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# Take a Stand to Prevent Falls in Oregon

**Lisa Shields**

Public Health Division

Injury and Violence Prevention Program

ADRC Webinar

July 15, 2015

The logo for the Oregon Health Authority. It features the word "Oregon" in orange, "Health" in blue, and "Authority" in orange. The word "Health" is the largest and is underlined with a blue line. The entire logo is set against a light blue curved background.

Oregon  
Health  
Authority

# Topics covered

The burden  
of falls

Preventing  
falls

Oregon  
program  
overview

Resources

7 things you  
can do starting  
NOW

# Falls are Common in Older Individuals

**One out of three adults 65+ falls each year but less than half talk to their health care providers about it**

**HALF of adults 80+ fall each year**

**Two-thirds of those who fall will do so again within 6 months**

Source: [CDC Injury Center](#)

# Falls in Oregon

**In 2013 639 Oregonians died and nearly 8,700 were hospitalized due to a fall**

**Oregon's fatal fall rate for adults 65+ is 41% higher than the national average**

**The rate of death due to falls has increased nearly two-fold (92.3%) since 2000**

**The rate of fatal falls for those 85+ is 23x greater than those age 65-74**

**Nearly 60% of seniors in Oregon who are hospitalized for falls are discharged into long-term care**

1. Source: [Oregon Injury and Fatality Data](#)

# The cost of falls

Fall hospitalization charges for Oregon seniors are over \$222 million per year



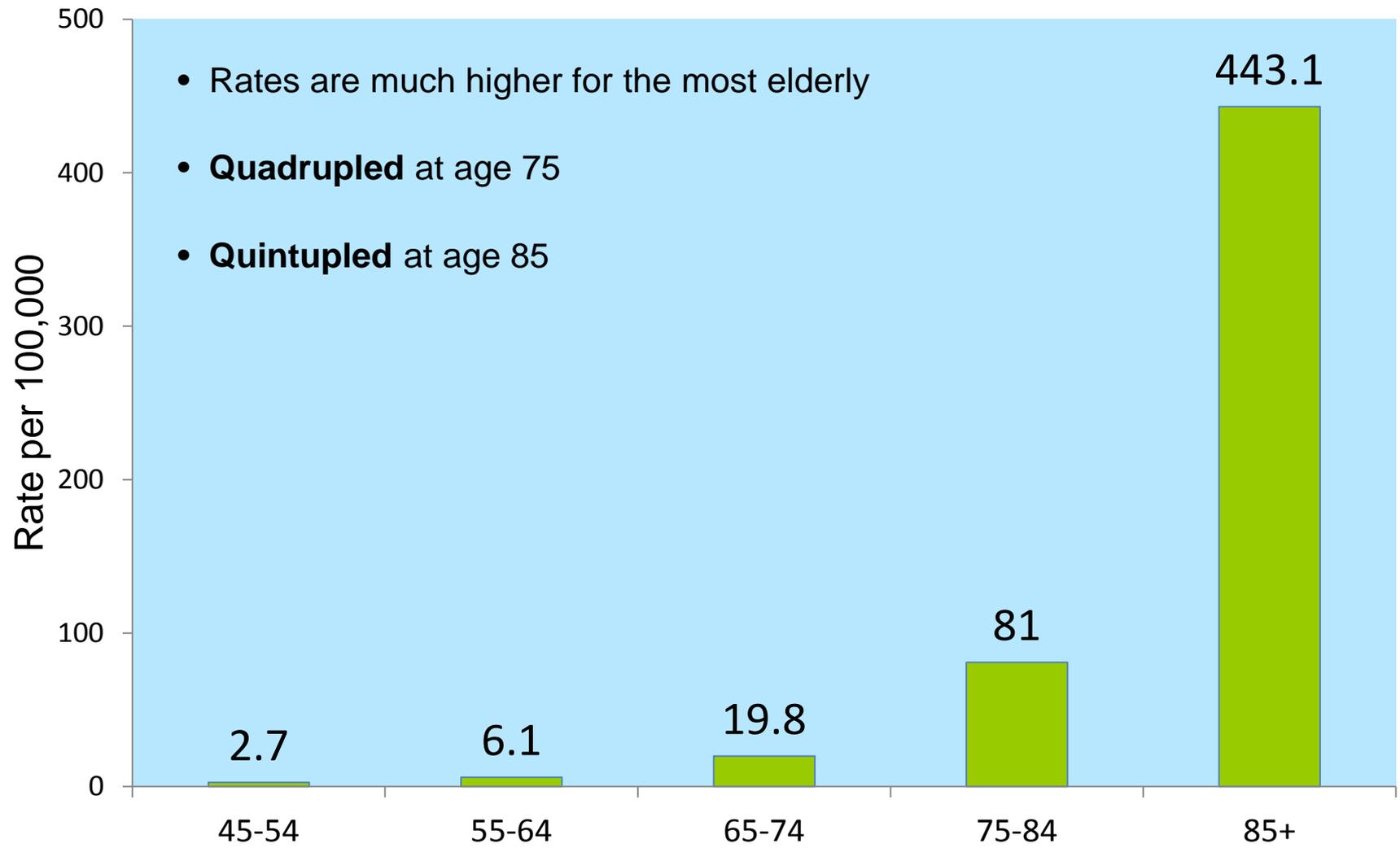
Unintentional falls are the third most costly hospitalized condition after cancer and heart disease



The median per patient hospitalization charges for fall-related injury are nearly \$33,000

Source: [Oregon Injury and Fatality Data](#)

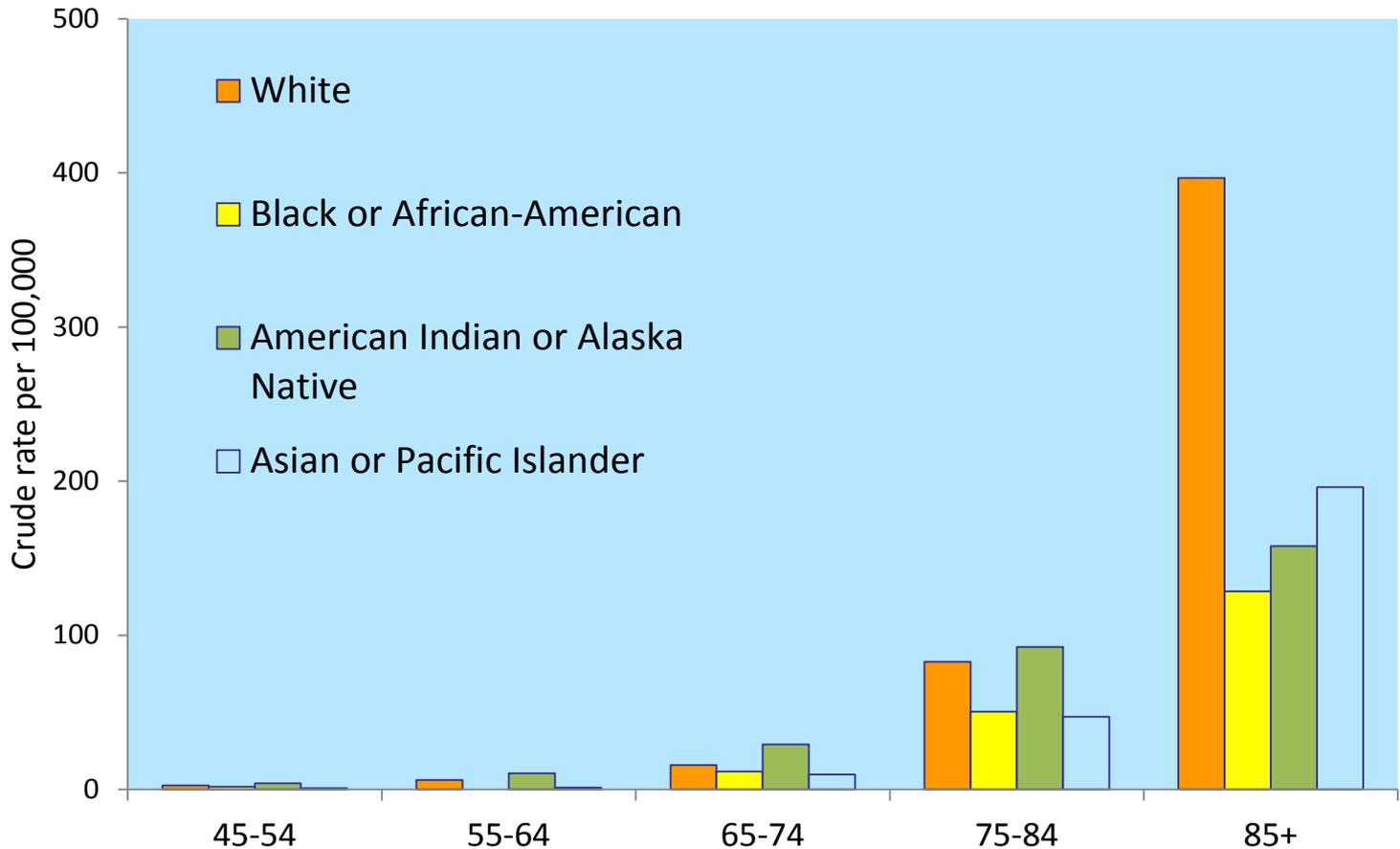
## 2013 Oregon fall mortality rate by age



Source: [Oregon Injury and Fatality Data](#)

# 2009 - 2013 Oregon average annual fall mortality rate by race

- Native Americans had the highest mortality rates from 25-85
- Whites had the highest fall mortality rate 85+
- Hispanic fall mortality rates were lower than Non-Hispanics for every age group except age 65 to 74

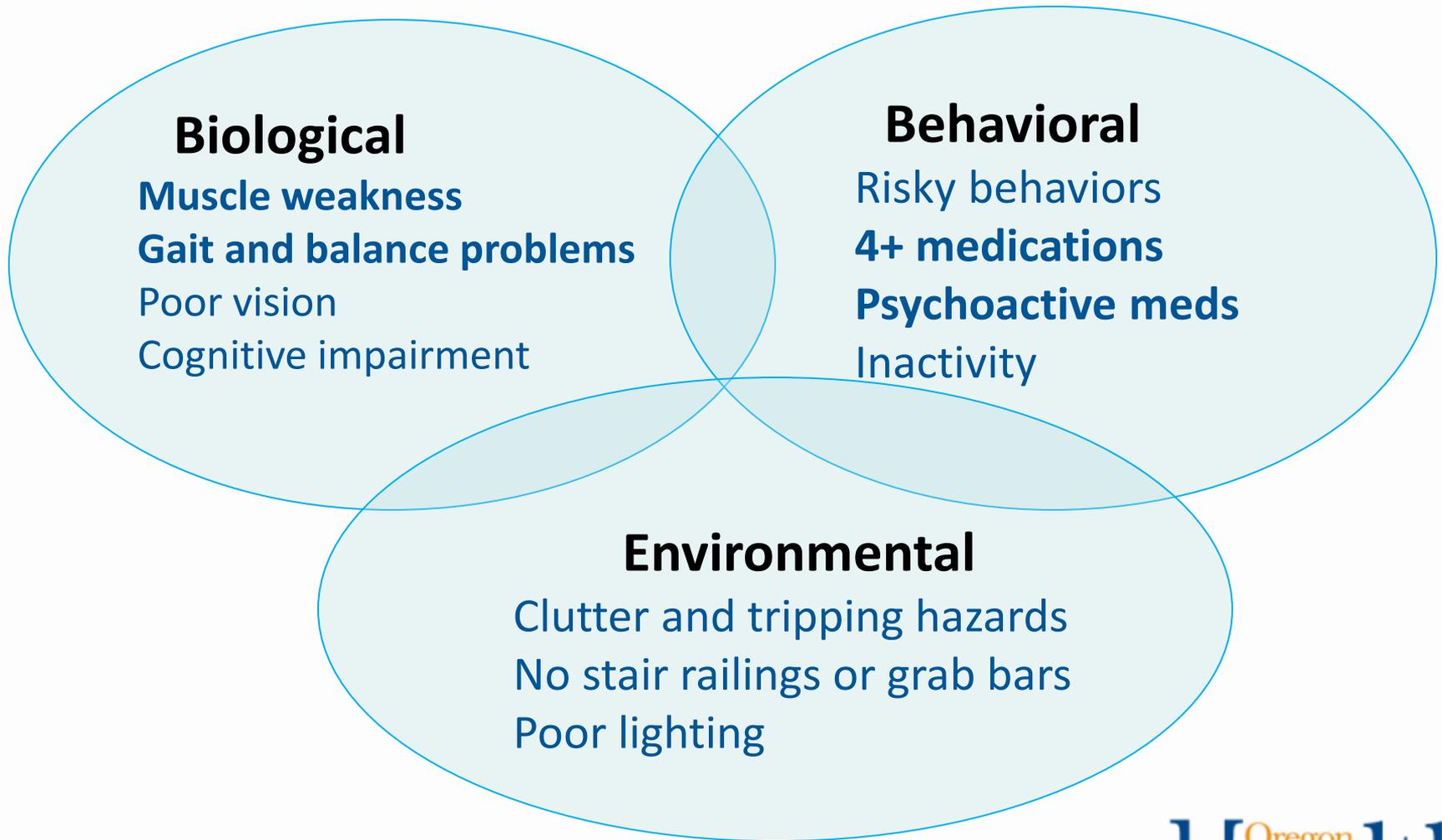


Source: [Oregon Injury and Fatality Data](#)

# Consequences of falling



# Falls can be prevented



Source: [Rubenstein, Age and Ageing 2006; ii37-ii41](#)

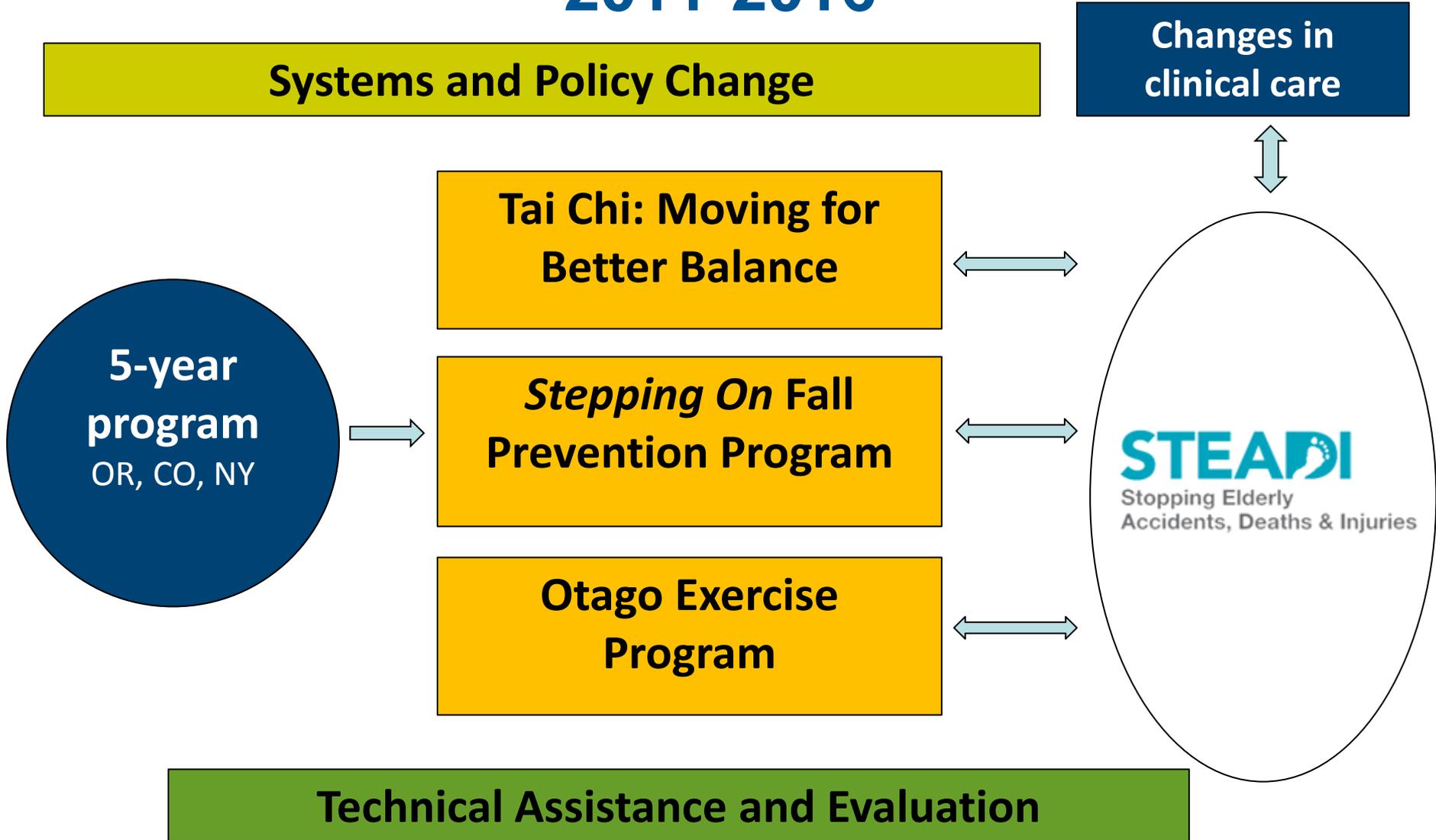
# Community Wide Efforts Can Reduce Falls Substantially

A multifaceted community based falls reduction program involving medical groups and the community reduced fall related injuries by **10% in a target community**

This is the model for the CDC State Fall Prevention Program

Source: [Tinetti, N Engl J Med 2008;359:252-61](#)

# CDC State Fall Prevention Program 2011-2016



Source: [CDC Core Violence and Injury Prevention Program](#)

# Oregon falls prevention strategies for systems change

**Health systems:** embed activities into existing business models

**Health plans and Medicare-beneficiary fitness programs:** cover activities as member benefit

Establish community fall prevention programs in sustainable settings:  
Tai Chi, Stepping On, Otago

Increase clinician assessments and referrals (STEADI)

Partner with aging services, community health workers, volunteers, professional organizations, first responders

Increase public awareness of falls as a preventable issue

# Incentives and Motivators for Health Care and Falls Prevention

## **MEDICARE**

Welcome to Medicare visit  
Annual Wellness Visit  
5-star health plan rating

**Physician Quality  
Reporting System  
(PQRS)**

**Patient-centered  
Primary Care  
Homes**

**480 recognized  
Oregon clinics**

**Coordinated Care  
Organizations  
(CCO)**

Serving 90% of Oregon  
Health Plan (Medicaid)  
members

**Comprehensive  
Primary Care  
initiative**

Oregon is one of 7  
national markets  
67 clinics

**ABIM and ABFM  
maintenance of  
certification  
credits**

# Activities with health system partners



- STEADI toolkit
- Leader training for community fall prevention programs



- Interns
- Participation in outreach events
- Provide opportunities for networking with local and national experts, each other



- Assist with ABIM and ABFM credit requirements



# Health plan coverage



KAISER PERMANENTE®



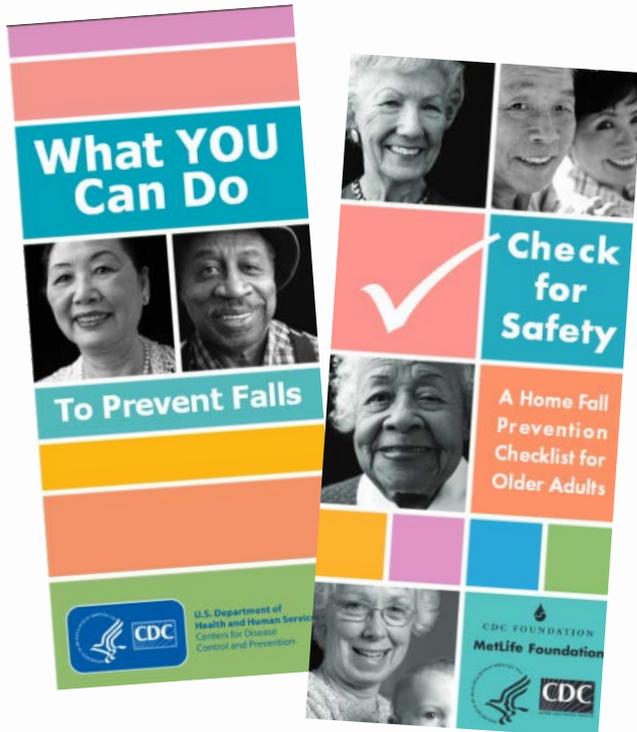
- Tai Chi: Moving for Better Balance is approved program for Silver and Fit and Silver Sneakers FLEX™
- Silver and Fit health plans include Providence and Kaiser
- Providence Health Plan covers Stepping On classes
- Portland VA Medical Center waived co-pay requirement for Stepping On classes, reimburses travel expenses
- Kaiser Permanente offers Otago to Complex Medical Home patients
- ATRIO health plans working with OGEC and Salem Clinic, and NWSDS to promote STEADI as best practice



# First responders

Trainings for statewide Fire and Life safety educators through Oregon State Fire Marshal

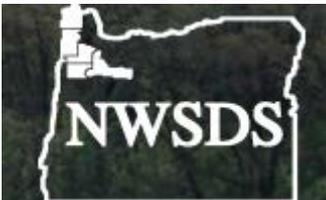
- Home safety assessments
- Safe footwear and clothing
- Home modification resources
- Medication safety
- Vision safety
- Connecting seniors to falls prevention programs
- Distributing STEADI patient education material



# Aging services and professional organizations



- Presentations and exhibit tables at events
- Promote STEADI toolkit material
- Participation in Falls Prevention Awareness Day
- Webinars for ADRC series
- TCMBB trainings for senior center staff
- Training and TA for Otago experiment with AAA in Salem



[alz.org](http://alz.org) | alzheimer's association



# Activities with community health workers and volunteers

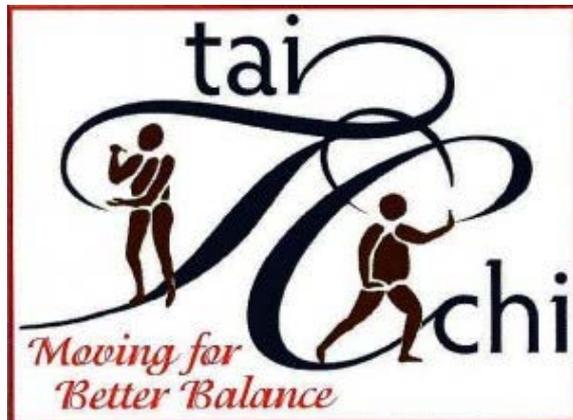


Northwest Portland Area  
Indian Health Board  
*Indian Leadership for Indian Health*

- Tai Chi: Moving for Better Balance and Stepping On trainings
- Participation in public awareness events
- Falls prevention seminars for staff and clients
- STEADI patient education material
- CHW online training



# STEADI and community programs



Otago Exercise Programme

to prevent falls in older adults



## Preventing Falls in Older Patients Provider Pocket Guide

### Key Facts about Falls:

- 1/3 of older adults (age 65+) fall each year.
- Many patients who have fallen do not talk about it.

### This is What You Can Do:

#### RITUAL:

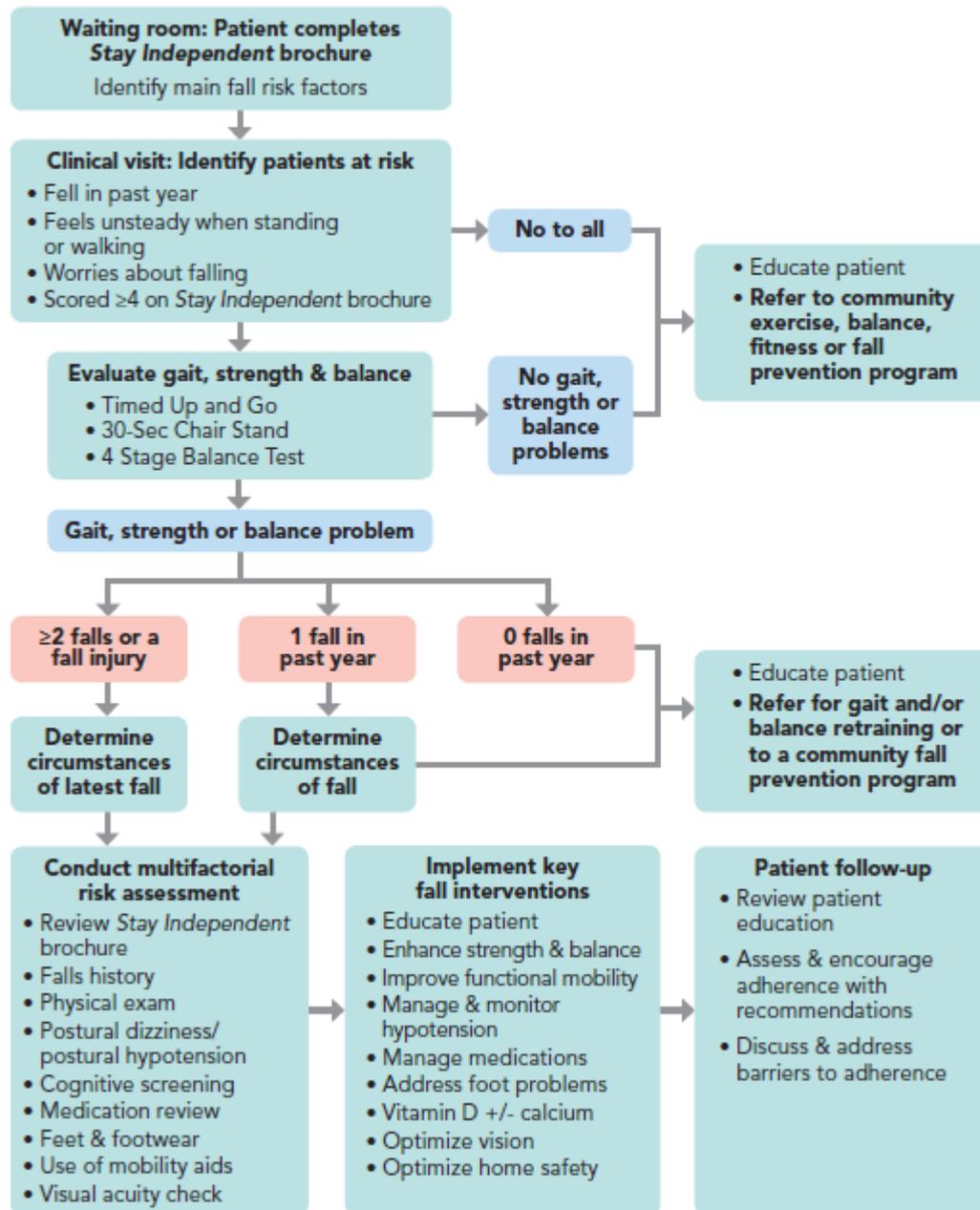
- Review self-assessment brochure
- Identify risk factors
- Test gait & balance
- Undertake multifactorial assessment



# STEADI in Oregon

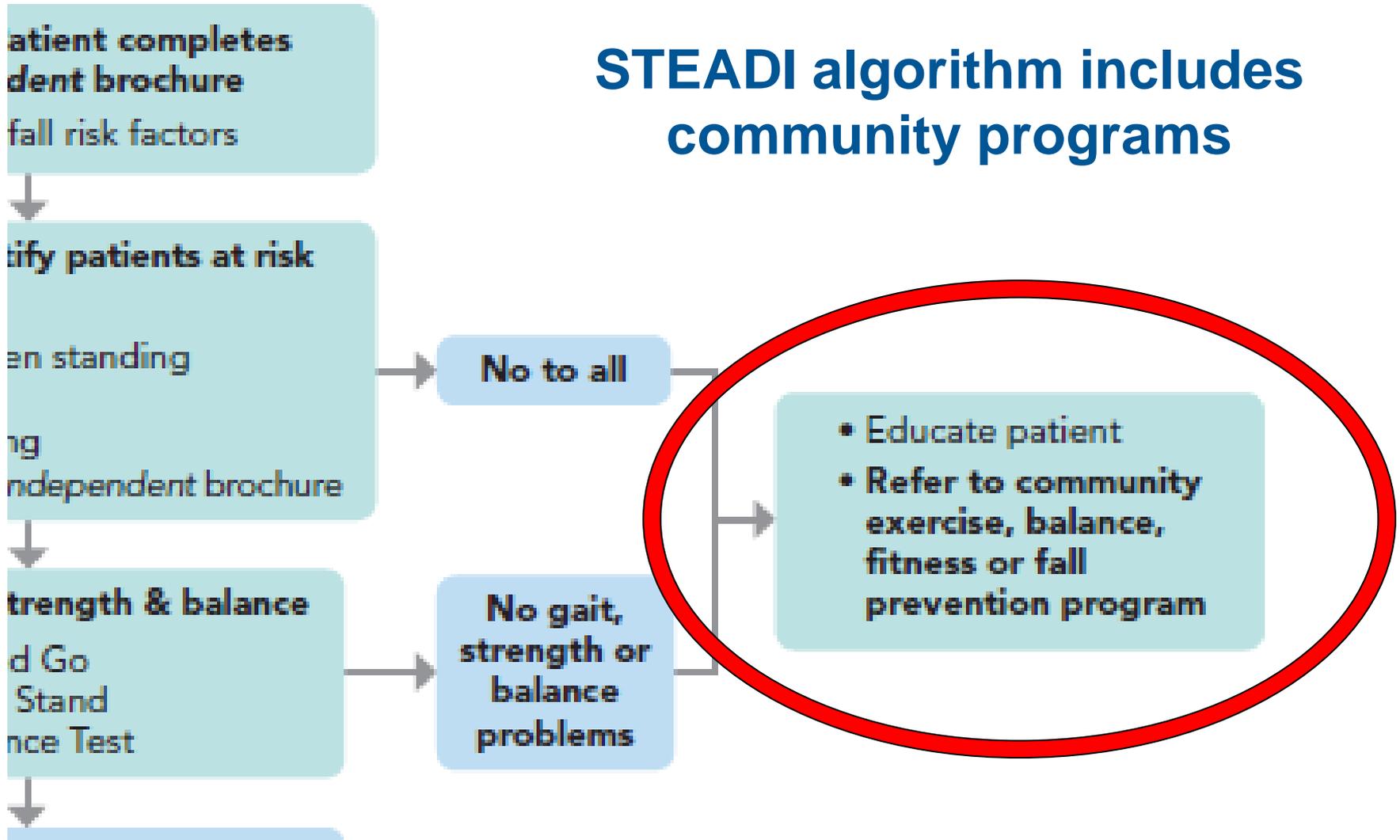
- Toolkit for health care providers with decision tree, functional assessments, referrals, and patient education material
- STEADI tools developed by Oregon Health & Science University is now part of Epic's national EHR package. Online training available in August 2015 through CDC
- Oregon Geriatric Education Center trains clinic groups statewide; Oregon Health Authority trains Tai Chi instructors in those areas to accommodate clinician referrals
- Over 2,000 patients screened

# Algorithm for Fall Risk Assessment & Interventions

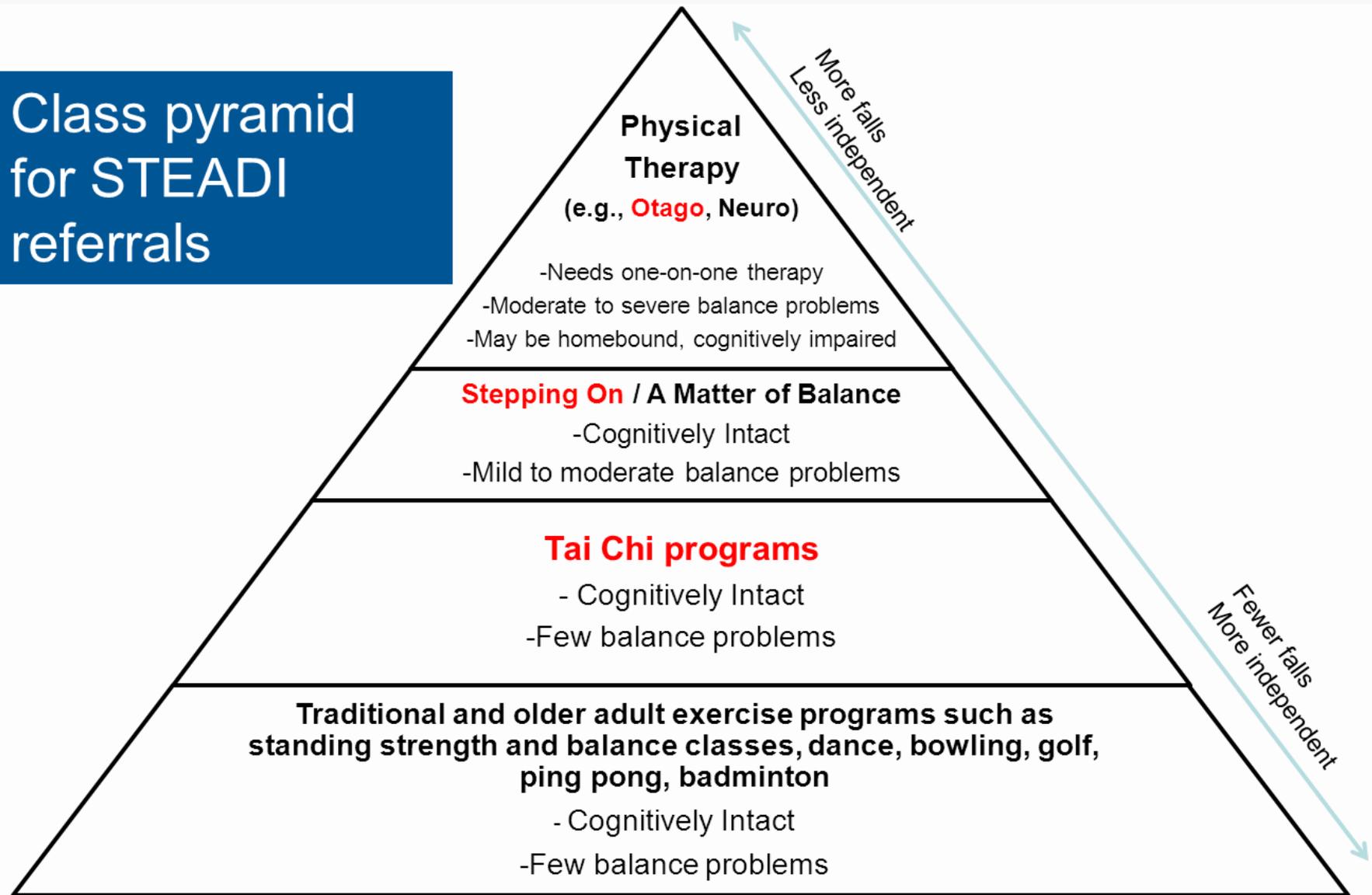


**STEADI** Stopping Elderly Accidents, Deaths & Injuries

## STEADI algorithm includes community programs



# Class pyramid for STEADI referrals



Copyright 2005, Mahoney J, Shea T, with Dane County Falls Prevention Task Force

# What is the evidence?

## Tai Chi: Moving for Better Balance

- Developed at Oregon Research Institute by Dr. Fuzhong Li
  - **Evidence:** Inactive seniors 70+ practiced 3x/week for 26 weeks. Risk of falling decreased 55%
  - 500 instructors trained in Oregon
  - Over 1,500 participants completed 12-week class
- 

## *Stepping On*

Developed in Australia by Lindy Clemson; multifactorial intervention

- **Evidence:** Seniors 70+ who had fallen in the past year or were concerned about falling. Fall rate reduced 30% overall. Male fall rate reduced almost 67%
- 29 leaders trained in Oregon
- 210 participants completed 7-week class

Source: [CDC Compendium of Effective Fall Interventions, 2nd Ed.](#)

# The Otago Exercise Program



- Developed in New Zealand for homebound, high risk, or 80+
- Individually tailored exercise plus home safety and a walking program
- Once a month for 1 year in the home. At least 4 home visits, plus monthly phone calls.
- Reimbursable by Medicare when delivered by a PT
- **Effective way to reach people who need it most: highest risk category**
- Evidence: Participants aged 80+ who had fallen in the previous year showed the greatest benefit
- Fall rate reduced by 35% overall
- 12 PTs trained in Oregon; 25 patients in Portland with traditional model, 75 patients in Salem through NWSDS



Source: [CDC Compendium of Effective Fall Interventions, 2nd Ed.](#)

# Where are these programs?

## Tai Chi: Moving for Better Balance

- Fitness centers, health care, parks and rec, senior centers, living communities
- TCMBB trainings linked with OGEC clinic trainings
- Special populations: Dept. of Corrections, VA Chronic Pain/PTSD program, Oregon State Hospital

## *Stepping On*

- Classes in Portland metro area through Providence, Emanuel, the VA, Lake Oswego adult center, Mirabella retirement

## Otago Exercise Program

- Beyond the Clinic Physical Therapy in Portland
- NW Senior and Disability Services in Salem
- Kaiser Permanente NW complex medical home patients in Portland/Vancouver

# Where can I find more information?

## Healthoregon.org/fallprevention

The screenshot shows the Oregon Health Authority website. At the top, there is a navigation bar with the Oregon.gov logo, a search bar, and a language selector. Below this is a blue header with the Oregon Health Authority logo and a search bar. A secondary navigation bar contains links for Topics A to Z, Data & Statistics, Forms & Publications, News & Advisories, Licensing & Certification, Rules & Regulations, and Public Health Directory. The main content area is titled "Falls Prevention for Older Adults" and includes a breadcrumb trail: Public Health > Prevention and Wellness > Safe Living > Falls Prevention for Older Adults. A "SHARE" button is visible. The page features a sidebar with various resources, a main text block with an image of an elderly couple, and a "More Information" section with links to "Safe Living" and "Contact Us".

**Public Health**

**Falls Prevention for Older Adults**

STEADI toolkit for healthcare providers

Tai Chi: Moving for Better Balance

Stepping On Falls Prevention Program

Otago Exercise Program

Resources for Older Adults Stories

Share Your Story

Request More Information

Instructor Tools

Submit Class Info

Partners

Reports

Resources for Health Care Providers

**Public Health > Prevention and Wellness > Safe Living > Falls Prevention for Older Adults**

**Falls Prevention for Older Adults**

**More Information**

[Safe Living](#)

**Contact Us**

[Injury & Violence Prevention Section](#)

 In Oregon, falls are the leading cause of fatal and nonfatal injuries for adults 65 and older. One in three older adults falls each year, and 20 to 30 percent of people who fall suffer moderate to severe injuries, such as bruises, hip fractures, and head traumas.

While falling is common to people of all ages, the severity of injury for older adults can result in a loss of mobility and independence. However, many falls are preventable; there are proven interventions that can help older adults reduce their risk of falling and live longer, healthier lives.

**Classes for Seniors**

You can also email [lisa.m.shields@state.or.us](mailto:lisa.m.shields@state.or.us) if you need assistance finding a class near you.

- [View the map of Senior Fitness Classes in Oregon / SW Washington \(includes Tai Chi, Stepping On and Otago\).](#)
- [Tai Chi for Arthritis website.](#)
- [Go4Life Free Virtual Coaching to Encourage Physical Activity](#)  
The National Institute on Aging's Go4Life program now provides participants with their own (virtual) fitness coach. Anyone can create a free account and sign up to receive tips and encouragement to get up and active every day. Whether someone wants some gentle encouragement or a little muscle behind the message, these Go4Life coaches can help. Weekly or monthly e-mail tips on specific exercises, nutrition, safety, and more are available at [Go4Life](#).

View the [Stories from others](#) about the classes and their benefits

# Oregon class listings map

## Falls Prevention Program Map Oregon/SW Washington

Public · 3 Collaborators · 667 views  
Created on Mar 7 · By Joe · Updated 3 hours ago  
★★★★★ 1 ratings · Write a comment · KML ·  



### Senior Falls Prevention - OHA

800 NE Oregon St, Ste 730, Portland, OR 97232  
[www.healthoregon.org/fallprevention](http://www.healthoregon.org/fallprevention) 971-673-1036  
[Lisa.m.shields@state.or.us](mailto:Lisa.m.shields@state.or.us) M - F: 7:30 am - 4:00 pm



### Albany, OR - Albany Senior Center

489 NW Water Ave, Albany, OR [www.cityofalbany.net/department/parks-and-recreation/classes](http://www.cityofalbany.net/department/parks-and-recreation/classes) 541-917-7760 Tai Chi Visit website contact for more info



### Battle Ground, WA - Battle Ground Baptist Church

1110 NW 6th Ave, Battle Ground, WA 360-909-2604  
[jillaross@yahoo.com](mailto:jillaross@yahoo.com) Tai Chi: Moving for Better Balance M: 9:30 - 11:00 am



### Battle Ground, WA - Battle Ground Community Center

912 E. Main St, Battle Ground, WA  
[wa-battleground.civicplus.com/index.aspx?NID=247](http://wa-battleground.civicplus.com/index.aspx?NID=247) 360-694-8144  
Enhanced Senior Fitness T, W & F: 8:30 - 9:30 am & 9:45 - 10:45 am



### Beaverton, OR - Beaverton Hoop YMCA

9685 SW Harvest Court, Beaverton, OR [ymcacw.org/locations/beaverton-hoop-ymca](http://ymcacw.org/locations/beaverton-hoop-ymca) 503-644-2191 Tai Chi See website or call



### Beaverton, OR - Elsie Stuhr Center

5550 SW Hall Blvd, Beaverton, OR [www.thprd.org/facilities/stuhr/home.cfm](http://www.thprd.org/facilities/stuhr/home.cfm) 503-629-6342 Essential Balance and Mobility T & F: 3:00 - 4:00 pm FallProof Balance & Mobility Training Level 1 T & Th: 2:00 - 3:00 pm



### Beaverton, OR - Family Martial Arts Academy

8618 SW Hall Blvd, Beaverton, OR  
[www.tigardmartialarts.com/beaverton](http://www.tigardmartialarts.com/beaverton) 503-977-3300  
[paul.keller571@gmail.com](mailto:paul.keller571@gmail.com) Tai Chi & Qigong Visit website or contact for more info



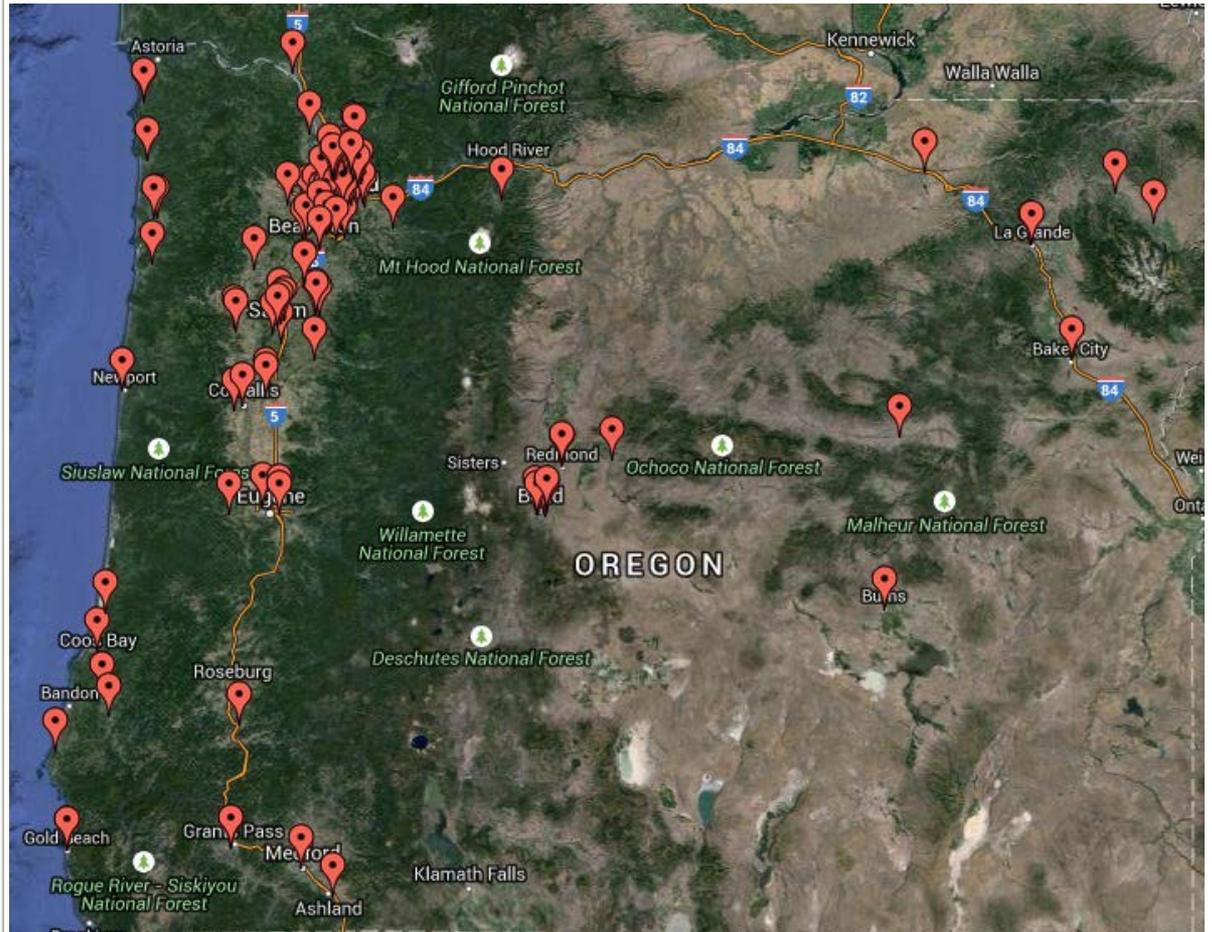
### Beaverton, OR - Nature Park Interpretive Center

15655 SW Millikan Way, Beaverton, OR [www.thprd.org/activities/home.cfm](http://www.thprd.org/activities/home.cfm) 503-292-6951 [jwdalto@comcast.net](mailto:jwdalto@comcast.net) Seasonal Tai Chi: Moving for Better Balance W: 6:00 - 7:15 pm



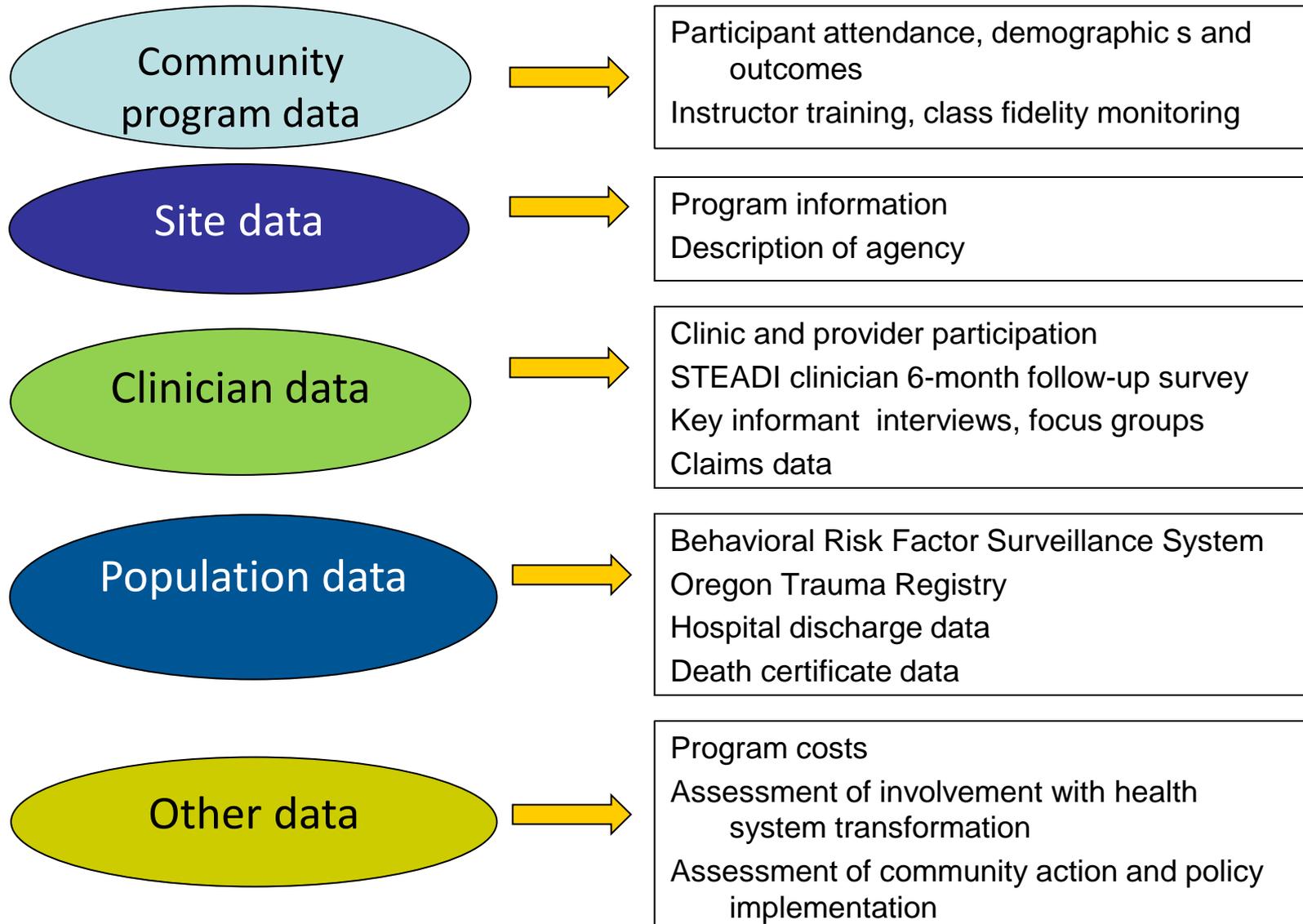
### Bend, OR - Active Life Fitness

34 NW Allen Rd, Bend, OR [www.taichijenny.com](http://www.taichijenny.com) 541-788-7537  
[activelifetaichi@gmail.com](mailto:activelifetaichi@gmail.com) Sun style Tai Chi Visit website or contact for more info



**How are we measuring success?**

# Evaluation



# Pilot Evaluation Results (OR, CO, and NY)

Data collected pre/post from participant surveys and Timed Up and Go scores; TCMBB and Stepping On group classes

Significant improvements emerged for:

- Self-reported confidence for avoiding falls
- Self-reported satisfaction with physical activity
- Self-reported ability to do specific physical tasks
- Timed Up and Go scores (~1.8 second improvement)

Falls Evaluation & Technical Assistance Team Data Report,  
Texas A&M Health Science Center

# Otago results comparing NWSDS model vs traditional

Data collected at initial visit and at 8-week follow-up visit

Program	Functional Performance	Baseline Mean	8-week Mean	Mean Difference (Effect Size <sup>^</sup> )
OR Pilot (n=31)	Timed Up & Go (TUG) (Faster = better)	29.0	24.3	-4.7** (.34)
Traditional (n=36)	Timed Up & Go (TUG)	20.8	18.5	-2.3* (.12)
OR Pilot (n=29)	30 Second Chair Stand (more stands = better)	6.5	7.1	1.7* (.34)
Traditional (n=29)	30 Second Chair Stand	8.8	10.2	1.4* (.36)

\*Paired Samples t-test p<.05      \*\*Paired Samples t-test p<.01

† Data provided courtesy of University of North Carolina at Chapel Hill

<sup>^</sup>Effect Size = mean difference / mean standard deviation

Significant improvements emerged across both delivery models for:

Timed Up and Go scores

30-second chair stand

4-stage balance test



# Resources

## 7 things we can do NOW to prevent falls



# 1. Promote the top four ways to prevent falls



Evidence-based exercise



Medication review



Vision checks



Home safety

Source: [CDC Home and Recreational Safety](#)

## 2. Distribute handouts

Free download on CDC website



Risk assessment:  
review results with your  
doctor



Includes  
recommendations for  
exercise, medications,  
vision, home safety



# Chair Rise Exercise

**What it does:** Strengthens the muscles in your thighs & buttocks.

**Goal:** To do this exercise without using your hands as you become stronger.

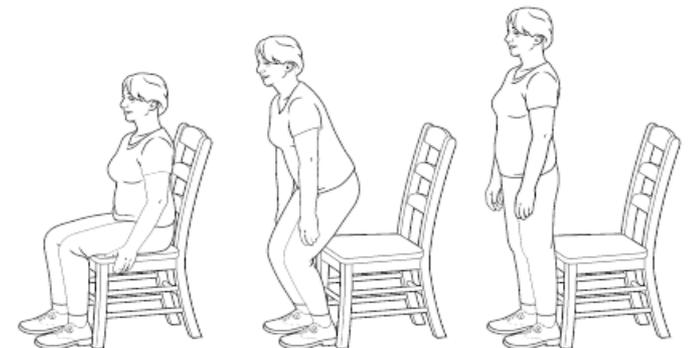
**How to do it:**

1. Sit toward the front of a sturdy chair with your knees bent & feet flat on the floor, shoulder-width apart.
2. Rest your hands lightly on the seat on either side of you, keeping your back & neck straight & chest slightly forward.
3. Breathe in slowly. Lean forward & feel your weight on the front of your feet.
4. Breathe out & slowly stand up, using your hands as little as possible.
5. Pause for a full breath in & out.
6. Breathe in as you slowly sit down. Do not let yourself collapse back down into the chair. Rather, control your lowering as much as possible.
7. Breathe out.

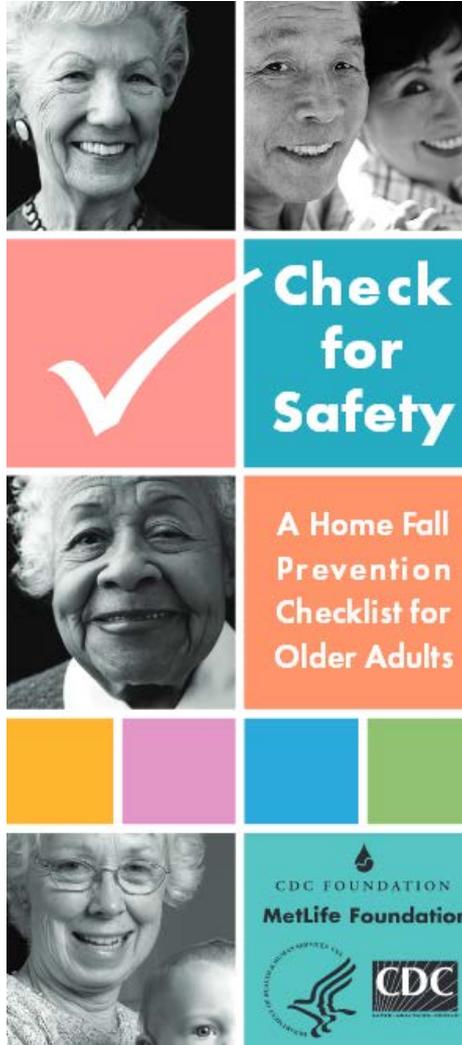
Repeat 10–15 times. If this number is too hard for you when you first start practicing this exercise, begin with fewer & work up to this number.

Rest for a minute & then do a final set of 10–15.

- Strengthens your legs
- Try doing it several times a day



### 3. Help make homes safer



- 8-page brochure with room-by-room recommendations enables anyone to conduct a home safety check

<http://www.cdc.gov/homeandrecrreationalafety/falls/checklistforsafety.html>

- Connect to home modification resources at [adrcoforegon.org](http://adrcoforegon.org)

## 4. Recommend safe footwear and clothing

- Seniors who go barefoot or just in stockings in the home are at higher risk for falls
- Wear shoes both inside and outside the house
- Avoid backless shoes or high heels
- If you wear slippers, make sure they have traction



# Safe slippers

- Can be worn indoors or outdoors
- Nonslip soles that grip like sneakers



# Safe shoes

- Avoid smooth leather or plastic soles
- Try athletic shoes with good traction and support, without heavy soles



# Safe shoes can be stylish!



# Safe robes

- Wrap loose robes around body and fasten loose belts and ties
- No wide or open pockets that stick out and catch doorknobs or furniture
- Sleeves are not too long, too open, or too wide
- Hems are not too long



# 5. Connect people to evidence-based falls prevention classes

Healthoregon.org/fallprevention or adrcoforegon.org

## Falls Prevention for Older Adults



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[View the map of Senior Fitness Classes in Oregon / SW Washington \(includes Tualatin and Clatsop County\).](#)

- [Tai Chi for Arthritis website.](#)

## 6. Take advantage of educational opportunities

### Free online courses through Carolina Geriatric Education Center

1. Falls prevention for Community Health Workers and Promotores
2. Falls prevention for Home Health aides
3. Falls prevention for Home Health nurses
4. Otago Exercise Program: email Lisa Shields for code to waive \$25 fee

<http://www.aheconnect.com/cgec/courses.asp>

# How can I be trained as a program instructor?

## Tai Chi: Moving for Better Balance

- 2-day training (free)
- 4 trainings for 2015-2016 in various locations

## *Stepping On*

- 3-day training
- OHA not planning to sponsor any new trainings with this grant
- Providence, Legacy, the VA and the NW Indian Health Board may sponsor future trainings

## Otago Exercise Program

- Online training you may start and stop at your own pace
- Fee waived with special code

Email Lisa Shields if you are interested in these trainings

[Lisa.m.shields@state.or.us](mailto:Lisa.m.shields@state.or.us)

## **7. Increase public awareness that falls aren't an inevitable part of aging: Participate in Falls Prevention Awareness Day**

### **2014 events**

- Governor proclaimed Falls Prevention Awareness Day
- Multnomah County Commissioners proclaimed Falls Prevention Awareness and Senior Center Month
- Tai Chi demonstration at YMCA Beaverton Hoops
- STEADI health fair at Kaiser Permanente NW in Portland
- Falls prevention fair at PeaceHealth in Springfield
- Tai chi flash mob in downtown Portland

# Join us for national Falls Prevention Awareness Day 9/23/2015: Take a Stand to Prevent Falls®

## Ideas for hosting your own event

- Tai chi demonstration or flash mob
- Falls prevention health fair
- Celebrate it along with Senior Center Month
- Press release
- Social media alerts
- Partner with local health care professionals: fall risk screenings
- Local government proclamation

More resources: <https://www.ncoa.org/healthy-aging/falls-prevention/falls-prevention-awareness-day/>





Tai Chi flash mob



Kaiser STEADI Fair



Tai Chi with County Commissioners

# Falls Prevention Awareness Day



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# Contact Information

Lisa Shields

[Lisa.m.shields@state.or.us](mailto:Lisa.m.shields@state.or.us)

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Oregon  
Health  
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