivers over the pre-waiver and post-waiver period.

Results

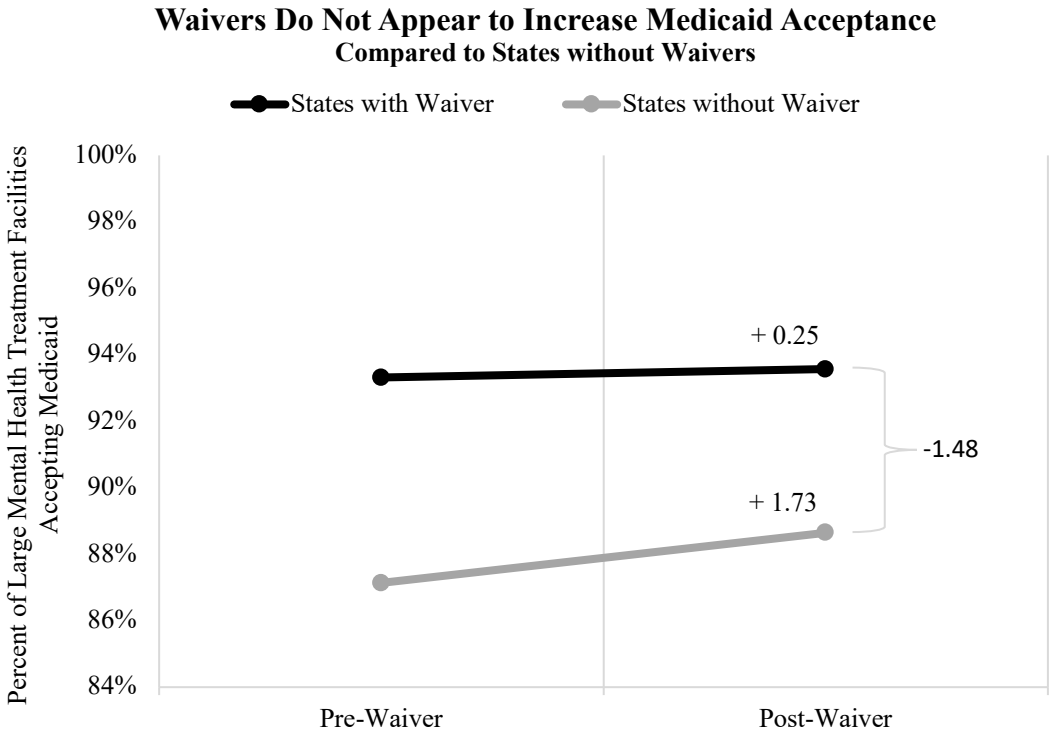
Based on the hypothesis that waivers would increase Medicaid acceptance at large mental health treatment facilities, the difference-in-differences model was expected to show that states with waivers experienced larger increases in the percent of large mental health treatment facilities accepting Medicaid compared to states without waivers over the pre-waiver and post-waiver period. A table of results appears as Table A2 in the appendix.

Contrary to the hypothesis, waivers do not appear to increase Medicaid acceptance at large mental health treatment facilities. The difference-in-differences model showed that states with waivers did not experience larger increases in the percent of facilities accepting Medicaid

compared to states without waivers. Instead, the difference-in-differences model showed that states with waivers experienced smaller increases in the percent of facilities accepting Medicaid compared to states without waivers over the pre-waiver and post-waiver period. The difference-in-differences statistic of -1.48 means states with waivers experienced an increase in Medicaid acceptance 1.48 percentage points less than states without waivers. Therefore, when comparing states with waivers and states without waivers, waivers do not appear to increase the percent of large mental health treatment facilities accepting Medicaid.

Figure 1.1 depicts the difference-in-differences model for states with waivers and states without waivers.

Figure 1.1



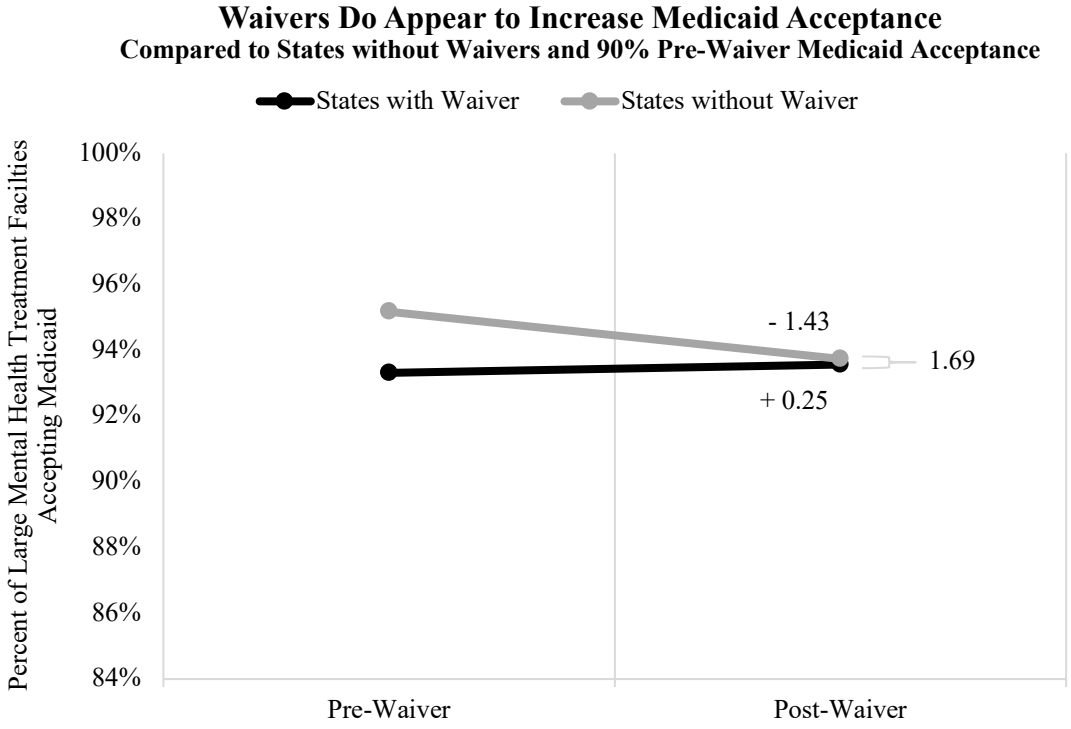
Note: Figure 1.1 compares states with waivers and states without waivers. Pre-waiver, averaging 2014, 2016 and 2018, states with waivers had a larger percent of facilties accepting Medicaid (93.32%) than states without waivers (87.14%), for a difference of 6.21%. Post-waiver, in 2020, states with waivers had a larger percent of facilties accepting Medicaid (93.57%) than states without waivers (88.64%), for a difference of 4.93%. However, states with waivers had a smaller increase in the percent of facilities accepting Medicaid (0.25 percentage points) than states without waivers (1.73 percentage points) over the pre-waiver and post-waiver period. This results in a difference-in-differences statistic of -1.48 percentage points over the pre-waiver and post-waiver period.

States with waivers had a higher pre-waiver percent of facilties accepting Medicaid than states without waivers. This difference may have contributed to the waiver's effect on Medicaid acceptance, because states with a higher pre-waiver percent of facilties accepting Medicaid may have fewer mental health treatmement facilties that can begin accepting Medicaid compared to states with a lower pre-waiver percent of facilties accepting Medicaid. To make states with waivers and states without waivers more comparable, the pre-waiver percents of facilties accepting Medicaid were made more similar. Each state with a waiver had a pre-waiver percent of facilties accepting Medicaid over 90%, with Vermont having the lowest percent of facilties accepting Medicaid at 90.47%. To align the pre-waiver percent of facilties accepting Medicaid, states without waivers that had a pre-waiver percent of facilties accepting Medicaid under 90% were removed from the data.

When including only states that have a pre-waiver percent of facilties accepting Medicaid over 90%, waivers do appear to increase Medicaid acceptance at large mental health treatment facilities. The difference-in-differenced model showed that states with waivers experienced increases in the percent of facilities accepting Medicaid over the pre-waiver and post-waiver period, while states without waivers experienced decreases in the percent of facilities accepting Medicaid over the pre-waiver and post-waiver period. The difference-in-differences statistic of 1.69 means states with waivers experienced an increase in Medicaid acceptance 1.69 percentage points more than states without waivers. Therefore, for states with a high pre-waiver percent of facilties accepting Medicaid, waivers do appear to increase the percent of large mental health treatment facilities accepting Medicaid.

Figure 1.2 depicts the difference-in-differences model for states with waivers and states without waivers, only including states that have pre-waiver percent of facilities accepting Medicaid over 90%.

Figure 1.2



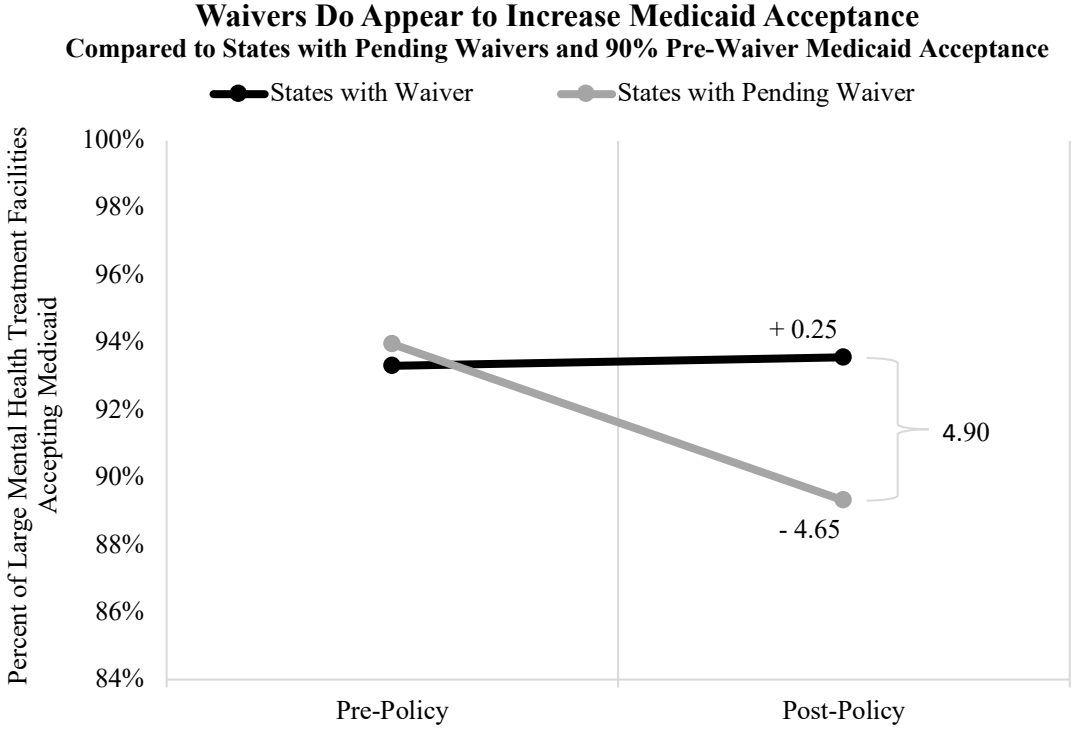
Note: Figure 1.2 compares states with waivers and states without waivers, only including states that have pre-waiver percent of facilties accepting Medicaid over 90%. Pre-Waiver, averaging 2014, 2016 and 2018, states with waivers had a smaller percent of facilties accepting Medicaid (93.32%) than states without waivers (95.18%) %), for a difference of 1.86%. Post-waiver, in 2020, states with waivers had a smaller percent of facilties accepting Medicaid (93.57%) than states without waivers (93.37%), for a difference of 0.17%. States with waivers had an increase in Mediciad acceptance (0.25%) and states without waivers had a decrease in Medicaid acceptance (1.73%), resulting in a difference-in-differences statistic of 1.69 percentage points over the pre-waiver and post-waiver period.

Some states included in the aggregate of states without waivers had pending waivers. This differenece may have contributed to the waiver's effect on Medicaid acceptance because states with pending waivers are similar to states with waivers in that they both self-selected to apply for waivers. To compare states that self-selected to apply for waivers, states with pending waivers were separated from states without waivers, in addition to removing states with pre-waiver percent of facilties accepting Medicaid under 90%.

When comparing states with waivers and states with pending waivers, waivers do appear to increase Medicaid acceptance at large mental health treatment facilities. The difference-in-differences model showed that states with waivers experienced increases in the percent of facilities accepting Medicaid over the pre-waiver and post-waiver period, while states without waivers experienced decreases in the percent of facilities accepting Medicaid over the pre-waiver and post-waiver period. The difference-in-differences statistic of 4.90 means states with waivers experienced an increase in Medicaid acceptance 4.90 percentage points more than states with pending waivers. Therefore, for states that self-selected to apply for waivers, waivers do appear to increase the percent of large mental health treatment facilities accepting Medicaid.

Figure 1.3 depicts the difference-in-differences model for states with waivers to states with pending waivers only including states that have pre-waiver percent of facilities accepting Medicaid over 90%.

Figure 1.3



Note: Figure 1.3 compares states with waivers to states with pending waivers, only including states that have pre-waiver percent of facilties accepting Medicaid over 90%. Pre-Waiver, averaging 2014, 2016 and 2018, states with waivers had a larger percent of of facilties accepting Medicaid (93.32%) than states with pending waivers (93.96%), for a difference of 0.65%. Post-waiver, in 2020, states with waivers had a larger percent of facilties accepting Medicaid (93.57%) than states with pending waivers (89.32%), for a difference of 4.26%. States with waivers had an increase in Mediciad acceptance (0.25%) and states with pending waivers had a decrease in Medicaid acceptance (4.65%), resulting in a difference-in-differences statistic of 4.90 percentage points over the pre-waiver and post-waiver period.

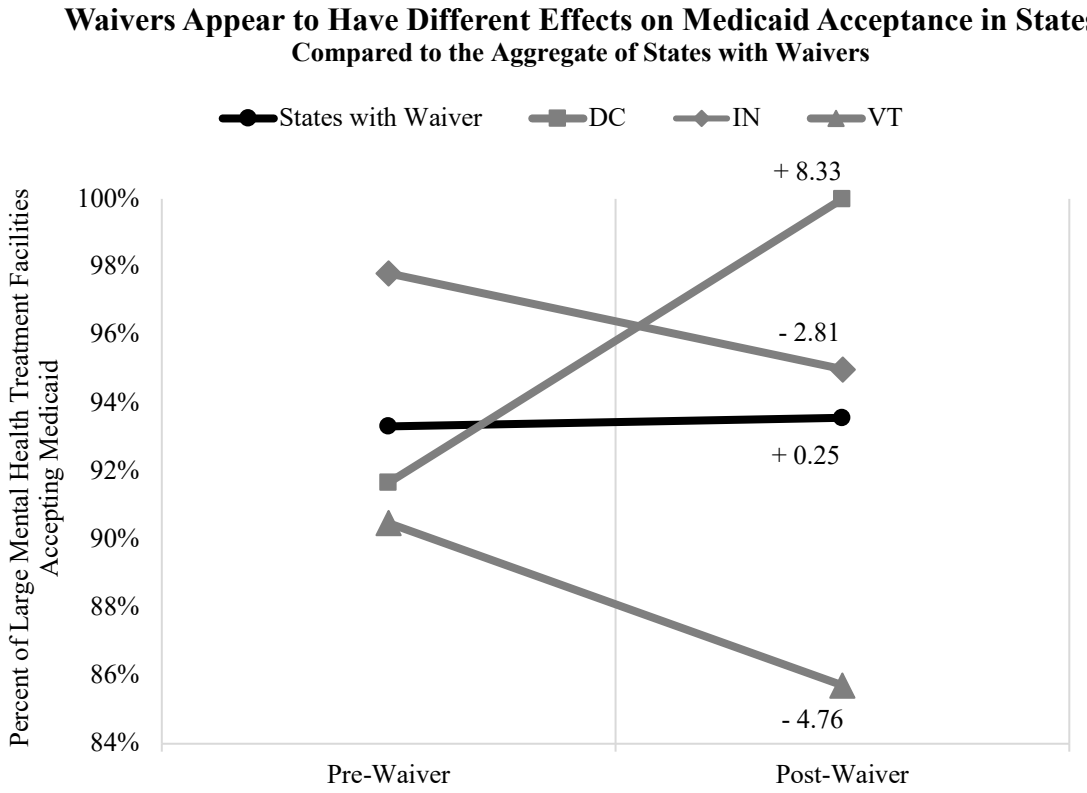
Once states receive the waiver, they implement their own programs to meet the federal guidelines, so states may experience a different waiver effect. Thus, the waiver's effect on the Medicaid acceptance at large mental health treatment facilities may have differed by state. To see if there were differences in each state's waiver's effect on the percent of large mental health treatment facilities accepting Medicaid, the 3 states with waivers were analyzed inidvidually.

When comparing individual states with waivers, waivers appeared to both increase and decrease Medicaid acceptance at large mental health treatment facilities. The difference-in-differences model showed that Washington D.C. experienced increases in the percent of facilities accepting Medicaid over the pre-waiver and post-waiver period, while Indiana and Vermont experienced decreases in the percent of facilities accepting Medicaid over the pre-waiver and post-waiver period. Therefore, the waiver's effect on Medicaid acceptance at large mental health treatment facilities differed by state.

While the aggregate of states with waivers showed an increase in the percent of facilities accepting Medicaid, this increase was not representative of the waiver's effect for each state. The waiver's effect appears heterogeneous, and states with waivers appear to not have generally experienced increases in the percent of facilities accepting Medicaid as suggested by the aggregate of states with waivers. Therefore, individual state differences may have been more important in determining the percent of large mental health treatment facilities accepting Medicaid than waivers.

Figure 1.4 depicts the difference-in-differences model for individual states with waivers and the aggregate of states with waivers.

Figure 1.4



Note: Figure 1.4 compares individual states with waivers and the aggregate of states with waivers. Pre-waiver, averaging 2014, 2016 and 2018, Indiana had a larger percent of facilties accepting Medicaid (97.81%) and Washington D.C. and Vermont had smaller percents of facilties accepting Medicaid (91.67% and 90.48%) than the aggregate of states with waivers. Post-waiver, in 2020, Indiana and Washington D.C. had larger percents of facilties accepting Medicaid (95.00% and 100.00%) and Vermont had a smaller percent of facilties accepting Medicaid (85.71%) than the aggregate of states with waivers. Washington D.C. had a larger increase in the percent of facilities accepting Medicaid (8.33 percentage points) and Indiana and Vermont had a decrease in the percent of facilities accepting Medicaid (-2.81 and -4.76 percentage points) than the aggregate of states with waivers (0.25 percentage points) over the pre-waiver and post-waiver period.

Limitations

Although this research aimed to thoroughly analyze the waiver's effect on Medicaid acceptance at large mental health treatment facilities, limitations remain. State heterogeneity, small sample sizes, and deidentified facilities from the data may have inaccurately represented the waiver effect. Additionally, slow implementation time and partial Medicaid acceptance at large mental health treatment facilities may have underrepresented the waiver effect.

Each state appears to have experienced a different effect of the waiver on Medicaid acceptance at large mental health treatment facilities. Some states with waivers showed increases in Medicaid acceptance while other states showed decreased in Medicaid acceptance, and some states without waivers showed increases in Medicaid acceptance while other states showed decreases in Medicaid acceptance. When aggregated, states with waivers and states without waivers both showed increases in Medicaid acceptance. However, this increase was not representative of the waiver's effect for each state. Because of these heterogeneous effects, the results of this research may not have accurately represented the waiver's effect on Medicaid acceptance at large mental health treatment facilities.

The number of facilities included in the data differed between years and states. Although the average number of facilities in the data per year per states was 23, for a few years and states, only one facility was included in the data. These small sample sizes may not have accurately represented facilities in that year or state, which may not have accurately represented the waiver's effect on Medicaid acceptance at large mental health treatment facilities.

The facilities in the data were deidentified, meaning an individual facility's response could not be tracked over multiple years. Thus, an individual facility's change in Medicaid acceptance is unknown. Individual facilities could have chosen to start or stop accepting

Medicaid, and these effects may have cancelled out at the state level. Therefore, the waiver's effect on Medicaid acceptance at individual large mental health treatment facilities may not have been accurately represented by this research.

The waiver's effect on Medicaid acceptance at large mental health treatment facilities was assessed using post-policy data from 2020, and although 3 states did have active waivers at that time, more time may have been needed for the full waiver's effect to materialize. For example, facilities may have needed more administrative time to accept Medicaid, and more facilities may have chosen to accept Medicaid overtime. Therefore, post-policy data for years beyond 2020 may better represent the waiver's effect on Medicaid acceptance at large mental health treatment facilities.

Large mental health treatment facilities may accept Medicaid for some populations, therefore reporting that they did accept Medicaid, even if they did not accept Medicaid for nonelderly adults. Facilities that already accepted Medicaid for some populations may have expanded their acceptance to nonelderly adults, but that would not be reflected in the data as the facilities already reported that they accept Medicaid. Thus, because the data and design used in this study assessed overall Medicaid acceptance at large mental health treatment facilities, it may not accurately assess the change in Medicaid acceptance for nonelderly adults.

Discussion

It was expected that states with waivers would experience larger increases in the percent of large mental health treatment facilities accepting Medicaid compared to states without waivers. This research finds that, surprisingly, states with waivers appear to experience smaller increases in the percent of facilities accepting Medicaid compared to states without waivers.

After adjusting states without waivers to be more comparable to states with waivers, this research finds that, conversely, states with waivers appear to experience relative increases in the percent of facilities accepting Medicaid compared to states with high pre-waiver precent of facilities accepting Medicaid and states that self-select to apply for waivers. After analyzing states with waivers individually, this research finds heterogeneity, indicating that existing differences in states may be more important than waivers in determining Medicaid acceptance at large mental health treatment facilities. Thus, the waiver's effect appears to be nuanced and different by state.

This research aims to start examining the effects of the waiver removing the IMD Exclusion for mental health treatment on Medicaid acceptance at large mental health treatment facilities. Further research should reassess these findings, examine incentives that determine a facilitiy's decisions to accept Medicaid, and investigate differences between states on the waiver's effect on Medicaid acceptance at large mental health treatment facilities. At the time of this research, only 1 year of post-waiver data and 3 states with waivers were available for analysis. Future research should reassess these findings as more data becomes available and more states receive waivers. The waiver allows large mental health treatment facilities to accept Medicaid for nonelderly adults, but facilities may still choose not to accept Medicaid because incentives are not strong enough. Further research should examine additional incentives that determine a facility's decision to accept Medicaid, such as reimbursement rates. Based on this research, each state with a waiver experienced a different effect of the waiver on Medicaid acceptance. Further research should investigate each state's waiver's effect so lessons can be gleaned from states that experienced increases in Medicaid acceptance at large mental health treatment facilities, like Washington D.C., and from states that experienced decreases in

Medicaid acceptance at large mental health treatment facilities, like Indiana and Vermont. Although this research starts examining the waiver removing the IMD Exclusion, further research is needed to determine the overall effects of the waiver.

The waiver removing the IMD Exclusion for mental health treatment allows large mental health treatment facilities to accept Medicaid for nonelderly adults, which may be a useful step in removing a barrier to mental health care for Medicaid beneficiaries. However, based on the nuanced and different results from this research, further research is needed to determine if waivers are sufficient to encourage large mental health treatment facilities to accept Medicaid.

Appendix

Table A1

Waiver Status

Waiver Status	State	Active Date	Post-Waiver Data
Active Waivers	Vermont	12/5/2019	2020
	Indiana	12/20/2019	2020
	Washington D.C.	1/1/2020	2020
Omitted Waivers	Idaho	4/17/2020	Possibly 2020
	Washington	11/6/2020	Possibly 2020
	Utah	12/16/2020	Possibly 2020
	Oklahoma	12/22/2020	Possibly 2020
Pending Waivers	Alabama	5/20/2022	After 2020
	New Hampshire	6/2/2022	After 2020
	Maryland	1/1/2022	After 2020
	Massachusetts	Pending	After 2020
	New Mexico	Pending	After 2020
	Oregon	Pending	After 2020
	West Virginia	Pending	After 2020

Table A2

Results from Difference-in-Differences Models

Figure	Group	Pre-Waiver	Post-Waiver	Difference
1.1 States without Waivers	States with Waiver	93.32%	93.57%	0.25%
	States without Waiver	87.14%	88.64%	1.73%
	Difference	6.18%	4.93%	-1.48%
1.2 States without Waivers and Pre-Waiver 90% Medicaid Acceptance	States with Waiver	93.32%	93.57%	0.25%
	States without Waiver	95.18%	93.74%	-1.43%
	Difference	-1.86%	-0.17%	1.69%
1.3 States with Pending Waivers and Pre-Waiver 90% Medicaid Acceptance	States with Waiver	93.32%	93.57%	0.25%
	States with Pending Waiver	93.96%	89.32%	-4.65%
	Difference	-0.65%	4.26%	4.90%
1.4 Individual States with Waivers	Washington D.C.	91.67%	100.00%	8.33%
	Indiana	97.81%	95.00%	-2.81%
	Vermont	90.48%	85.71%	-4.76%

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