

# Supplemental Nutrition Assistance Program Work Requirements and Safety-Net Program Participation

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**IMPORTANCE** Work requirements are a controversial feature of US safety-net programs, with some policymakers seeking to expand their use. Little is known about the demographic, clinical, and socioeconomic characteristics of individuals most likely to be negatively impacted by work requirements.

**OBJECTIVE** To examine the association between work requirements and safety-net program enrollment.

**DESIGN, SETTING, AND PARTICIPANTS** This cohort study included Medicaid and Supplemental Nutrition Assistance Program (SNAP) enrollees in Connecticut. The impact of SNAP work requirements for able-bodied adults without dependents—the target population—was estimated using a triple-differences research design comparing outcomes before and after the policy (first difference) in affected and exempted towns (second difference) between the targeted population and untargeted parents and caregivers (third difference). SNAP and Medicaid enrollment trends were assessed for a 24-month period, and the characteristics of individuals most likely to lose coverage were examined. Data were collected from August 2015 to April 2018, and data were analyzed from August 2022 to September 2024.

**EXPOSURES** The reintroduction of SNAP work requirements in 2016.

**MAIN OUTCOMES AND MEASURES** Proportion of enrollees disenrolled from SNAP and Medicaid.

**RESULTS** Of 81 888 Medicaid enrollees in Connecticut, 46 872 (57.2%) were female, and the mean (SD) age was 36.6 (7.0) years. Of these, 38 344 were able-bodied adults without dependents, of which 19 172 were exposed to SNAP work requirements, and 43 544 were parents or caregivers exempted from SNAP work requirements. SNAP coverage declined 5.9 percentage points (95% CI, 5.1-6.7), or 25%, following work requirements. There were no statistically significant changes in Medicaid coverage (0.2 percentage points; 95% CI, -1.4 to 1.0). Work requirements disproportionately affected individuals with more chronic illnesses, targeted beneficiaries who were older, and beneficiaries with lower incomes. Individuals with diabetes were 5 percentage points (95% CI, 0.8-9.3), or 91%, likelier to lose SNAP coverage than those with no chronic conditions; older SNAP beneficiaries (aged 40 to 49 years) with multiple comorbidities were 7.3 percentage points (95% CI, 4.3-11.3), or 553%, likelier to disenroll than younger beneficiaries (aged 25 to 29 years) without chronic conditions; and households with the lowest incomes were 18.6 percentage points (95% CI, 11.8-25.4), or 204%, likelier to lose coverage than the highest income SNAP beneficiaries.

**CONCLUSIONS AND RELEVANCE** In this cohort study, SNAP work requirements led to substantial reductions in SNAP coverage, especially for the most clinically and socioeconomically vulnerable. Work requirements had little effect on Medicaid coverage, suggesting they did not lead to sufficient increases in employment to transition beneficiaries off the broader safety net.

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Work requirements are a controversial feature of means-tested assistance programs in the US.<sup>1,2</sup> Despite evidence that imposing additional reporting increases the already substantial administrative burdens on beneficiaries and generally reduces take-up, Supplemental Nutrition Assistance Program (SNAP) beneficiaries have faced work requirements since the program's inception. Meanwhile, in the Medicaid program, several states have considered or implemented work requirements.<sup>3-5</sup> The purported goal of work requirements is to induce work-ready individuals to achieve self-sufficiency via employment.<sup>6</sup> While there is limited empirical support for the policy's effectiveness,<sup>7,8</sup> in May 2023, the US Congress increased the maximum age for able-bodied adults without dependents subject to work requirements from 49 years to 54 years, putting an additional 750 000 beneficiaries at risk of losing SNAP benefits.<sup>9</sup>

This expansion of work requirements persists amid evidence that these policies have had small or null effects on self-sufficiency while substantially reducing safety-net enrollment. In theory, work requirements for able-bodied adults without dependents are designed to counteract the disincentives to seek employment for healthy beneficiaries receiving public assistance. To target those able to work, most states base exemptions on age and disability,<sup>10</sup> but a growing body of literature also pinpoints poor health and social instability as important risk factors for unemployment.<sup>11-13</sup> Hence, work requirements may unintentionally disenroll clinically and socially vulnerable individuals, undermining a fundamental goal of safety-net programs to provide assistance for those most in need.

In this study, we examine the impact of work requirements on safety-net program enrollment, leveraging a unique data linkage between Medicaid and SNAP and a natural experiment wherein Connecticut reimplemented work requirements in some towns but not others. We estimate the effects of work requirements on program enrollment and identify the demographic, socioeconomic, and clinical characteristics of the individuals most likely to be affected by work requirements.

## Methods

### Data Sources

Our primary data source was linked to individual-level administrative SNAP and Medicaid data between August 2015 and April 2018, obtained from the Connecticut Department of Social Services. SNAP data contain monthly indicators of enrollment, benefit amount, household size, and household composition. Medicaid data contain monthly indicators of enrollment, eligibility category, date of birth, sex, race, ethnicity, town of residence, and administrative medical and pharmacy claims. Race and ethnicity data were self-reported by enrollees. Individuals were linked across programs using a unique identifier. We identified work requirements towns using US Department of Agriculture Waiver documentation (eFigure 1 in Supplement 1). This study was approved by the Yale Uni-

## Key Points

**Question** What are the effects of Supplemental Nutrition Assistance Program (SNAP) work requirements on safety-net program enrollment?

**Findings** In this cohort study including 81 888 Medicaid beneficiaries, using a triple-differences design, SNAP work requirements were associated with significant reductions in SNAP enrollment, concentrated among the most clinically and socioeconomically vulnerable groups. There was no change in Medicaid enrollment, suggesting most individuals do not gain employment significant enough to reach self-sufficiency.

**Meaning** In this study, SNAP work requirements had deleterious effects for vulnerable recipients, and states may bear any downstream Medicaid costs associated with lost benefits.

versity Institutional Review Board, and informed consent was waived. This study followed the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) reporting guideline.

### Study Population

Our study population included Medicaid members who were eligible for SNAP and subject to work requirements at the time they were enacted. We defined the policy target population as able-bodied adults without dependent beneficiaries aged 18 to 49 years, excluding individuals with exemptions to work requirements or ineligible due to income. For example, exceptions were granted to students enrolled in at least a half-time education program, so we limited our sample to individuals aged 25 to 49 years. We compared the policy target population residing in treated towns with the similar target population residing in exempt towns, alongside a similar comparison for untargeted parents and caregivers aged 25 to 49 years who were not subject to work requirements (eMethods 1 and eFigure 2 in Supplement 1).

### Empirical Setting

From 2009 until 2016, Connecticut was covered by a state-wide waiver of work requirements. As of January 1, 2016, Connecticut was only eligible for a partial waiver in which 82 towns remained exempt from work requirements based on combined unemployment rates 20% above the national average. Work requirements were reinstated for the remaining 87 towns in January 2016 and included a 3-month allowance; therefore, SNAP benefits were not at risk until April 2016.

### Variables

The primary dependent variables (outcomes) were enrollment in the SNAP and Medicaid program. Analyses examined short-term and long-term estimated effects of work requirements by assessing monthly program attrition, with a maximum follow-up period of 24 months (through April 2018). We assessed the long-term estimated effects on enrollment to examine whether work requirements led to a short disruption in enrollment that resolved over time or a more persistent decline.

The primary independent variable was exposure to work requirements. We assessed changes in enrollment among populations (able-bodied adults without dependents vs parents and caregivers) and geographies (towns with and without waivers) that differed in their exposure to work requirements. We also compared beneficiaries in treated vs control towns on a range of demographic (eg, race and ethnicity), clinical (eg, chronic conditions), and socioeconomic (eg, income) characteristics (eMethods 2 in Supplement 1).

To create chronic condition indicators, we used *International Classification of Diseases, Ninth Revision (ICD-9)* and *ICD-10* diagnoses with the US Centers for Medicare & Medicaid Services Chronic Conditions Warehouse algorithm to identify chronic conditions in administrative claims in a 9-month period prior to work requirements putting benefits at risk (eMethods 2 in Supplement 1).<sup>14</sup> Using this approach and existing literature on the relationship between SNAP benefits and food insecurity allowed us to identify a subset of these conditions as nutritionally sensitive.<sup>15-18</sup>

### Statistical Analysis

We used a quasi-experimental triple-differences research design that compares outcomes before and after the policy (first difference) in affected and exempted towns (second difference) between targeted and untargeted populations (third difference). This approach filters out time trends common to each population as well as any town-specific factors that might influence enrollment in either program. SEs were clustered at the town level to account for correlation between beneficiaries within towns. To examine heterogeneity, we performed these analyses stratified by demographic, clinical, and income groups. To improve the comparability of groups, the primary specification used a 1:1 match of individuals in exempt towns to individuals in work requirement towns using propensity score matching on age, sex, race, ethnicity, rurality,<sup>19</sup> and SNAP enrollment during the preperiod (eMethods 4 in Supplement 1).

We conducted several sensitivity tests for our main specification on SNAP and Medicaid enrollment to assess the robustness of our findings. First, to address any residual concern that towns affected by work requirements may be fundamentally different than towns unaffected by work requirements in ways not accounted for in our primary models, we used a second identification strategy. In this approach, we exploited a different source of quasi-experimental variation—termination of work requirements for able-bodied adults at age 50 years—to estimate a difference-in-differences model comparing changes for those aged 40 to 49 years in work requirement towns with individuals aged 50 to 59 years in work requirement towns who were subject to the same economic environment but exempted from work requirements. Second, we present each of the difference-in-difference estimators that were subtracted to calculate the triple-differences estimation and corresponding event study analyses underlying the primary triple-differences model (eFigures 3 and 4 in Supplement 1). Third, we used various matching strategies to assess robustness (eFigure 5 in Supplement 1) and formally tested parallel trends in the preperiod (eTable 1 in Supplement

1). All analyses were conducted using R version 4.3.3 (The R Foundation).

## Results

### Study Population

The study sample included 81 888 beneficiaries enrolled as of March 2016. Of these, 46 872 (57.2%) were female, and the mean (SD) age was 36.6 (7.04) years; 5988 (7.3%) self-identified as non-Hispanic Black, 12 788 (15.6%) self-identified as Hispanic, 59 344 (72.5%) self-identified as non-Hispanic White, and 3768 (4.6%) self-identified as another race, including American Indian or Alaska Native, Asian, or Native Hawaiian or Other Pacific Islander. Of this sample, 38 344 were able-bodied adults without dependents, of which 19 172 were exposed to SNAP work requirements, and 43 544 were parents or caregivers exempted from SNAP work requirements. For both groups, demographic and socioeconomic characteristics did not differ markedly between individuals residing in towns with work requirements and those residing in towns that were exempt from work requirements; these differences were smaller after matching (Table 1; eTables 2 and 3 in Supplement 1).

### Changes in Program Participation Associated With SNAP Work Requirements

Among targeted beneficiaries, work requirements were associated with a reduction in SNAP enrollment from 23.7% (95% CI, 23.1-24.3) prior to the implementation of work requirements to 16.5% (95% CI, 16.1-17.0) after implementation, a decline of 7.2 percentage points (95% CI, 6.4-8.0) (Figure 1; Table 2). Meanwhile, the share of targeted beneficiaries in non-work requirement towns that were enrolled in SNAP rose slightly from 24.6% (95% CI, 23.8-25.3) to 24.8% (95% CI, 24.1-25.6) over the same period, an increase of 0.2 percentage points (95% CI, -0.7 to 1.3). Our triple-differences model estimated that the share of beneficiaries in SNAP declined by 5.9 percentage points (95% CI, 5.1-6.7). There were no statistically significant changes in Medicaid enrollment. For both outcomes, we observed parallel pretrends.

### Heterogeneity in Estimated Effects of SNAP Work Requirements

Although almost all groups experienced reductions in SNAP enrollment due to work requirements, people with more chronic conditions, individuals who were older (eg, aged 40 to 49 years), and beneficiaries with the lowest incomes (eg, net-zero income) were disproportionately likely to be disenrolled by the policy (Figure 2). Our triple-differences model estimated that individuals aged 40 to 49 years experienced a -7.9-percentage point (95% CI, -9.2 to -6.8) decrease in SNAP enrollment compared with a -1.7-percentage point (95% CI, -3.8 to 0.3) decrease for individuals aged 25 to 29 years, a 370% difference (eTable 4 in Supplement 1).

When we stratified by health, we found that individuals with diabetes, regardless of whether they had any other conditions, were 5 percentage points (95% CI, 0.8-9.3), or 91%,

Table 1. Study Population of Medicaid Adults in Connecticut as of March 2016

Outcome	No. (%)							
	Targeted able-bodied adults without dependents aged 25-49 y <sup>a</sup>				Untargeted parents and caregivers aged 25-49 y <sup>a</sup>			
	Work requirement towns (n = 19 172) <sup>b</sup>	Exempt towns prematching (n = 73 709)	Exempt towns postmatching (n = 19 172)	Standard mean difference <sup>c</sup>	Work requirement towns (n = 21 772) <sup>d</sup>	Exempt towns prematching (n = 86 194)	Exempt towns postmatching (n = 21 772)	Standard mean difference
Age group, y								
25-29	6693 (34.9)	21 839 (29.6)	6693 (34.9)	0	3283 (15.1)	19 090 (22.1)	3283 (15.1)	0
30-39	6482 (33.8)	26 584 (36.1)	6482 (33.8)	0	9466 (43.5)	41 386 (48)	9466 (43.5)	0
40-49	5997 (31.3)	25 286 (34.3)	5997 (31.3)	0	9023 (41.4)	25 718 (29.8)	9023 (41.4)	0
Race and ethnicity <sup>e</sup>								
Hispanic	1958 (10.2)	17 933 (24.3)	1958 (10.2)	0	4436 (20.4)	28 256 (32.8)	4436 (20.4)	0
Non-Hispanic Black	1360 (7.1)	15 135 (20.5)	1360 (7.1)	0	1634 (7.5)	16 581 (19.2)	1634 (7.5)	0
Non-Hispanic White	15 260 (79.6)	39 325 (53.4)	15 260 (79.6)	0	14 412 (66.2)	38 401 (44.6)	14 412 (66.2)	0
Other race	594 (3.1)	1316 (1.8)	594 (3.1)	0	1290 (5.9)	2956 (3.4)	1290 (5.9)	0
Sex								
Female	7476 (39.0)	26 058 (35.4)	7476 (39.0)	0	15 960 (73.3)	67 593 (78.4)	15 960 (73.3)	0
Male	11 696 (61.0)	47 651 (64.6)	11 696 (61.0)	0	5812 (26.7)	18 601 (21.6)	5812 (26.7)	0
Resident in rural town <sup>f</sup>	2432.0 (12.7)	2740 (3.7)	2432.0 (12.7)	0	2410.0 (11.1)	3205 (3.7)	2410.0 (11.1)	0
Enrolled in SNAP in the preperiod	5894 (30.7)	39 208 (53.2)	5894 (30.7)	0	8918 (41.0)	53 115 (61.6)	8918 (41.0)	0
Homeless	741 (3.9)	5633 (7.6)	1049 (5.5)	-0.08	45 (0.2)	318 (0.4)	79 (0.4)	-0.03
≥1 Chronic condition	7378 (38.5)	30 952 (42.0)	7545 (39.4)	-0.02	8975 (41.2)	38 727 (44.9)	9813 (45.1)	-0.08

Abbreviation: SNAP, Supplemental Nutrition Assistance Program.

<sup>a</sup> Any beneficiaries enrolled as both able-bodied adults without dependents as well as parents or caregivers are removed from the sample (eFigure 2 in Supplement 1).

<sup>b</sup> Columns represent postmatching in work requirement towns. Only 33 targeted beneficiaries and 26 untargeted beneficiaries in work requirement towns were dropped during matching.

<sup>c</sup> Standardized mean differences are calculated postmatching.

<sup>d</sup> Columns represent prematching and postmatching in exempt towns. Due to matching with replacement, there are 13 685 unique targeted and 16 015

unique untargeted beneficiaries in exempt towns.

<sup>e</sup> Race and ethnicity were self-reported by enrollees from eligibility data. Enrollees could self-identify as non-Hispanic American Indian or Alaska Native, non-Hispanic Asian, non-Hispanic Black, Hispanic, non-Hispanic Native Hawaiian or Other Pacific Islander, and non-Hispanic White.

<sup>f</sup> Individuals are listed as residing in a rural town using the rural definition from the Connecticut State Office of Rural Health. Towns were encoded as rural if they had a population of 10 000 or less and a population density of 500 or fewer people per square mile.

more likely than those with no chronic conditions to lose SNAP coverage; likewise, SNAP beneficiaries who were older (aged 40 to 49 years) and those with multiple comorbidities were 7.3 percentage points (95% CI, 4.3-11.3), or 553%, more likely than the youngest SNAP beneficiaries (aged 25 to 29 years) with no chronic conditions to lose coverage. We did not observe statistically significant differences in disenrollment rates by race, ethnicity, or sex. We reported results for specific chronic conditions that were identified as nutritionally sensitive with sufficient sample size (more than 500 individuals).

When we stratified by income, we found substantial heterogeneity in the association between SNAP work requirements and enrollment. SNAP beneficiaries with above-median family net income (those with the lowest SNAP benefit amounts) experienced a small but significant reduction in SNAP enrollment. Across the 3 groups of SNAP beneficiaries with available family net income (above median, below median, and no income), there was a monotonic and increasing association between income and SNAP coverage losses associated with work requirements; we estimated a 27.7-percentage point (95% CI, 22.4-33.0) decrease in SNAP enrollment for those with net-zero income compared with a 9.1-percentage point (95% CI, 4.6-13.6) decrease in SNAP enrollment for those with the highest net income.

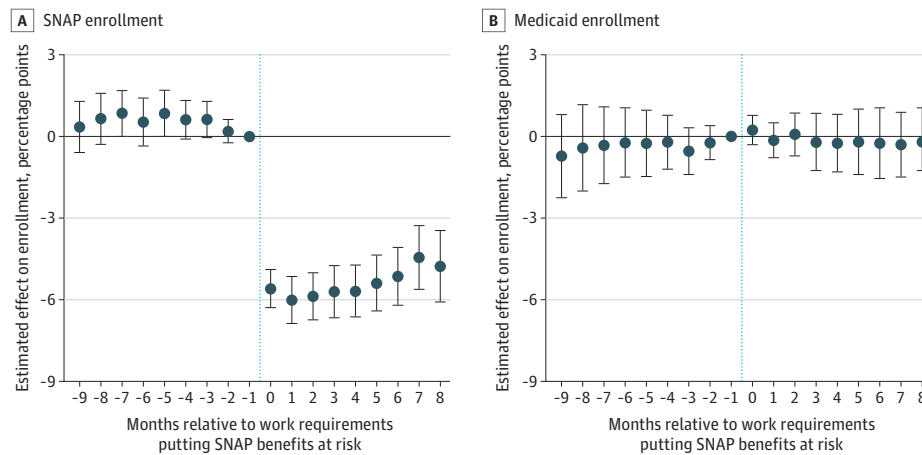
### Long-Term Association Between Work Requirements Policy and Enrollment

The implementation of work requirements was associated with long-term changes in SNAP enrollment among targeted beneficiaries, with outcomes between able-bodied adults without dependents in towns exposed to work requirements and exempted towns only converging 21 months following work requirements first putting benefits at risk (eFigure 6 in Supplement 1). Importantly, this convergence was largely driven by the attrition of SNAP beneficiaries in exempted towns as opposed to a return of beneficiaries to the program; less than one-quarter of beneficiaries who were initially disenrolled from the program due to work requirements returned to SNAP in any month during the 24-month follow-up period (eFigure 7 in Supplement 1). Long-term reductions in coverage were also most pronounced for SNAP beneficiaries aged 40 to 49 years and those receiving the most assistance at baseline (Figure 3). On average, we found that individuals who lost SNAP coverage due to work requirements lost approximately \$2746 in benefits (in 2023 US dollars, over an 18-month period) (eMethods 5 in Supplement 1).

### Sensitivity and Supplemental Analyses

We used an alternate model leveraging the age variation from the discontinuation of the policy at age 50 years comparing

**Figure 1. Event Study of the Estimated Effect of Supplemental Nutrition Assistance Program (SNAP) Work Requirements on SNAP and Medicaid Enrollment**



Triple-differences event study coefficients and 95% CIs for the primary sample involving 81 888 beneficiaries. The triple-differences study compares enrollment trends before and after the policy (first difference) between treated able-bodied adults without dependents and untreated parents and caregivers (second difference) in affected and exempt towns (third difference). Time is measured relative to the month work requirements putting SNAP benefits at

risk in March 2016 ( $t = -1$ ). SEs were clustered at the town level, based on an enrollee's town in the month prior to work requirements putting benefits at risk (March 2016). Details and full regression equations are provided in eMethods 3 in Supplement 1. The vertical dotted line indicates initiation of SNAP work requirements. Error bars indicate 95% CIs.

**Table 2. Regression Estimates of Changes in Enrollment Associated With SNAP Work Requirements in Connecticut**

Outcome	Enrollee-months, %				Adjusted percentage point change (95% CI) <sup>a</sup>	Adjusted percentage change
	Work requirement towns		Exempt towns			
	Preperiod	Postperiod	Preperiod	Postperiod		
<b>Enrolled in SNAP</b>						
Difference-in-differences involving able-bodied adults without dependent beneficiaries aged 25-49 y	23.7	16.5	24.6	24.8	-7.5 (-8.2 to -6.8)	-31.5
Difference-in-differences involving control parents and caregivers aged 25-49 y	34.6	31.3	36.0	34.2	-1.5 (-2.2 to -0.9)	-4.4
Triple-differences analysis of able-bodied adults without dependents and parents or caregivers in work requirement vs exempt towns	NA	NA	NA	NA	-5.9 (-6.7 to -5.1)	-24.9
<b>Enrolled in Medicaid</b>						
Difference-in-differences involving able-bodied adults without dependent beneficiaries aged 25-49 y	84.8	88.6	85.7	88.8	0.7 (-0.1 to 1.6)	0.8
Difference-in-differences involving control parents and caregivers aged 25-49 y	91.7	92.8	92.3	92.9	0.5 (-0.2 to 1.3)	0.6
Triple-difference analysis of able-bodied adults without dependents and parents or caregivers in work requirement vs exempt towns	NA	NA	NA	NA	0.2 (-1.0 to 1.4)	0.2

Abbreviations: NA, not applicable; SNAP, Supplemental Nutrition Assistance Program.

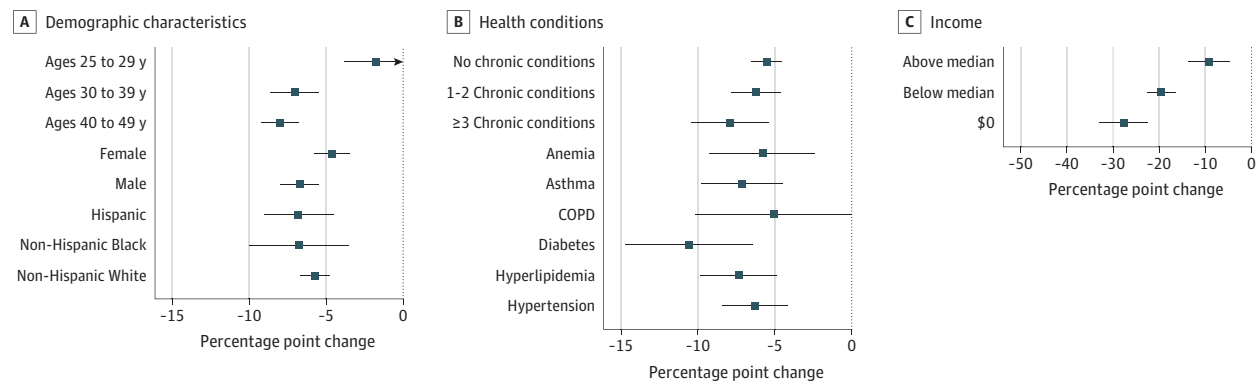
<sup>a</sup> Triple-difference coefficients and 95% CIs for the primary study sample involving 81 888 beneficiaries. SEs were clustered at the town level, based on an enrollee's town in the month prior to work requirements putting SNAP benefits at risk (March 2016). Regressions use an 18-month (9-month preperiod and 9-month postperiod) balanced panel of monthly observations

of 19 172 able-bodied adults without dependents aged 25 to 49 years in work requirement towns matched with 19 172 able-bodied adults without dependents aged 25 to 49 years in exempt towns and 21 772 parents and caretakers aged 25 to 49 years in work requirement towns matched with 21 772 parents and caretakers aged 25 to 49 years in exempt towns. Details and full regression equations are provided in eMethods 3 in Supplement 1.

able-bodied adults without dependents aged 40 to 49 years who were subject to work requirements relative to able-bodied adults without dependents aged 50 to 59 years who were exempt (eTable 5 in Supplement 1). We estimated an 8.4-percentage point (95% CI, 7.5-9.4) reduction in SNAP enroll-

ment among those aged 40 to 49 years due to work requirements. This represents a 26% reduction in SNAP enrollment relative to the population mean, almost identical to our primary results. Similarly, we found no estimated effect of SNAP work requirements on Medicaid enrollment in this sample. Our

Figure 2. Estimated Effects of Work Requirements on Supplemental Nutrition Assistance Program Enrollment by Subgroup



Triple-difference event study coefficients and 95% CIs for enrollment 9 months after the policy (first difference) in affected and exempted towns (second difference) between targeted (able-bodied adults without dependent) and untargeted (parents and caregivers) populations (third difference). Each row reflects a separate triple-differences regression. A, Stratified analyses using the entire sample of 81 888 beneficiaries based on demographic conditions. B, Stratified analyses using the entire sample of 81 888 beneficiaries based on baseline health conditions from the linked Medicaid data. This analysis includes counts of total chronic conditions as identified by the US Centers for Medicare & Medicaid Services Chronic Conditions Warehouse as well as specific

nutritionally sensitive conditions. We excluded heart disease and heart failure due to small sample size (less than 500 individuals), which can lead to extremely imprecise estimates. Further details on the assessment of chronic conditions are available in eMethods 2 in Supplement 1. C, Stratified analyses by income, which is only observable for individuals with Supplemental Nutrition Assistance Program enrollment in the preperiod. Hence, this includes only 29 624 beneficiaries using Supplemental Nutrition Assistance Program benefits in the preperiod (eTable 3 in Supplement 1). COPD indicates chronic obstructive pulmonary disorder. Error bars indicate 95% CIs.

main results were also robust to alternate matching specifications (eFigure 5 in Supplement 1).

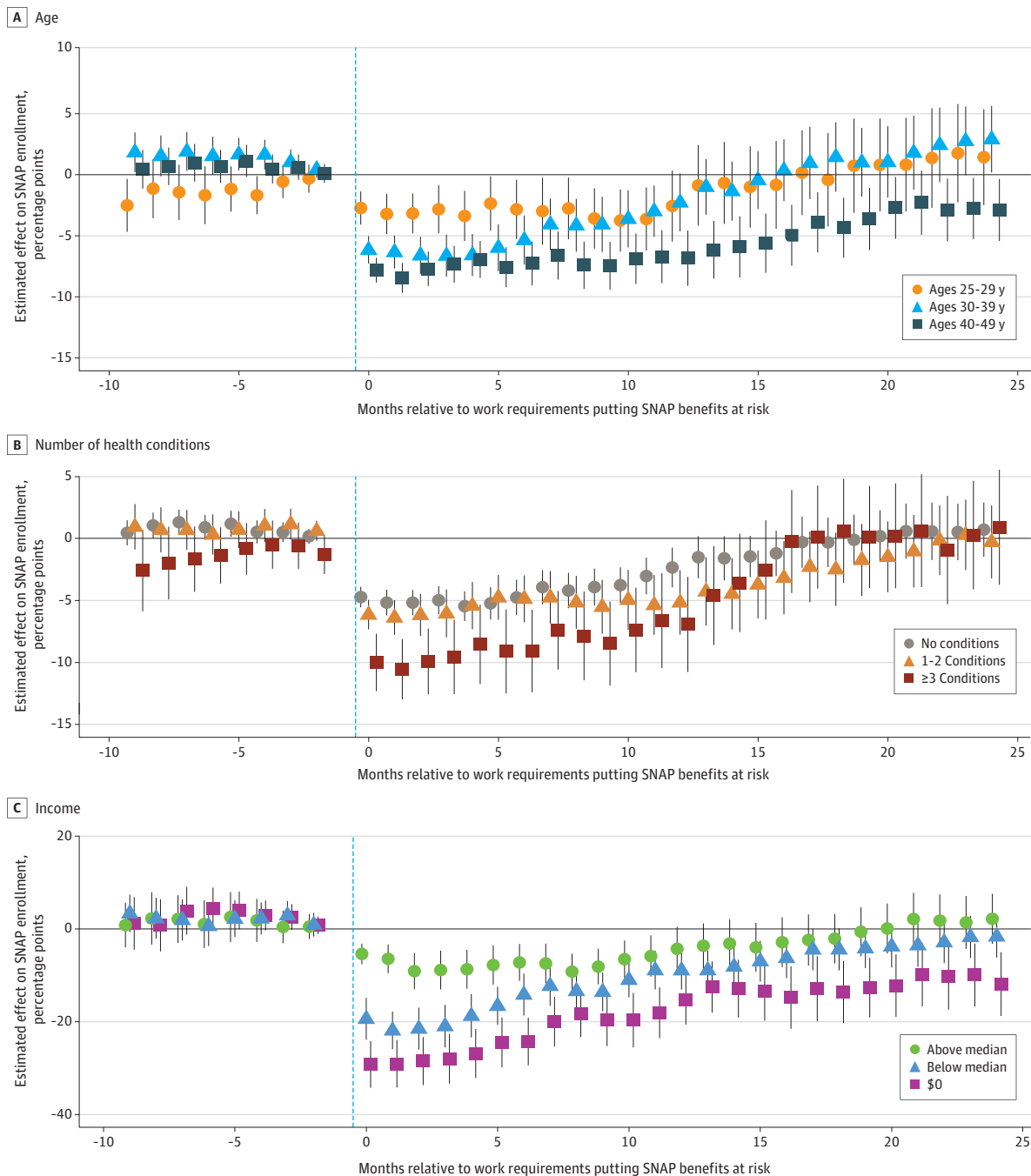
## Discussion

This study examined a natural experiment using a triple-differences research design to assess the impact of work requirements on safety-net enrollment for low-income beneficiaries. We make 4 key contributions. First, we estimated that SNAP work requirements were associated with a substantial and significant 25% reduction in SNAP enrollment among targeted populations. Second, we found no evidence that SNAP work requirements reduced Medicaid enrollment in the 2 years following implementation. This finding is consistent with prior evidence on the limited incentive effects of work requirements<sup>4,7,8</sup> and suggests that work requirements were not associated with increases in employment of a sufficient magnitude to transition beneficiaries off the social safety net. Third, we found evidence that work requirements disproportionately disenrolled clinically and socioeconomically vulnerable populations. For example, individuals with diabetes were almost twice as likely to lose SNAP coverage as beneficiaries with no chronic conditions. Fourth, we found that losses in SNAP coverage were persistent; rather than being short disruptions, differences in SNAP enrollment between beneficiaries in affected and exempted towns took almost 2 years to reconverge. Assuming these estimated SNAP work requirements effects generalized to all other states today, it would correspond to a national benefit loss of \$372.7 million (in 2023 US dollars, over an 18-month period) (eMethods 5 in Supplement 1).

Our study provides novel insights into the arguments typically underlying support of work requirements. Proponents of work requirements generally argue either that (1) they counteract the disincentive to work created by receiving safety-net benefits or (2) they are a mechanism to target benefits to the truly needy.<sup>20</sup> Consistent with the prior literature, we find little evidence to support the notion that they counteract a disincentive to work. First, we found no evidence that work requirements improved labor market outcomes in a way that eliminated reliance on state financial support (if they had, we would have expected to see a reduction in Medicaid enrollment due to individuals exceeding the Connecticut Medicaid income threshold—138% of the federal poverty level, or \$16 394 for single adults), consistent with prior literature.<sup>7,8</sup> However, some individuals may have engaged in job training or acquired lower-paying employment positions. Second, we found that SNAP beneficiaries of all backgrounds, including those with the highest incomes who are the most likely to already be working, experienced coverage losses due to work requirements. Collectively, this suggests that the administrative burdens of complying with work requirements—even for those already working—are primarily serving to disenroll eligible beneficiaries rather than incentivize self-sufficiency.<sup>21,22</sup> Concerningly rather than targeting benefits to those with the greatest need, as intended, work requirements may reduce access to benefits for the most clinically and socioeconomically vulnerable.

Our study has implications for the organization of the safety net and demonstrates the importance of efforts to link data and insights across interconnected programs. For example, addressing unmet social needs has become a cornerstone of the national strategy to improve disproportionately

Figure 3. Long-Term Associations of Work Requirements by Subgroup



Triple-difference event study coefficients and 95% CIs comparing Supplemental Nutrition Assistance Program (SNAP) enrollment before and after the policy (first difference) in affected and exempted towns (second difference) between treated (able-bodied adults without dependent) and untreated (parents and caregivers) populations (third difference). A, Stratified analyses using the entire sample of 81 888 beneficiaries based on demographic conditions. B, Stratified analyses using the entire sample of 81 888 beneficiaries based on baseline health conditions from the linked Medicaid data. This analysis includes counts of total chronic conditions as identified by the US Centers for Medicare &

Medicaid Services Chronic Conditions Warehouse as well as specific nutritionally sensitive conditions. We excluded heart disease and heart failure due to small sample size (less than 500 individuals), which can lead to extremely imprecise estimates. Further details on the assessment of chronic conditions are available in eMethods 2 in Supplement 1. C, Stratified analyses by income, which is only observable for individuals with SNAP enrollment in the preperiod. Hence, this includes only 29 624 beneficiaries using SNAP benefits in the preperiod (eTable 3 in Supplement 1). Error bars indicate 95% CIs.

poor outcomes among low-income populations. A number of state Medicaid programs now have approved waivers to offer food as medicine and provide nutritional supports to needy beneficiaries.<sup>23</sup> Our study highlights that these efforts are occurring against the backdrop of SNAP work requirements, which reduce access to food for some of the most socioeconomically and clinically vulnerable Medicaid recipients, potentially muting the benefits of such initiatives. Prior work demonstrates that even short periods without SNAP enrollment decrease caloric quality and quantity for beneficiaries.<sup>24-27</sup> This is particularly concerning given that some gaps in SNAP enrollment due to work requirements persisted for almost 2 years in our setting. Given growing evidence that unmet social needs harm health,<sup>28-30</sup> the loss of SNAP benefits may spillover onto the Medicaid program as increases in preventable health care spending.

Evidence also shows that most beneficiaries use more than 1 assistance program. For example, 45% of Medicaid beneficiaries receive social support services from at least 2 other government programs<sup>31</sup> and approximately 90% of SNAP beneficiaries are enrolled in Medicaid.<sup>31</sup> Despite this, safety-net policymaking is often siloed with decisions made without consideration or evidence for how they impact adjacent safety-net programs. Individuals with diabetes, for example, require consistent access to high-quality nutrition to ensure optimal management of their condition,<sup>32,33</sup> yet we find some of the highest rates of loss of supplemental nutritional benefits among individuals with diabetes or those with multiple chronic conditions. These findings underscore the importance of enhanced data sharing arrangements across social safety-net agencies and highlight that states should consider a broader aperture through which to view work requirements exemptions. Recently, the federal government exempted unhoused populations from SNAP work requirements due to their difficulty securing and maintaining employment.<sup>7</sup> Our findings suggest states should consider similar exemptions for individuals with chronic health needs (eg, diabetes) to unlock a smarter and more humane safety net that promotes greater efficiency and improved health.

Our findings also raise concerns about the recent policy increasing the maximum age of beneficiaries subject to work requirements. We find that work requirements lead to substan-

tial coverage losses for older populations, suggesting potentially large coverage losses associated with this new policy. Based on our findings, we estimate that nationally more than 200 000 of the 750 000 beneficiaries with benefits newly at risk would lose SNAP coverage. Though federally mandated, states should endeavor to implement these policies in ways that minimize their administrative burdens on beneficiaries.

### Limitations

Our study has limitations. First, our natural experiment is based in a single state. However, SNAP work requirements and income thresholds are generally set by federal policy; therefore, there is little reason to believe that our results are not generalizable. Second, our primary results compare individuals residing in different townships, potentially introducing unmeasured confounding. However, our results are robust to several different specifications, including a second natural experiment that compares affected and exempted individuals within the same townships. Third, our natural experiment occurred between 2016 and 2018. The design of work requirements, both in SNAP and Medicaid, has not substantially changed since then and is almost universal across states; therefore, we have good reason to believe we are identifying a fundamental feature of work requirements as opposed to something more idiosyncratic. Fourth, we do not directly observe income for SNAP beneficiaries in our data. We believe the SNAP benefit amounts are a reasonable proxy for income, as SNAP household benefit amount calculations are based on household net income.<sup>34</sup>

### Conclusions

In this cohort study, SNAP work requirements were associated with large reductions in SNAP coverage among the targeted populations with no evidence that they increased self-sufficiency. The largest coverage losses occurred among the most clinically and socioeconomically vulnerable populations. Work requirements in SNAP disenrolled the neediest populations, with potentially adverse consequences for beneficiaries and the safety net.

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