

Tai Chi: An Innovative Community-Based Program to Address Fall Risk in Older Adults

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Objectives

Identify

Identify the impact of older adult falls on individuals, health systems, and society

Examine

Examine the health benefits of tai chi

Discuss

Discuss how to implement a tai chi program in your congregation or community

Experience

Experience the therapeutic benefits of tai chi by practicing the 8-forms of Tai Chi: Moving for Better Balance

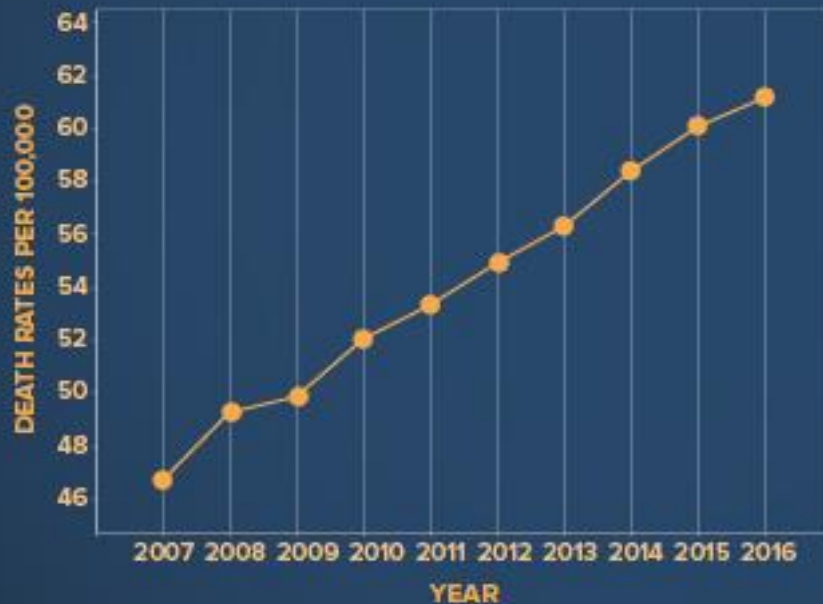
Impact of Older Adult Falls

- ▶ More than one in four older adults fall each year, but less than half tell their doctor.
- ▶ One in five falls causes a serious injury, such as a broken bone or head injury.
- ▶ In 2015, the total medical costs for falls was more than \$50 billion.
- ▶ Medicare and Medicaid shoulder 75% of these costs.
- ▶ The older adult population is predicted to increase by 55% by the year 2030.
- ▶ Older adult falls are largely preventable, and healthcare providers (and FCNs and HMs) can play an important role in prevention.

Retrieved March 6, 2019 from: <https://www.cdc.gov/homeandrecreationalafety/falls/adultfalls.html>

Fall Death Rates in the U.S. **INCREASED 30%**

FROM 2007 TO 2016 FOR OLDER ADULTS



Learn more at www.cdc.gov/HomeandRecreationalSafety.

If rates continue to rise,
we can anticipate

**7 FALL
DEATHS**
EVERY HOUR
BY 2030



OLDER ADULT FALLS A Growing Burden

STEADI Stopping Elderly
Accidents, Deaths & Injuries

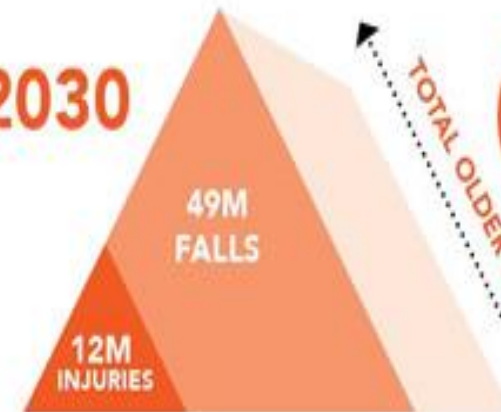
2014



TOTAL OLDER ADULTS

46M
PEOPLE

2030



TOTAL OLDER ADULTS

74M
PEOPLE

Retrieved March 6, 2019 from: <https://www.cdc.gov/steady>

Impact of Older Adult Falls



INDIVIDUALS



HEALTH SYSTEMS



SOCIETY

Health Benefits of Tai Chi



Reduced fall risk in older adults



Reduced blood pressure



Improved sleep quality



Enhanced psychological well-being



Decreased pain



Others

Evidence-Based Falls Prevention Programs: Saving Lives, Saving Money

THE CHALLENGE: Older Adult Falls in the U.S.

- 1 in 3 Americans aged 65+ falls each year
- Every 13 seconds, an older adult is treated in the emergency room for a fall
- Every 20 minutes, an older adult dies from a fall



Falls Are Common

- In 2013, the total cost of fall injuries was \$34 billion (78% paid by Medicare)
- This total cost may reach \$67.7 billion by 2020
- Even falls without injury can cause fear of falling, leading to physical decline, depression, and social isolation

Falls Are Costly

Falls in adults aged 65+ are the leading cause of head injuries and broken hips

THE SOLUTION: Proven Community-Based Programs



A Matter of Balance

8-session workshop to reduce fear of falling and increase activity among older adults in the community

- 97% of participants feel more comfortable talking about their fear of falling
- 99% of participants plan to continue exercising
- \$938 savings in unplanned medical costs per Medicare beneficiary



Otago Exercise Program

Individual program of muscle strengthening and balance exercises prescribed by a physical therapist for frail older adults living at home (aged 80+)

- 35% reduction in falls rate
- \$429 net benefit per participant*
- 127% ROI**



Stepping On

7-week program that offers older adults living in the community proven strategies to reduce falls and increase self-confidence

- 30% reduction in falls rate
- \$134 net benefit per participant
- 64% ROI



Tai Chi: Moving for Better Balance***

Balance and gait training program of controlled movements for older adults and people with balance disorders

- 55% reduction in falls rate
- \$530 net benefit per participant
- 509% ROI



Falls Free®

National Council on Aging

Learn more about these and other proven programs at ncoa.org/FallsPrevention

Sources:

Carande-Kulis, V., Stevens, J., Fiorens, C., Beattie, B.L., Arias, I. (2016). A cost-benefit analysis of three older adult falls prevention interventions. *Journal of Safety Research*, 62, 66-70.

Report to Congress in November 2013: The Centers for Medicare & Medicaid Services' Evaluation of Community-based Wellness and Prevention Programs under Section 4202 (b) of the Affordable Care Act. <http://innovation.cms.gov/Files/reports/CommunityWellnessRTO.pdf>

* Net benefit = Direct medical costs averted (e.g., emergency department visits, hospitalizations, rehab, homecare) after subtracting intervention costs

** ROI (return on investment) = Net benefit per participant divided by average cost of the program per participant; percentage of return for each dollar invested

***Now known as 'Tai Ji Quan: Moving for Better Balance'

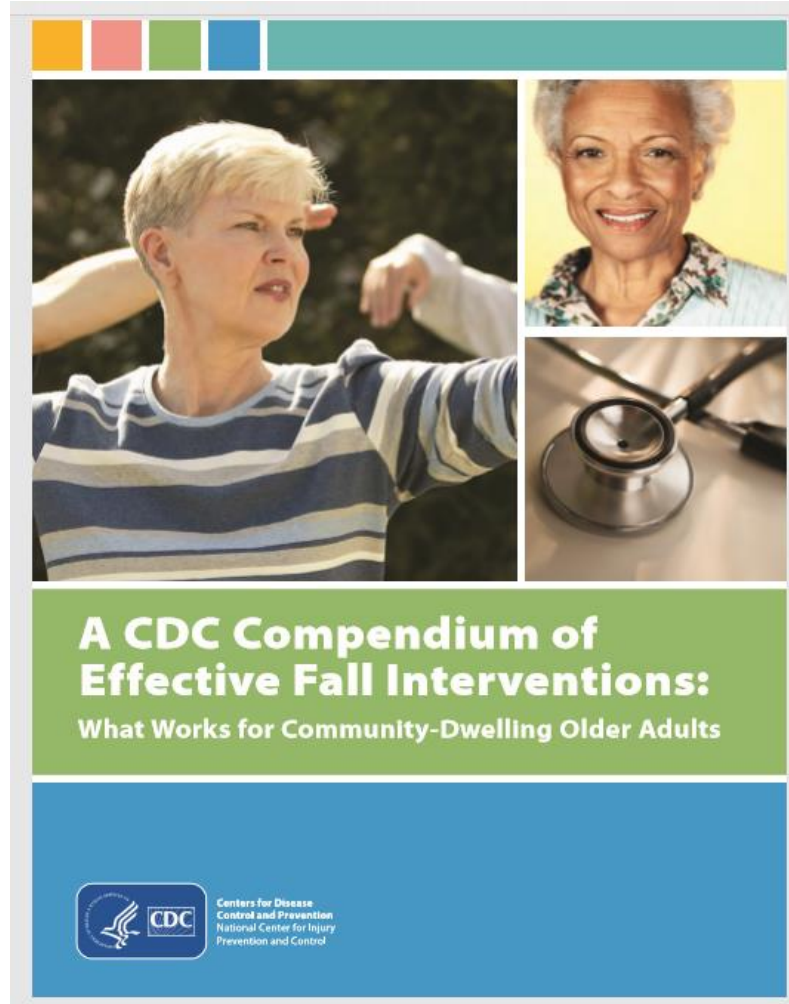
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Tai Chi Return on Investment

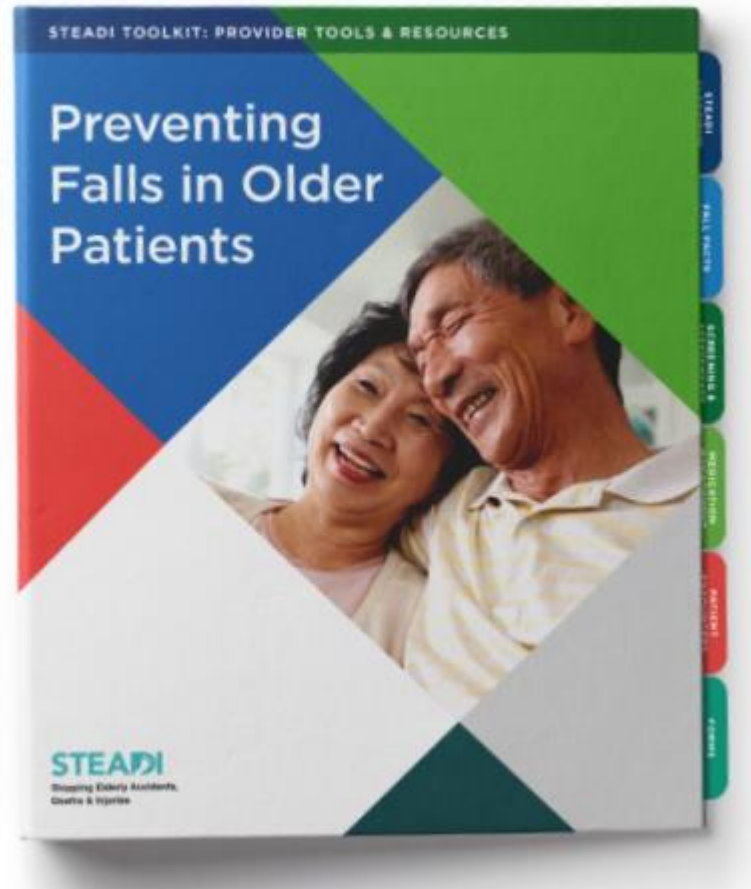
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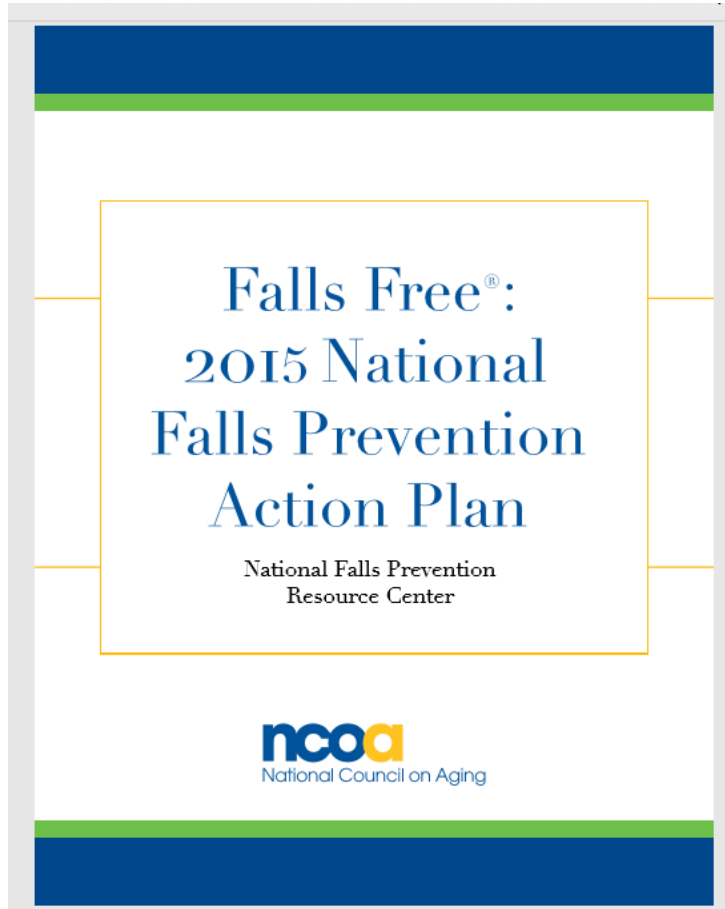
<https://www.ncoa.org/healthy-aging/falls-prevention/>

CDC Compendium of Effective Fall Interventions, 3rd edition, 2015



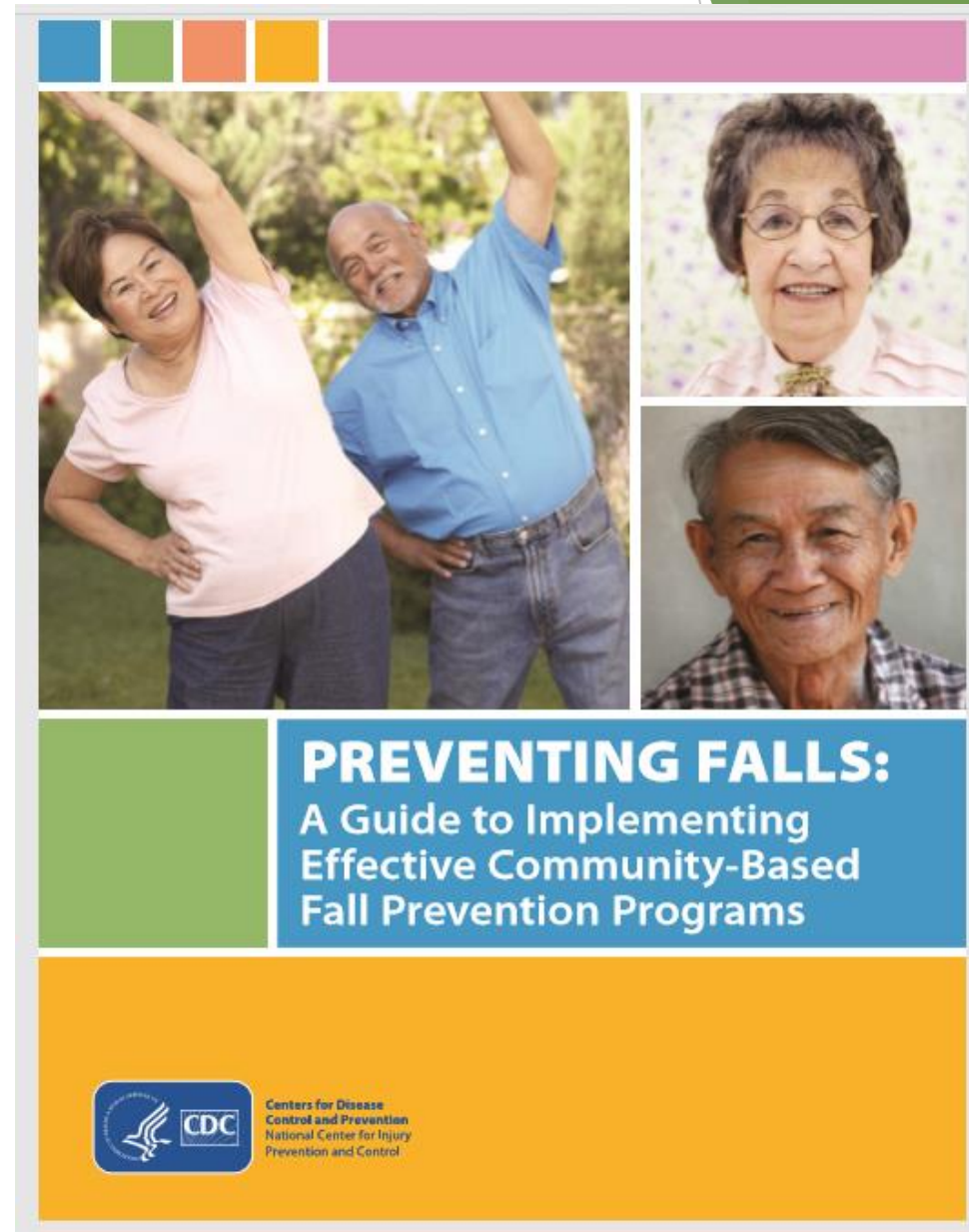
STEADI: Stopping Elderly Accidents Deaths and Injuries





National Council
on Aging (NCOA)
Falls Free® 2015
National Falls
Prevention
Action Plan

How to Implement a Tai Chi Program in Your Congregation or Community



Step One: Assessment and Planning



Assess your community's needs



Identify resources



Determine your organization's readiness



Complete required training

Step Two: Develop Partnerships



Identify potential partners



Develop your “pitch”



Make contact



Maintain partnerships



Budget adequate resources

Step Three: Market Your Program

Identify

Identify target population



Increase

Increase public awareness



Develop

Develop marketing and recruitment plan



Educate

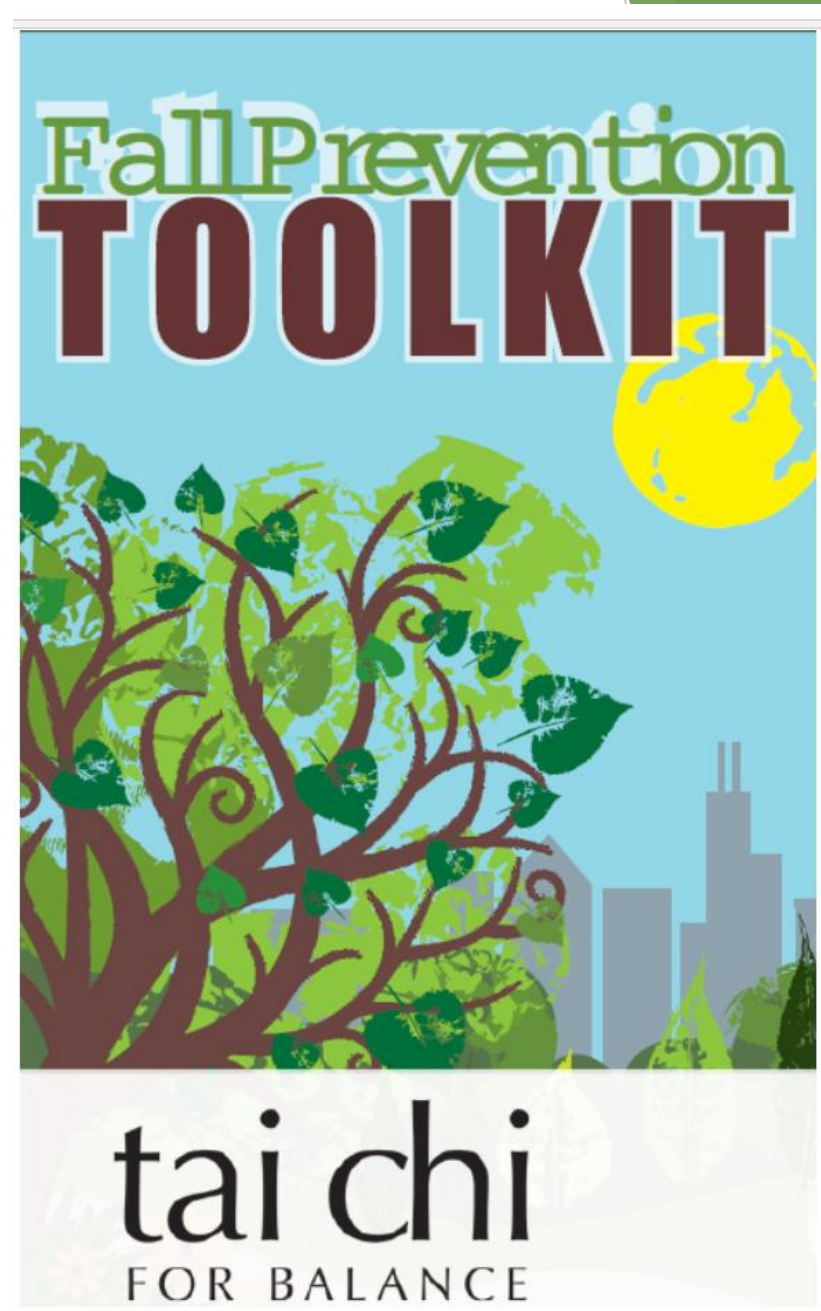
Educate healthcare providers



Educate

Educate your target population

Fall Prevention Toolkit



Step Four: Implement Your Program

- ▶ Just do it!
- ▶ Assure program quality and fidelity
 - ▶ Plan
 - ▶ Monitor
 - ▶ Evaluate
 - ▶ Revise

Step Five: Evaluate Your Tai Chi Program

▶ Why?

- ▶ Show benefits to participants
- ▶ Attract and retain program partners and stakeholders
- ▶ Make program improvements based on strengths and weaknesses
- ▶ Seek continued or additional funding for long-term sustainability or expansion

Step Five: Evaluate Your Tai Chi Program

▶ How?

- ▶ Evidence-based programs have been shown to reduce falls in original research
 - ▶ You do not need to measure participants' self-reported falls
- ▶ Measure improvements in balance, functional ability, and self-confidence
 - ▶ 30-Second Chair Stand Test
 - ▶ Timed Up and Go Test
- ▶ Participant satisfaction scores
- ▶ Process measures
 - ▶ Number of attendees/program attendance
 - ▶ Number of instructors trained
 - ▶ Number of tai chi classes available
- ▶ Qualitative data

Tai Chi for Balance

- ▶ Tai Chi has been shown to reduce the risk of falls up to 50% in those over age 60
- ▶ 75 class locations drew 2,441 participants
- ▶ Participants showed significant improvement in balance

Pre-post numbers:

- ▶ % increase in Sit-to-Stand 54.98%
- ▶ % increase in Single Leg Stand 98.09%
- ▶ % increase in SLS Eyes Closed 53.76%

2018 Projects

Step Six: Celebrate and Sustain Your Program

- ▶ Establish and share your vision
- ▶ Build collaborations
- ▶ Secure funding
- ▶ Demonstrate benefits
- ▶ Examine delivery system
- ▶ [Tai Chi video](#)

Questions?





Let's
Practice!

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