Impact of Complex Care Management on Spending and Utilization for High-Need, High-Cost Medicaid Patients

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ABSTRACT

OBJECTIVES: Complex care management programs have emerged as a promising model to better care for high-need, high-cost patients. Despite their widespread use, relatively little is known about the impact of these programs in Medicaid populations. This study evaluated the impact of a complex care management program on spending and utilization for high-need, high-cost Medicaid patients.

STUDY DESIGN: Randomized quality improvement trial conducted at CareMore Health in Memphis, Tennessee. A total of 253 high-need, high-cost Medicaid patients were randomized in a 1:2 ratio to complex care management or usual care.

METHODS: Intention-to-treat analysis compared regression-adjusted rates of spending and utilization between patients randomized to the complex care program (n = 71) and those randomized to usual care (n = 127) over the 12 months following randomization. Primary outcomes included total medical expenditures (TME) and inpatient (IP) days. Secondary outcomes included IP admission, emergency department (ED) visits, care center visits, and specialist visits.

RESULTS: Compared with patients randomized to usual care, patients randomized to complex care management had lower TME (adjusted difference, –$7732 per member per year [PMPY]; 95% CI, –$14,914 to –$550; *P* = .036), fewer IP bed days (adjusted difference, –3.46 PMPY; 95% CI, –4.03 to –2.89; *P* <.001), fewer IP admissions (adjusted difference, –0.32 PMPY; 95% CI, –0.54 to –0.11; *P* = .014), and fewer specialist visits (adjusted difference, –1.35 PMPY; 95% CI, –1.98 to –0.73; *P* <.001). There was no significant impact on care center or ED visits.

CONCLUSIONS: Carefully designed and targeted complex care management programs may be an effective approach to caring for high-need, high-cost Medicaid patients.

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High-need, high-cost patients—those with chronic medical conditions and co-occurring social and behavioral complexity—experience poor health outcomes and high rates of potentially preventable spending.[1-8] Improving care quality and lowering spending for this population have become a focus for policy makers, clinicians, payers, and health systems.[3,4,8]

Complex care management programs—broadly defined as efforts to coordinate medical and social services, assist patients and caregivers in managing medical and behavioral health conditions, and address the psychosocial drivers of poor health—have emerged as a promising model to improve care for high-need, high-cost patients.[8-13] In recent years, complex care management programs have been widely adopted by health systems and delivery organizations entering into value-based payment arrangements. A 2018 survey found that 96% of accountable care organizations had implemented complex care management programs for high-need, high-cost patients.[14]

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The impact of complex care management has been uneven. Systematic reviews and large-scale program evaluations have not demonstrated a consistent impact on health outcomes, spending, or acute care utilization.[15-17] Some individual programs, however, have led to improvements in patient-reported health and decreases in acute care utilization and total spending.[11,15,16,18,19] Program heterogeneity (eg, practice setting, patient characteristics, care models, staffing) may explain these varied results.

Complex care management programs have traditionally been developed and implemented among Medicare populations.[11,12,15,16,20] Increasingly, these models are being adopted in Medicaid.[14,21-24] Similar to the Medicare population, high-need, high-cost Medicaid patients have high rates of chronic conditions[25] and preventable acute care utilization,[6,26,27] both attributes well suited to complex care management.[13] High-need, high-cost Medicaid patients also have high rates of behavioral health disorders and unmet social needs,[6,21,28,29] attributes less common among Medicare patients and areas in which the impact of complex care management is uncertain.

Despite the proliferation of complex care management for Medicaid patients, there have been very few rigorous program

TAKEAWAY POINTS

A complex care management program for high-need, high-cost Medicaid patients reduced total medical expenditures by 37% and inpatient utilization by 59%. Based on the design of the program, these results suggest that:

- Carefully designed and targeted complex care management can be effective among high-need, high-cost Medicaid patients.
- Community health workers and other nontraditional healthcare workers can help engage and activate patients, build trust, and better understand and manage the nonmedical drivers of poor health and avoidable spending.
- Targeted interventions focused on modifiable risk factors are an effective and efficient approach for reducing unnecessary utilization.

evaluations, and the overall effect of these programs is unclear. This paper presents the results of a randomized quality improvement trial to evaluate the impact of complex care management on spending and utilization for high-need, high-cost Medicaid patients with complex health and social needs.

METHODS

Design and Setting

This was a randomized quality improvement trial to evaluate the impact of a complex care management program on spending and utilization for high-need, high-cost Medicaid patients. The design and implementation of the program, detailed in the following paragraphs, incorporated attributes of successful complex care management programs in other populations.[8,11,13,20,30] The program was implemented at CareMore Health (CareMore) in Memphis, Tennessee, where CareMore provides comprehensive primary care services for Medicaid patients enrolled in TennCare plans administered by Amerigroup. The program was operated out of a single CareMore care center.

Population

Participants were drawn from adult Medicaid patients attributed to CareMore primary care physicians (PCPs). Program eligibility criteria were aimed at identifying patients at risk for poor outcomes and unnecessary spending, as well as those most likely to benefit from complex care management. The criteria drew from analyses suggesting that combining predictive models, historical claims, and clinician judgment is the most effective approach to identifying patients for complex care management.[13,31-34]

Eligible patients were first required to meet at least 1 of the following criteria: top 5% of total medical expenditures (TME) in the prior 12 months, top 5% of Chronic Illness Intensity Index (CI3) score, or care team member nomination. The CI3 score is a predictive model developed by Amerigroup that uses demographic, clinical, and pharmacy claims data to estimate a patient's predicted cost in the subsequent 12 months compared with the average Amerigroup Medicaid patient.

Patients meeting 1 of the above criteria were then required to meet at least 1 of the following criteria: 2 or more inpatient (IP) admissions in the prior 12 months, 3 or more emergency department (ED) visits in the prior 12 months, or 2 or more chronic conditions.

Patients less likely to benefit from complex care management because of specific comorbidities (cognitive impairment, severe mental illness without medical comorbidity, active malignancy, pregnancy) or current residence in a long-term care facility were excluded.

Given limited resources, eligible patients were randomized in a 1:2 ratio to complex care management or usual care. Patients not continuously attributed to CareMore over the 12-month period following randomization were considered lost to follow-up. This could occur for several reasons: loss of Medicaid eligibility, enrollment in another TennCare plan, or transfer of care to a non-CareMore PCP.

Program Description

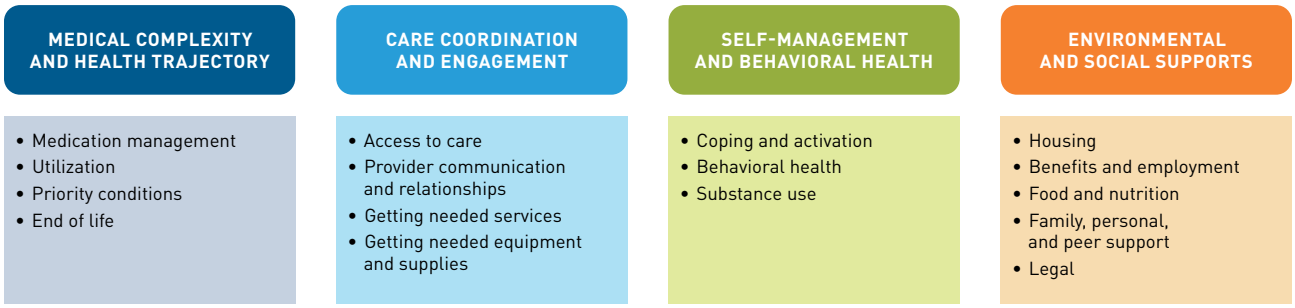
The program was staffed by a multidisciplinary care team consisting of a community health worker (CHW), a social worker (SW), and a PCP. CHWs and other nontraditional healthcare workers have become increasingly common components of complex care management programs.[35] CHWs, drawn from local communities, build longitudinal relationships with patients, provide context-specific activation and engagement, assist with care coordination, and help patients navigate the complexities of health systems and social programs.[35] CHW interventions have been shown to improve health outcomes and reduce spending, especially among urban, underserved populations.[22,36-41]

With guidance and support from the SW and the PCP, the CHW was responsible for patient outreach, engagement, activation, and accompaniment. The SW was responsible for counseling and brief interventions for patients with behavioral health needs and for coordinating referrals to social service agencies and other medical providers. The PCP was responsible for providing comprehensive care for acute and chronic conditions and for coordinating with specialists and inpatient providers.

Patients randomized to the complex care management program were contacted by the CHW via telephone and invited to enroll in the program. The CHW attempted to contact patients on 3 separate occasions, after which no additional attempts at contact were made.

Program activities were designed around a conceptual model of the drivers of poor outcomes and avoidable spending for high-need, high-cost Medicaid patients. Drawing on existing frameworks,[42] these drivers were grouped into 4 intersectional domains: (1) medical complexity and health trajectory, (2) care coordination and engagement, (3) self-management and behavioral health, and (4) environmental and social supports. Within each domain, specific drivers of poor health and high costs were identified. For example, unstable housing was a driver within the environmental and social supports domain, and medication management was a driver within

FIGURE 1. Conceptual Model of the Domains and Drivers of Poor Outcomes and Avoidable Spending for High-Need, High-Cost Medicaid Patients



the medical complexity and health trajectory domain (see **Figure 1** for a complete list of domains and drivers).

Patients who enrolled in the program were scheduled for a 60-minute in-person intake visit within 7 days of enrollment. During the intake visit, the entire care team (ie, CHW, SW, and PCP) conducted a comprehensive assessment of the patient's medical, behavioral, and social risk factors. The results of this assessment were used to identify and prioritize the most impactful and impactable drivers of poor outcomes and avoidable spending for each patient. Finally, the patient and the care team codeveloped a tailored care plan that outlined interventions, roles, and responsibilities for addressing each of the prioritized drivers. For example, the SW may be responsible for providing counseling and brief interventions for depression and for coordinating referrals to psychiatry. The PCP may be responsible for rapidly addressing poorly controlled diabetes or congestive heart failure. The CHW may be responsible for contacting patients to identify barriers to adherence and self-management. The patient may be responsible for applying for temporary housing assistance, logging physical activity, or checking in daily with the CHW/PCP to provide blood pressure or blood sugar readings.

After the intake visit, there was frequent, structured follow-up. The CHW called patients at least weekly to assess progress and identify and troubleshoot barriers. The care team met formally every week to review and update care plans. Patients were scheduled for monthly, in-person follow-up visits to review and revise the care plan. Patients admitted to an IP or skilled nursing facility were visited by a member of the care team, if possible. The CHW accompanied patients to specialist, social service, and other appointments as needed.

The program launched on March 1, 2017, and ran until February 28, 2018, at which point patients returned to usual care.

Data Sources and Measures

The primary outcomes were TME and IP bed days. Secondary outcomes included ED visits, IP admissions, care center visits, and specialist visits. The ED visit outcome measure excluded visits that resulted in an IP admission. The care center visit measure included any in-person visit for medical or behavioral health services at one of CareMore's outpatient facilities. All outcomes were assessed over the 12-month period following randomization (March 1, 2017, to February 28, 2018).

The following covariates were assessed for each patient: age at randomization, gender, CI3 score at randomization, and rates of each outcome measure over the 12 months prior to randomization (March 1, 2016, to February 28, 2017). Spending and utilization rates were calculated from claims data provided by Amerigroup. CI3 scores were provided by Amerigroup. Demographic data were extracted from the CareMore electronic data warehouse.

Statistical Analysis

Baseline characteristics for patients randomized to complex care management and those randomized to usual care were compared using standardized mean differences (SMDs).[43] Proposed cutoffs vary, but SMDs greater than 0.1 or 0.25 are generally considered to represent an important difference between groups.[44,45]

The effect of the program on the primary and secondary outcomes was analyzed through an intention-to-treat approach based on random assignment. Count-based utilization outcomes (IP admissions, IP bed days, ED visits, care center visits, and specialist visits) were modeled with Poisson regression, and the spending outcome (TME) was modeled with ordinary least squares regression. Both adjusted and unadjusted analyses were performed. Adjusted models included age at randomization, gender, CI3 score at randomization, and the corresponding outcome measure over the 12-month period prior to randomization (eg, the model for IP days included IP days from March 1, 2016, to February 28, 2017, as a covariate). Adjusted and unadjusted results were similar. Results from the adjusted models are presented below, with unadjusted results available in the **eAppendix** (available at **ajmc.com**). A *P* value of .05 was considered to indicate statistical significance. *P* values were adjusted for multiple comparison using the Holm-Bonferroni method.[46] All analyses were performed using R version 3.5.1. The evaluation was implemented as a randomized quality improvement trial without institutional review board approval or waiver.

FIGURE 2. Flow of Patients Through the Trial

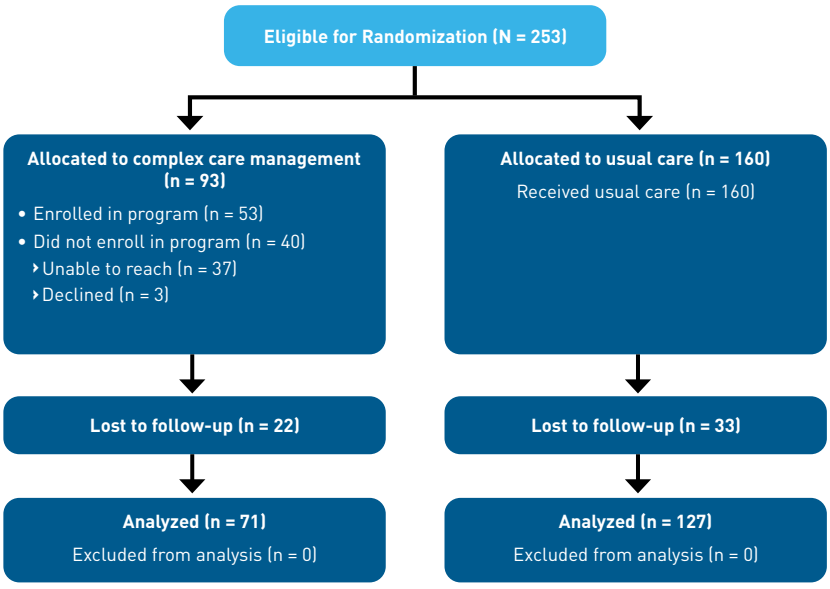


TABLE 1. Baseline Characteristics for Patients by Study Group[44,45,a]

	Complex Care Management (n = 71)	Usual Care (n = 127)	SMD[b]
Age in years,[c] mean (SD)	43.8 (15.6)	45.9 (14.5)	−0.139
Sex, % male	43.7	42.5	0.023
CI3 score,[d] mean (SD)	8.56 (6.87)	9.99 (8.46)	−0.180
TME in prior 12 months ($), mean (SD)	21,429 (33,859)	23,432 (29,723)	−0.064
IP admissions in prior 12 months, mean (SD)	1.28 (2.64)	1.17 (2.25)	0.045
IP days in prior 12 months, mean (SD)	6.90 (15.80)	6.77 (13.67)	0.009
ED visits in prior 12 months, mean (SD)	3.82 (6.62)	3.01 (4.70)	0.148
Care center visits in prior 12 months, mean (SD)	4.14 (6.22)	4.07 (5.12)	0.013
Specialist visits in prior 12 months, mean (SD)	5.55 (6.61)	6.38 (9.18)	−0.099

CI3 indicates Chronic Illness Intensity Index; ED, emergency department; IP, inpatient; SMD, standardized mean difference; TME, total medical expenditures.

[a]Baseline spending and utilization rates were calculated over the 12-month period prior to randomization (March 1, 2016, to February 28, 2017).

[b]SMD is calculated by taking the mean of each group, divided by the standard deviation of the entire population.[44] Proposed cutoffs vary, but SMDs greater than 0.1 or 0.25 are generally considered to represent an important difference between groups.[44,45]

[c]Age at randomization.

[d]CI3 is a predictive score that estimates a patient's relative predicted cost in the subsequent 12 months compared with the average patient. See Methods for more details.

RESULTS

Randomization, Enrollment, and Follow-up

Figure 2 depicts the flow of patients through the trial. A total of 253 patients met eligibility criteria and were randomized in a 1:2 ratio to complex care management (n = 93) or usual care (n = 160). More than half (56.9%) of the patients randomized to complex care management ultimately enrolled in the program. The most common reason for not enrolling was an inability for the CHW to reach the patient via telephone (37 of 40 patients). A small number of patients were reached but declined to participate in the program (3 of 40 patients). Across both groups, roughly 20% of patients were lost to follow-up in the 12 months after randomization. The intention-to-treat analysis included 71 patients in the complex care management group and 127 patients in the usual care group. Information on appointment-kept rates is provided in the eAppendix.

Baseline Characteristics

Baseline rates of spending and utilization were high. The average patient incurred TME of $22,714, spent 6.81 days in an IP facility, and visited the ED 3.30 times during the 12-month period prior to randomization. Table 1[44,45] compares baseline characteristics between patients randomized to complex care management and those randomized to usual care. Compared with patients in the usual care group, patients in the complex care management group were slightly younger (mean age of 43.8 vs 45.9 years), had lower predicted future costs (mean CI3 score of 8.56 vs 9.99), and visited the ED more frequently (3.82 vs 3.01 mean visits).

Spending and Utilization Outcomes

Table 2 compares adjusted rates of utilization and spending between patients randomized to complex care management and those randomized to usual care over the 12 months following randomization. The complex care management program was associated with lower TME (adjusted difference, −$7732 per member per year [PMPY]; 95% CI, −$14,914 to −$550; $P = .036$), fewer IP bed days (adjusted difference, −3.46 PMPY; 95% CI, −4.03 to −2.89; $P < .001$), fewer IP admissions (adjusted difference, −0.32 PMPY; 95% CI, −0.54 to −0.11; $P = .014$), and fewer specialist visits (adjusted difference, −1.35 PMPY; 95% CI, −1.98 to 0.73; $P < .001$). There was no significant impact on ED or care center visits.

Patient Vignettes

The eAppendix includes summary vignettes for selected patients enrolled in complex care management. These are intended to

supplement the quantitative findings from the primary analysis and offer additional detail on the implementation of complex care planning.

DISCUSSION

A complex care management program reduced spending and inpatient utilization among high-need, high-cost Medicaid patients. Patients randomized to complex care management had TME that were 37% lower than those randomized to usual care, an absolute reduction of $7732 per patient per year. This spending reduction appeared to be driven primarily by decreases in inpatient utilization—bed days were reduced by 59% and admissions by 44%.

Several potential mechanisms could explain the observed decreases in utilization and spending. Improved management of medical, social, and behavioral risk factors may have prevented acute exacerbations of chronic disease. Patient engagement and activation may have led to improved self-management and adherence. Finally, social and behavioral stabilization may have facilitated safe discharge planning, reducing the need for, or duration of, inpatient admissions.

TABLE 2. Adjusted Rates of Spending and Utilization for Patients Randomly Assigned to Complex Care Management Versus Usual Care[a]

	Complex Care Management	Usual Care	Difference (95% CI)	P[b]
Primary outcomes				
TME ($/patient/year)	13,091	20,823	−7732 (−14,914 to −550)	.036
IP days (patient/year)	2.41	5.87	−3.46 (−4.04 to −2.89)	<.001
Secondary outcomes				
IP admissions (patient/year)	0.41	0.73	−0.32 (−0.54 to −0.11)	.014
ED visits (patient/year)	2.77	2.79	−0.02 (−0.51 to 0.47)	1.00
Care center visits (patient/year)	4.80	4.33	0.47 (−0.16 to 1.11)	.576
Specialist visits (patient/year)	4.08	5.43	−1.35 (−1.98 to −0.73)	<.001

ED indicates emergency department; IP, inpatient; TME, total medical expenditures.

[a]Spending and utilization rates are adjusted for age at randomization, gender, Chronic Illness Intensity Index score at randomization, and the corresponding outcome measure over the 12-month period prior to randomization (eg, IP days are adjusted for IP days from March 1, 2016, to February 28, 2017).

[b]Adjusted for multiple comparisons (Holm-Bonferroni).

Complex care management led to a small but significant decrease in specialist visits. Although prior studies of complex care management have not examined specialist use, data from primary care improvement initiatives suggest that enhanced primary care services can reduce downstream specialist utilization.[47,48] In this study, specialist utilization could have been decreased by increased engagement with primary care, better management of chronic medical conditions in the primary care setting, or better communication and coordination between the PCP and specialists. Because there were no additional financial or nonfinancial incentives to reduce utilization in the complex care management group, it is less likely that the reduction in specialist utilization was due to restricted access.

Complex care management had no impact on ED utilization. This contrasts with findings from some programs targeting Medicare patients[18,19] and may be explained by a differential approach to ED utilization between Medicare and Medicaid patients. Research suggests that even with access to primary care, Medicaid patients use the ED at high rates.[49,50] Additional research is needed to better understand the drivers of ED utilization among high-need, high-cost Medicaid patients.

Despite a focus on structured engagement and follow-up, patients randomized to complex care management did not visit CareMore care centers more frequently than patients randomized to usual care. This suggests that the character of outpatient visits (eg, social and behavioral risk assessments, structured care planning, patient engagement and activation) may be more important than the quantity of those visits. It is also possible that telephonic or virtual contact with care team members, which occurred frequently for patients enrolled in the complex care program, can be an effective substitute for in-person visits among engaged patients.

Taken together, the results of this study have several important implications for the design and implementation of complex care management programs for high-need, high-cost patients.

First, these findings add to an emerging evidence base suggesting that carefully designed and targeted care management programs can reduce spending and utilization in Medicaid populations.[22,36,38] The magnitude of utilization and spending reductions observed in this study were similar to those reported in recent evaluations of complex care management and CHW programs for Medicaid populations[22,36,38] and substantially larger than those reported from programs targeting Medicare patients.[15,16,18,19] Although additional evaluations of programs targeting both populations are needed, these findings suggest that high-need, high-cost Medicaid patients may be better suited for complex care management.

Second, patterns of utilization in the 2 study groups underscore the importance of precise patient targeting. To be most effective, complex care management programs should target patients at risk of persistently high spending and those whose spending and health outcomes are amenable to complex care planning and engagement. Many complex care management programs use claims data and historical utilization patterns to identify eligible patients. Recent research has highlighted the limitations of this approach—historically high-cost patients often return to normal patterns or spending, or they have drivers of high spending not amenable to complex care management.[34,51,52] The eligibility criteria in this study made use

of a hybrid strategy that integrated historical claims data, predictive models, and clinician judgment. The persistently high rates of utilization observed in the usual care group and the decrease in utilization observed in the complex care management group suggest that these criteria successfully identified patients at risk of persistently high spending that was modifiable by complex care management.

Third, engagement via telephonic outreach failed to reach many patients. About 40% of the patients randomized to complex care management could not be contacted by telephone. Medicaid patients often have missing or outdated contact information because of numerous structural barriers including poverty and housing insecurity.[53,54] Strategies that incorporate alternative forms of outreach (eg, in-person, text message, email) and partnerships with community organizations could improve engagement among this population.

Finally, the design and implementation of the program incorporated attributes of successful complex care management programs in other populations.[11,13,20,21,30] These included identifying patients at high risk of poor outcomes and avoidable spending; conducting comprehensive assessments of medical, social, and behavioral risk; care planning and routine follow-up; interdisciplinary, team-based care; and the use of CHWs to engage and activate patients, build trust, and better understand and manage the nonmedical drivers of poor outcomes. The results of this study confirm the importance of these attributes, but it remains unclear which attributes are more or less responsible for the observed reductions in spending and utilization. Larger evaluations, with factorial designs or well-powered subgroup analyses, could help clarify which attributes are most effective.

Limitations

This study has several limitations. First, as it was a pragmatic quality improvement trial, the scope was limited to a relatively small population (n = 198). Second, patients with cognitive impairment, severe mental illness without medical comorbidity, active malignancy, or pregnancy, as well as those residing in long-term care facilities, were excluded from the study population. As a result, the findings may not be generalizable to other high-need, high-cost Medicaid populations, and larger replication studies are warranted. Third, many patients were lost to follow-up. Although the rates were similar across both study groups (roughly 20%), if the patients lost to follow-up in each group were systematically different, the results may be biased. Fourth, the analysis was limited to 12-month spending and utilization outcomes. We were unable to evaluate the impact of the program on health-related outcomes or longer-term spending and utilization trends. Future research is needed to better understand the impact of complex care management on morbidity, mortality, measures of disease control, and the durability of spending and utilization reductions. Finally, we did not collect detailed information on processes outcomes or program fidelity. This limited our ability to understand which program attributes were most responsible for the observed spending and utilization reductions.

CONCLUSIONS

Complex care management programs have proliferated in recent years, but little is known about their impact in high-need, high-cost Medicaid populations. The results of this study suggest that complex care management can reduce spending and acute care utilization. Precise patient targeting, the use of nontraditional healthcare workers such as CHWs, and in-person engagement strategies may improve the efficacy and efficiency of complex care management programs for Medicaid patients. ■

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eAppendix for "Impact of Complex Care Management on Spending and Utilization for High-Need, High-Cost Medicaid Patients: A Randomized Quality Improvement Trial"

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(1) Unadjusted Spending and Utilization Outcomes

	Complex Care Management	Usual Care	Difference (95% CI)	P Value[a]
Primary Outcomes				
TME ($/patient/yr)	11,567	21,674	-10,108 (-18,071, -2,143)	0.013
IP Days (#/patient/yr)	2.13	6.25	-4.13 (-4.68, -3.57)	<0.001
Secondary Outcomes				
IP Admissions (#/patient/yr)	0.38	0.76	-0.38 (-0.59, -0.17)	0.001
ED Visits (#/patient/yr)	2.69	2.83	-0.14 (-0.63, 0.34)	1.000
Care Center Visits (#/patient/yr)	4.55	4.46	0.09 (-0.52, 0.71)	1.000
Specialist Visits (#/patient/yr)	3.92	5.55	-1.64 (-2.25, -1.02)	<0.001

[a] Adjusted for multiple comparisons (Holm-Bonferroni)

Abbreviations: TME = total medical expenditures; IP = inpatient; ED = emergency department.

(2) Selected Appointment Kept Rates

Appointment	Kept Rate
Intake Visit	87%
30 Day Visit	87%
60 Day Visit	100%
90 Day Visit	95%

NOTE: Due to changes in information systems, monthly appointment kept rates were not routinely tracked after 90 days.

(3) Patient Vignettes

Ms. T

- *History:* 58-year-old woman with hypertension, diabetes, anxiety, post-traumatic stress disorder, domestic violence, and substance use disorder. Frequent ED visits for substance use and behavioral health needs.
- *Intervention:* Discovered extensive prior trauma from domestic violence. Built trust with patient through a trauma-informed approach, which ultimately led to re-engagement with psychiatry and enrollment in a substance use disorder treatment program.
- *Impact*: ED visits fell from 11 to 1. Total medical expenditures decreased by $72,367.

Mr. R

- *History:* 59-year-old man with congestive heart failure, hypertension, diabetes, chronic pain, and depression. Frequent hospitalizations for heart failure exacerbations.
- *Intervention:* Screening uncovered he was living in his friend's garage due to an inability to pay utility bills. He had been unable to prioritize attending cardiology appointments given housing instability. CHW arranged for utility bill payments through a combination of donations and a payment plan, and he was able to move back into his home.
- *Impact:* Cardiology visits increased from 1 to 8. Inpatient bed days decreased from 41 to 9

Mr. S

- *History:* 45-year-old man with bilateral above the knee amputations and multiple, chronic, high-risk wounds. Frequent inpatient admissions for wound care and infections.
- *Intervention:* Discovered home health nurses would not see patient due to concerns for gang-related activity in the home and risk of violence in the neighborhood. Arranged for transportation and wound-care visits at the care center.
- *Impact:* Inpatient bed days fell from 51 to 0. Total medical expenditures decreased by $28,723