The Effects of Physician Access Costs on Prescription Utilization

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Working Paper Coming Soon

1 Extended Abstract

Patients often pay two separate costs to access healthcare services: the cost of visiting a physician and the cost of the service itself. For example, patients must visit a provider before receiving the permission to fill potentially many prescription drugs at a pharmacy. For low-income patients especially, higher physician costs could meaningfully impede utilization of healthcare. There is, however, limited empirical evidence on how higher costs visiting a provider affects the utilization of healthcare service because large changes in insurance plan generosity typically affect both costs contemporaneously.

This paper leverages differences in lost Medicaid benefits in conjunction with administrative differences between Medicaid and the Low-Income Subsidy ("the subsidy") to assess how higher costs of accessing medical care affect prescription utilization for low-income Medicare patients. The Medicaid benefit differences break patients into two groups: those who lose premium support, and those that additionally lose benefits that eliminate the costs of accessing medical services. The administrative differences between Medicaid and the subsidy create a several month period where there is substantial variation in lost Medicaid benefits, but no change in the cost of filling prescriptions because the subsidy benefits last until the end of the calendar year. The two sources of variation are used in a difference-in-difference design with Medicare claims data to estimate how higher costs for accessing medical services affect prescription utilization, holding the costs of filling prescription effectively zero.

There is a large reduction in the number of physician visits in response to higher costs of accessing physician services. In the absence of full Medicaid benefits, patients go from owing nothing to owing 20 percent of the total cost for medical care. For the average physician visit, this amounts to $18, and

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patients respond by visiting physician offices 10 percent less. The higher costs also reduce outpatient and emergency department visits.

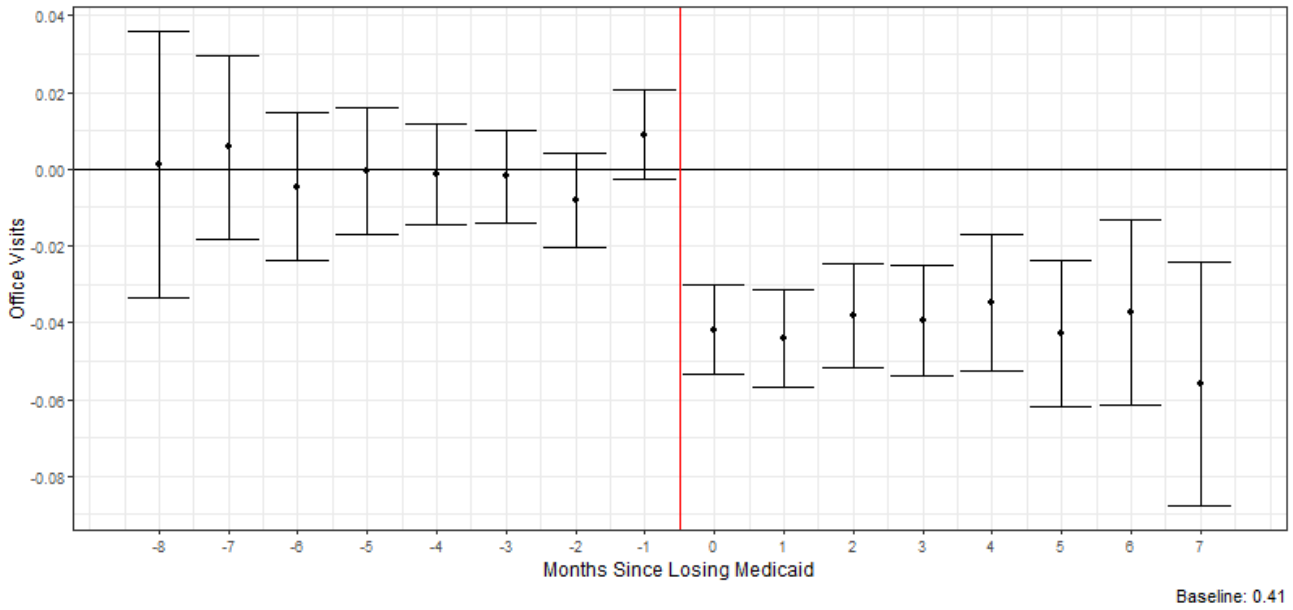
The reduction in physician visits leads to a meaningful reduction in prescription utilization, with both the quantity of prescriptions filled and total prescription expenditures falling 5 percent. The reductions are not concentrated in a particular type of prescription, but instead whether a prescription has refills or not. Initial fills of prescriptions fall nearly 10 percent, whereas there is no reduction in refills, consistent with a reduction in office visits being the driver in the reduction of prescription utilization.

At least in the short-run, patients do not respond in ways to maximize the number of prescriptions they can fill. I show suggestive evidence that patients are not shifting prescriptions to other providers, which would allow them to maintain a similar level of prescription purchases with fewer providers.

This paper contributes the economics literature on prescription cost-sharing by isolating how higher costs of visiting the physician affect prescription utilization. Prior work has estimated the effect of prescription cost-sharing by leveraging either bundled increases in costs that capture the combined effect of office and prescription cost-sharing or changes only to prescription cost-sharing (Brot-Goldberg et al., 2017; Chandra et al., 2010, 2014, 2021; Einav et al., 2015). Quantifying how other factors of health insurance outside of the prescription prices also ties in well with recent work demonstrating that administrative rules can have a large effect on prescription utilization (Brot-Goldberg et al., 2023).

Isolating how higher costs of visiting a provider is additionally important in understanding the benefits of Medicaid as eliminating these costs is a key component of the program. There are challenges to estimating the pure demand effect from eliminating patient costs because the Medicaid program payment design significantly disincentives providers to serve Medicaid patients (Cabral et al., 2021; Li, 2023). By focusing on low-income patients that lose Medicaid, the provider's beliefs about payment are likely minimally affected, meaning that I am likely identifying the demand response. A pure demand response is important for policy makers as it allows them to better predict Medicaid patient healthcare demand were they to address the administrative and payment burdens on providers.

Figure 1: Monthly Difference-in-Difference Coefficients of Office Visits



Note: Figure shows the event-study coefficients estimated following Callaway and Sant'Anna 2021 and 95 percent confidence intervals. All patients in the sample lose Medicaid. The estimates show the difference between patients that lose cost-sharing benefits and premium support (full-dual) and patients that only lose premium support (partial-dual). The aggregated group ATTs are all relative to the first calendar month. Office visits are a category of E&M visits.

Figure 2: Monthly Difference-in-Difference Coefficients of E&M Visits

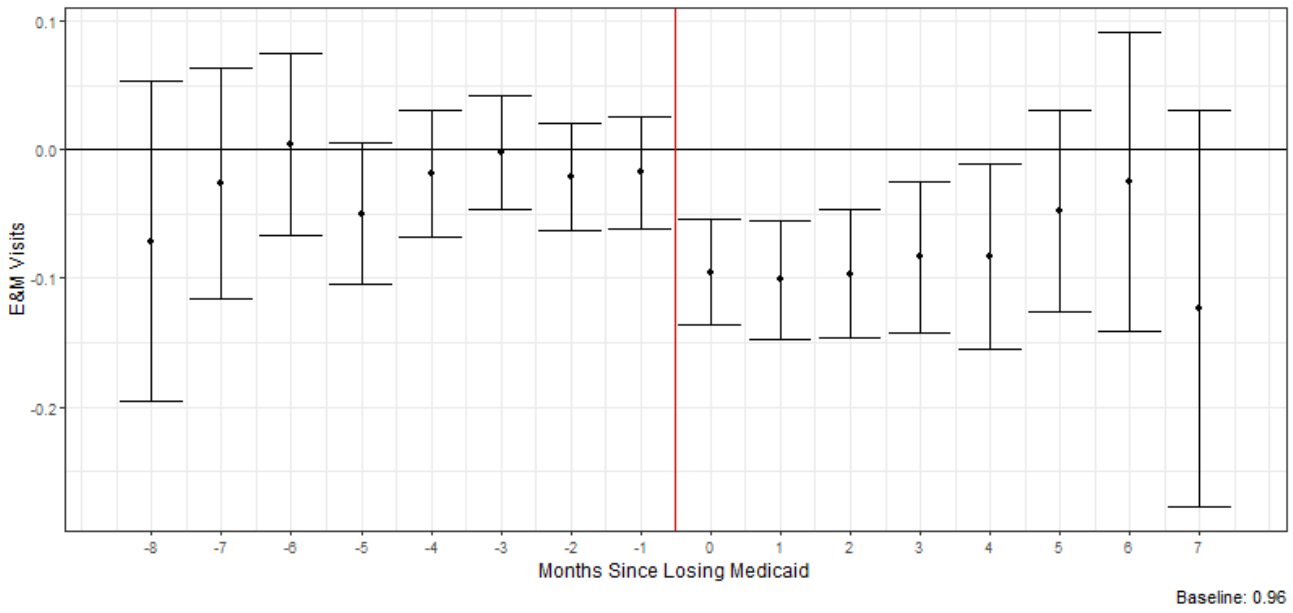


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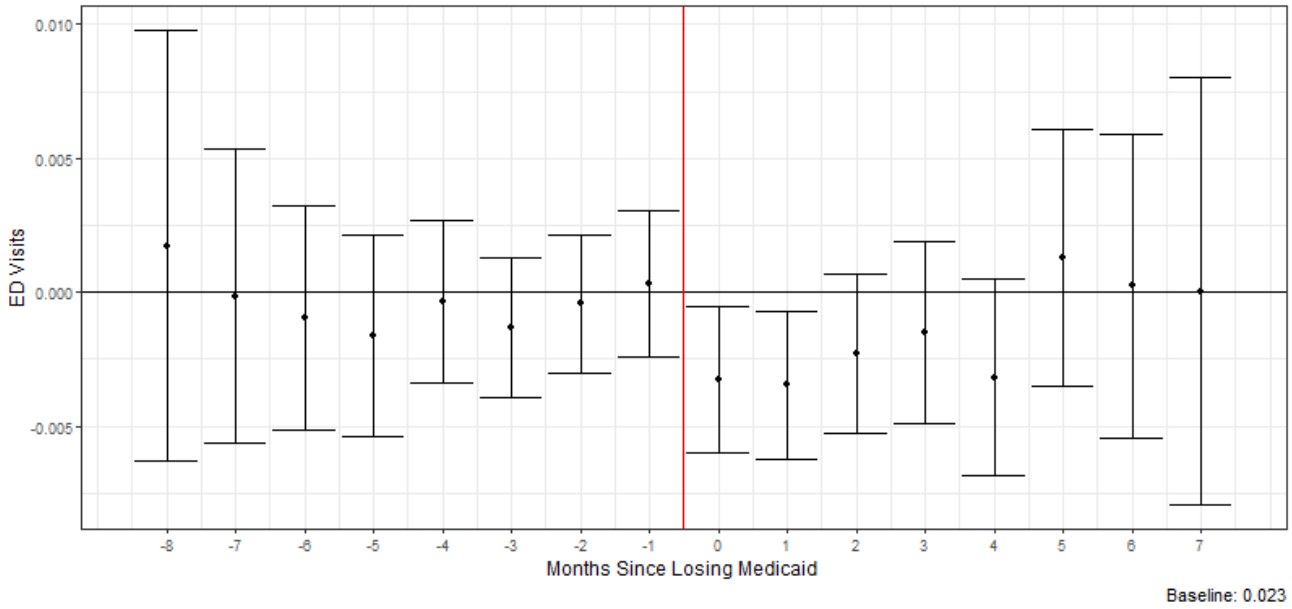
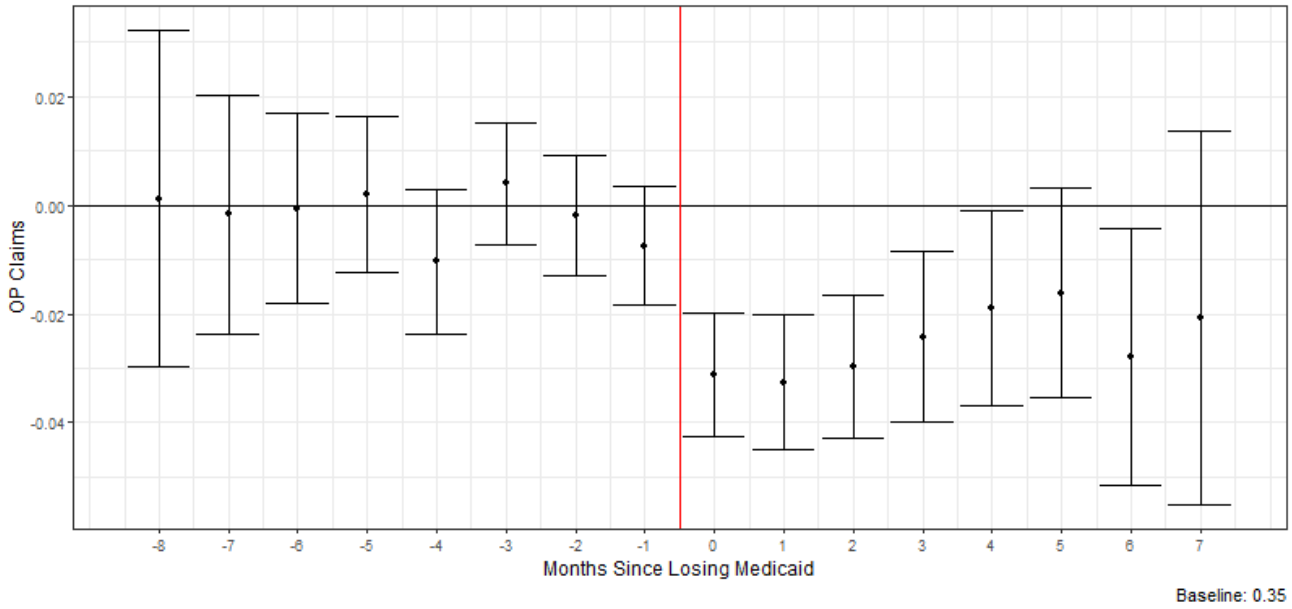
Figure 3: Monthly Difference-in-Difference Coefficients of Emergency Department Visits



Note: Figure shows the event-study coefficients estimated following Callaway and Sant'Anna 2021 and 95 percent confidence intervals. All patients in the sample lose Medicaid. The estimates show the difference between patients that lose cost-sharing benefits and premium support (full-dual) and patients that only lose premium support (partial-dual). The aggregated group ATTs are all relative to the first calendar month.

Figure 4: Monthly Difference-in-Difference Coefficients of Outpatient Claims



Note: Figure shows the event-study coefficients estimated following Callaway and Sant'Anna 2021 and 95 percent confidence intervals. All patients in the sample lose Medicaid. The estimates show the difference between patients that lose cost-sharing benefits and premium support (full-dual) and patients that only lose premium support (partial-dual). The aggregated group ATTs are all relative to the first calendar month.

Figure 5: Monthly Difference-in-Difference Coefficients of Prescription Days' Supply

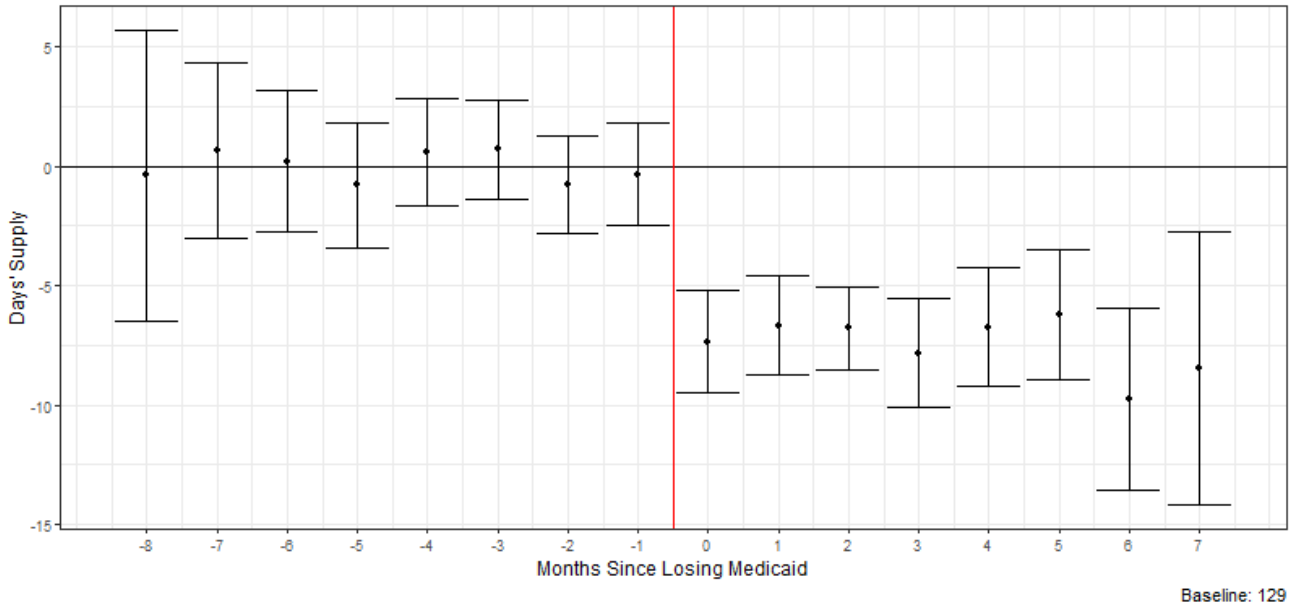


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Figure 6: Monthly Difference-in-Difference Coefficients of Prescription Expenditures

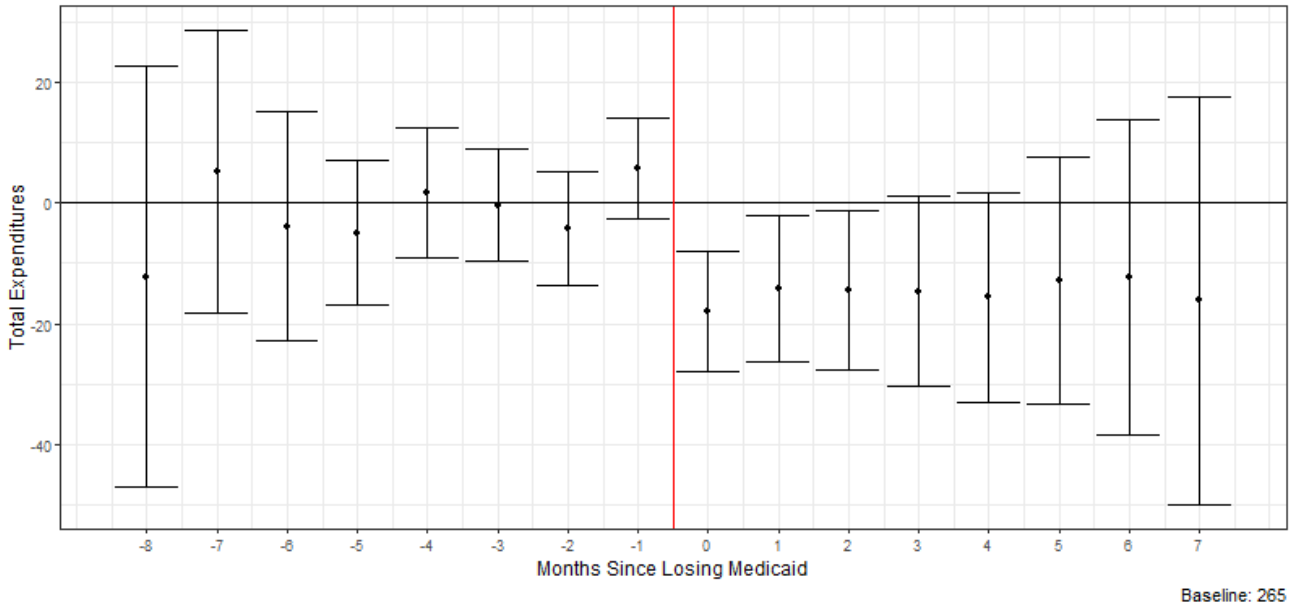

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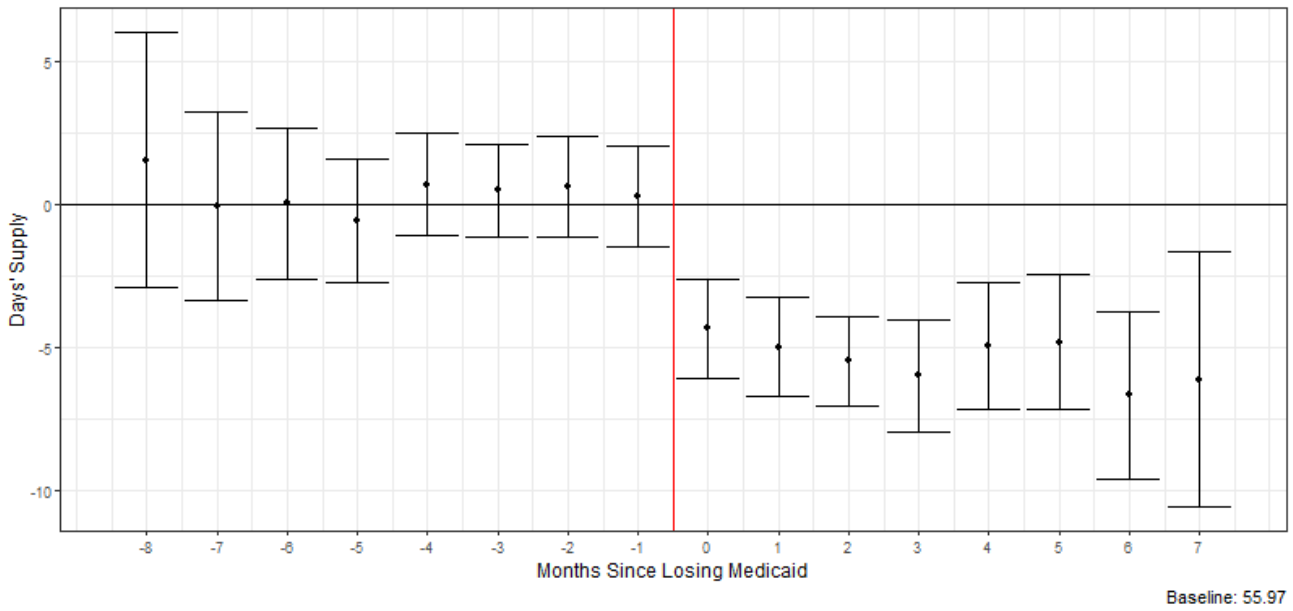
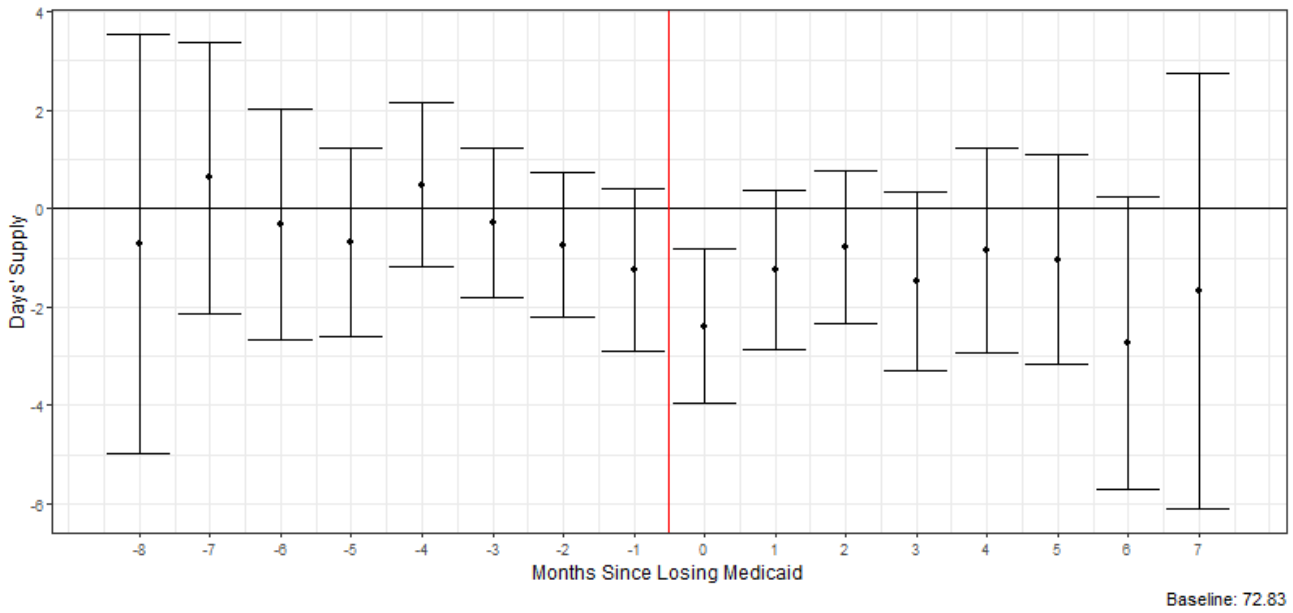
Figure 7: Monthly Difference-in-Difference Coefficients of Prescription Initial Fills



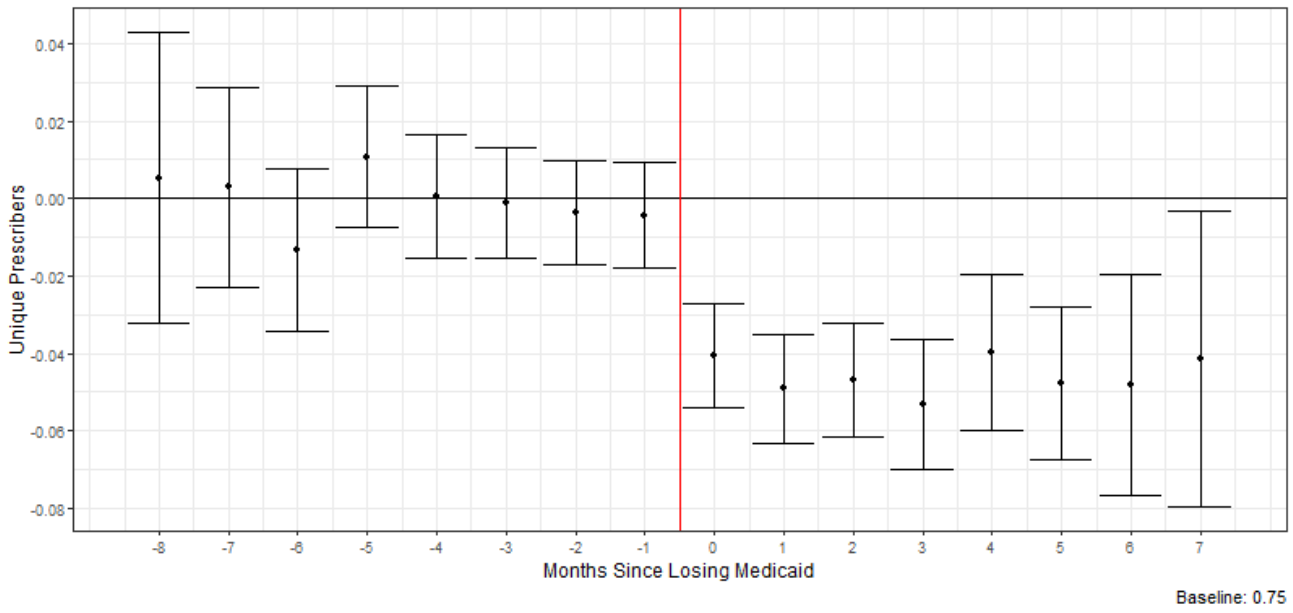
Note: Figure shows the event-study coefficients estimated following Callaway and Sant'Anna 2021 and 95 percent confidence intervals. All patients in the sample lose Medicaid. The estimates show the difference between patients that lose cost-sharing benefits and premium support (full-dual) and patients that only lose premium support (partial-dual). The aggregated group ATTs are all relative to the first calendar month.

Figure 8: Monthly Difference-in-Difference Coefficients of Prescription Refills



Note: Figure shows the event-study coefficients estimated following Callaway and Sant'Anna 2021 and 95 percent confidence intervals. All patients in the sample lose Medicaid. The estimates show the difference between patients that lose cost-sharing benefits and premium support (full-dual) and patients that only lose premium support (partial-dual). The aggregated group ATTs are all relative to the first calendar month.

Figure 9: Monthly Difference-in-Difference Coefficients of Unique Prescribers



Note: Figure shows the event-study coefficients estimated following Callaway and Sant'Anna 2021 and 95 percent confidence intervals. All patients in the sample lose Medicaid. The estimates show the difference between patients that lose cost-sharing benefits and premium support (full-dual) and patients that only lose premium support (partial-dual). The aggregated group ATTs are all relative to the first calendar month. Unique prescribers come from prescribing physician of initial prescription fills.

Table 1: Patient Demographics Split by Patient Type

	Full Medicaid	Partial Medicaid
Female	0.667	0.676
White	0.556	0.653
Black	0.192	0.185
Hispanic	0.174	0.121
Age	74.8	75.7
Chronic	0.367	0.350
Q1 Avg. Days' Supply	127	125
Q1 Avg. Rx Expenditures	261	246
Q1 Avg. E&M Visits	0.988	0.798
OOP per Fill	1.73	3.05
N	51717	23196

Notes: The table shows descriptive statistics for all patients that lost Medicaid between May and October in the main sample in the year of Medicaid loss, split by whether they had full or partial Medicaid benefits. All in the patients in the sample filled at least one prescription, entered the year with Medicaid, and are enrolled in Traditional Medicare. The first column reports statistics for patients that were enrolled with traditional Medicaid benefits or in the Qualified Medicare Beneficiary program. The second column reports statistics for patients that were only enrolled in either the Specified Low-Income Medicare Beneficiary or Qualifying Individual programs. The quarter one averages are at the monthly level and chronic conditions in an indicator for whether a patient's Charlson index is non-zero.

Table 2: Difference-in-Difference Coefficients by Whether a Patient has a Chronic Condition

	Chronic Sample		No Chronic Sample	
	Days' Supply	Office Visits	Days' Supply	Office Visits
ATT	-5.205***	-8.442***	-5.932***	-11.011***
	(0.645)	(1.430)	(0.610)	(1.246)
Baseline Mean	169	0.520	106	0.349
N	27131	27131	47782	47782

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Note: Table shows the average treatment on the treated (ATT) coefficients estimated following Callaway and Sant'Anna 2021 as a percent change relative to the baseline mean. All patients in the sample lose Medicaid. The estimates show the difference between patients that lose cost-sharing benefits and premium support (full-dual) and patients that only lose premium support (partial-dual). Patients with a non-zero Charlson index are labeled chronic. Significance levels: *=10%, **=5%, ***=1%.

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