Evidence-Based Programs ROI Assessment Report

Chronic Disease Self-Management Education (CDSME)

July 2025

Executive Summary

BACKGROUND AND PURPOSE

Chronic diseases such as heart disease, diabetes, arthritis, and depression represent a growing public health crisis in the United States, especially among older adults. Over 75% of healthcare expenditures are attributed to the treatment of chronic conditions, and this burden is poised to escalate in the coming years. One in five Americans are projected to be aged 65 years or older by 2030, and with 60-75% of this group living with multiple chronic conditions, the demand for cost-effective strategies to manage chronic diseases is more urgent than ever.

In response, the National Council on Aging (NCOA), in partnership with the Administration for Community Living (ACL), has implemented Chronic Disease Self-Management Education (CDSME) programs nationwide. These evidence-based interventions, including the Stanford Chronic Disease Self-Management Program (CDSMP), Diabetes Self-Management Program (DSMP), Tomando Control de su Salud, and others, equip older adults with the skills and confidence to better manage their conditions and reduce healthcare utilization. Between 2010 and 2024, more than 500,000 older adults participated in CDSME programs funded by ACL and delivered through community partners. This executive summary presents key findings from a national return on investment (ROI) assessment using participant-level pre-post data from the Healthy Aging Programs Integrated Database (HAPID).

This assessment provides evidence to inform policymakers on the health and economic value of CDSME programs. It:

- Measures changes in participant health and behavior following program participation
- Estimates the healthcare cost savings associated with those changes
- Calculates the return on federal investment in CDSME programming

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- Offers actionable recommendations to support program expansion and sustainability

METHODOLOGY OVERVIEW

This return on investment (ROI) study used a robust, six-step methodology to analyze CDSME program effectiveness and translate outcomes into economic terms. Data were drawn from HAPID, encompassing 532,503 individuals enrolled in ACL-funded CDSME programs between 2010 and 2024. Data included demographic indicators, age, sex, race, highest education attained chronic conditions, and disability types. Participants were matched on pre- and post-program surveys and the data was reshaped for longitudinal analysis. Fixed effects regression estimated within-person changes over time, while random effects models explored associations across demographic and program characteristics.

Key outcomes included general health, self-efficacy, and loneliness and isolation. Mental health outcome improvements was monetized using nationally reported cost estimates (adjusted to 2024 dollars) from peer-reviewed literature. Annual mental healthcare costs range from a low of $2,796 to a high of $7,445. Total savings were calculated using “loneliness” outcome improvement from fixed effects regression model multiplied by associated costs and modeled under conservative, mean, and optimistic mental health cost saving scenarios to provide a credible range of potential economic benefits.

KEY FINDINGS

The results of this analysis reveal compelling evidence that CDSME programs yield significant health improvements and economic benefits. Participants experienced marked improvements in several key areas following completion of a CDSME program.

Outcome Measured	Before the Program	After the Program	Change	What This Means
General Health	2.53	2.69	**6% improvement**	Participants reported feeling healthier overall
Self-Efficacy	7.72	8.00	**4% improvement**	Greater confidence in managing their own health
Loneliness	2.22	2.19	**1.4% reduction**	Small decrease in feelings of loneliness
Isolation	2.06	2.05	No significant change	No meaningful change in social isolation

Table 2: Results of fixed effects regressions for key CDSME program outcomes

Self-reported General Health

The distribution of self-rated general health (5-point scale), in Figure 2, showed a modest shift toward more positive perceptions following participation in the program. The majority of respondents rated their health as “Good” both before and after CDSME programs, with this category increasing slightly from 56% to 58%. The proportion reporting “Fair” health decreased from 34% to 31%, while those reporting “Poor” declined marginally from 6% to 5%. The proportion of respondents who rated their health as “Excellent” increased from 5% pre-program to 7% post-program suggesting a small but encouraging movement toward more favorable health self-

assessments among CDSME participants. In addition, fixed effects regression model results in

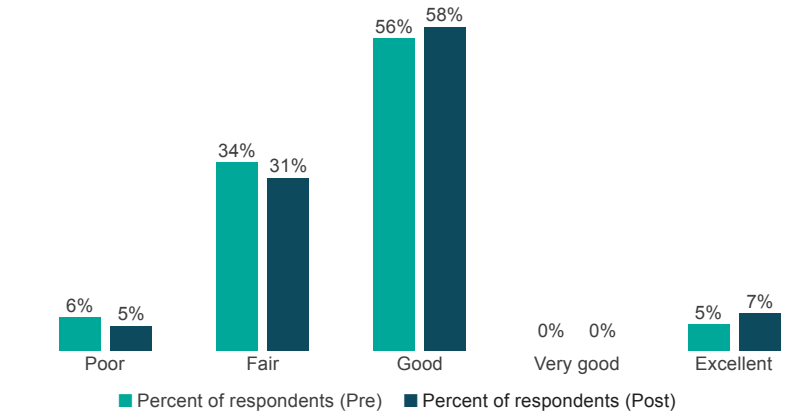
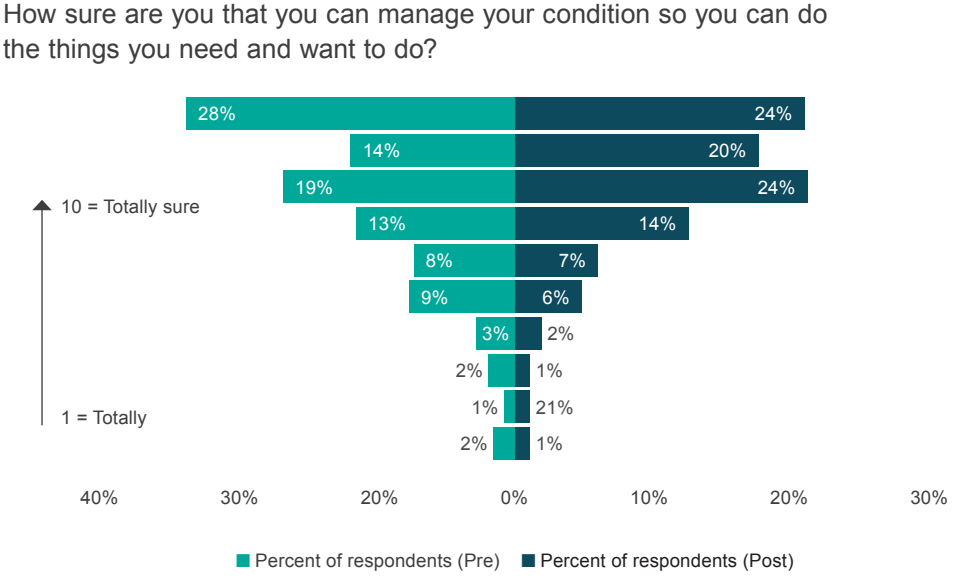


Table 2 showed significant improvement in self-rated general health, with an average improvement of 6% post CDSME program participation.

Figure 2: Self-reported General Health

Self-Efficacy

A separate analysis of self-efficacy scores shows an encouraging shift in CDSME participants' confidence in managing their health following their participation. Before the intervention, as shown in Figure 3, scores were more evenly distributed across the mid-to-high range, with 28% of participants rating their self-efficacy at the highest level of 10, and another 19% selecting 8. Post CDSME, the proportion of participants selecting 8 increased from 19% to 24%, while those selecting 9 rose from 14% to 20%. This redistribution suggests a shift toward high levels of perceived self-efficacy. At the same time, the percentage of respondents selecting the lowest

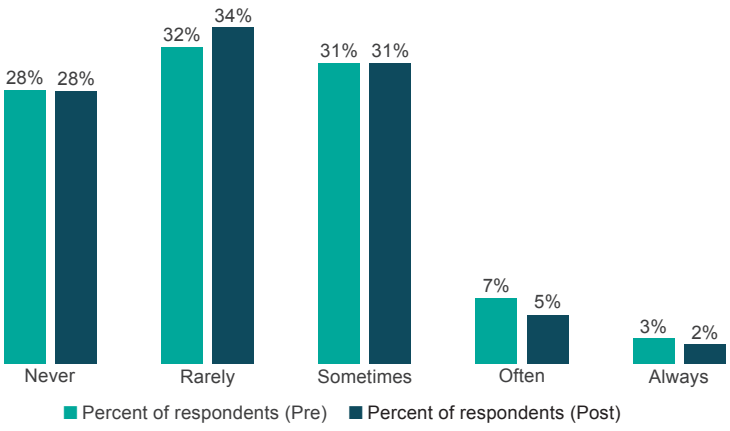


scores (1 to 4) remained small and generally declined. Results from a fixed effects regression model in Table 2 support this finding, indicating a 4% statistically significant improvement in the self-efficacy post participation in CDSME programs.

Figure 3: Self-reported Self Efficacy

Loneliness

The distribution of self-reported loneliness before and after CDSME programs as shown in Figure 4, suggest a slight overall improvement in participants' experiences of social connectedness. The proportion of respondents who reported "rarely" feeling lonely increased from 32% to 34%, while those reporting "sometimes" remained stable at 31%. More notably, the percentage of participants who reported feeling lonely "often" declined from 7% to 5%, and those who reported feeling lonely "always" dropped from 3% to 2%. These changes, although modest, suggest that the program had



a small positive effect in reducing the prevalence of more frequent and severe loneliness among participants. This is also consistent with results from fixed effects regression model in Table 2, showing a significant but modest reduction in loneliness post participation in CDSME programs.

Figure 4: Self-reported perception on Loneliness

Return on Investment (ROI)

The analysis translated these health outcomes, particularly improvements in loneliness, a key driver of mental health service utilization, into cost savings. Loneliness, a leading predictor of depression and anxiety, is prevalent among older individuals, especially those living alone or

Variable	Mean (Pre)	Mean (Post)	Improvement
General Health	2.53	2.69	0.15
Self-Efficacy	7.72	8.00	0.28
Loneliness	2.22	2.19	0.04

managing multiple chronic conditions. By creating a safe, supportive, and peer-led environment, CDSME workshops foster social connectedness, reduce stigma, and build resilience. Mental health conditions such as depression and anxiety account for billions in healthcare spending annually, and interventions that reduce loneliness have been shown to significantly lower treatment needs.

Table 10: Key Outcome Improvement

Using peer-reviewed cost estimates adjusted to 2024 dollars, the study projected annual savings per CDSME participant ranging from $112 (conservative estimate) to nearly $298 (optimistic

Scenarios	Avoided Per Participant	Cost	Savings Per participant	Total Savings N=532,503
Scenario 1 (Lower)		$2,796.76	$111.87	$59,571,323.61
Scenario 2 (Mean)	0.04	$5,681.24	$227.25	$121,011,093.75
Scenario 3 (Upper)		$7,445.00	$297.80	$158,579,393.40

scenario), based solely on improvements in loneliness. When scaled across the entire HAPID

Scenarios	Total Savings N=532,503	Total Program Cost	Net Benefit
Scenario 1 (Lower)	$59,571,323.61		$8,869,286.61
Scenario 2 (Mean)	$121,011,093.75	$50,702,037.00	$70,309,056.75
Scenario 3 (Upper)	$158,579,393.40		$107,877,356.40

participant base of 532,503 individuals, the estimated total mental health cost savings ranged from $59.6 million to $158.6 million. After accounting for the full program delivery cost of $50.7 million between 2017 and 2024, the estimated net benefit ranged from $8.9 million to $107.9 million.

Table 11: Cost Savings Estimates

Table 12: Net Benefit Estimates

It is important to note that these figures underestimate the true economic value of the program, as they exclude savings from reduced hospital admissions, emergency department visits, and outpatient care all outcomes that CDSME programs are known to influence but were not captured in the HAPID database.

POLICY IMPLICATIONS

The findings from this study have implications for Medicare, Medicaid, and public health policy. With older adults accounting for the majority of chronic disease and mental health expenditures, even modest improvements in self-management and social connectedness can translate into substantial system-wide savings.

Policymakers should consider:

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- Sustaining and expanding federal investment in CDSME programs through ACL's Evidence-Based Programs portfolio as this will yield scaled health and economic benefits.
- Integrating CDSME into Medicaid waivers incentivizing states and plans to include CDSME as a reimbursable service under Section 1115 Medicaid waivers, D-SNP models, and Medicare Advantage supplemental benefits.
- Improving data Infrastructure to capture key healthcare utilization indicators (such as hospitalizations, emergency department visits etc.) and program related costs. This would allow future analysts to quantify downstream cost savings more precisely and fully capture the return on investment of CDSME programs.

In sum, CDSME is a high-value, low-cost intervention that supports healthier aging, with demonstrable benefits for individuals, communities, and federal health systems. As the U.S. population ages and the burden of chronic disease intensifies, investing in programs that build self-efficacy, improve health, and reduce costs is not just prudent, it is essential.

LIMITATIONS

While the report presents robust findings, it acknowledges certain limitations:

- The absence of direct healthcare utilization data (e.g., ER visits, hospitalizations) in HAPID limited the scope of cost savings estimations.
- The lack of granular cost data from grantees necessitated the use of aggregate funding across grantees by number of participants on HAPID database as a proxy for per-participant cost.
- Self-reported outcomes, while standardized and widely used, are subject to recall and social desirability bias.

Despite these limitations, the analysis offers a conservative yet meaningful estimate of CDSME's potential value, particularly with respect to improvements in self-efficacy, general health, and loneliness. Future evaluations would benefit from more robust data infrastructure, including standardized utilization metrics, comprehensive cost tracking, and claims data integration to enable a fuller understanding of the program's clinical and economic impact.

CONCLUSION

CDSME programs offer a powerful solution to one of the most pressing challenges in public health: managing chronic disease among an increasingly aging population. The evidence presented in this report underscores that these programs not only improve individual health outcomes such as general health, self-efficacy, and loneliness, but also generate meaningful financial returns by reducing the cost burden on our healthcare system. As federal and state policymakers seek to build a sustainable, and person-centered health system, CDSME programs should be recognized and funded as a strategic investment.

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