
Falls Prevention in Oregon

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Falls are Common in Older Individuals

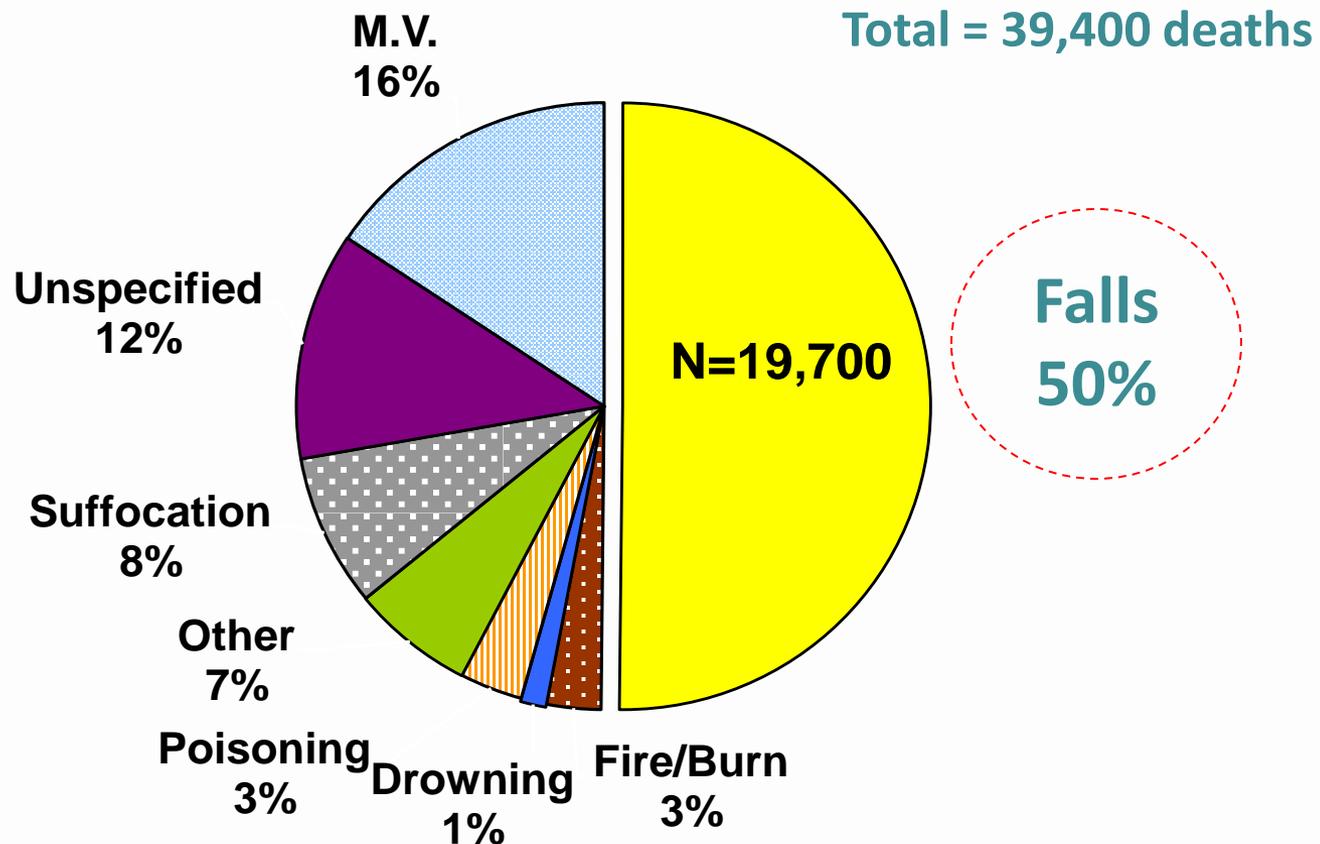
- 30-35% of people 65+ fall **each** year, but less than half talk to their healthcare providers about it
- Two-thirds of those who fall will do so again within 6 months

- Hausdorff JM. Archives of Physical Medicine and Rehabilitation 2001;82(8):1050–6.
- Hornbrook MC. The Gerontologist 1994;34(1):16–23.

How big is the problem?

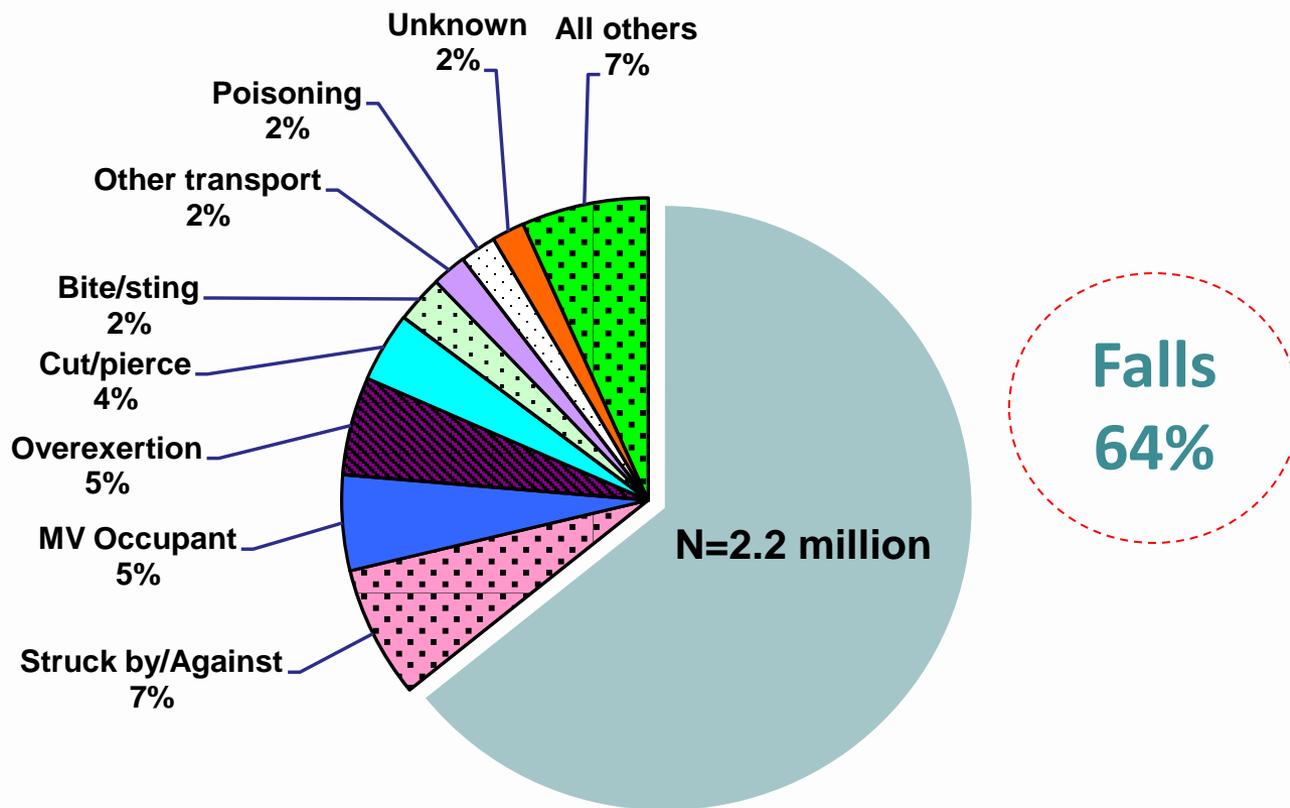
- Falls are the **leading** cause of both fatal and nonfatal injuries for those 65+
 - Nearly 60% of seniors in Oregon who are hospitalized for falls are discharged into long-term care
 - Each year, nearly 400 deaths and 8,600 hospitalizations in Oregon are due to falls
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- Centers for Disease Control and Prevention. U.S. fall prevention programs for seniors. <http://www.cdc.gov/ncipc/falls/fallprev.pdf>
 - Injury Prevention and Epidemiology Program, *Fall Injuries among Older Adults in Oregon*, Oregon Public Health Division, 2008
 - Injury Prevention and Epidemiology Program *Annual Report*, Oregon Health Authority, 2012

Leading Causes of Unintentional Injury Death Among People 65+, 2008



NCHS, Vital
Records, 2008

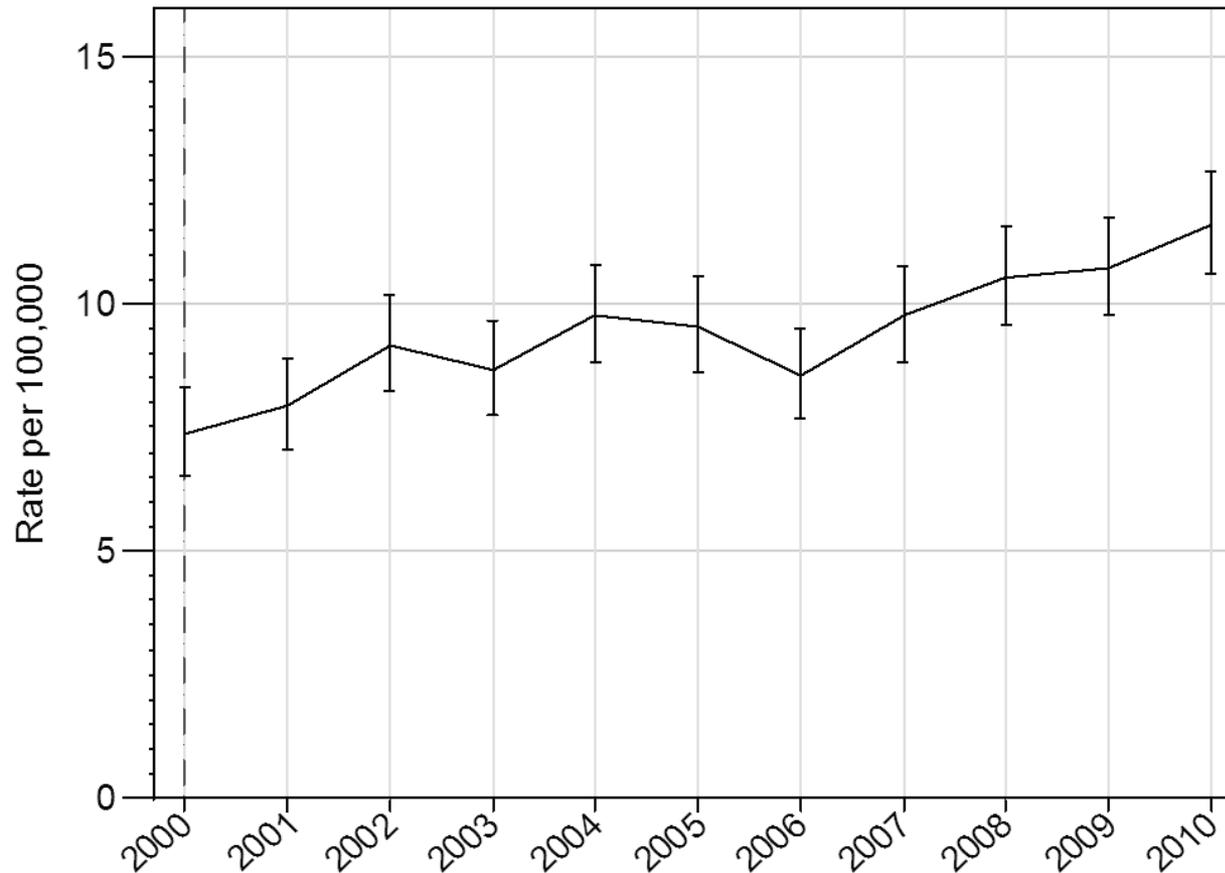
Leading causes of nonfatal injuries among people 65+, 2009



National Electronic Injury
Surveillance System-All Injury
Program, 2010

Fall Mortality

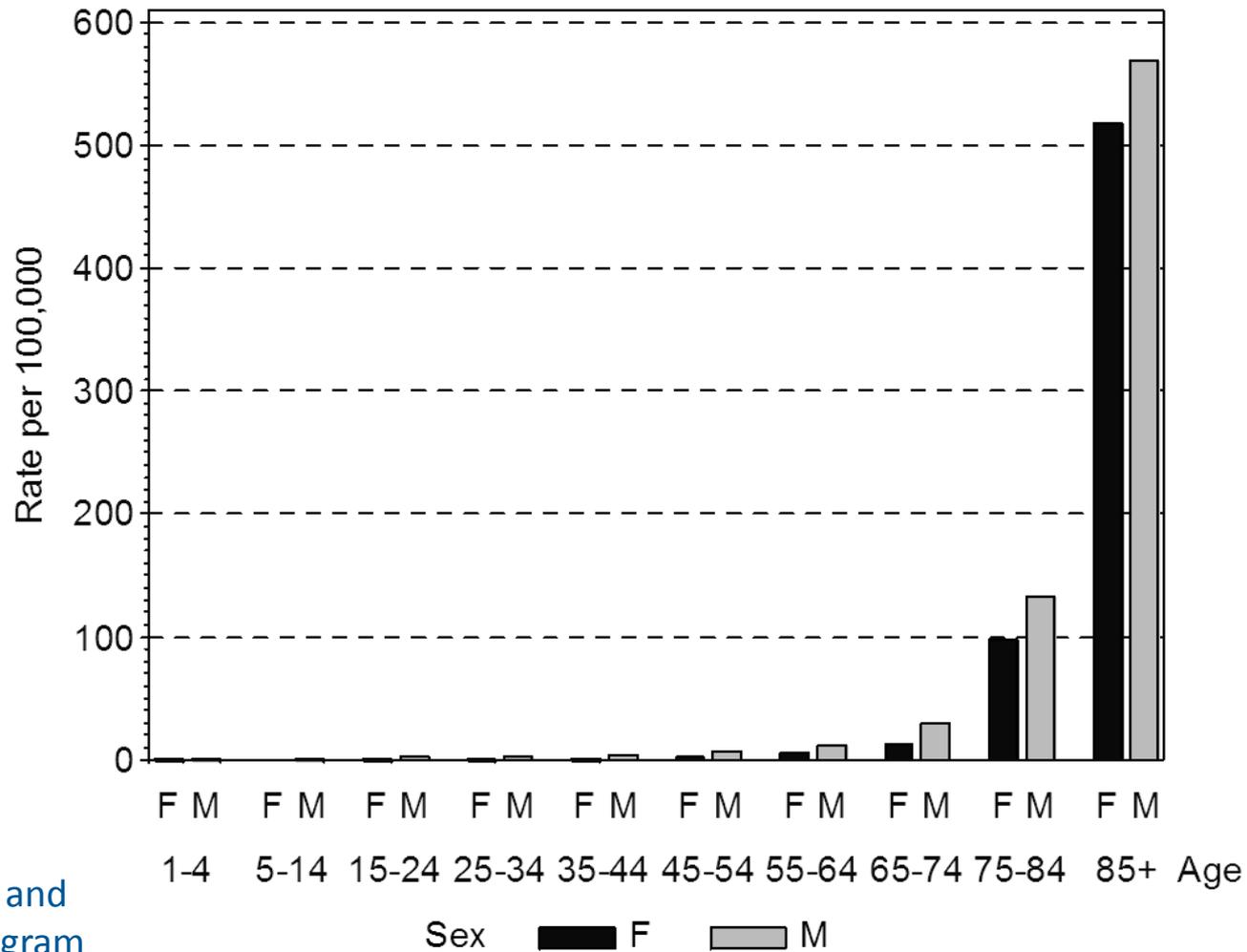
Age-adjusted Rate, 2000-2010



*Vertical bars indicate 95% confidence intervals for age-adjusted rate.
ICD-10 Code

Fall Mortality

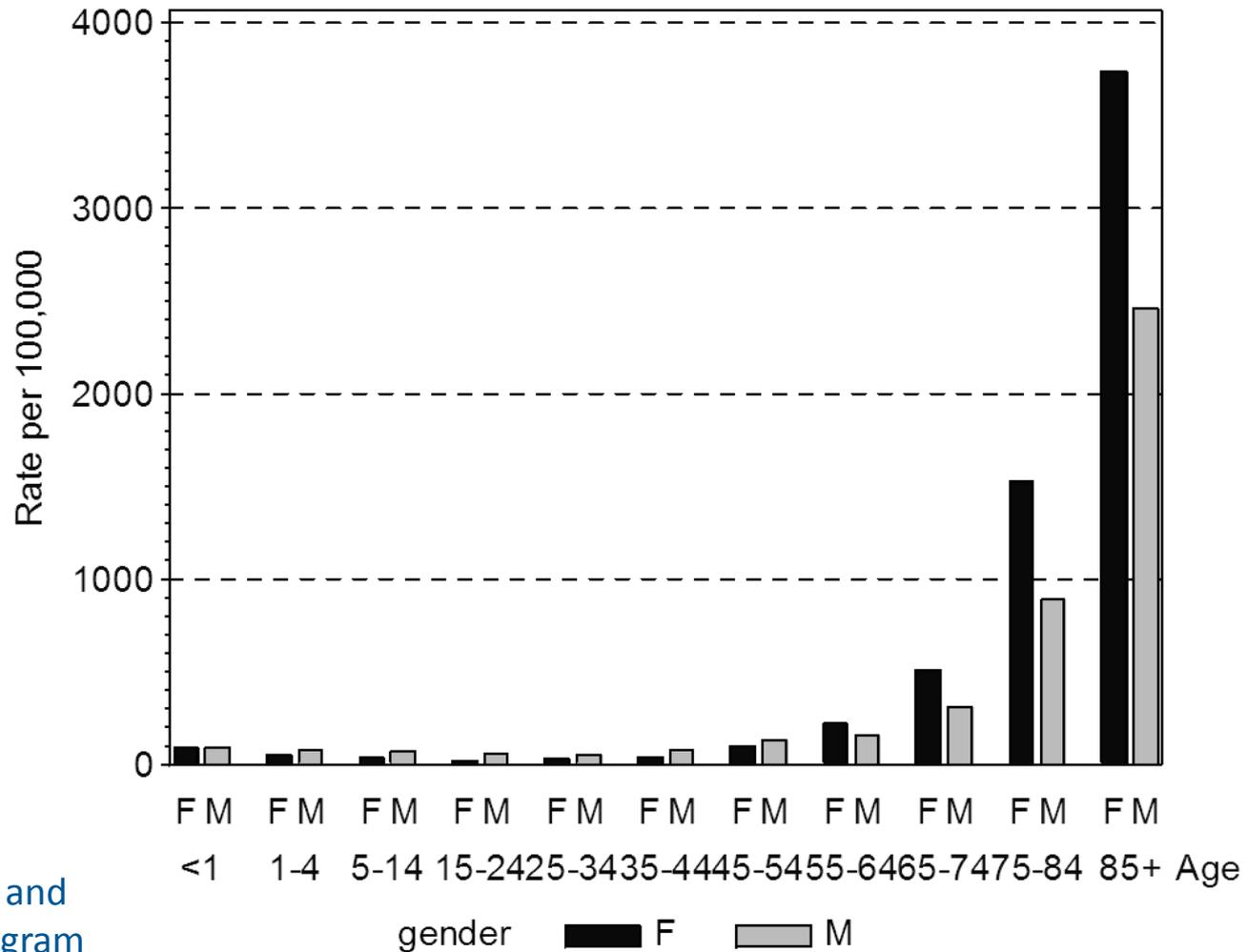
Average annual rate by age and sex, 2006-2010



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Fall Hospitalization

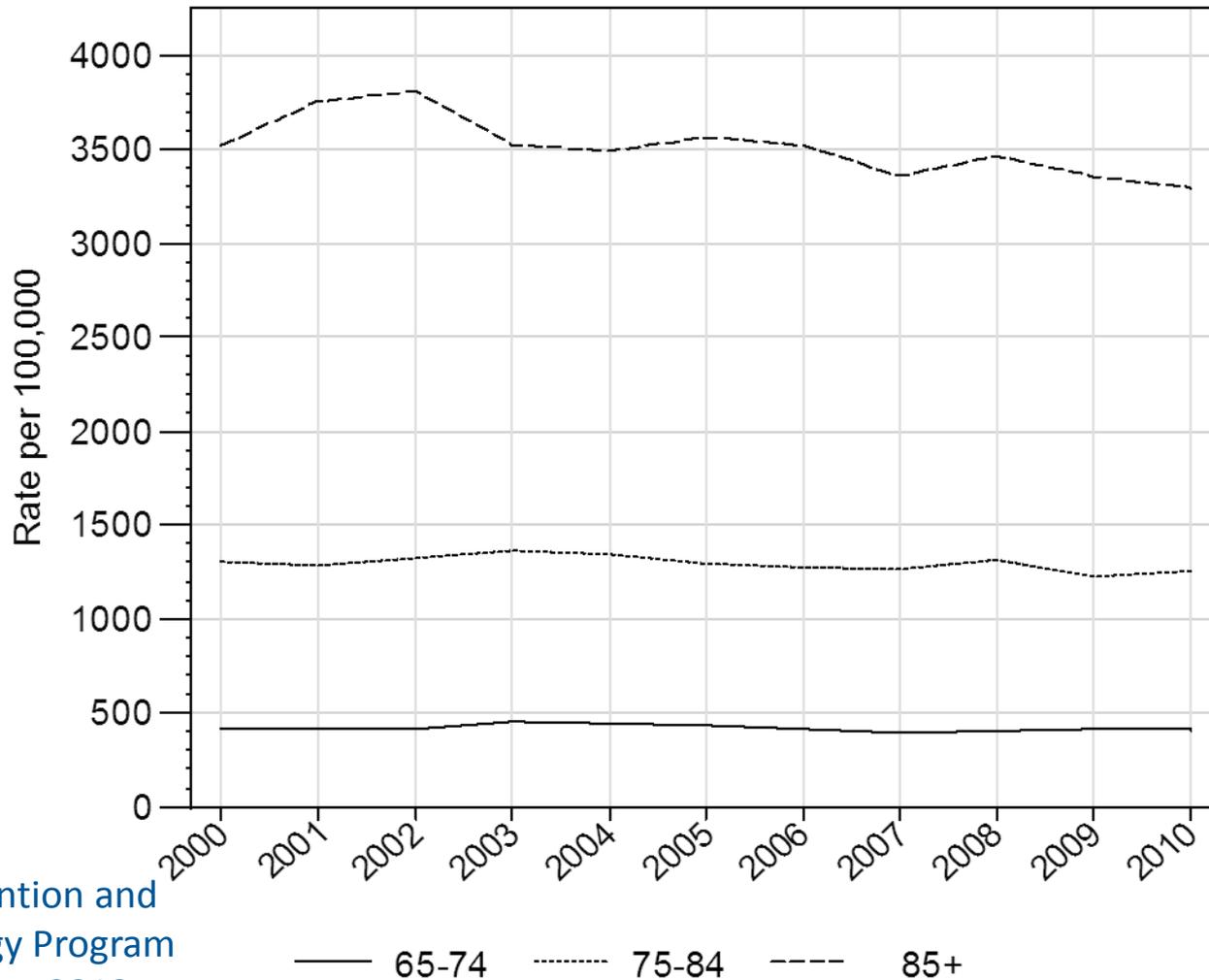
Rate by age and sex, 2010



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Fall Hospitalizations in Three Age Groups

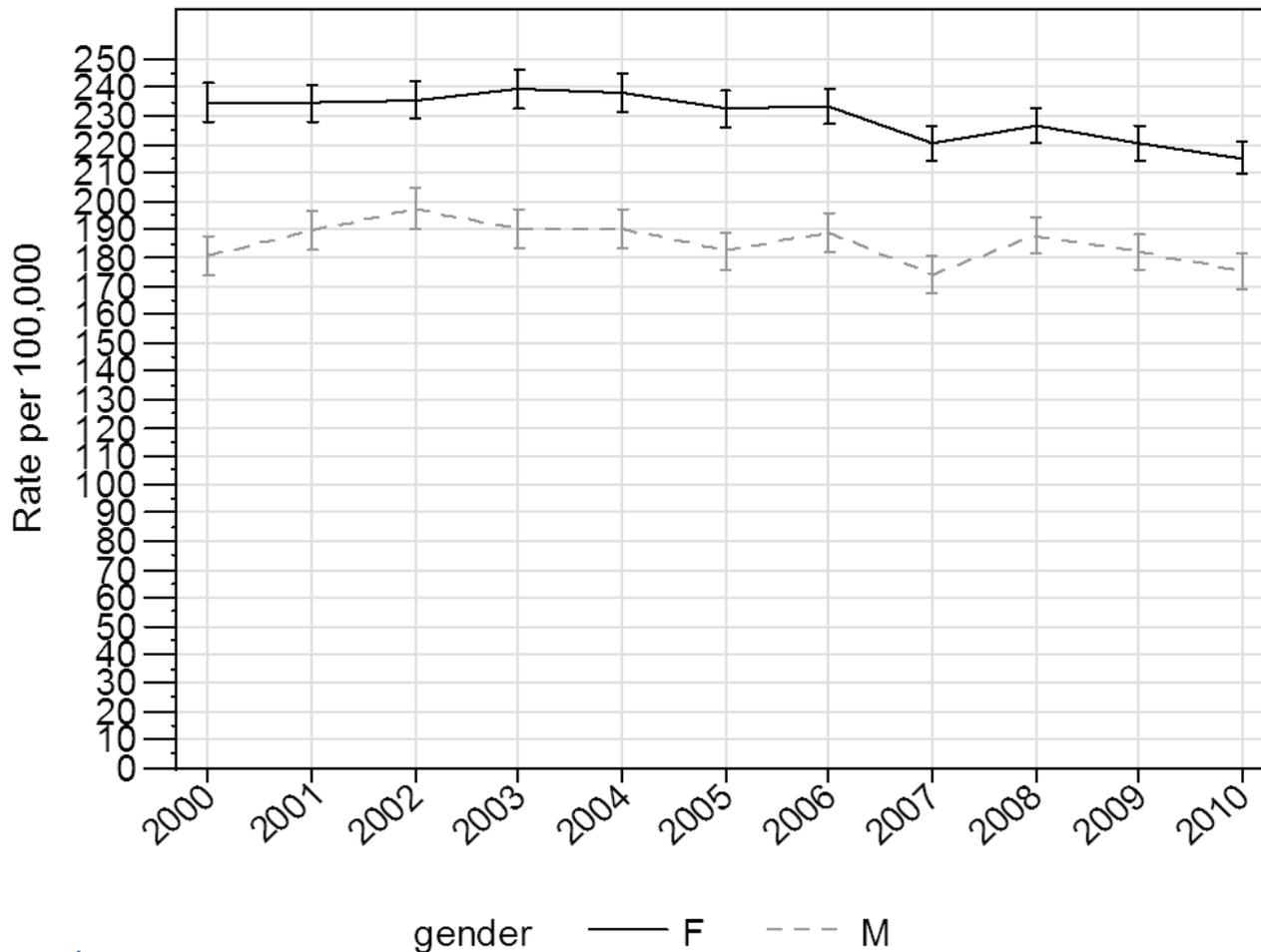
Age Group-Specific Rates, 2000-2010



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Fall Hospitalizations

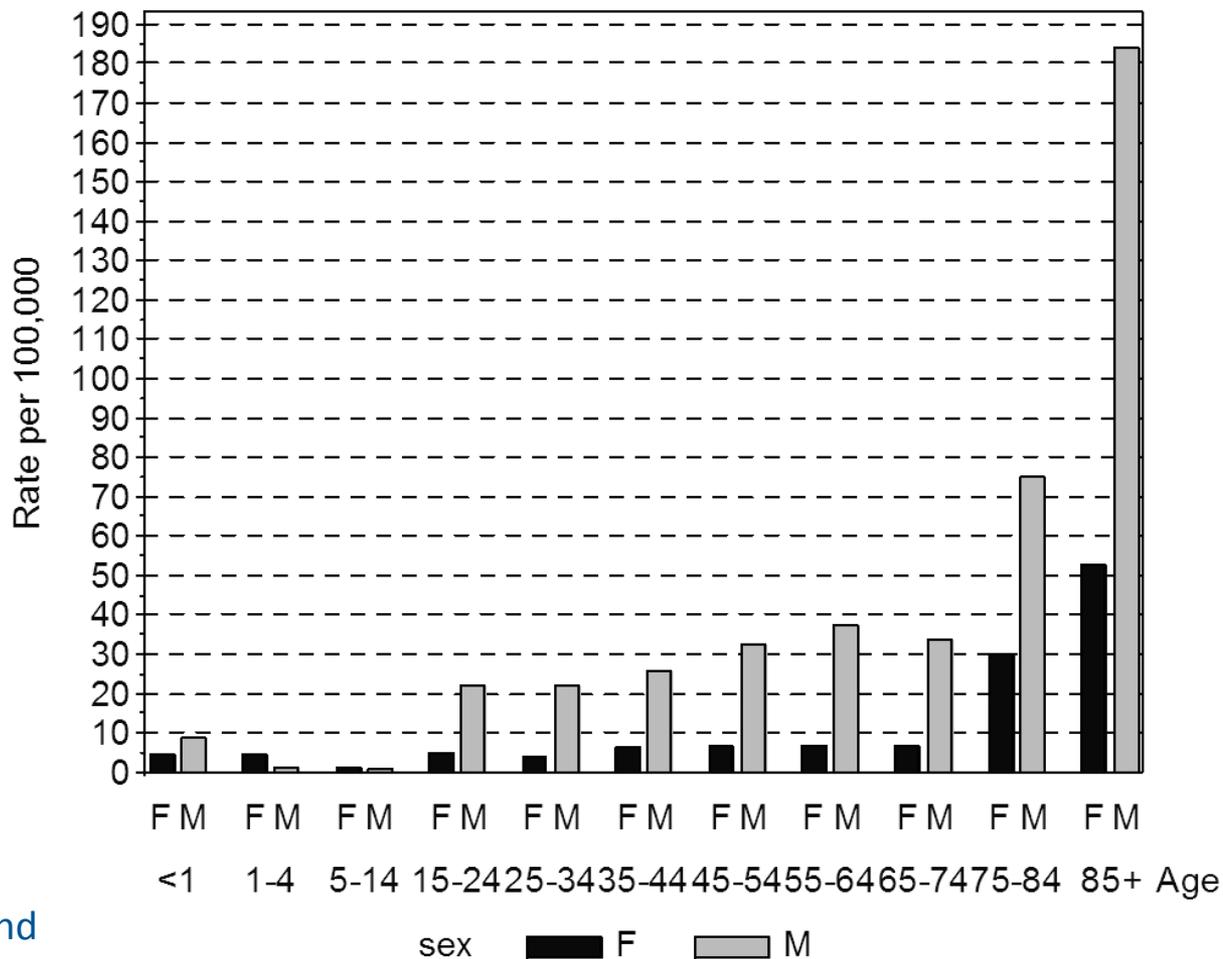
Age-adjusted rate by gender, 2000-2010



*Vertical bars indicate 95% confidence intervals for age-adjusted rate.

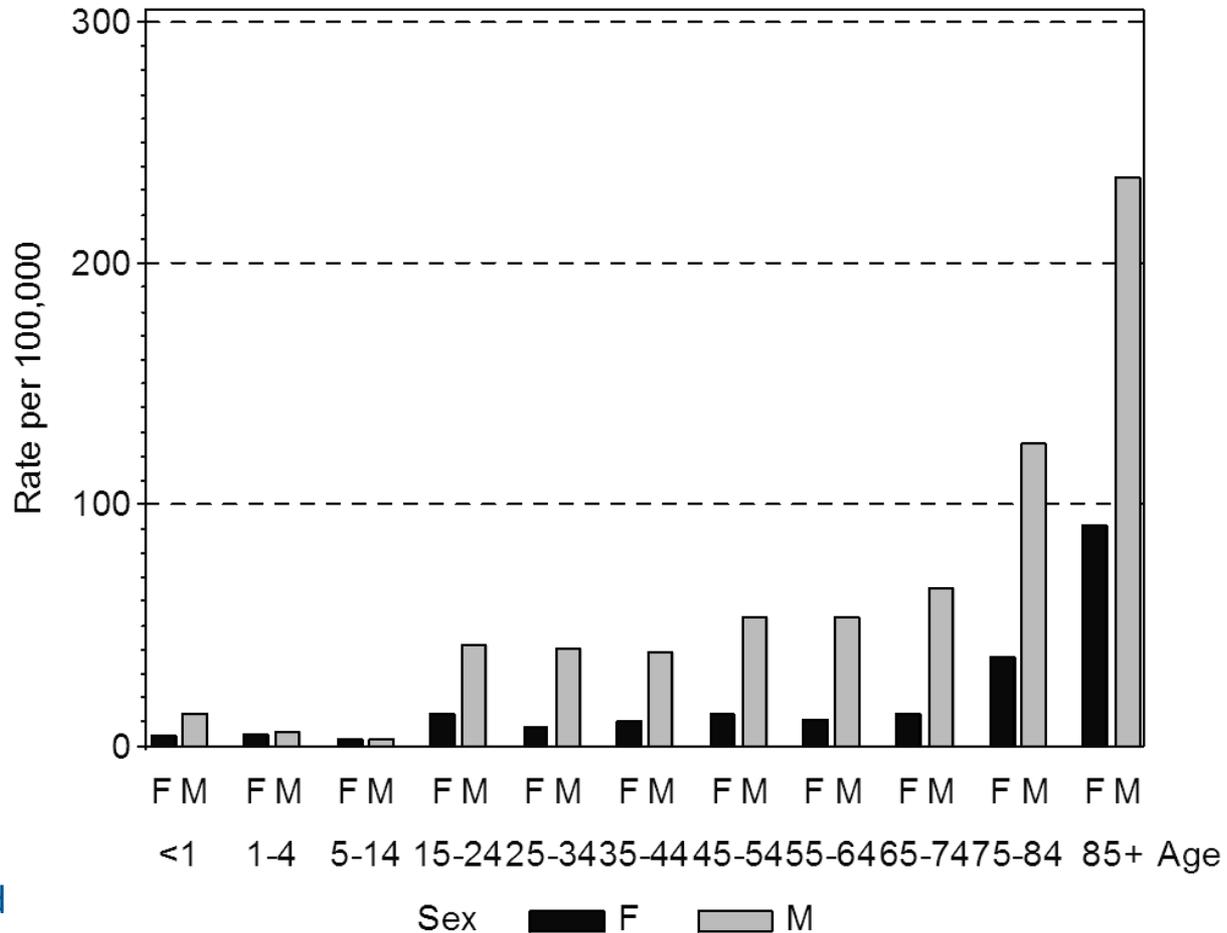
Traumatic Brain Injury Mortality

Rate by age and sex, 2010



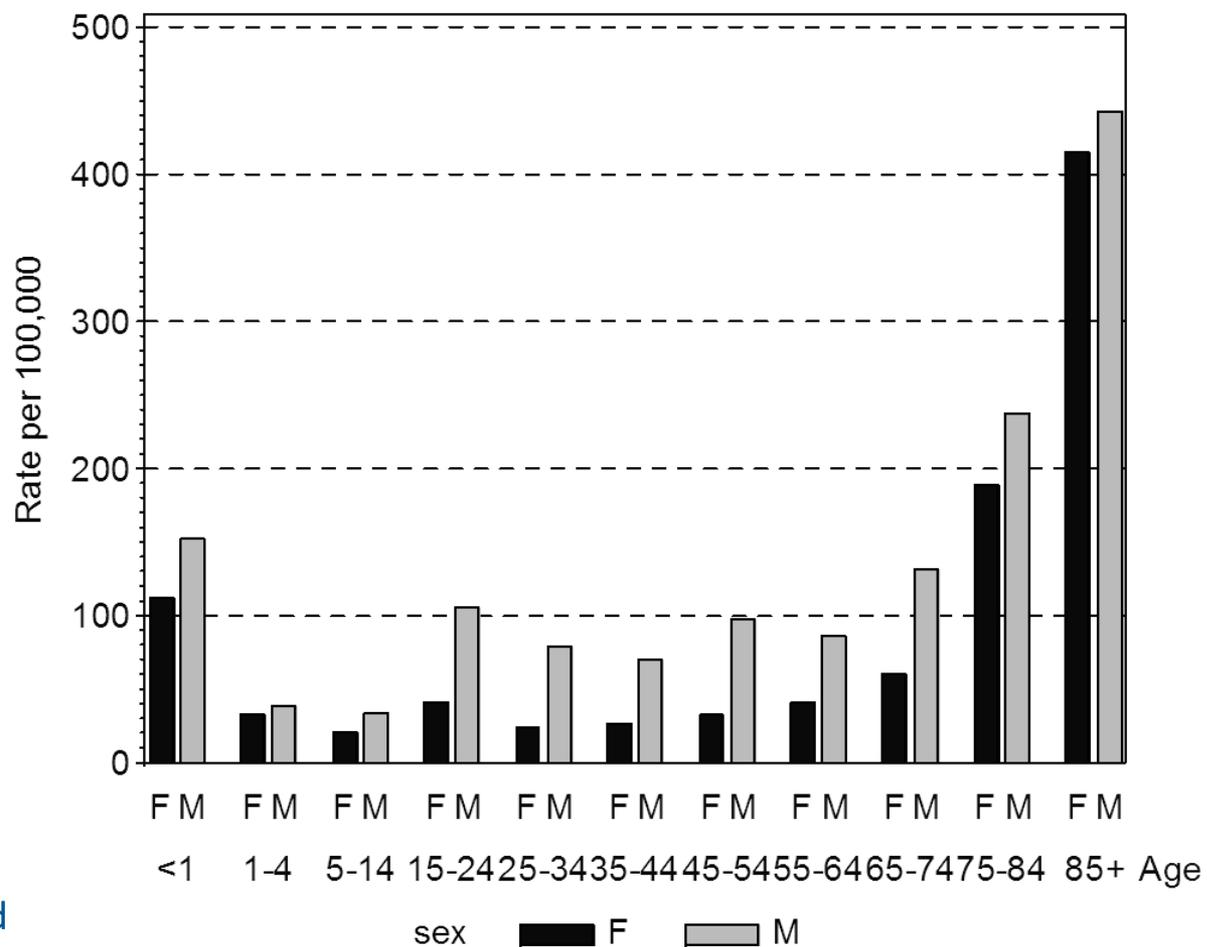
Traumatic Brain Injury Mortality

Average annual rate by age and sex, 2006-2010



Traumatic Brain Injury Hospitalization

Rate by age and sex, 2010



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The Cost of Falls

- Fall injury hospitalizations cost more than all other injury hospitalizations combined
- Unintentional falls were the third most costly hospitalized condition after cancer and heart disease
- In addition to direct medical costs, there are significant costs due to follow up care, rehabilitation, medications, and caregiver burden

Falls can be prevented

Biological

Muscle weakness
Gait and balance problems
Poor vision
Cognitive impairment

Behavioral

Risky behaviors
4+ medications
Psychoactive meds
Inactivity

Environmental

Clutter and tripping hazards
No stair railings or grab bars
Poor lighting

- Rubenstein, *Age and Aging*, 2006

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 State Fall Prevention Program

- Tinetti, N Engl J Med 2008;359:252-61

State fall prevention program 2011-2016

- Oregon is one of three state health departments to receive a CDC grant for linking clinical practice to evidence-based falls prevention programs
- Target area: Multnomah County

State Fall Prevention Program

Policy Change Strategies

Changes in clinical care

Tai Chi: Moving for Better Balance

Stepping On Fall Prevention Program

Otago Exercise Program

5-year program
3 state health departments

STEADI

Technical Assistance and Evaluation

Oregon Health Authority

Falls and Medicare

- Welcome to Medicare and Annual Wellness Visit require fall risk assessment
- Incentives through the Physician Quality Reporting System are tied to falls prevention measures

- <https://www.cms.gov/MLN MattersArticles/downloads/MM7079.pdf>.
- https://www.cms.gov/MLNProducts/downloads/MPS_QRI_IPPE001a.pdf
- https://www.cms.gov/PQRS//15_MeasuresCodes.asp

Stopping Elderly Accidents, Deaths, and Injuries (STEADI)

- Fall prevention toolkit for healthcare providers
- Fall risk assessment tools
- Fact sheets and patient education brochures
- Training materials for staff
- Referrals to physical therapy and community fall prevention programs

Examples of how to use STEADI

- Include fall risk assessment routinely in Medicare Annual Wellness Visit
- Ask every older patient if they've fallen in the last 12 months
- Adapt EMR to record fall risk factors
 - Self-Risk Assessment tool (“Stay Independent” brochure)
Put in waiting room
 - Provider hands out to each older patient
- Assign new roles for health care team members

Tai Chi: Moving for Better Balance

- Simplified 8-form format, developed at Oregon Research Institute in Eugene by Fuzhong Li, PhD
 - Low cost; no special clothing or equipment needed
 - For seniors with varying levels of mobility; can be modified for seated participants
 - Group program is at least 12 weeks, 2 times per week
 - Can decrease fall risk by 55%, also shown to benefit Parkinson's patients and visually-impaired seniors
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- Li, *Journal of Gerontology: Med Sci*, 2005
 - Li, *New Eng J Med*, 2012
 - Chen, *Age and Ageing*, 2012

Otago Exercise Program

- Developed in New Zealand for home-bound seniors
 - Most effective at reducing falls and fall-related mortality for adults 80 and older
 - Individually-tailored, home-based balance and strength fall prevention program that includes a walking program
 - Reimbursable by Medicare when done by a PT
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- Thomas, *Age and Ageing*, 2010

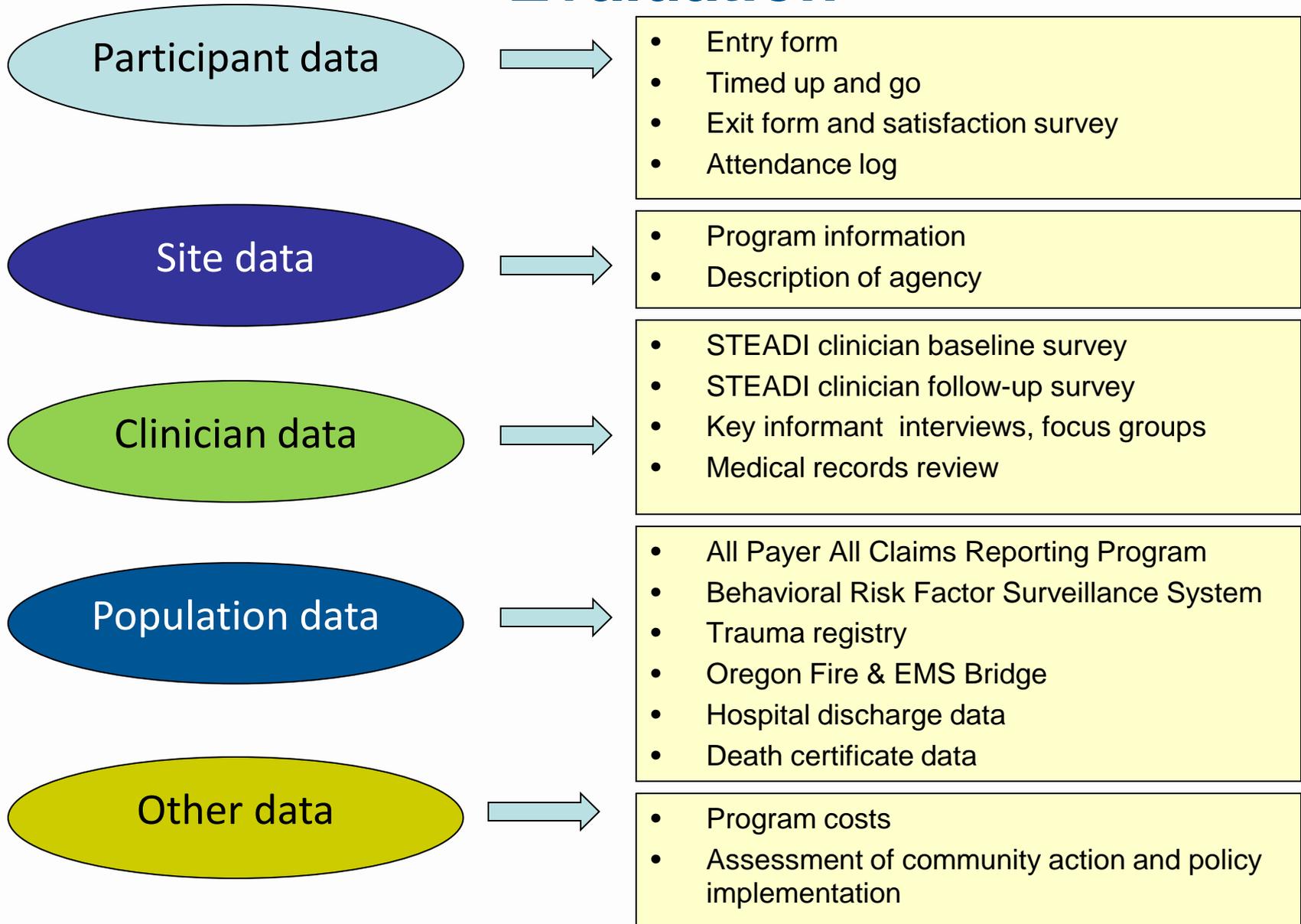
Stepping On Program

- Developed in Australia by Lindy Clemson, PhD, OT
- For independently-living seniors with no cognitive impairment
- Seven weekly group sessions of discussion, exercise, and education
- Classes are held in healthcare settings
- Guest speakers are featured: pharmacist, ophthalmologist, community safety officer, PT

Policy

- Advocacy
- Community awareness
- Policy changes
- Organization changes
- System changes

Evaluation



Falls prevention website

Fall 2012

- Falls prevention information
- Program descriptions and updates
- Class locations and times
- List of Otago providers
- Instructor resources: trainings, class material
- Upcoming events
- Falls workgroup information

Partnerships

- Oregon Geriatric Education Center
- Aging & Disability Services, Multnomah County
- Providence Health & Services
- Legacy Health
- Kaiser Permanente
- Portland VA Medical Center
- Oregon Rural Practice-Based Research Network
- Beyond the Clinic
- NW Parish Nurses
- Metropolitan Family Service
- NAYA, Portland Parks and Recreation, YMCA, American Specialty Health

Questions?

