

Syracuse University

## SURFACE at Syracuse University

---

Center for Policy Research

Institutes, Research Centers, and Campus  
Groups

---

4-19-2023

### Medicaid-Insured Older Adults on SNAP May Have Stronger Medication Adherence

Colleen Heflin  
cmheflin@syr.edu

Chinedum O. Ojinnaka  
*Arizona State University*, chinedum.ojinnaka@asu.edu

Irma A. Arteaga  
*University of Missouri - Columbia*, arteagai@missouri.edu

Leslie Hodges  
leslie.hodges@usda.gov

Gabriella Alphonso  
gaalphon@syr.edu

Follow this and additional works at: <https://surface.syr.edu/cpr>



Part of the [Health Policy Commons](#), [Public Policy Commons](#), and the [Social Welfare Commons](#)

---

#### Recommended Citation

Heflin, C., Ojinnaka, C.O., Arteaga, I., Hodges, L., & Alphonso, G. (2023). Medicaid-Insured Older Adults on SNAP May Have Stronger Medication Adherence. Syracuse University Center for Policy Research, Policy Brief Series #2.

This Policy Brief is brought to you for free and open access by the Institutes, Research Centers, and Campus Groups at SURFACE at Syracuse University. It has been accepted for inclusion in Center for Policy Research by an authorized administrator of SURFACE at Syracuse University. For more information, please contact [surface@syr.edu](mailto:surface@syr.edu).

## Medicaid-Insured Older Adults on SNAP May Have Stronger Medication Adherence

Colleen Heflin, Chinedum O. Ojinnaka, Irma Arteaga, Leslie Hodges, and Gabriella Alphonso

The Supplemental Nutrition Assistance Program (SNAP)—the largest food and nutrition assistance program in the United States—could protect against medication non-adherence (i.e., not taking medication as prescribed). Taking medication as prescribed is critical for older adults with hypertension (higher than normal blood pressure),<sup>1</sup> as non-adherence to antihypertensive medication may worsen poor health outcomes and is associated with an increased likelihood of hospitalizations and higher healthcare costs.<sup>2-4</sup>

This brief summarizes the findings from [our recent study](#), which linked Missouri Medicaid administrative claims data to SNAP data from 2006 to 2014. We analyzed the association between the duration and patterns of SNAP participation and adherence to antihypertensive medications among Medicaid-insured individuals aged 60 years and older.<sup>5</sup>

### Older Adults Who Participate in SNAP Longer Had Better Medication Adherence

Medicaid-insured older adults living with hypertension who participated in SNAP were 9 percentage points (PP) more likely to refill their antihypertensive medications as prescribed compared to those who were not enrolled in SNAP programs. Notably, we found that the number of months on SNAP improved medication adherence. For example, the likelihood of medication adherence was 16PP

### KEY FINDINGS



Older adults on Medicaid who have been diagnosed with hypertension and who have ever participated in the Supplemental Nutrition Assistance Program (SNAP) in Missouri were 12 percentage points (PP) more likely to take their prescribed antihypertensive medication than those not connected to SNAP.



Longer duration and consistent receipt of SNAP was associated with higher levels of medication adherence.

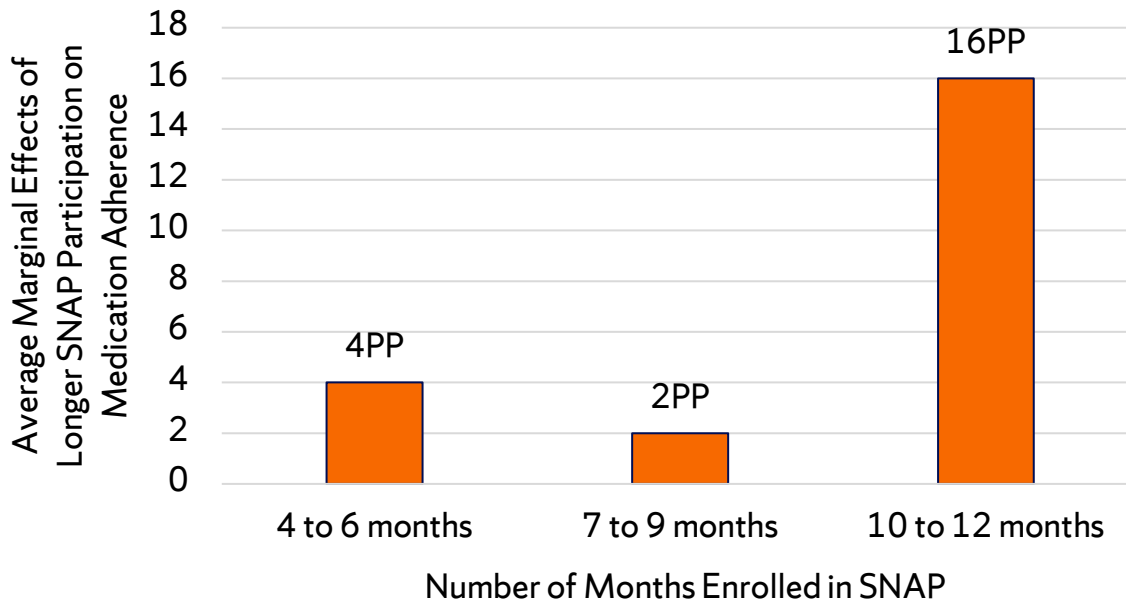


Older adults who experienced gaps in SNAP participation had lower levels of medication adherence.



Strategies to coordinate SNAP and Medicaid enrollment and recertification for older adults eligible for both programs may promote health by supporting adherence to prescribed treatment plans.

higher among those enrolled in SNAP for 10 to 12 months compared to those enrolled for 1 to 3 months (see Figure 1). The difference in the duration of SNAP participation may be linked to administrative churn—defined as SNAP disenrollment and re-enrollment within 4 months, resulting in a gap in benefits. Churn often occurs when an individual needs to recertify their eligibility for benefits.<sup>6</sup>



**Figure 1: Increase in Probability of Medication Adherence among Average SNAP Participants Relative to 1 to 3 months of SNAP Participation**

Data Source: Missouri Medicaid Administrative Claims Data and SNAP Data, 2006-2014 (N = 33,347 older adults).

Note: PP=percentage points. Error bars represent 95% confidence intervals.

### Continuous SNAP Participation May Support Medication Adherence

We found that older adults who transitioned off SNAP or who participated intermittently were 14-15 pp less likely to adhere to their medications compared to those who participated continuously. Although we cannot determine why continuous SNAP participation supports medication adherence, one possibility is that the loss of SNAP benefits leads low-income older adults to reallocate their limited resources from medication to food, which could lead to medication non-adherence.

### Coordinating Enrollment in SNAP and Medicaid May Have Health Benefits for Eligible Older Adults

Our study shows that Medicaid-insured older adults who received SNAP benefits for a longer

period may be more likely to take their hypertension medication as prescribed. Previous studies have shown that medication nonadherence is related to adverse outcomes, such as poorer health, uncontrolled hypertension and hospitalization, and this association is worse for lower income individuals.<sup>6</sup> Although existing policy efforts like the Elderly Simplified Application Project (ESAP) aim to simplify the SNAP application and recertification processes for older adults, there may also be health benefits to improving the coordination and synchronization of SNAP and Medicaid enrollment, and recertification for individuals who are eligible for both programs.<sup>7,8</sup>

## Data and Methods

Our sample included 69,823 older adults, 60 years and over, who were continuously enrolled in Medicaid for 12 months following their first observed claim for hypertension at or after age 60 (referred to as the 12-month continuous enrollment period). Using Missouri Medicaid administrative claims data and SNAP data from 2006 to 2014, we measured medication adherence using the proportion of days an individual had access to antihypertensive medications (as evidenced by refills), duration of SNAP participation, SNAP participation pattern (continuous versus SNAP exit, SNAP entry or intermittent SNAP), and whether SNAP benefits were received. Further details on how our research was conducted, including the full list of controls used, can be found in the [published study](#).<sup>5</sup>

## References

1. Osterberg L, & Blaschke T. (2005). Adherence to medication. *New England Journal of Medicine*, 353(5):487-497.
2. Ho, P.M., Bryson, C.L., & Rumsfeld, J.S. (2009). Medication adherence: Its importance in cardiovascular outcomes. *Circulation*, 119(23):3028-3035.
3. Yang, Z., Howard, D.H., Will, J., Loustalot, F., Ritchey, M., & Roy, K. (2016). Association of antihypertensive medication adherence with healthcare use and Medicaid expenditures for acute cardiovascular events. *Medical Care*, 54(5):504-511.
4. Sokol, M.C., McGuigan, K.A., Verbrugge, R.R., & Epstein, R.S. (2005). Impact of medication adherence on hospitalization risk and healthcare cost. *Medical Care*. 43(6):521-530.
5. Ojinnaka, C. O., Arteaga, I., Hodges, L., & Heflin, C. (2023). Supplemental Nutrition Assistance Program participation and medication adherence among Medicaid-insured older adults living with hypertension. *Journal of General Internal Medicine*, 10.1007/s11606-022-07994-4. Advance online publication.

6. Mojtabai R, Olfson M. (2023). Medication costs, adherence, and health outcomes among Medicare beneficiaries. *Health Affairs*, 22(4), 220-229.
7. Heflin, C., Hodges, L., Arteaga, I. & Ojinnaka, C. (2022). Churn in the older adult SNAP population. *Applied Economic Perspectives and Policy*, 0(0), 1-22.
8. USDA Food and Nutrition Service. Elderly Simplified Application Project. (2020). <https://www.fns.usda.gov/snap/elderly-simplified-application-project>. Accessed 09/12, 2022.
9. Wagner, J., & Hoguelet, A. (2016). Opportunities for states to coordinate Medicaid and SNAP renewals. *Washington, DC: Center on Budget and Policy Priorities*.

## Acknowledgements

Financial support for this study was provided by the U.S. Department of Agriculture, Food and Nutrition Service through the University of Kentucky Center for Poverty Research [3200002889-2045]. The findings and conclusions in this brief are those of the authors and should not be construed to represent any official USDA or U.S. Government determination or policy. Special thanks to Lauren Quick for research assistance on this study. Finally, the authors thank Zoé Tkaczyk, Alexandra Punch, and Shannon Monnat for editorial assistance on this brief.

## Recommended Citation

Heflin, C., Ojinnaka, C.O., Arteaga, I., Hodges, L., & Alphonso, G. (2023). Medicaid-Insured Older Adults on SNAP May Have Stronger Medication Adherence. Syracuse University Center for Policy Research, Policy Brief Series #2.

## About the Authors

**Colleen Heflin** ([cmheflin@syr.edu](mailto:cmheflin@syr.edu)) is an Associate Dean in the Maxwell School and Chair and Professor in Public Administration and International Affairs, a Senior Research Associate in the Center for Policy Research and Lerner Center for Public Health Promotion and

Population Health, and an affiliate of the Center for Aging and Policy Studies in the Maxwell School at SU. **Chinedum O. Ojinnaka** ([chinedum.ojinnaka@asu.edu](mailto:chinedum.ojinnaka@asu.edu)) is an Assistant Professor in the College of Health Solutions at Arizona State University  
**Irma Arteaga** ([arteagai@missouri.edu](mailto:arteagai@missouri.edu)) is an Associate Professor in the Harry S Truman School of Government and Public Affairs at the

University of Missouri. **Leslie Hodges** ([leslie.hodges@usda.gov](mailto:leslie.hodges@usda.gov)) is a Research Agricultural Economist in the Economic Research Service at the U.S. Department of Agriculture, in Kansas City, MO. **Gabriella Alphonso** ([gaalphon@syr.edu](mailto:gaalphon@syr.edu)) is a student in the Masters in Public Administration (MPA) program and Graduate Research Assistant in the Maxwell School at SU.



The Syracuse University Center for Policy Research supports policy-relevant research and disseminates knowledge that enables leaders to make informed policy decisions and provide effective solutions to critical challenges in our local region, state, country, and across the world.

426 Eggers Hall • Syracuse • New York • 13244  
(315) 443-3114

<https://www.maxwell.syr.edu/research/center-for-policy-research>