Evidence-Based Programs ROI Assessment Report

Falls Prevention Programs

July 2025

Executive Summary

BACKGROUND AND PURPOSE

Falls are the leading cause of fatal and non-fatal injuries among adults aged 65 and older in the United States. With over 36 million fall incidents annually, about $80 billion is spent on medical costs related to non-fatal fall injuries, most of which is absorbed by Medicare, and this burden is expected to increase as the older adult population grows. Falls not only result in emergency room visits, hospitalizations, and long-term care admissions but also lead to reduced independence, poorer quality of life, and increased fear of mobility for older adults.

In response, the National Council on Aging (NCOA), through Administration for Community Living (ACL) funding, supports implementation of evidence-based fall prevention programs nationwide. Some of these fall prevention programs include A Matter of Balance, Tai Ji Quan: Moving for Better Balance, Otago Exercise Program, Stepping On, and others. According to data collected via the Healthy Aging Programs Integrated Database (HAPID), over 275,000 older adults participated in these evidence-based fall prevention programs between 2014 and 2024 and this report presents the first large-scale assessment of the return on investment (ROI) of these programs.

This analysis was designed to help policymakers understand the full health and economic impact of fall prevention programs at scale. Specifically, it aimed to:

- Quantify reductions in fall-related healthcare utilization
- Measure improvements in general health, self-efficacy, and psychosocial wellbeing
- Estimate economic savings and ROI from avoided medical costs
- Provide evidence to guide federal and state funding decisions for preventive aging services

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METHODOLOGY OVERVIEW

This return on investment (ROI) study used a robust, six-step methodology to analyze program effectiveness and translate outcomes into economic terms. Data were drawn from HAPID, encompassing 275,462 individuals enrolled in ACL-funded fall prevention programs between 2014 and 2024. Data included demographics, self-reported falls history, general health, self-efficacy, fear of falling, loneliness, and healthcare utilization. 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 falls incidence, emergency room (ER) visits, hospitalizations, outpatient visits, fear of falling, and loneliness. Outcome improvements were monetized using nationally reported cost estimates (adjusted to 2024 dollars) from peer-reviewed literature. Hospitalizations range from $9,805 to $40,619, with an average of $25,423. ER visits and outpatient care costs range from $1,485 to $6,421, with a mean of $3,525. Additionally, the average cost per injurious fall is estimated at $15,807. Total savings were calculated using healthcare utilization outcome improvements from regression models multiplied by associated costs and return on investment calculated by dividing the difference between total savings and program cost, by program cost. Finally, ROI was modeled under conservative, mean, and optimistic cost scenarios to provide a credible range of potential returns.

KEY FINDINGS

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

Table 2: Results of fixed effects regressions for key fall prevention program outcomes-

Outcome Measured	Before the Program	After the Program	Change	What This Means
General health	2.86	2.93	Slight improvement	Participants reported feeling a healthier overall post program
Loneliness and isolation	2.04	2.02	Slight reduction	A small decrease in feelings of loneliness
Number of times fallen	**0.46**	**0.22**	**52% reduction**	**Substantial drop in how often participants fell**
Injurious fall	**0.18**	**0.08**	**56% reduction**	**Significant decrease in falls that caused injuries**
ER visit due to fall	**0.50**	**0.41**	**18% reduction**	**Fewer emergency room visits, suggesting fewer serious fall incidents**
Hospitalization	0.50	0.37	No significant change	Fewer hospitalizations, but change not statistically conclusive
Outpatient visit	0.50	0.42	No significant change	Minimal difference in outpatient visits
Fear of falling	2.44	2.28	Moderate reduction	Participants felt more confident and less fearful of falling

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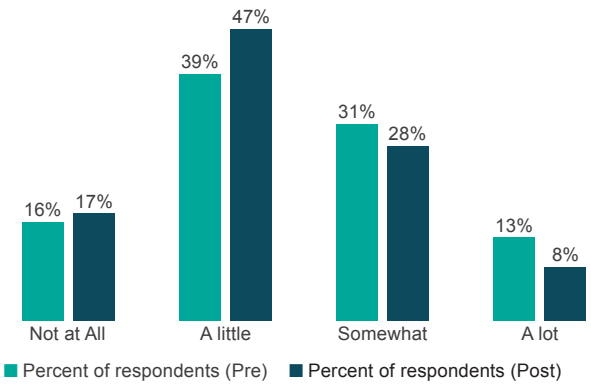
Fear of Falling and Fall Incidence

The assessment found a notable shift in perceived fear levels, particularly at the higher end of the fear spectrum. The proportion of respondents who reported being afraid of falling “A lot” declined from 13% pre-program to 8% post-program, indicating a reduction in the most severe levels of fall-related anxiety. Conversely, more participants reported feeling “A little” fearful after the program, increasing from 39% to 47%, while those who were “Not at all” fearful rose slightly from 16% to 17%, suggesting a general shift away from high levels of fear toward more moderate or minimal concern. In addition, a fixed effects regression model showed substantial improvement in fall incidence, with the average number of falls decreasing significantly from 0.46 to 0.22, and the rate of injurious falls dropping from 18% to 8%, highlighting the program’s impact on both fall frequency and severity. These reductions in fall frequency and severity were observed consistently across demographic groups and delivery formats.

Figure 4: Self-reported Fear of Falling

How fearful are you of falling?



Loneliness and Social Isolation

Participants in fall prevention programs also reported slight improvements in feelings of loneliness or isolation. The proportion of respondents who reported “Rarely” feeling lonely or isolated increased from 36% pre-program to 38% post-program, while those reporting “Sometimes” declined slightly from 27% to 26%. Meanwhile, the proportion of participants who “Never” felt lonely or isolated decreased slightly from 33% to 32%.

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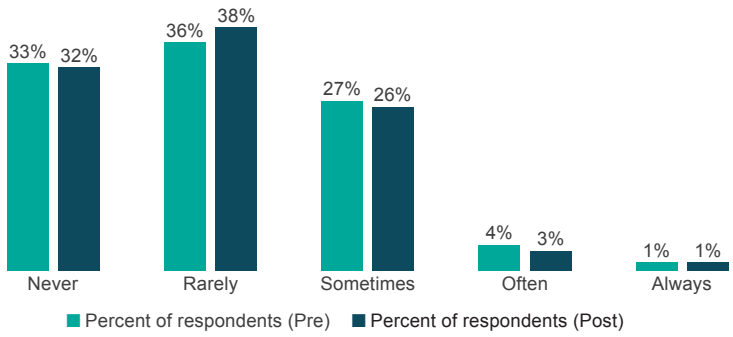
Figure 3: Self-reported perception on Loneliness and Isolation

How often do you feel lonely or isolated?



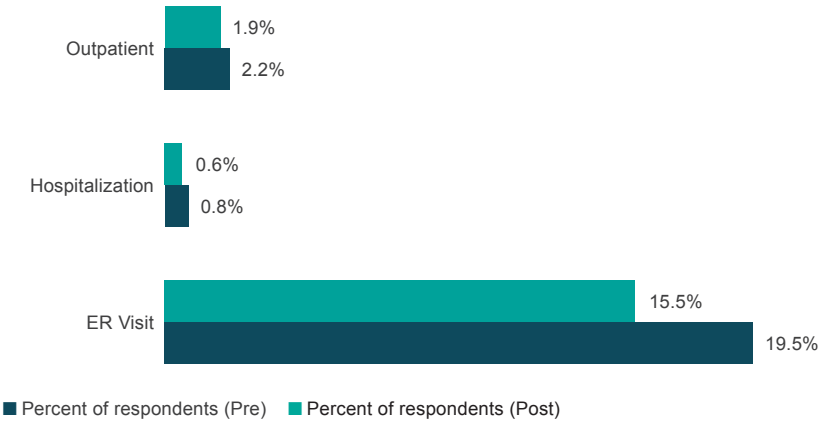
Healthcare Utilization

The figure illustrates participants' responses regarding the type of medical care received following a fall, both before and after participating in fall prevention programs. The most notable change occurred in the proportion of participants who reported visiting the emergency room (ER) after a fall, which declined from 19.5% pre-program to 15.5% post-program. This reduction suggests that the program may have contributed to a decrease in fall severity or improved participants' ability to manage fall-related incidents without requiring emergency care.

Smaller decreases were also observed in hospitalizations, which declined from 0.8% to 0.6%, and outpatient visits, which dropped from 2.2% to 1.9%. Fixed effects logistic regression results also showed a decrease in healthcare utilization, with the likelihood of emergency room visits following a fall decreasing by 18%, hospitalizations declined by 26%, and outpatient visits declined by 16%. This downward trends across all forms of medical response indicate that fall prevention programs are associated with reductions in fall-related health system utilization, particularly in high-cost settings like emergency departments.

Figure 5: Self-reported Healthcare Utilization

What happened after you fell?



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Return on Investment (ROI)

From a fiscal perspective, the programs demonstrated extraordinary efficiency. Using the avoided incidents per participant (from fixed effects regression models) and healthcare cost estimates from the literature (adjusted to 2024 USD using the U.S. GDP Price Index), Tables 9 through 11 present projected cost savings across three cost scenarios: lower bound, mean, and upper bound. In the lower-bound scenario (Table 9), which applies the most conservative cost estimates for each type of incident, the program yields an estimated savings of $1,527.14 per participant and a total savings of over $420 million across all 275,462 participants. Under the mean cost scenario (Table 10), savings per participant rise to $3,904.13, with a total estimated savings exceeding $1.07 billion. The upper-bound estimates (Table 11) suggest the greatest potential return, with total program savings reaching approximately $1.76 billion, or $6,371.95 per participant. When measured against the $45 million invested in program delivery, the return on investment ranged from $8.36 to $38.04 for every dollar spent on fall prevention programs.

Table 9: Cost Savings Estimates (Lower Bound)

Incident	Avoided Per Participant	Cost	Savings Per participant	Total Savings
Injurious fall	0.1	$15,807.00	$1,580.70	$435,422,783.40
ER visit	0.09	$1,485.00	$133.65	$36,815,496.30
Hospitalization	0.13	$9,805.32	$1,274.69	$351,129,097.52
Outpatient visit	0.08	$1,485.00	$118.80	$32,724,885.60
Total			**$1,527.14**	**$420,669,479.42**

Table 10: Cost Savings Estimates (Mean)

Incident	Avoided Per Participant	Cost	Savings Per participant	Total Savings
Injurious fall	0.1	$15,807.00	$1,580.70	$435,422,783.40
ER visit	0.09	$3,524.67	$317.22	$87,382,138.28
Hospitalization	0.13	$25,422.57	$3,304.93	$910,383,757.05
Outpatient visit	0.08	$3,524.67	$281.97	$77,673,011.80
Total			**$3,904.13**	**$1,075,438,907.14**

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Table 11: Cost Savings Estimates (Upper Bound)

Incident	Avoided Per Participant	Cost	Savings Per participant	Total Savings
Injurious fall	0.1	$15,807.00	$1,580.70	$435,422,783.40
ER visit	0.09	$6,420.60	$577.85	$159,176,818.55
Hospitalization	0.13	$40,618.80	$5,280.44	$1,454,561,665.13
Outpatient visit	0.08	$6,420.60	$513.65	$141,490,505.38
Total			**$6,371.95**	**$1,755,228,989.05**

Table 12: Return on Investment (ROI)

Scenarios	Total Savings	Cost	Savings Per participant	Total Savings
Scenario 1 (Lowest)	$420,669,479.42		$375,710,947.42	$8.36 per $1
Scenario 2 (Mean)	$1,075,438,907.14	$44,958,532.00	$1,030,480,375.14	22.92 per $1
Scenario 3 (Highest)	$1,755,228,989.05		$1,710,270,457.05	38.04 per $1

POLICY IMPLICATIONS

The findings from this report present a clear and urgent policy opportunity. Given that 67% of fall-related costs are paid by Medicare and an additional 4% by Medicaid, the reductions in hospitalizations, emergency visits, and long-term care admissions translate directly into federal and state budget relief.

Beyond cost savings, these programs contribute to federal priorities related to healthy aging and preventative care. They promote independence, reduce caregiver burden, and help older adults remain connected to their communities. Importantly, the analysis also highlights the value of in-person and hybrid delivery models, especially in underserved and rural areas.

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Recommendations for Policymakers:

1. Expand ACL and CDC funding for fall prevention under Title III-D, Injury Prevention grants, and Medicaid HCBS waivers.
2. Incorporate fall prevention into Medicare Advantage and managed care incentive structures to reduce avoidable acute care use.
3. Strengthen monitoring through robust data systems like HAPID, linking self-reported outcomes with claims-based utilization data.
4. Support scalable delivery models, including hybrid and virtual programs, to improve accessibility in rural and high-risk communities.
5. Mandate routine cost tracking from grantees to enhance future ROI analyses and benchmarking.

LIMITATIONS

While this study presents some of the strongest national evidence to date on the value of fall prevention, some key limitations must be acknowledged:

1. The time periods for pre- and post-program outcome reporting were not equivalent, potentially inflating post-program improvement.
2. Program costs were estimated using federal funding totals rather than site-specific expense data.
3. All outcome measures were self-reported, making them susceptible to recall or social desirability bias.
4. Income data was not available for most participants, limiting socioeconomic subgroup analysis.

These limitations underscore the need for continued investments in standardized data infrastructure for more robust outcome monitoring and program cost tracking, and integration with administrative claims systems.

CONCLUSION

This assessment provides robust evidence that evidence-based fall prevention programs are both clinically effective and economically sound. With high rates of participation, clear improvements in health and wellbeing, and return on investment figures as high as $38 per dollar spent, these programs represent a model for efficient, scalable public health intervention.

In an era of rising healthcare costs and an aging population, fall prevention should be viewed as a core component of national aging policy, not a supplementary wellness initiative. Sustained funding, improved data integration, and program delivery will be essential to maximizing these benefits. For Medicare, Medicaid, and public health systems, investing in fall prevention is not only good public health policy, it is sound fiscal policy.

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