

## TRENDS IN IN-PERSON AND TELEHEALTH-INVOLVED CONTROLLED MEDICATION INITIATIONS AMONG ADULTS WITH PRIVATE INSURANCE

### KEY POINTS

- Between March 2020 and June 2023, initiations per 100,000 enrollee-months involving a telehealth visit increased for stimulants (from approximately 0 to 35), benzodiazepines (from 1 to 76), buprenorphine for opioid use disorder (OUD) (from 0 to 1), and opioid analgesics (from 3 to 64). There were corresponding decreases in in-person-only initiations.
- Initiations involving a telehealth visit decreased after peaking in March 2020 for benzodiazepines, buprenorphine for OUD, and opioid analgesics, but remained flat at about the March 2020 level for stimulants. Additionally, after March 2020, there was an increase in initiations involving an in-person visit only for stimulants.
- After peaking in March 2020, the average proportion of initiations involving a telehealth visit between March 2020 and June 2023 was approximately 33% for stimulants, 24% for benzodiazepines, 21% for buprenorphine for OUD, and 11% for opioid analgesics.

### POLICY ISSUE

In 2008, the Ryan Haight Online Pharmacy Consumer Protection Act (“Ryan Haight Act”) was enacted to prevent providers from unlawfully distributing controlled substances via online platforms.<sup>1</sup> With few exceptions, the Ryan Haight Act requires health care practitioners to conduct in-person medical evaluations of all patients before issuing initial prescriptions of Schedule II-V controlled substances (“controlled medications”).<sup>1</sup> One exception to this requirement can be exercised upon the declaration of a Public Health Emergency (PHE) by the Secretary of the U.S. Department of Health and Human Services (HHS).<sup>2</sup>

In March 2020, due to the COVID-19 PHE, the Secretary of HHS, in concurrence with the Acting Administrator of the Drug Enforcement Administration (DEA), authorized a temporary exception to these Ryan Haight Act requirements, to allow people to access medical care in their home via telehealth while abiding by stay-at-home orders and social distancing practices.<sup>3</sup> This temporary exception allowed health care providers to prescribe controlled medications via audio-video telehealth visits, without first having an in-person examination. The DEA provided additional flexibility to health care providers prescribing buprenorphine to patients with opioid use disorder (OUD); in such instances, an audio-only consultation was sufficient.<sup>3</sup> Since the COVID-19 PHE expired on May 11, 2023, DEA and HHS have issued multiple, temporary extensions for these flexibilities, most recently through December 31, 2025, to ensure continuity of care for patients while the Federal government engages in the rulemaking process for a new telehealth regulation.<sup>4,5,6</sup>

Data that describe patterns of controlled medication use during these periods with increased telehealth flexibility are essential for informing future telehealth prescribing policies. This data brief presents trends in the initiations of selected, frequently prescribed controlled medications among individuals with private health insurance coverage.

## STUDY DESIGN

We analyzed pharmacy claims data covering January 2019 through June 2023 from the Merative MarketScan Commercial Claims database. We began the study period in January 2019 to provide at least a full year of baseline data prior to the onset of the COVID-19 pandemic. During this period, the dataset included about 65 million employees, dependents, and retirees in the United States with private health insurance coverage through fee-for-service, point-of-service, and capitated health plans. For the purposes of this study, we defined the term “private insurance” to include only employer-sponsored health plans, Medicare Advantage, and Medicare supplemental plans; the dataset did not include Marketplace plans. Using enrollee-months as the unit of analysis, we examined data on enrollees who were aged 18-64 years and were enrolled in private insurance plans, with behavioral health and prescription drug coverage for the month in which they were observed and for the previous 6 months.

Our outcome variables were initiations of four categories of controlled medications, identified by generic drug names and national drug codes: psychostimulants (methylphenidate, amphetamines, and lisdexamfetamine), referred to throughout as “stimulants”; benzodiazepines; buprenorphine products indicated for treating OUD; and opioid analgesics. For each category, we calculated the monthly incidence of initiations per 100,000 enrollee-months. We defined an initiation to be the first observed prescription fill of the controlled medication per enrollee (i.e., the index fill) where there were no other prescription fills of the same category in the 90 days before the index fill.

To investigate how often controlled medication initiations occurred in association with in-person and telehealth outpatient health care visits, we matched each initiation with the closest outpatient visit occurring up to 7 days before the fill. If no visits were found in the previous 7 days, we also searched the 3 days after the fill. Using this information, we grouped each controlled medication initiation into the following categories: (1) total, with or without a matched visit; (2) total with any matching visit (in-person, telehealth, or both); (3) any matching telehealth visit (with or without an in-person visit); (4) a matching in-person visit only (no telehealth visit); and (5) no matching visit. We identified outpatient visits using Current Procedural Terminology and Healthcare Common Procedure Coding System procedure codes and by excluding the following settings: inpatient admission, lab test, and pharmacy. The definition of outpatient visit included emergency department visits that did not lead to inpatient admissions. We identified telehealth visits using a combination of place of service codes (02 and 10), procedure codes (99441-99443, 98966-98968, and G2025), and procedure modifier codes (GT, GQ, and 95). The proportion of controlled medication initiations that could not be matched with a visit remained consistent throughout the study period for all four medication categories (**Figure A1**).

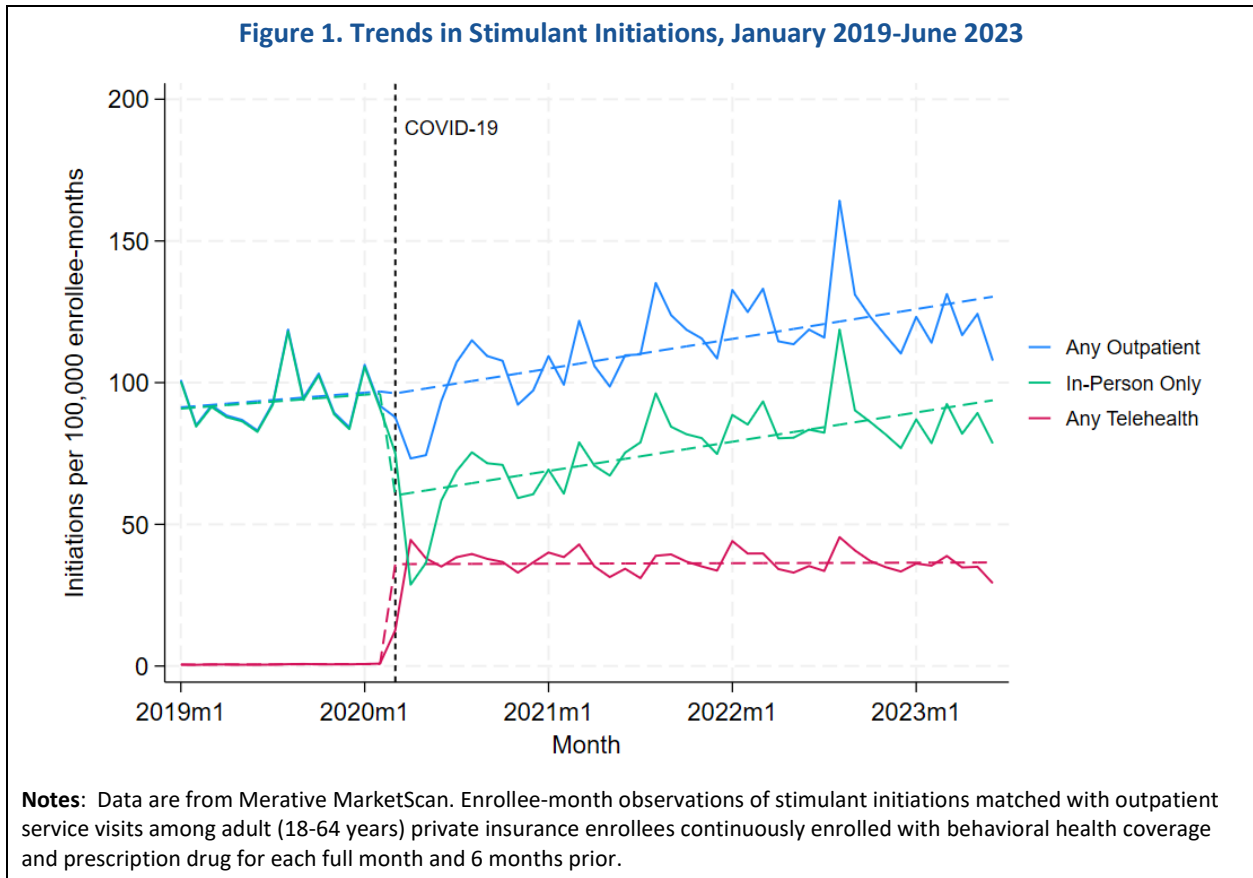
We used interrupted time series (ITS) analysis to estimate how the volume of controlled medication initiations changed over the study period—in particular, from before to after the COVID-19 pandemic prescribing flexibilities took effect. Using ITS analysis allowed us to test whether both the trend (slope) and level of initiations changed starting in March 2020 compared to the pre-March 2020 period. For each controlled medication category, we estimated three separate models: all initiations, telehealth-involved initiations, and in-person-only initiations. We estimated the ITS models using generalized linear regression models with Newey-West standard errors to account for first-order autocorrelation.

## FINDINGS

### Stimulant Initiations

The overall number of stimulant initiations increased over time, averaging about 106.89 initiations per 100,000 enrollees per month during the January 2019 through June 2023 study period (**Figure 1**). ITS analysis (**Table A1**) showed there was not a statistically significant pre-March 2020 trend, nor were there statistically

significant changes in the level of initiations or trend in initiations associated with the pandemic. The post-March 2020 trend in initiation rates, however, was positive and statistically significant, with the number of stimulant initiations increasing by about 0.87 per 100,000 enrollees per month during this period ( $p < 0.001$ ).



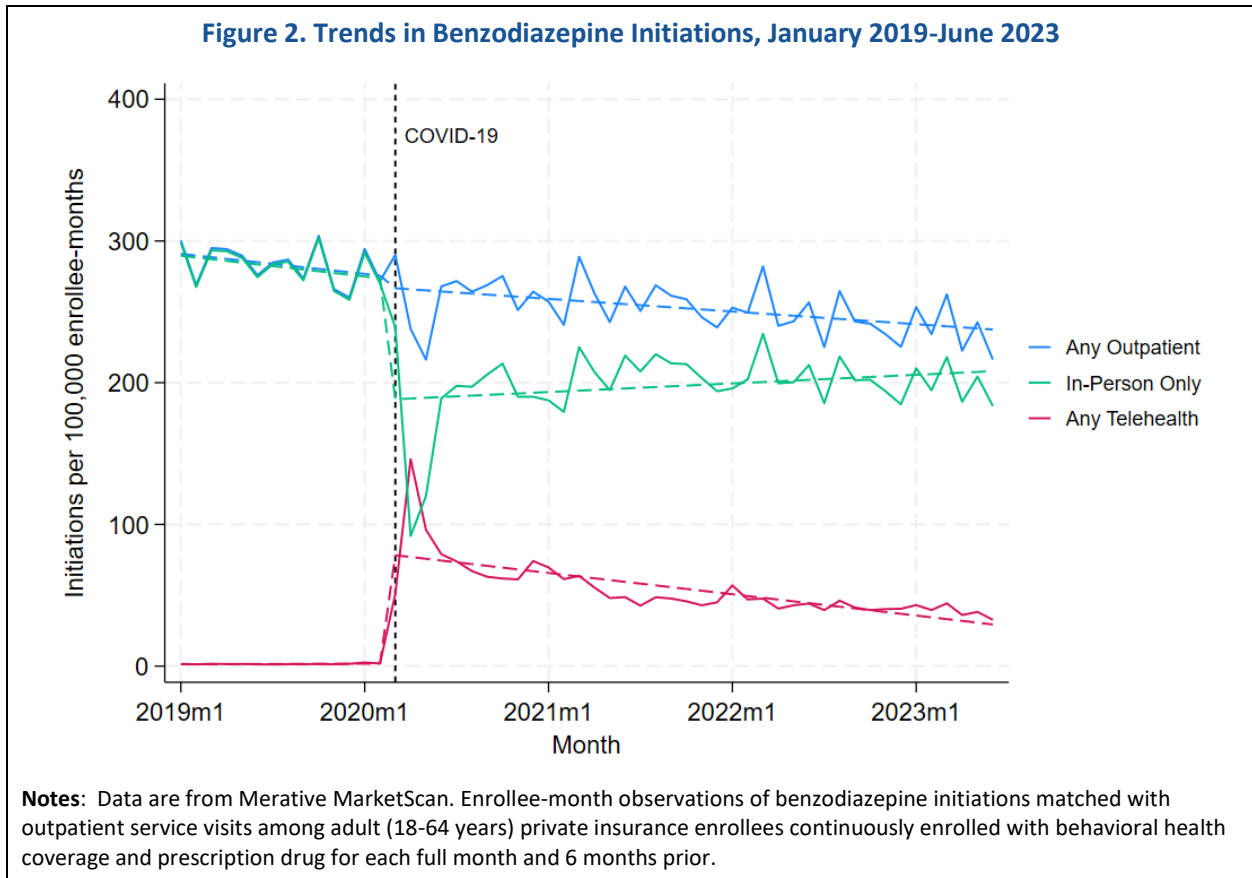
Pre-March 2020, there were very few stimulant initiations involving a telehealth visit with an estimated 0.47 initiations per 100,000 enrollees ( $p < 0.001$ ) in January 2019. During this time, they increased at a slow, but statistically significant rate ( $b = 0.02$ ,  $p < 0.001$ ). In March 2020, there was a large and statistically significant level increase in initiations involving a telehealth visit ( $b = 35.21$ ,  $p < 0.001$ ). After March 2020, the trend was not statistically significantly different from zero, nor was it significantly different from the trend in initiations involving a telehealth visit before March 2020.

Pre-March 2020, in-person-only stimulant initiations remained flat (i.e., no statistically significant trend) at a level just above 90 initiations per 100,000 enrollee per month, which accounted for nearly all initiations during that period. In March 2020, there was a large, statistically significant decrease in the level of in-person-only initiations ( $b = -36.33$ ,  $p < 0.001$ ). After March 2020, the trend in in-person-only initiations was positive and statistically significant ( $b = 0.86$ ,  $p < 0.001$ ), but it was not significantly different from the pre-pandemic in-person-only trend.

### Benzodiazepine Initiations

The overall number of benzodiazepine initiations began at close to 300 initiations per 100,000 enrollees in January 2019 but decreased substantially by June 2023 (Figure 2). Most of this decline was concentrated in the post-March 2020 period, as there was neither a statistically significant decline pre-March 2020, nor a significant level change in March 2020. From March 2020 on, however, overall benzodiazepine initiations declined significantly by about 0.75 initiations per 100,000 enrollees per month ( $p < 0.001$ ). (The estimated

magnitude of the pre and post period trends in overall initiations were quite similar. It may be that only the post-period trend was statistically significant because it included more than twice as many observations as the pre period.)



Benzodiazepine initiations involving a telehealth visit were rare pre-March 2020, starting at an estimated 1.33 per 100,000 enrollees in January 2019 ( $p < 0.001$ ). In March 2020, there was a large, significant level increase in initiations ( $b = 76.42$ ,  $p < 0.001$ ), but between March 2020 and June 2023, initiations declined at a rate of about 1.25 initiations per 100,000 enrollees per month ( $p < 0.001$ ). This negative trend was statistically significantly different than the pre-March 2020 trend ( $b = -1.29$ ,  $p < 0.001$ ).

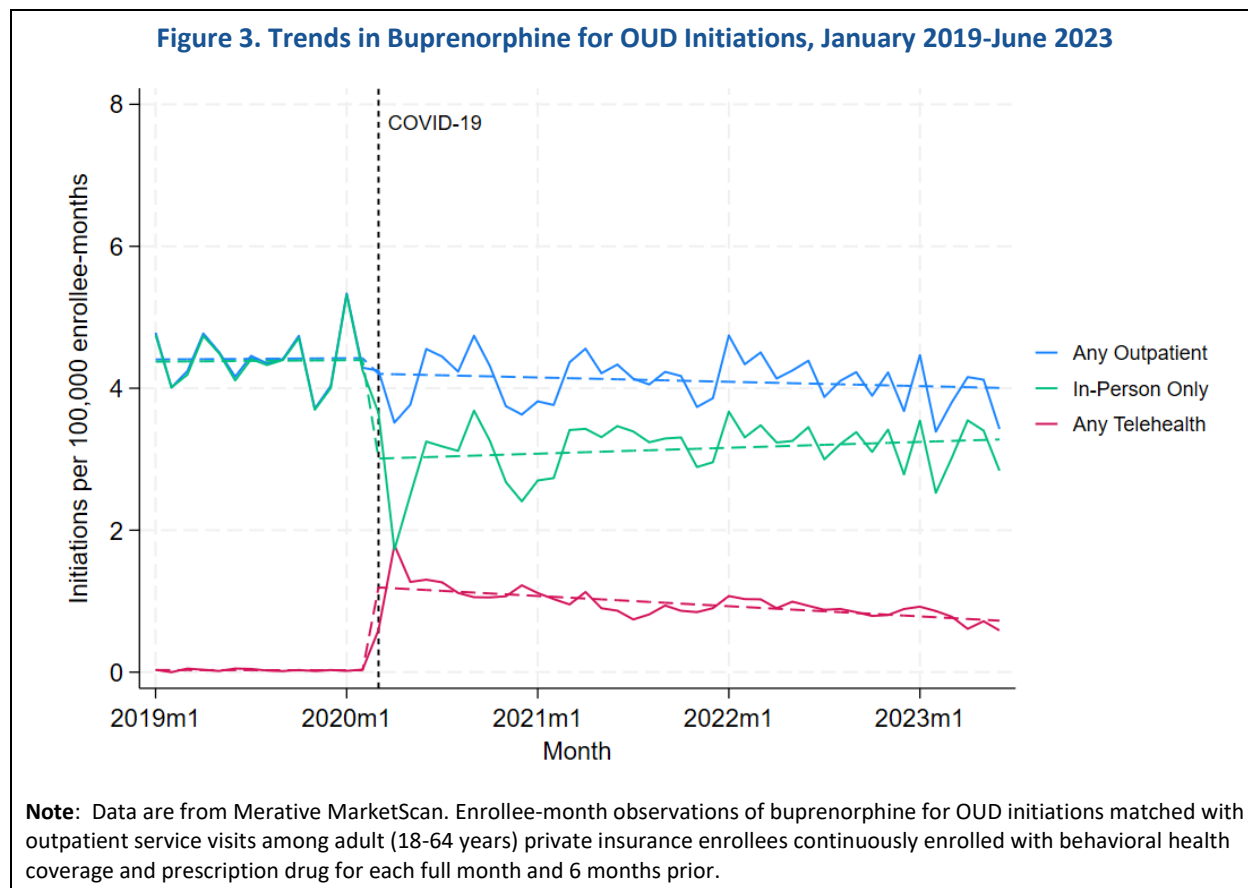
In-person-only initiation accounted for nearly all benzodiazepine initiations in the pre-March 2020 period, and during that time, trends in initiations were not significantly different than zero. In March 2020, however, there was a large and statistically significant level decrease in in-person-only initiations ( $b = -84.20$ ,  $p < 0.001$ ). This was gradually offset by a post-March 2020 trend that was not significantly different than zero itself but represented a significant increase relative to the pre-March 2020 trend ( $b = 1.72$ ,  $p < 0.001$ ).

### Buprenorphine for OUD Initiations

The overall incidence of initiations of buprenorphine for OUD remained consistent at between 4 and 5 initiations per 100,000 enrollees per month during the entire January 2019 through June 2023 study period (**Figure 3**). These rates were substantially lower than those observed for the other three classes of medications examined in this study, perhaps owing to a lower prevalence of OUD in the commercially insured population compared rates of attention-deficit/hyperactivity disorder (ADHD), anxiety, and pain (i.e., the most common diagnoses for which the other medications are indicated). This could have been further compounded by relatively low rates of buprenorphine uptake among people with OUD relative to rates of initiation of the other

three classes of medications for people with, for example, ADHD, anxiety, and pain. Before the COVID-19 pandemic, nearly all buprenorphine initiations occurred via in-person visits only; there were virtually no buprenorphine initiations involving a telehealth visit.

In March 2020, there was a statistically significant increase in initiations involving a telehealth visit ( $b = 1.17$ ,  $p < 0.001$ ) and a corresponding, statistically significant decrease in in-person-only initiations ( $b = -1.39$ ,  $p < 0.001$ ). From March 2020 on, initiations involving a telehealth visit decreased by a slow, but significant rate ( $b = -0.01$ ,  $p < 0.001$ ) but remained at levels substantially higher than those observed in the pre-March 2020 period. The trend in in-person-only initiations was not statistically significantly different from zero after March 2020.



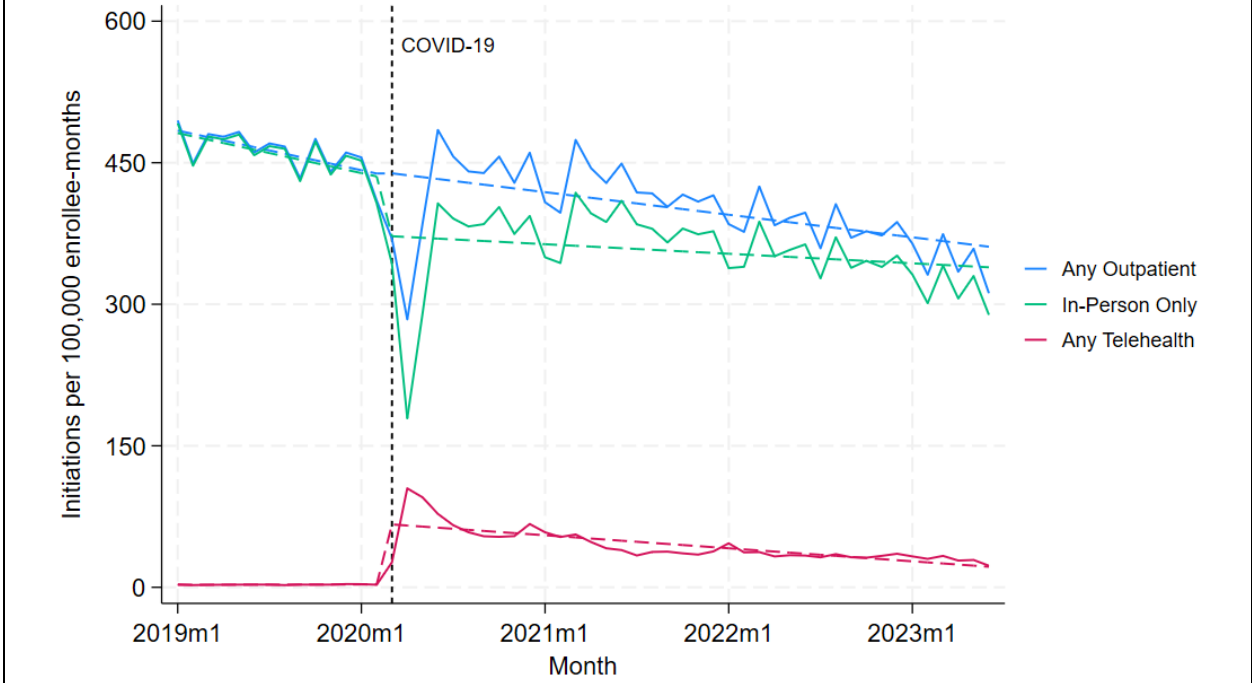
### Opioid Analgesic Initiations

Of the controlled medications categories we examined, opioid analgesics were initiated at the highest rates overall, but initiations declined consistently throughout the full study period. Overall opioid initiations began at an estimated 484.07 initiations per 100,000 enrollees in January 2019 and decreased from then until March 2020 at a rate of about 3.50 initiations per 100,000 enrollees per month ( $p = 0.001$ ). From March 2020 on, the decline continued at about 1.99 initiations per 100,000 enrollees per month ( $p = 0.022$ ).

Initiations of opioid analgesics involving a telehealth visit were rare pre-March 2020, starting at an estimated 2.63 per 100,000 enrollees in January 2019 with no statistically significant trend during this period. They experienced a large, statistically significant increase in March 2020 ( $b = 63.56$ ,  $p < 0.001$ ). From then on, however, they gradually decreased again at a significant rate ( $b = -1.15$ ,  $p < 0.001$ ).

Patterns of in-person-only initiations of opioid analgesics largely mirrored the overall patterns.

**Figure 4. Trends in Opioid Analgesic Initiations, January 2019-June 2023**

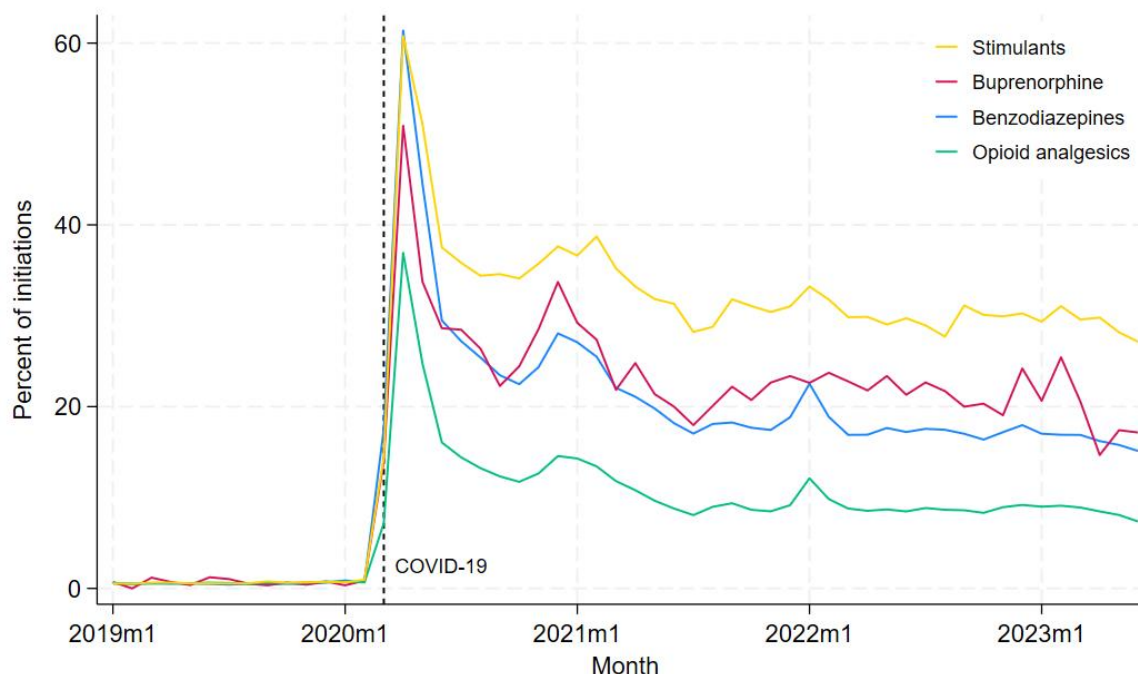


**Note:** Data are from Merative MarketScan. Enrollee-month observations of opioid analgesic initiations matched with outpatient service visits among adult (18-64 years) private insurance enrollees continuously enrolled with behavioral health coverage and prescription drug for each full month and 6 months prior.

### Initiations Involving a Telehealth Visit as a Proportion of All Initiations

When examining trends in initiations involving a telehealth visit as a proportion of all initiations, all four categories of controlled medications followed similar patterns (**Figure 5**). Before March 2020, fewer than 1% of all initiations each month involved a telehealth visit (stimulants: 0.64%; benzodiazepines: 0.55%; buprenorphine for OUD: 0.65%; opioid analgesics: 0.62%). Initiations involving a telehealth visit reached their highest level for each controlled medication category in April 2020--the month after the COVID-19 pandemic began (stimulants: 60.78%; benzodiazepines: 61.38%; buprenorphine for OUD: 50.91% opioid analgesics: 36.93%). From then until the end of the study period in June 2023, initiations involving a telehealth visit declined as a share of all controlled medication initiations but still comprised a substantially higher share of initiations than in the period prior to March 2020. For the period of March 2020 to June 2023, the average share of initiations involving a telehealth visit of each controlled medication category was 32.52% for stimulants, 23.55% for benzodiazepines, 21.41% for buprenorphine for OUD, and 11.13% for opioid analgesics.

**Figure 5. Telehealth Involvement in Selected Controlled Medications Initiations, January 2019-June 2023**



**Note:** Data are from Merative MarketScan. Enrollee-month observations of controlled medication initiations matched with outpatient service visits among adult (18-64 years) private insurance enrollees continuously enrolled with behavioral health coverage and prescription drug for each full month and 6 months prior.

## LIMITATIONS

A limitation of the study is that it is drawn from a claims database covering patients from employer-sponsored insurance and Medicare Advantage plans; therefore, the findings only reflect pharmacy-dispensed controlled medication prescriptions (not including medications dispensed or administered in institutional settings without a prescription being issued, such as medications for OUD dispensed at Opioid Treatment Programs) and are not generalizable to other insured groups (e.g., Medicaid beneficiaries), uninsured individuals, or individuals who might have lost their employer-sponsored coverage and transitioned to public insurance during the pandemic. Another limitation is that, among initiations involving telehealth visits, we could not distinguish between those that were telehealth only and those that also involved an in-person visit. Therefore, our estimates for initiations involving telehealth visits may represent an upper bound on the extent to which telehealth played a role. An unmeasured proportion of these initiations may have in fact come primarily through an in-person visit with a telehealth visit occurring contemporaneously. A third limitation of this study is that we linked index prescriptions with outpatient visits but not with prior inpatient visits. One implication of this is that medications that were administered or dispensed in an inpatient setting without a subsequent prescription being issued were not captured. Additionally, due to variation in billing methods and claims data quality, we could not reliably distinguish outpatient visits with practitioners who do and do not have prescriptive authority and therefore did not consider practitioner type when matching initiations with outpatient visits. This may have resulted in some incorrect matches. Further, a substantial portion of initiations within the study period did not have a matching outpatient visit (**Figure A1**), which could represent prescriptions that were issued in connection with inpatient visits, or outpatient visits that were not covered by insurance (which is common for behavioral health care). Finally, this study does not include any information about patient characteristics and only reports descriptive trends. An important avenue for future studies to

consider would be looking at trends in controlled medication initiation based on patient demographic characteristics (e.g., race, ethnicity, gender) and geographic location (e.g., state, county).

## CONCLUSION

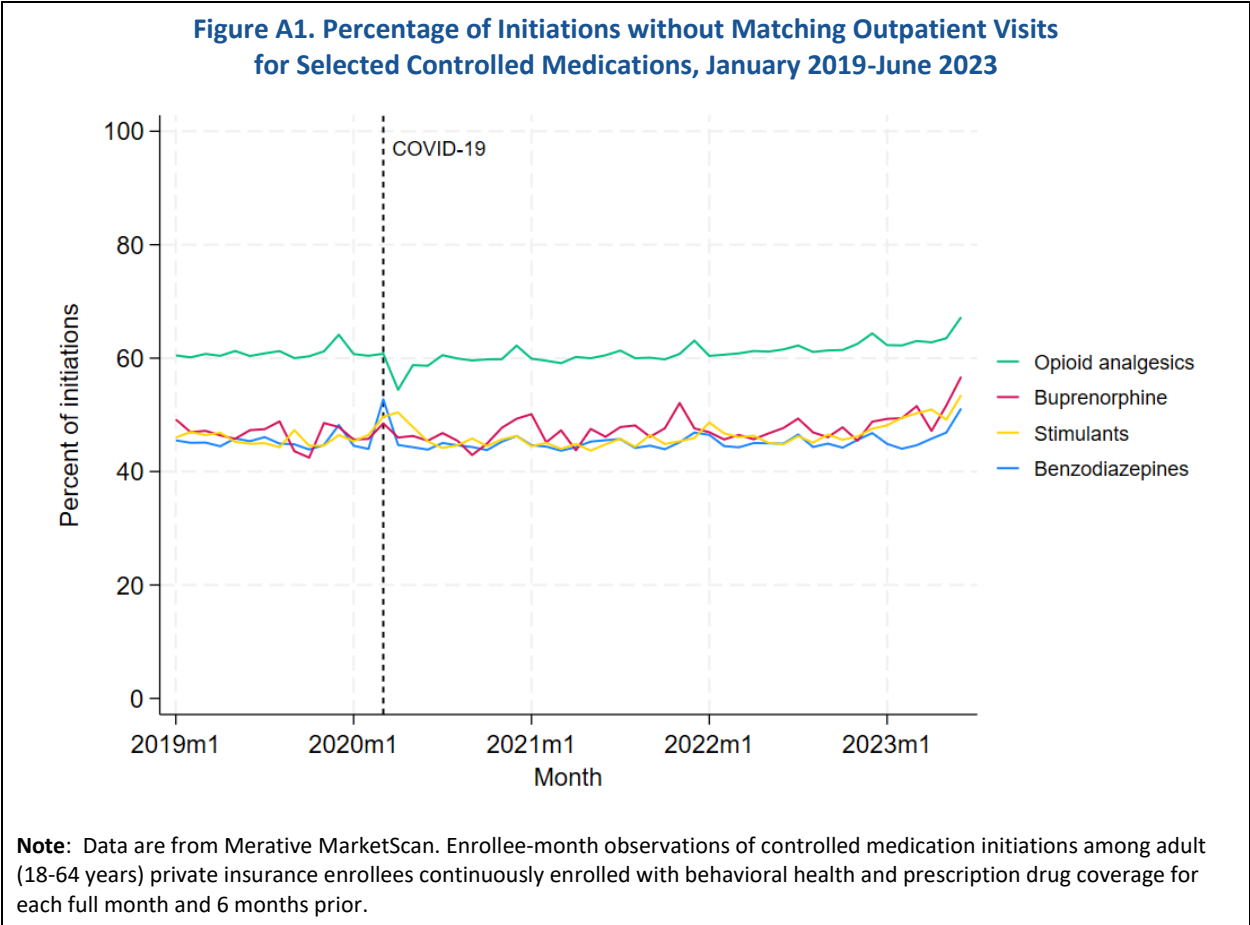
Since March 2020, HHS and DEA have allowed health care practitioners to initiate controlled medications via a telehealth visit without first conducting an in-person medical evaluation, representing a substantial change in how these medications, and the conditions they are used to treat, can be managed.

According to Merative MarketScan data of privately insured individuals between January 2019 and June 2023, rates of selected controlled medication prescriptions initiated with some telehealth involvement were highest in the months immediately following the onset of the COVID-19 PHE, when stay-at-home orders were in full effect. Beginning in March 2020, initiations involving a telehealth visit significantly increased, with corresponding decreases in in-person-only initiations. Initiations involving a telehealth visit significantly decreased after March 2020 for benzodiazepines, buprenorphine for OUD, and opioid analgesics, but remained steady for stimulants. The sustained rate of telehealth use for initiating stimulants could reflect a maldistribution of providers who are specialized in treating conditions for which stimulants are indicated (e.g., ADHD, binge eating disorder), or that individuals with such conditions face unique barriers to receiving in-person care (e.g., executive dysfunction associated with ADHD could make it more difficult to seek services in person than via telehealth). More research is needed to elucidate this finding. After peaking in March 2020, the average proportion of initiations involving a telehealth visit between March 2020 and June 2023 was approximately 33% for stimulants, 24% for benzodiazepines, 21% for buprenorphine for OUD, and 11% for opioid analgesics. During this time and among the medications examined, buprenorphine had the lowest rate of initiation both overall and involving a telehealth visit among commercially insured individuals in this sample.

These results show that the majority of privately insured individuals received their initial controlled medication prescriptions without telehealth involvement, throughout the COVID-19 PHE.



APPENDIX



**Table A1. ITS Analysis of Trends in Controlled Medication Initiations**

	Overall			Any Telemedicine			In-Person-Only		
	Est.	SE	P	Est.	SE	P	Est.	SE	P
<b>Stimulants</b>									
Intercept	91.31	3.56	0.000	0.47	0.04	0.000	90.84	3.54	0.000
Slopes (monthly trends)									
Pre-March 2020	0.43	0.41	0.297	0.02	0.01	0.000	0.41	0.41	0.318
Post-March 2020	0.87	0.24	0.000	0.01	0.09	0.873	0.86	0.22	0.000
Difference	0.45	0.48	0.353	-0.01	0.09	0.950	0.45	0.45	0.320
Level									
Difference at March 2020	-1.12	6.56	0.865	35.21	2.32	0.000	-36.33	6.75	0.000
<b>Benzodiazepines</b>									
Intercept	290.92	4.50	0.000	1.33	0.12	0.000	289.59	4.47	0.000
Slopes (monthly trends)									
Pre-March 2020	-1.18	0.67	0.077	0.04	0.02	0.118	-1.22	0.66	0.064
Post-March 2020	-0.75	0.26	0.004	-1.25	0.28	0.000	0.51	0.51	0.323
Difference	0.43	0.71	0.541	-1.29	0.28	0.000	1.72	0.82	0.036
Level									
Difference at March 2020	-7.78	9.22	0.399	76.42	7.49	0.000	-84.20	15.05	0.000
<b>Buprenorphine for OUD</b>									
Intercept	4.41	0.15	0.000	0.03	0.01	0.000	4.38	0.15	0.000
Slopes (monthly trends)									
Pre-March 2020	0.00	0.03	0.956	0.00	0.00	0.706	0.00	0.03	0.948
Post-March 2020	-0.01	0.01	0.354	-0.01	0.00	0.000	0.01	0.01	0.315
Difference	-0.01	0.03	0.809	-0.01	0.00	0.000	0.01	0.03	0.848
Level									
Difference at March 2020	-0.22	0.29	0.446	1.17	0.07	0.000	-1.39	0.32	0.000
<b>Opioid Analgesics</b>									
Intercept	484.07	7.34	0.000	2.63	0.12	0.000	481.44	7.27	0.000
Slopes (monthly trends)									
Pre-March 2020	-3.50	1.09	0.001	0.03	0.02	0.106	-3.53	1.08	0.001
Post-March 2020	-1.99	0.87	0.022	-1.15	0.25	0.000	-0.84	0.98	0.389
Difference	1.51	1.48	0.308	-1.18	0.25	0.000	2.69	1.49	0.071
Level									
Difference at March 2020	3.66	23.54	0.876	63.56	6.60	0.000	-59.89	26.96	0.026

**Notes:** Data are from Merative MarketScan. N = 54 monthly observations for each model. ITS analyses were conducted using generalized linear regression models with Newey-West standard errors to account for first-order autocorrelation.

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### ABOUT THE AUTHORS

Timothy Creedon, Ph.D., Monica Rousseau, Dr.PH., and Daniel Schwartz, M.P.H., work in the Office of Behavioral Health, Disability, and Aging Policy in the Office of the Assistant Secretary for Planning and Evaluation.

Mir M. Ali, Ph.D., works at the National Institutes of Health.

Kay Miller, B.A., works at Merative.

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