The Missing Cliff: SNAP Emergency Allotment Expiration and the Absence of an Acute Care Cascade

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Abstract

When 18 U.S. states abruptly terminated SNAP Emergency Allotments between April 2021 and January 2023—cutting \$95–\$250 per month in food benefits for Medicaid enrollees—the policy consensus predicted a cascade into emergency departments. Using the universe of Medicaid ED and primary care claims from CMS T-MSIS (37 million claim-level observations, 51 state-month units over 84 months), I estimate staggered difference-in-differences models finding no acuity shift: the ED share of Medicaid utilization did not increase in early-terminating states relative to controls (Callaway-Sant'Anna ATT: -0.009, SE: 0.005). The null survives randomization inference, leave-one-out, and a behavioral health placebo. These results rule out ED share increases larger than one percentage point with 95% confidence, suggesting that food benefit reductions do not mechanically redirect Medicaid patients toward costlier emergency settings.

JEL Codes: I12, I18, I38
Keywords: SNAP, Emergency Allotments, Medicaid, emergency department, primary care, safety net spillovers

1. Introduction

In March 2023, the last SNAP Emergency Allotments expired, ending a pandemic-era policy that had boosted food benefits by \$95–\$250 per month for over 40 million Americans. The expiration arrived with a grim prediction: without adequate nutrition, Medicaid enrollees would delay primary care, suffer acute dietary crises—hypoglycemic episodes, electrolyte imbalances, malnutrition-related infections—and flood emergency departments (Berkowitz et al., 2018; Seligman et al., 2010). The fiscal arithmetic of this "penny wise, pound foolish" argument is vivid: a \$150 primary care visit prevented by a \$95 food benefit might transform into a \$1,500 ED encounter. This logic has shaped congressional debates over SNAP reauthorization and animated advocacy campaigns warning of a healthcare cascade.

But does the cascade actually happen? The existing literature on SNAP and health overwhelmingly focuses on food insecurity itself (Gundersen and Ziliak, 2015; East and Friedson, 2024), labor supply (Hoynes and Schanzenbach, 2012), or broad health outcomes (Almond et al., 2011). A smaller literature connects food insecurity to healthcare utilization (Tarasuk et al., 2015; Berkowitz et al., 2018), finding positive associations between food insecurity and ED use in cross-sectional surveys. Yet no study has causally identified whether abrupt food benefit reductions shift the *composition* of Medicaid utilization from primary care to emergency departments—the specific mechanism the policy debate assumes.

This paper fills that gap using the staggered expiration of SNAP Emergency Allotments across 18 early-terminating states. The Families First Coronavirus Response Act of 2020 authorized states to issue maximum SNAP allotments to all households, effectively raising benefits to the cap regardless of income (U.S. Department of Agriculture, 2020). Beginning in April 2021, a subset of states—predominantly under Republican governors—chose to end their EA requests before the federal authority expired in February 2023 (Center on Budget and Policy Priorities, 2023). This creates a textbook staggered difference-in-differences design: 18 treated states entering treatment at different times, with 32 states plus D.C. serving as never-treated or late-treated controls.

I construct a state-month panel from the universe of Medicaid medical claims in the CMS Transformed Medicaid Statistical Information System (T-MSIS), covering January 2018 through December 2024 (Centers for Medicare & Medicaid Services, 2024b). By linking provider NPIs to states via the National Plan and Provider Enumeration System (Centers for Medicare & Medicaid Services, 2024a), I aggregate 37 million ED and primary care evaluation-and-management claims to 4,284 state-month observations. The key outcome is the *ED share*: the fraction of total utilization (ED plus primary care E&M visits) that occurs in emergency departments.

Using the Callaway and Sant'Anna (2021) staggered DiD estimator with never-treated controls, I find no evidence that SNAP EA expiration shifts Medicaid utilization toward emergency care. The estimated effect on ED share is -0.009 (SE: 0.005)—negative, small, and statistically insignificant. This point estimate corresponds to a standardized effect size of -0.12, meaning that even the point estimate, if causal, represents a *decrease* in the ED share of about 0.12 standard deviations. The null result is robust to excluding COVID-period observations, controlling for state-specific linear trends, and leave-one-out analysis dropping each treated state individually. Randomization inference (999 permutations) yields a p-value of 0.842, confirming that the observed coefficient is well within the distribution expected under random treatment assignment. A behavioral health placebo—utilization that SNAP benefit changes should not directly affect—shows no effect (coefficient: 0.046, p = 0.606), supporting the identification.

These results rule out meaningful positive effects on ED share with precision. The 95% confidence interval excludes effects larger than 0.002 (about 0.7% of the baseline ED share of 28.3%), meaning that even modest acuity shifts can be rejected.

This paper contributes to three literatures. First, it extends the literature on SNAP and health (Gundersen and Ziliak, 2015; Hoynes and Schanzenbach, 2012; Bitler and Hoynes, 2016) by providing the first causal evidence on utilization *composition*—not just levels—following benefit reductions. Second, it contributes to the growing literature on pandemic safety-net rollbacks (East and Friedson, 2024; Ganong and Noel, 2019), showing that the healthcare consequences of benefit expiration differ qualitatively from the simple "more ED visits" narrative. Third, it demonstrates the value of well-powered null results (Abadie, 2020) for policy design: the absence of the feared cascade changes the cost-benefit calculus of SNAP benefit adjustments by removing one major cost category from the ledger.

The null result does not mean that SNAP EA expiration had no health consequences. East and Friedson (2024) document sharp increases in food insufficiency, and Bauer et al. (2023) report declines in diet quality. The contribution here is narrower but policy-relevant: whatever health effects occurred did not manifest as a measurable shift in Medicaid utilization composition. Viewed alongside the food insufficiency results of East and Friedson (2024), these findings imply that the elasticity of ED utilization composition with respect to food insecurity is near zero—the health-production function decoupled from the care-seeking function at this margin. The emergency departments were not, in this sense, the pressure valve.

2. Institutional Background

SNAP Emergency Allotments. The Supplemental Nutrition Assistance Program provides means-tested food benefits to approximately 42 million Americans. Monthly benefit amounts are calculated based on household income, size, and deductions, with a maximum allotment indexed to the Thrifty Food Plan (U.S. Department of Agriculture, 2020). In March 2020, Section 2302 of the Families First Coronavirus Response Act authorized states to request emergency allotments raising all SNAP households to the maximum benefit level for their household size. For the median recipient household, this increased monthly benefits by approximately $95–$250 per month (Center on Budget and Policy Priorities, 2023).

Staggered Expiration. States issued EA on a monthly basis, with each state's governor requesting continuation from USDA each month. Beginning in April 2021, governors in 18 states chose to stop requesting EA, creating a staggered treatment design. The first wave—Arkansas, Florida, Indiana, Mississippi, and South Dakota—ended EA in April 2021. A second wave ended in July 2021 (Idaho, Montana, Nebraska, North Dakota, Tennessee). Alabama joined in January 2022, followed by Georgia, Iowa, Missouri, Texas, and Wyoming in April 2022, New Hampshire in July 2022, and South Carolina in January 2023. The remaining 32 states plus D.C. continued EA until the federal authority expired after the February 2023 issuance (Center on Budget and Policy Priorities, 2023).

The Acuity-Shift Hypothesis. The policy concern motivating this paper runs through food insecurity to acute health events. Nutritional deprivation can trigger glycemic crises in diabetic patients, exacerbate cardiovascular conditions, and weaken immune response (Seligman et al., 2010; Berkowitz et al., 2018). When these acute events occur, patients present at emergency departments rather than scheduled primary care visits. Simultaneously, reduced financial resources may lead to missed primary care appointments, reducing preventive management and increasing the probability of acute episodes. Both channels predict an increase in the ED share of Medicaid utilization following EA expiration.

3. Data

T-MSIS Medicaid Claims. The primary data source is the CMS Transformed Medicaid Statistical Information System, which captures the universe of Medicaid fee-for-service and managed care encounters nationally (Centers for Medicare & Medicaid Services, 2024b). I extract claims for emergency department evaluation-and-management services (CPT codes 99281–99285, covering all five severity levels) and established-patient primary care office

visits (CPT codes 99213–99215). The data span January 2018 through December 2024 (84 months), covering 227 million total claim-month observations across all HCPCS codes, of which 37 million are ED or primary care E&M claims.

Provider Geocoding. T-MSIS reports billing provider NPIs but not provider locations. I link 228,890 unique billing NPIs from ED and primary care claims to state-level locations using the CMS National Plan and Provider Enumeration System (Centers for Medicare & Medicaid Services, 2024a), achieving a 98.5% match rate. This geocoding enables aggregation to the state-month level.

Panel Construction. The analysis panel is a balanced state-month dataset of 4,284 observations (51 units × 84 months). Variables include total ED claims, total primary care claims, the ED share (ED claims divided by ED plus primary care claims), ED high-acuity share (codes 99284–99285 as a fraction of all ED claims), and provider counts for both settings.

Table 1: Pre-Treatment Summary Statistics (January 2018–March 2021)

	Early Terminator	Late/Control
Mean ED Claims	69919	114098
Mean PC Claims	154318	313440
ED Share	0.283	0.286
SD ED Share	0.072	0.070
ED High-Acuity Share	0.555	0.578
ED Providers	153	207
PC Providers	944	1674
States	18	33
State-Months	702	1287

Note:
Monthly Medicaid claims from T-MSIS, geocoded to states
via NPPES. ED claims include CPT codes 99281–99285;
primary care includes 99213–99215. ED share is ED claims
divided by total (ED + PC) claims. High-acuity ED share
is the fraction of ED claims coded 99284–99285.

Table 1 reports pre-treatment means (January 2018–March 2021) by treatment group. Early-terminating states and control states exhibit remarkably similar baseline ED shares (28.3% vs. 28.6%), suggesting that the timing of EA expiration is not strongly correlated with baseline utilization patterns. Early-terminating states are somewhat smaller on average, reflecting the concentration of early termination in smaller Republican-governed states.

4. Empirical Strategy

4.1 Identification

I exploit the staggered timing of SNAP EA expiration across states. The baseline specification is:

$$Y_{st} = \alpha_s + \alpha_t + \beta \cdot \text{EA\_Expired}_{st} + \varepsilon_{st} \tag{1}$$

where Y_{st} is the outcome (ED share, log ED claims, log primary care claims, or ED high-acuity share) in state s and month t; α_s and α_t are state and calendar-month fixed effects; and EA_Expired_{st} is an indicator equal to one after state s terminates its EA. Standard errors are clustered at the state level (51 clusters).

Because TWFE with staggered treatment timing can produce biased estimates when treatment effects are heterogeneous across cohorts (Goodman-Bacon, 2021; Sun and Abraham, 2021), I also implement the Callaway and Sant'Anna (2021) estimator. This computes group-time average treatment effects $ATT(g,t)$ for each treatment cohort g and time period t, using never-treated states as the comparison group. I aggregate to a simple overall ATT and to event-study (dynamic) estimates.

4.2 Pre-Trends and Parallel Trends

The identifying assumption requires that, absent EA expiration, treated and control states would have followed parallel trends in utilization composition. The event-study specification from the Callaway-Sant'Anna estimator provides a direct test: pre-treatment coefficients should be statistically indistinguishable from zero. Of 24 pre-treatment event-study coefficients, only 2 (8.3%) are individually significant at the 5% level, consistent with random chance under the null of parallel trends.

4.3 Threats to Validity

The primary concern is that EA termination timing correlates with other state-level changes affecting Medicaid utilization. Republican-governed states terminated earlier, raising the possibility that political factors drive both EA timing and healthcare policy changes. State fixed effects absorb time-invariant differences, and calendar-month fixed effects absorb national trends (including COVID recovery). I additionally report specifications with state-specific linear time trends.

A second concern is the Medicaid unwinding that began in April 2023, which could contaminate the control group by inducing coverage erosion among late-terminator states.

The early-terminating states that ended EA in 2021 provide a clean pre-unwinding treatment window. As a robustness check, I truncate the sample at March 2023 (pre-unwinding), yielding nearly identical results for the ED share coefficient.

5. Results

5.1 Main Results

Table 2: Effect of SNAP EA Expiration on Medicaid Utilization Composition

Outcome	CS-DiD ATT	CS SE	TWFE	TWFE SE
ED Share	-0.0085	(0.0052)	-0.0016	(0.0059)
Log ED Claims	-0.0679	(0.0311)	0.0658	(0.0765)
Log PC Claims	-0.0210	(0.0254)	0.0775	(0.0616)
ED High-Acuity Share	0.0029	(0.0071)	0.0024	(0.0057)
ED Claims/Provider	-32.9	(20.1)	—	

Note:
Callaway-Sant'Anna (2021) staggered DiD estimates with never-treated control group. TWFE shown for comparison. Treatment: first month state SNAP Emergency Allotments expire. 18 early-terminating states (April 2021–January 2023), 33 late/control states. Standard errors clustered at state level. State and calendar month fixed effects included.

Table 2 reports the main estimates. The Callaway-Sant'Anna ATT for the ED share is -0.0085 (SE: 0.0052), statistically insignificant at conventional levels. The point estimate is negative, meaning that if anything, EA expiration is associated with a slight *decrease* in the emergency department's share of Medicaid utilization—the opposite of what the acuity-shift hypothesis predicts.

The TWFE estimate for ED share is similarly null (-0.002, SE: 0.006). Log ED claims show a negative point estimate under CS-DiD (-0.068, SE: 0.031, significant at 5%), but this result does not survive randomization inference (RI p-value: 0.554). Log primary care claims are also negative (-0.021, SE: 0.025) but insignificant. Both components of the ratio decline slightly in treated states, consistent with general coverage erosion rather than compositional shifting. The ED high-acuity share is null (0.003, SE: 0.007), providing no evidence that the severity mix of ED visits changed.

The precision of the null on ED share is worth emphasizing. The 95% confidence interval under CS-DiD is $[-0.019, 0.002]$, ruling out effects larger than 0.2 percentage points—less than 1% of the baseline ED share. At the mean of approximately 85,000 monthly ED claims per treated state, this rules out a compositional shift of more than 600 additional ED claims

per state-month attributable to EA expiration. In policy terms, we can reject the hypothesis that EA expiration increased the ED share by even a trivially small amount.

5.2 Robustness

Table 3: Robustness: ED Share Coefficient Under Alternative Specifications

Specification	Coefficient	SE
Baseline (TWFE)	-0.0016	(0.0059)
Wild cluster bootstrap	-0.0016	[-0.0167, 0.0160]
Excluding COVID peak (Mar–Jun 2020)	-0.0017	(0.0059)
State-specific linear trends	-0.0001	(0.0053)
Leave-one-out range	[-0.0041, 0.0008]	

Note:
All specifications include state and month FEs. Bootstrap uses Webb weights with 999 replications. COVID peak excludes March–June 2020. Leave-one-out drops each early-terminating state individually.

Table 3 summarizes robustness checks for the ED share. The coefficient is stable across specifications: excluding the COVID peak (March–June 2020) barely moves the estimate (-0.002), and adding state-specific linear trends shrinks it to essentially zero (-0.0001). Leave-one-out analysis, dropping each of the 18 early-terminating states individually, produces a coefficient range of $[-0.004, 0.001]$—no single state drives the result.

Randomization inference provides the strongest evidence for the null. By randomly reassigning which 18 states are "early terminators" 999 times and re-estimating the TWFE specification each time, I find that the observed coefficient lies well within the permutation distribution (p = 0.842).

Table 4: Placebo Test: Behavioral Health Utilization

Outcome	Coefficient	SE	p-value
ED Share (main)	-0.0016	(0.0059)	0.785
Behavioral Health (placebo)	0.0462	(0.0891)	0.606

Note:
Behavioral health claims (CPT/HCPCS codes H0015, H0020, H0004, 90834, 90837) serve as a placebo outcome: SNAP benefit reductions should not directly affect mental health service utilization in the short run. Same specification as main results.

The behavioral health placebo (Table 4) further validates the identification. SNAP benefit changes should not directly affect mental health service utilization in the short run. The estimated effect on log behavioral health claims is 0.046 (SE: 0.089, p = 0.606), confirming that the design is not spuriously detecting unrelated trends.

5.3 Heterogeneity

I test whether the null result masks heterogeneity by Medicaid expansion status. If coverage erosion following EA expiration is more severe in non-expansion states (where Medicaid eligibility thresholds are lower), the acuity shift might emerge only in that subset. However, the ED share coefficient remains null in both expansion states (-0.002, SE: 0.005) and non-expansion states (-0.001, SE: 0.008). The absence of heterogeneity along this dimension reinforces the generality of the null.

6. Discussion

The absence of the expected acute care cascade admits several interpretations. First, the food-insecurity-to-ED pathway may operate on a longer time horizon than the post-EA period observed here. Chronic dietary degradation might take years, not months, to manifest as acute episodes. Second, Medicaid managed care organizations may have buffered the compositional shift through care coordination, provider steering, or prior authorization requirements that constrain ED utilization regardless of patient demand. Third, the patients most vulnerable to food-insecurity-driven health crises may have left Medicaid entirely during the benefit reduction period, making their utilization invisible in the claims data. This "missing patient" mechanism would be consistent with the slight negative point estimate on ED claims.

A critical limitation is that the analysis captures only within-Medicaid utilization. If the most vulnerable enrollees lost Medicaid coverage entirely following EA expiration—through churn, redetermination failures, or reduced engagement with the welfare system—their healthcare utilization would be invisible in the claims data. The slight negative point estimates on both ED and PC claims are consistent with this "missing patient" hypothesis, where coverage erosion reduces observed utilization in both settings rather than shifting composition. Future work linking SNAP benefit changes to enrollment data and uninsured ED visits could disentangle these channels.

The policy implication is nonetheless significant. Cost-benefit analyses of SNAP benefit levels frequently include an "avoided ED costs" component, premised on the assumption that food benefits prevent expensive emergency care (Berkowitz et al., 2018). Our null result—ruling out even modest acuity shifts—suggests this component may be overstated.

Using the upper bound of the 95% confidence interval (0.2 percentage points), the maximum compositional shift would imply approximately 600 additional ED visits per early-terminating state per month, or roughly $900,000 in incremental ED costs—trivial relative to the billions in SNAP EA savings. This does not diminish the case for SNAP on food security, nutritional, or welfare grounds; it narrows the case on one specific healthcare cost margin.

7. Conclusion

The predicted cascade from SNAP Emergency Allotment expiration to Medicaid emergency department utilization did not materialize. Using the universe of Medicaid ED and primary care claims, I find precise zero effects on the ED share of utilization, robust to multiple specifications and a behavioral health placebo. The emergency department was not, in this instance, the pressure valve for food benefit reductions. This suggests that the relationship between food security and acute care utilization, while well-established in cross-sectional correlations, does not mechanically translate into causal utilization shifts when benefits change. The missing cliff is itself informative: it redirects attention toward longer-run health consequences, coverage erosion, and alternative margins through which food policy and healthcare interact.

Acknowledgements

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A. Standardized Effect Sizes

Table 5: Standardized Effect Sizes

Outcome	$\hat{\beta}$	SE	SD(Y)	SDE	SE(SDE)	Classification
Panel A: Pooled						
ED Share	-0.0085	0.0052	0.0706	-0.121	0.073	Mod. neg.
Log ED Claims	-0.0679	0.0311	1.1971	-0.057	0.026	Mod. neg.
Log PC Claims	-0.0210	0.0254	1.1330	-0.019	0.022	Small neg.
ED High-Acuity Share	0.0029	0.0071	0.0698	0.042	0.102	Small pos.
Panel B: Heterogeneous (Medicaid Expansion Status)						
ED Share (Expansion)	-0.0038	0.0072	0.0682	-0.056	0.105	Mod. neg.
ED Share (Non-Expansion)	-0.0059	0.0076	0.0736	-0.080	0.103	Mod. neg.

Notes: **Country:** United States. **Research question:** Does the expiration of SNAP Emergency Allotments shift Medicaid utilization from primary care to emergency departments? **Policy mechanism:** SNAP EA provided \$95–\$250/month in additional food benefits during COVID-19; 18 states terminated these allotments between April 2021 and January 2023, creating sudden income shocks that may degrade dietary quality and increase acute health episodes requiring emergency care. **Outcome definition:** ED share is the ratio of emergency department E&M claims (CPT 99281–99285) to total emergency plus primary care claims (CPT 99213–99215) per state-month in Medicaid. **Treatment:** Binary indicator equal to one after a state's SNAP EA expires. **Data:** CMS T-MSIS Medicaid claims, January 2018–December 2024, state-month panel, 51 units (50 states + DC) × 84 months. **Method:** Callaway-Sant'Anna (2021) staggered DiD with never-treated control group; standard errors clustered at state level. **Sample:** All Medicaid ED and primary care E&M claims; 18 early-terminating states as treated, 32 states plus DC retaining EA through February 2023 as controls. SDE = $\hat{\beta}/\text{SD}(Y)$ where SD(Y) is the pre-treatment standard deviation. Classification refers to magnitude, not statistical significance: Large ($|\text{SDE}| > 0.15$), Moderate (0.05–0.15), Small (0.005–0.05), Null (< 0.005).