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Center for Human Services Research, University at Albany

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CENTER FOR HUMAN SERVICES RESEARCH
UNIVERSITY AT ALBANY State University of New York

MRT Supportive Housing Evaluation:

Reductions in Medicaid Spending and Service Utilization After Enrollment in Supportive Housing

Overview

The New York State Medicaid Redesign Team (MRT) was created in 2011 to develop a multi-year reform plan to address unprecedented healthcare cost growth and improve healthcare quality. One innovation tested under this Redesign is the investment in *supportive housing*, i.e., affordable housing paired with supportive services, such as on-site case management or referrals to community-based services. High-cost, high-need Medicaid recipients who were homeless or unstably housed (including people living on the streets and in shelters, and also those living in nursing facilities who do not require the level of care provided therein) were targeted for enrollment. This investment was anticipated to improve quality of life and health outcomes for enrolled clients, thereby decreasing utilization of especially expensive forms of healthcare (emergency department visits, inpatient hospitalizations, and nursing home stays), increasing usage of primary care services, improving housing stability, and potentially reducing overall healthcare spending. **This Research Brief examines Medicaid spending and utilization one year before, versus one and two years after, program enrollment.**

Client Sample and Research Approach

A total of 3,649 clients were enrolled in one of 23 MRT Supportive Housing programs and had continuous full Medicaid coverage¹ for at least one year before (Pre-Period) and one year after (Post-Period 1) enrollment; 2,478 met these criteria for two years after enrollment (Post-Period 2). About two-thirds of the original 3,649 clients enrolled remained in the program for at least one year.²

The population served by these programs is a seriously ill one, with high rates of comorbidities. Almost two-thirds (62%) of clients had at least one serious mental illness, 41% had a substance use disorder, 33.5% had an “other chronic condition,”³ and 23.5% were HIV positive. About a quarter of clients had claims in three or more of these categories over their Pre-Period year.

¹ Continuous full Medicaid coverage was defined as no period of 60 days or longer without full Medicaid coverage.

² An intent-to-treat methodology was used for these analyses, such that participants were included whether or not they remained enrolled through the Post-Period. This approach reduces the bias potentially introduced by nonrandom participant attrition or crossover from other interventions, instead examining the efficacy of the program as implemented, and is considered a highly rigorous approach to analysis of real-world intervention impact.

³ The “other chronic condition” category was comprised of the twelve most common chronic conditions other than serious mental illness, substance use disorder, and HIV, and included hypertension, asthma, diabetes, osteoarthritis, coronary heart disease, chronic kidney disease, chronic obstructive pulmonary disease, cerebrovascular disease, congestive heart failure, cancer, angina, and acute myocardial infarction.

Medicaid fee-for-service claims (excluding capitation payments) and managed care plan encounter data were examined. Medicaid use was analyzed both overall and by category of service, or claim domain.

Key Findings

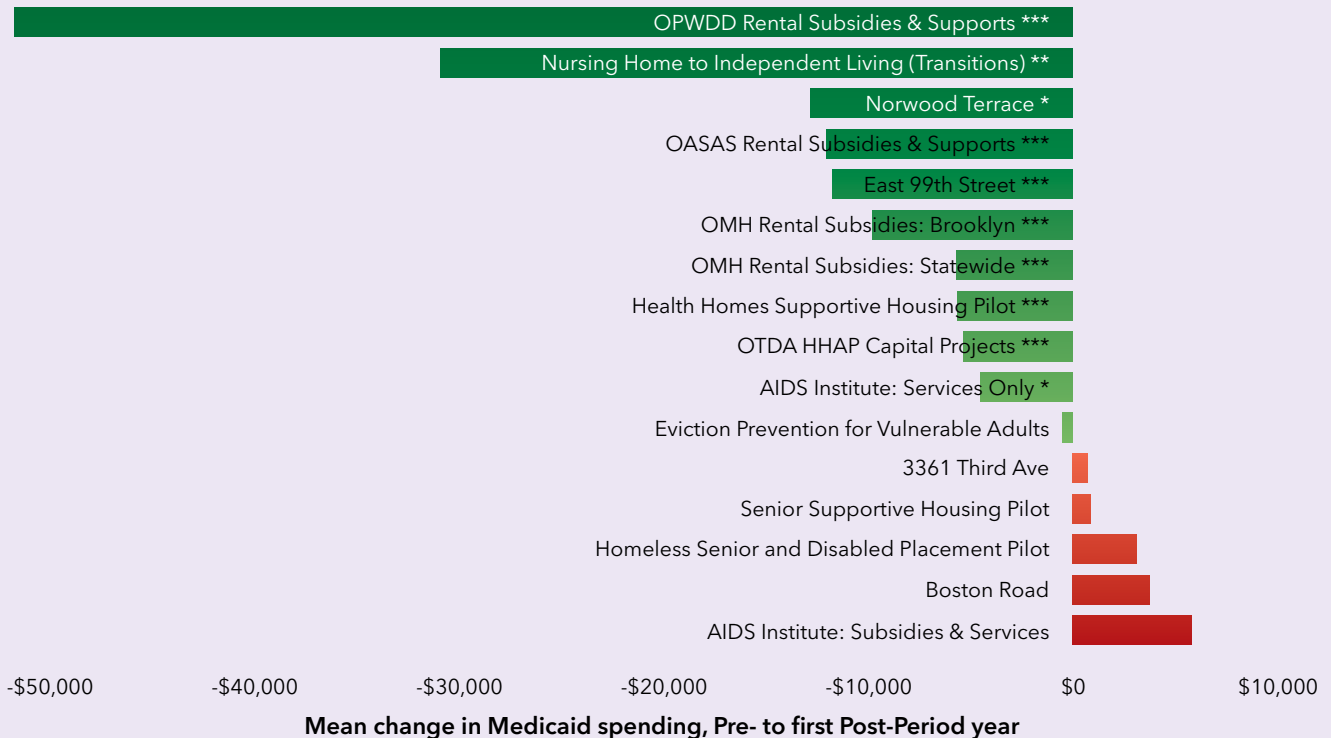
Total Cost Savings

Across all MRT Supportive Housing programs and clients, mean per-person Medicaid cost savings from the Pre-Period to the first Post-Period year were \$5,524; median savings were \$1,569. In total, savings were around \$20 million. Savings were similar for the Pre-Period versus the second Post-Period year.

Table 1. Medicaid cost savings were observed from the Pre- to the Post-Period years.

Period Compared	N Clients	Pre-Period Total Cost	Post-Period Total Cost	Total Cost Difference	Mean Cost Difference	Median Cost Difference ⁴
Pre vs. Post-Period 1	3,649	\$136,109,947	\$115,954,670	-\$20,155,277	-\$5,524	-\$1,569***
Pre vs. Post-Period 2	2,478	\$94,974,184	\$80,932,321	-\$14,041,863	-\$5,667	-\$2,590***

Figure 1. Most programs demonstrated significant cost savings from Pre- to Post-Period 1.



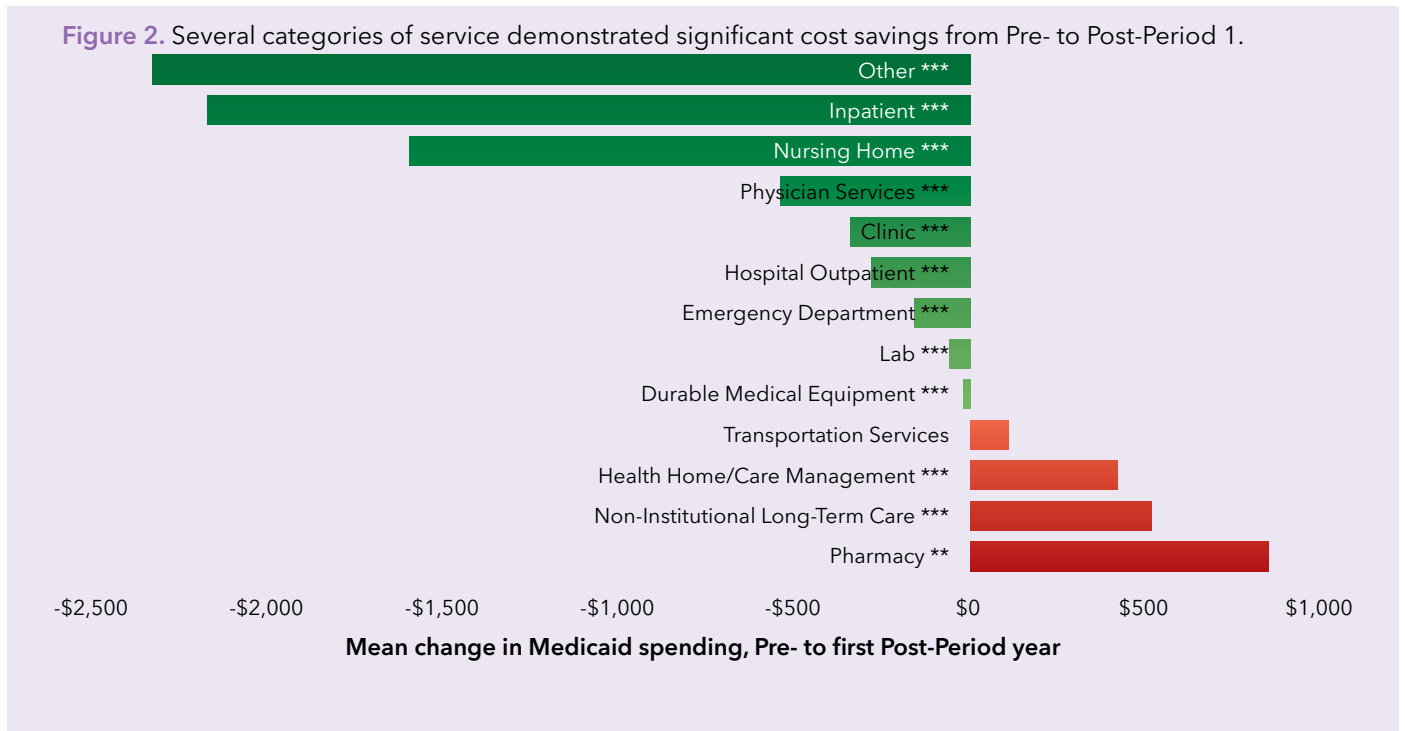
Significant cost savings were found for about half of all programs. Many of these same programs demonstrated maintained or additional savings in Post-Period 2. The remaining programs showed non-significant changes.

⁴ Sign test for difference in median cost for people with non-zero cost in the Pre- and/or Post-Period: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.1$.

Cost Savings by Category of Service

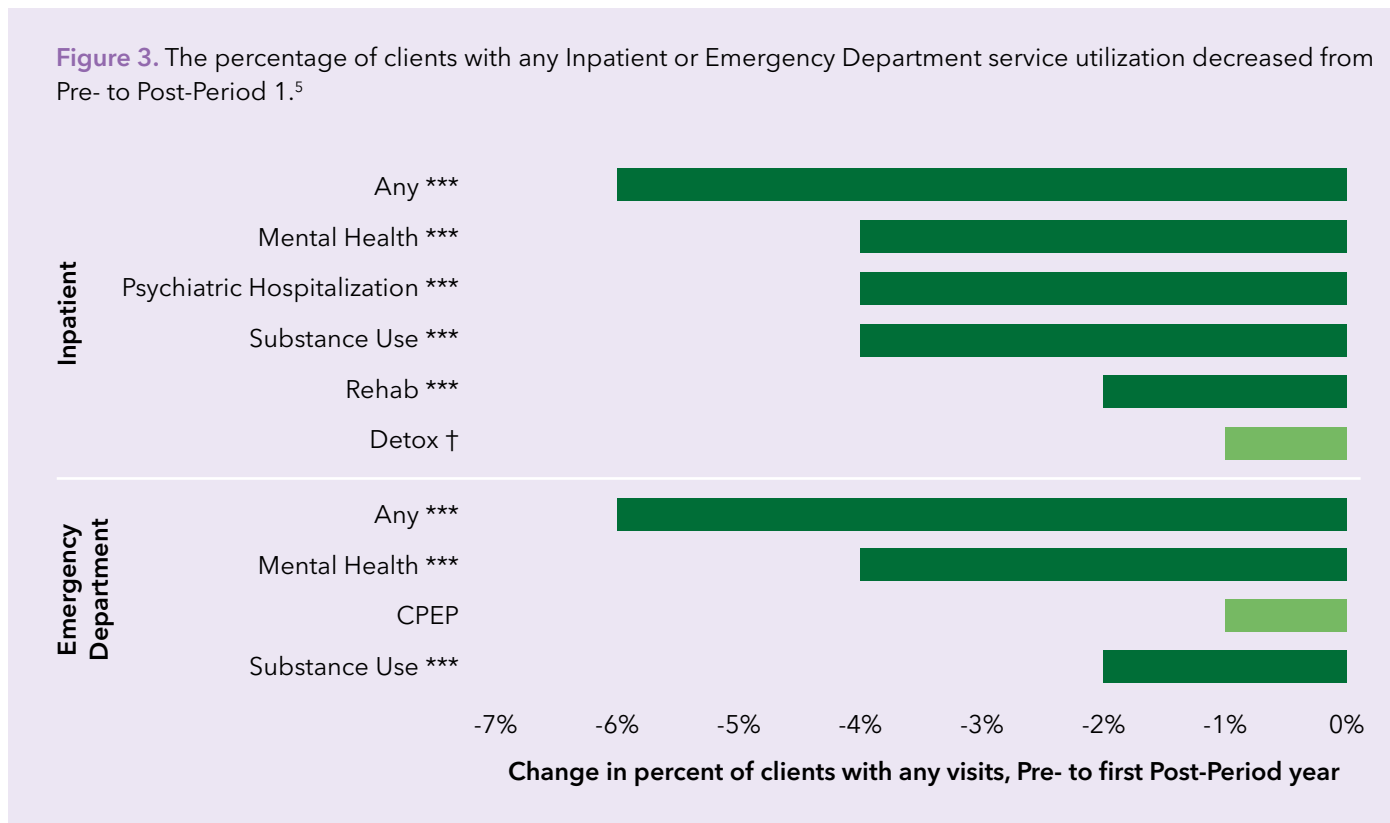
There were also statistically significant Medicaid cost savings from the Pre- to the Post-Periods for most examined categories of service. Many categories showed additional savings in the second post-enrollment year, indicating continued longer-term impacts. The categories with greatest savings included inpatient, nursing home, and "other" (e.g., all other costs not otherwise categorized, most prominently rehabilitation services for OMH programs and waiver services for OPWDD programs) claims. Three categories demonstrated significant cost increases, with likely reasons including changes in service prices or billing, increased client enrollment in care management, improved medication adherence or additional medications after enrollment, or continued need for long-term care.

Figure 2. Several categories of service demonstrated significant cost savings from Pre- to Post-Period 1.



Changes in Inpatient and Emergency Department Utilization

As expected, MRT Supportive Housing participants had high rates of utilization of high-cost acute care services in their Pre-Periods: 42% of all clients had at least one Pre-Period inpatient admission, and 61% had at least one emergency department (ED) visit. **However, following enrollment in supportive housing, there were statistically significant decreases in the percent of clients with any inpatient stay or ED visit, including visits related to mental health and substance abuse services.** These reductions were typically found in both the first and second Post-Period years.



Further, client visits were significantly shorter (the average number of inpatient days declined from 9.8 to 6.1) **and less frequent** (the average number of ED visits declined from 3.0 to 2.3). **These reductions were observed across diagnosis categories.**

Primary and Preventive Care

Surprisingly, **primary care utilization also decreased following enrollment:** 6% fewer clients had at least one primary care visit after enrollment, and the mean number of such visits per client declined. This decrease was also conserved across diagnosis categories. An examination of primary care and ED visits for selected routine conditions (which together account for about 10% of primary care visits) also showed such a reduction, implying that clients may be less ill after their enrollment. **As such, clients did not receive more primary or preventive care after enrollment in Supportive Housing, but may have had reduced need for such care.**

Housing Stability & Housing-Sensitive Condition Care

Information on homeless shelter stays was available for New York City and parts of Eastern New York for part of the analysis period. Of the clients within these regions, 25% had experienced a documented shelter stay in their Pre-Period

⁵ Sign test for difference in median utilization for people with non-zero utilization in the Pre- and/or Post-Period: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.1$. CPEP = Comprehensive Psychiatric Emergency Program.

year, but **only 3% had a stay in the first Post-Period year, representing a statistically significant and hugely impactful decrease in rate of shelter usage.** This decrease was largely maintained through the second Post-Period year. **The number of inpatient and ED visits for housing-sensitive conditions** (e.g., infections associated with congregate living situations, environmental heat- and cold-related conditions) **also decreased across this period.**

Conclusions

Overall, after enrollment in MRT Supportive Housing, participants demonstrated significant reductions in Medicaid utilization and spending. The cost savings and decreases in utilization were seen for several key categories of service, including hospital inpatient and outpatient, emergency department, and nursing home services, and were found across client diagnosis categories. This decreased utilization was also found for primary and preventive care; while unexpected, participants may have had less need for routine condition-related care after enrollment. Housing stability also improved, with fewer shelter stays and less housing-sensitive condition service utilization. Additionally, these decreases were typically conserved or improved when the second post-period year was examined, demonstrating longer-term effects. **These results indicate improved client health and stability and lessened need for all medical services, including high-cost, high-demand services.**

New York has recognized housing as a critical health intervention. These data demonstrate that providing housing may indeed result in reduced healthcare spending and improved client quality of life and health outcomes. Supportive housing may even reduce need, and thus spending, for other state-funded housing-related services, including homeless shelters, psychiatric facilities, addiction treatment centers, and jails. As such, participation in supportive housing may lead to a more efficient use of health care resources.

For full analyses and details, please see the ***MRT Supportive Housing Evaluation Cost Report 2: Volume 1 and Outcomes Report 2: Volume 1.***



About the Center for Human Services Research

The Center for Human Services Research (CHSR) is a research department at the University at Albany. CHSR has nearly 30 years of experience conducting evaluation research, designing information systems, and informing program and policy development for a broad range of agencies serving vulnerable populations. For more information about CHSR, please visit www.albany.edu/chsr



Center for Human Services Research

University at Albany
Richardson Hall
135 Western Avenue
Albany, NY 12222

(518) 442.5762
chsr@albany.edu

www.albany.edu/chsr