

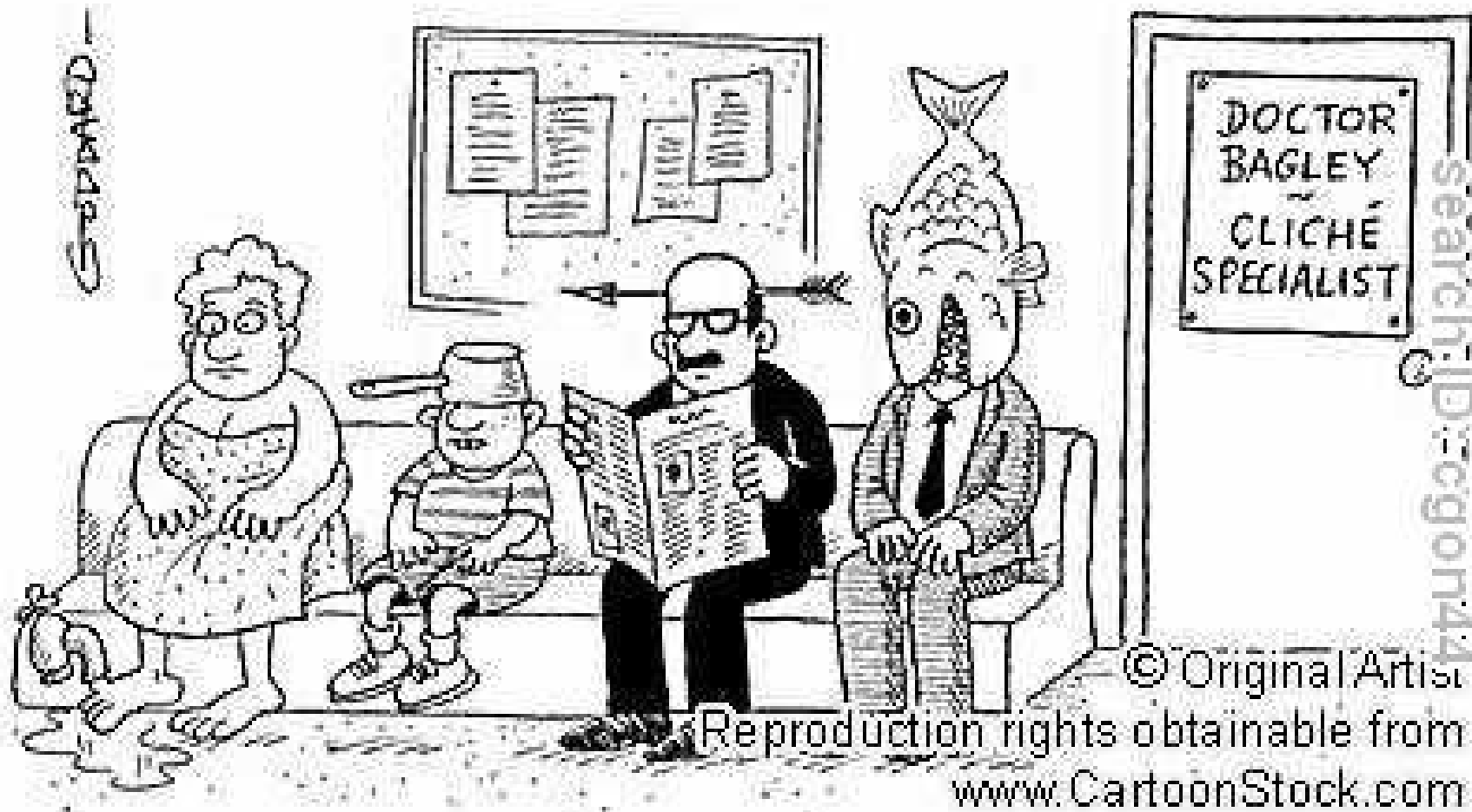
Who's falling in Virginia?

A Snapshot of Fall-Related Injuries Among Older Adults

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The Burden of Injury



The Burden of Injury



- ❑ Premature deaths
- ❑ Short, long or permanent disability
- ❑ High cost of health care
- ❑ Disruption of quality of life for families
- ❑ Loss of productivity for employers

Injuries – By Definition

- ❑ An injury is damage to the body resulting from acute exposure to thermal, mechanical, electrical or chemical energy or from the absence of essentials such as oxygen and heat
- ❑ Injuries can be fatal or nonfatal
- ❑ Injuries can be unintentional or intentional
- ❑ Injury has been called the most under-recognized major public health problem facing the nation today

Injuries: The Facts

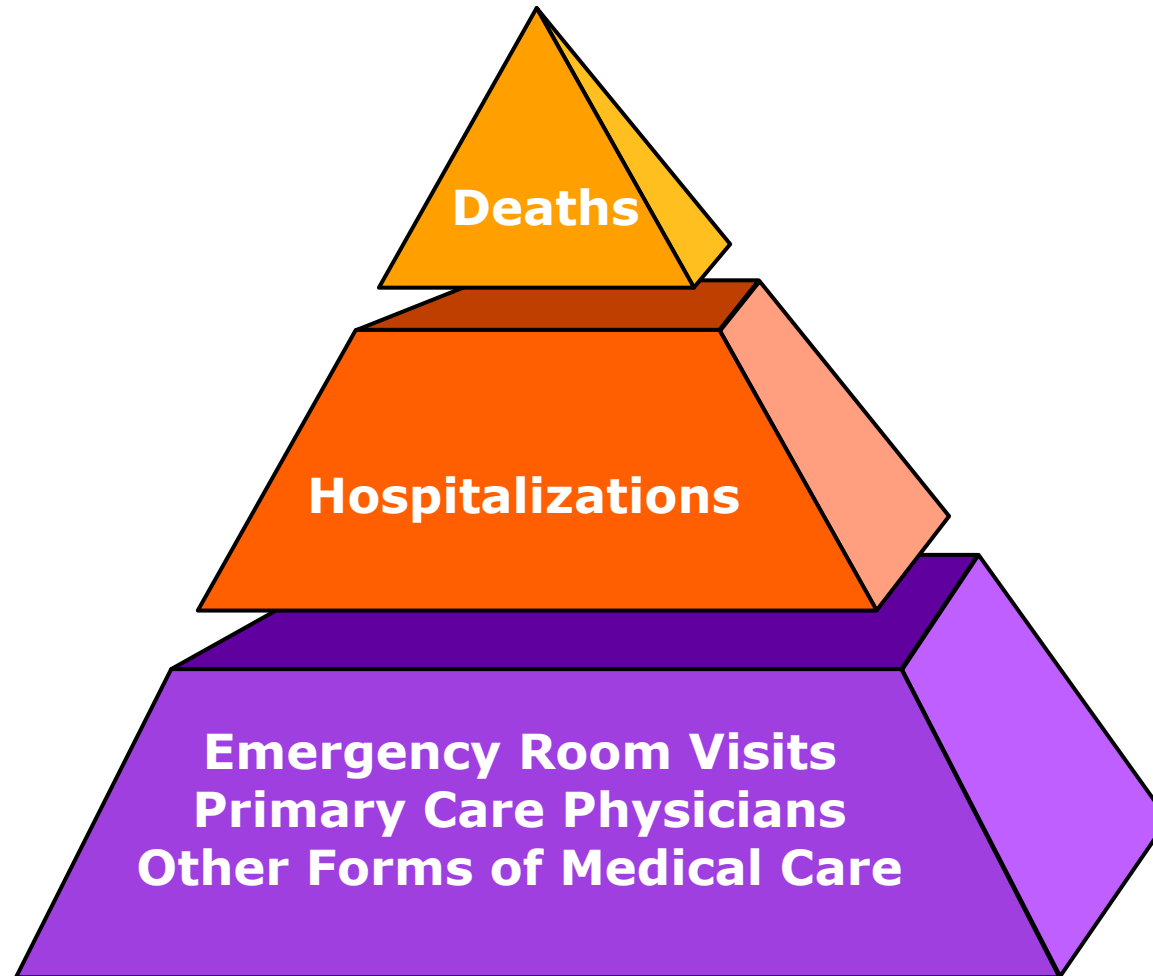
- ❑ In the United States, injuries are the leading cause of death for Americans ages 1 – 44.
- ❑ In Virginia in 2007, injuries were the 3rd leading cause of death for all Virginia residents, killing 3,965 Virginians
- ❑ Injury was the leading cause of death for Virginians between 1 and 40 years of age

Injuries: The Facts

In Virginia in 2007:

- 82% of injury hospitalizations and 66% of injury deaths were unintentional in nature and represented the majority of injuries
- The 3 leading causes of unintentional injury deaths:
 - * Motor vehicle traffic crashes
 - * Poisonings
 - * Falls

The Burden of Injury



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(Source: National Center for Health Statistics, CDC , January, 1988)

Injuries are no accident!



The causes of injuries are predictable and preventable and not randomly occurring accidents.

It is estimated that as many as **90** percent of unintentional injuries can be prevented.

Injuries: The Facts

10 leading causes of death, US, 65+, 2006

1. Heart disease
2. Malignant neoplasms
3. Cerebrovascular
4. Chronic lower respiratory disease
5. Alzheimer's disease
6. Diabetes mellitus
7. Influenza & pneumonia
8. Nephritis
9. **Unintentional injury**
10. Septicemia

Injuries: The Facts

Leading Causes of Death, VA, 65+, 2004-2008

	Number	Percent
Diseases of the heart	51,753	37.97
Malignant neoplasm	46,120	33.83
Cerebrovascular diseases	13,670	10.03
Chronic lower respiratory diseases	12,056	8.84
Nephritis	5,568	4.08
Unintentional injury	4,185	3.07
Diabetes mellitus	1,581	1.16
Suicide	722	0.53
Influenza and pneumonia	386	0.28
Assault (Homicide)	100	0.07
HIV disease	62	0.05

Total Deaths 136,203

Injuries: The Facts

Leading causes of death due to unintentional injury, Virginia, 65+, 2004-2008

	Number	Percent
Fall	1602	38
Motor Vehicle Traffic	762	18
Suffocation	548	13
Fire/Flame	183	4
Poisoning	92	2

Total UI Deaths
4,185

Source: Virginia Health Information, 2004-2007

Injuries: The Facts

Leading causes of unintentional injury hospitalizations VA, 65+, 2004-2007

Mechanism	Number	Percent
Fall	47,831	78
MVT Occupant	1,952	3
Poisoning	1,737	2.85
Overexertion	734	1.2
Struck by, against	719	1.18

Total Hospitalizations
61,033

Injuries: The Facts

Injury hospital and death rates were highest among seniors 75 and older.





Fall-Related Unintentional Injuries

Fall-Related Injuries

According to the Centers for Disease Control and Prevention (CDC):

- ❑ More than one third of adults 65 and older fall each year in the United States
- ❑ Among older adults, falls are the leading cause of injury deaths.
- ❑ In 2005, 1.8 million people 65 and older were treated in emergency departments for nonfatal injuries from falls
- ❑ In 2005, 15,800 people 65 and older died from injuries related to unintentional falls

VA, Fall-Related Injury Deaths, 2004-2007

	Number	Rate
All	1184	33.74
Year		
2004	280	33.06
2005	268	30.98
2006	292	32.89
2007	344	37.82
Age		
65-74	207	11.01
75 and over	977	59.98
Gender		
Male	558	37.89
Female	626	30.74

VA, Fall-Related Hospitalizations 2004-2007

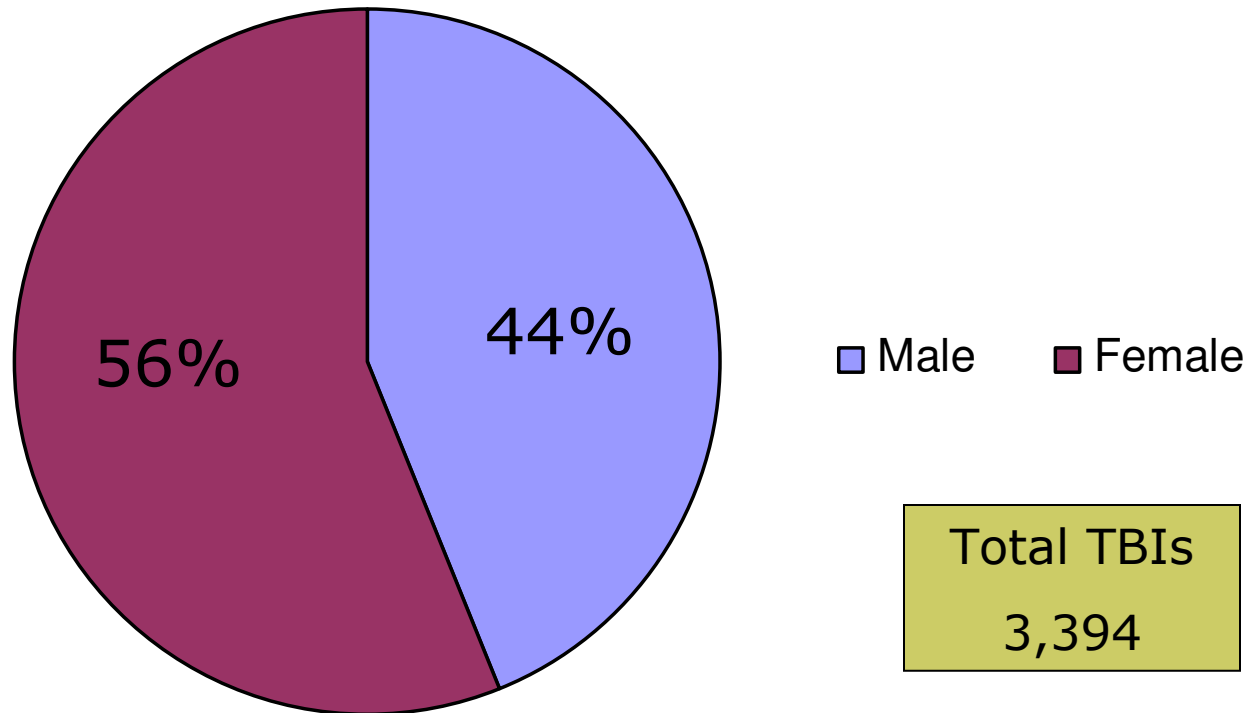
	Number	Rate
All	47,831	1,362.97
Year		
2004	11,763	1,388.91
2005	11,589	1,339.61
2006	11,426	1,287.05
2007	13,053	1,435.15
Age		
65-74	9,959	529.58
75 and over	37,872	2,325.17
Gender		
Male	12,786	868.28
Female	35,044	1,720.58

VA, Fall-Related Injuries & Deaths 2004-2007

	Ages 65-74	Ages 75 and Over
Fall-Related Hospitalizations	9,959	37,872
Fall-Related Deaths	207	977

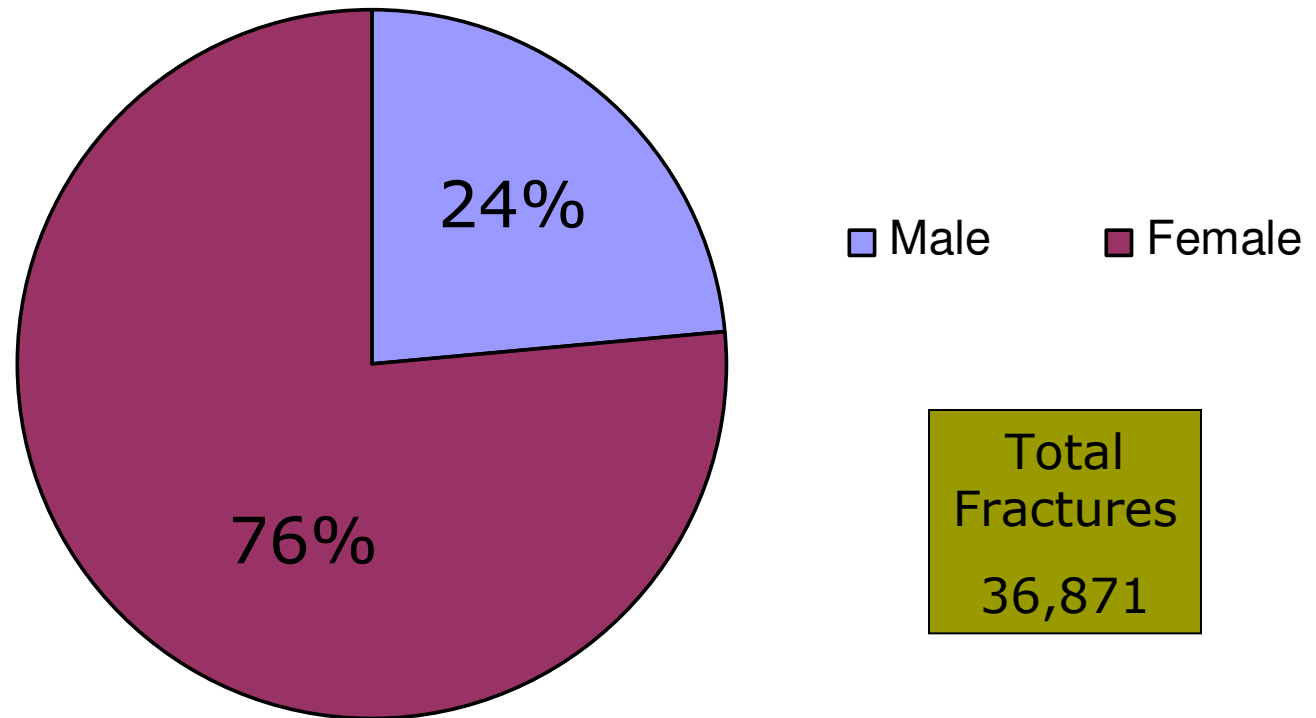
VA, Hospitalizations 2004-2007, 65+

Fall-Related Traumatic Brain Injuries



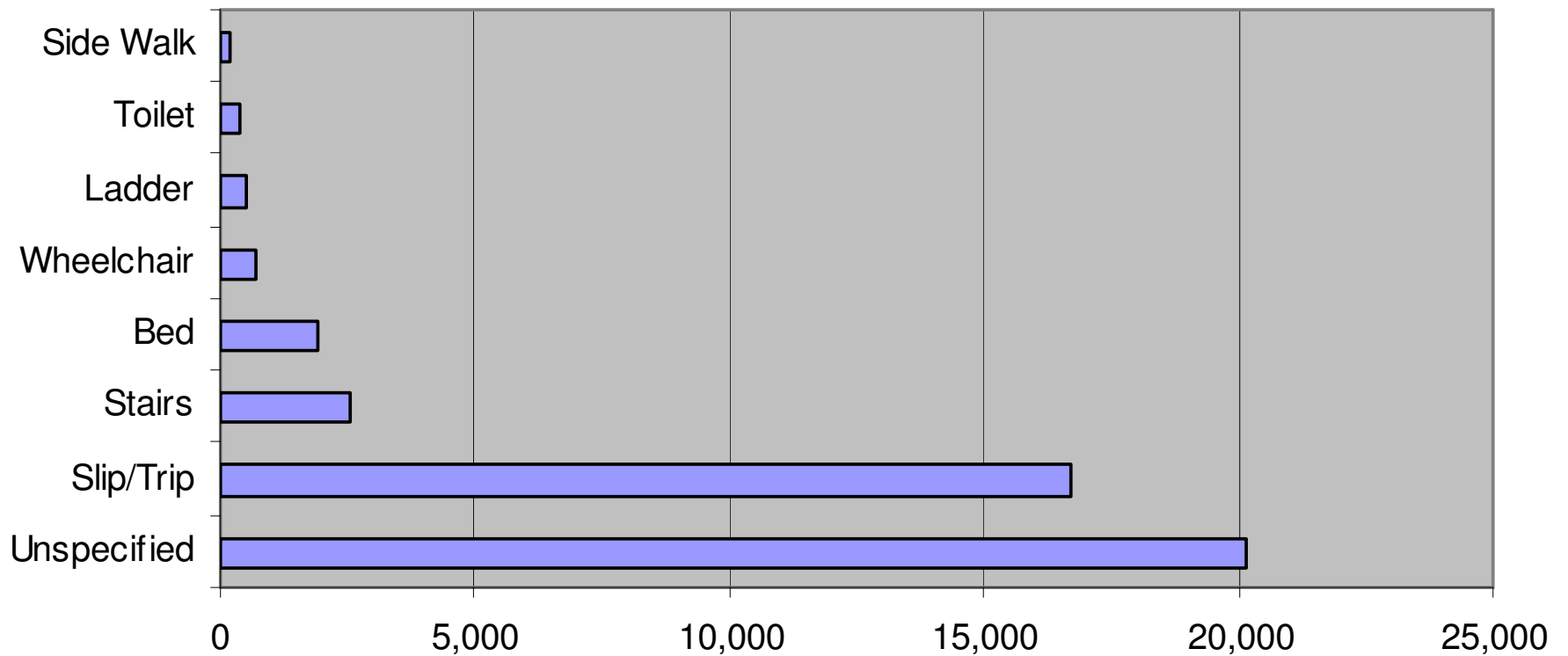
VA, Hospitalizations 2004-2007, 65+

Fall-Related Fractures



VA, Hospitalizations, 2004-2007, 65+

Circumstances Surrounding Falls



Charge and Length of Stay Cost Per Episode of Care

Between 2004 and 2007 in Virginia:

The average length of a hospital stay:

5.71 days

The average charge per stay:

\$24,263

The estimated total cost of hospitalized care for older adult fall-related injuries in Virginia was **\$1.1 billion** dollars.

The Public Health Response



What can be done?

Define the problem

- What does the data tell us?
- Data can show us how an injury problem changes over time, alert us to trends, and let us know what impact prevention programs are having
- Decision makers use data in allocating programs and resources

Identify risk and protective factors

- What puts people at risk for a certain type of injury?
- What factors protect people from it?
- How can we use this information to develop and implement programs that eliminate or reduce risk factors for injuries?



Causes of falls among older adults

- Mobility
- Sensory
- Medications
- Pre-existing medical conditions
- Environmental hazards
- Alcohol
- Footwear
- Work-related falls
- Recreational sports and play

Develop and test prevention strategies

- ❑ Put knowledge into action
- ❑ Develop strategies to prevent injuries
- ❑ Implement strategies in communities that are experiencing an injury
- ❑ Study the effects to determine whether and how well they're working
- ❑ Change or eliminate elements to increase effectiveness or decrease difficulties

Preventing a fall-related injury

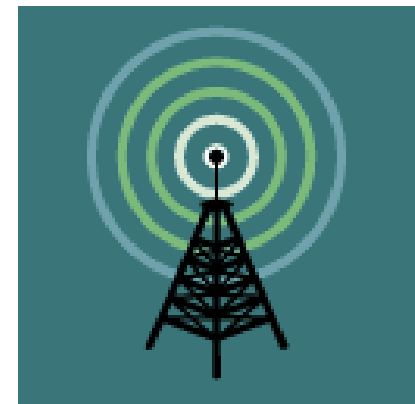
- ❑ **Exercise regularly**; exercise programs like Tai Chi that increase strength and improve balance are especially good.
- ❑ Ask your doctor or pharmacist to **review your medicines**—both prescription and over-the-counter—to reduce side effects and interactions.
- ❑ Have your **eyes checked** by an eye doctor at least once a year.

Preventing a fall-related injury

- **Improve lighting** in the home.
- **Reduce hazards** in the home that can lead to falls.
- **Wear safety equipment** when engaging in recreational sports and play

Assure widespread adoption

- Share knowledge – communicate results
- Provide funding or expert consultation so that communities can replicate these successful strategies



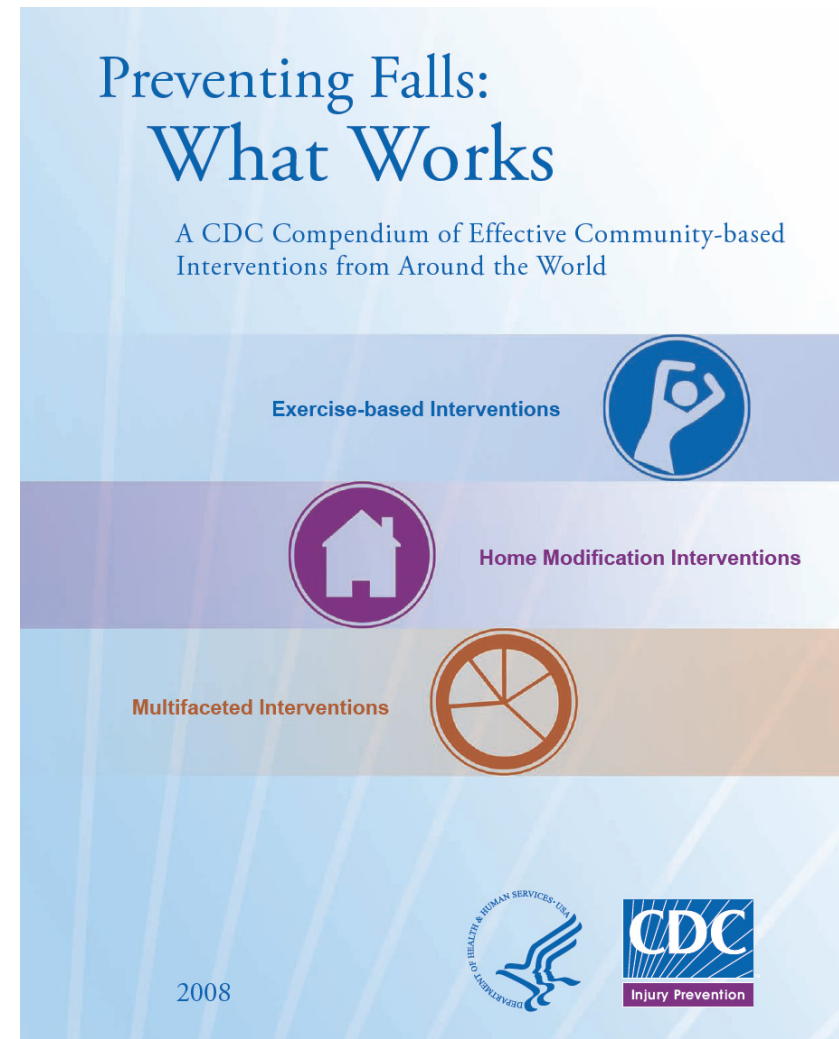
Putting Best Practice Into Action

*What works in fall
prevention?*



CDC Recommended Fall Prevention Programs

- ❑ Exercise-based Interventions
- ❑ Home Modification Interventions
- ❑ Comprehensive Interventions



Virginia Department of Health

Older Adult Fall Prevention Pilot Project

- ❑ Fund three local Area Agencies on Aging (AAA) to introduce one of CDC's recommended fall prevention interventions to their consumers
- ❑ Project Period:
December 1, 2008 – August 31, 2009
- ❑ Seven AAAs submitted an application
- ❑ Three AAAs received grants

Fairfax Area Agency on Aging

Intervention: Stepping On

Focus:

Empower participants to make better decisions and learn about fall prevention techniques, and make behavioral changes.

Key Elements:

- ❑ 6 educational workshops in multiple locations
- ❑ 6 week exercise program
- ❑ In-home safety evaluation
- ❑ Home safety modifications

Fairfax Area Agency on Aging

Outcomes:

- ❑ 124 seniors completed the intervention
- ❑ 80% reported that they would change some behaviors
- ❑ 95% reported that the information would increase their ability to remain independent
- ❑ 96% of those tested showed improvement in balance through pre/post testing
- ❑ 47 home safety evaluations; 35 home modifications were completed

Appalachian Agency for Senior Citizens

Intervention:

Falls-HIT (Home Intervention Team)

Focus:

Assess and reduce fall hazards in participants' homes.

Key Elements:

- ▣ frail older adults identified by staff
- ▣ Home visit - home safety checklist and fall prevention education session
- ▣ Focus on bathroom safety
- ▣ Safety devices installed

Appalachian Agency for Senior Citizens

Outcomes:

- ❑ 181 older adults participated and 175 completed the intervention
- ❑ 125 participants had a pre-intervention history of falls
- ❑ 175 of 181 participants received assistive devices
- ❑ 171 bathrooms were made safer through the use of assistive devices (e.g. transfer benches, handheld showerheads, commode risers with arms, safety rails/tub grab bars)
- ❑ 3 post-intervention falls have been documented – none occurred in the bathroom

Senior Services of Southeastern Virginia

Intervention:

Stay Safe, Stay Active

Focus:

Improve balance and coordination, muscle strength, reaction time, and aerobic capacity.

Key Elements:

- ▣ 12 weekly one-hour exercise sessions
- ▣ Sessions occurred in 8 wellness centers
- ▣ Participants divided into 3 groups determined by Functional Performance Inventory: those not afraid of falling; those who had fallen in the past year; and those afraid of falling
- ▣ Focus on mild low-impact exercise routines designed to increase strength, flexibility and balance; fall-prevention education; and daily at-home exercise plan

Senior Services of Southeastern Virginia

Outcomes:

- ❑ 184 older adults participated; 182 completed the intervention
- ❑ 102 of 109 (93%) of those afraid of falling or those who had fallen are no longer afraid, based on pre/post Functional Performance Inventory
- ❑ 110 of the participants reported improved balance, decreased muscle stiffness, lessened arthritic pain, increased self-confidence, and higher energy levels

Questions?



Resources

Division of Injury and Violence Prevention

Virginia Department of Health

1-800-732-8333

www.vahealth.org/injury

Brain Injury Association of Virginia

1-800-334-8443

www.biav.net

Centers for Disease Control and Prevention

Home and Recreational Safety

www.cdc.gov/HomeandRecreationalSafety/Falls

Resources

Virginia Department for the Aging
1-800-552-3402
www.vda.virginia.gov

Home Safety Council
1-888- 556-9947
www.homesafetycouncil.org

Dial 2-1-1 anywhere in Virginia - provides a wide variety of free health and human service referrals

www.Seniornavigator.org – online database of available resources and information in Virginia

Presenter Contact Information

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