



### The impact of falls in Los Angeles County

Falls are the leading cause of injury hospitalization in Los Angeles County. Between 2003 and 2007, for every hospitalization due to a motor vehicle collision (the second leading cause of injury hospitalization), there were more than three fall-related hospitalizations.<sup>22</sup> Falls are particularly detrimental to adults 65 and older and have serious implications for individual health, overall population health, and healthcare costs. Adults 65 and older account for 10% of the Los Angeles County population yet more than 63% of fall hospitalizations and deaths.<sup>3,7</sup> Outcomes from falls include loss of mobility, limited social and physical activities, loss of independence, nursing home placement, permanent disability, and premature death.

The purpose of this brief is to illustrate the importance of fall prevention by providing Los Angeles County community service providers and public health professionals with local falls data and general information about fall risk and prevention strategies.

In Los Angeles County falls are the leading cause of injury death among older adults. It is estimated that more than one-third of U.S. adults 65 years and older fall each year.<sup>10</sup> In Los Angeles County, this equates to about 363,000 older adults.<sup>21</sup> In 2007, fall-related injuries among Los Angeles County adults 65 years and older resulted in over 21,000 ambulance runs, 32,000 visits to emergency departments, and almost 900 visits to trauma centers.<sup>6,17,18</sup> Additionally, 29,000 older Angelinos were hospitalized and 400 died from fall-related injuries.

The population 65 years and older is projected to double by 2030, reaching 2.2 million, or 19% of the total Los Angeles County population.<sup>21</sup> As the senior population continues to grow, so too will the impact of fall-related morbidity and mortality. Falls are often perceived as an inevitable consequence of aging. However, research has shown that falls are preventable.<sup>14,19,23</sup> Preventing falls among adults 65 years and older in Los Angeles County is a public health priority.

### Los Angeles County Falls Facts in Brief

The number of hospitalizations due to fall injuries is 3-times that of motor vehicle collision injuries

An estimated 363,000 adults age 65 and over fall each year

In 2007, fall-related injuries among older adults resulted in:

- 21,000 ambulance runs
- 32,000 visits to emergency departments
- 900 visits to trauma centers

In 2007

- 29,000 older adults were hospitalized
- 400 older adults died from fall-related injuries

Fall death rates among older adults are highest in:

- SPA 5-West
- SPA 4-Metro

Fall hospitalization rates among older adults are highest in:


- SPA 5-West
- SPA 2-San Fernando

**Fall rates by SPA**

The highest rates of fall-related hospitalizations and deaths among older adults occur in SPA 5-West, followed by SPA 4-Metro and SPA 2-San Fernando Valley. The SPA with the lowest rates of fall-related hospitalizations and deaths is 6-South (2003-2007 data).<sup>3,7</sup>

*Fall-related mortality and nonfatal injury rate by Los Angeles County SPA, 2003-2007*

SPA	65+ Mortality rate	65+ Nonfatal injury rate
1 – Antelope Valley	25.9	1783.5
<b>2 – San Fernando Valley</b>	<b>26.4</b>	<b>1899.5</b>
3 – San Gabriel Valley	24.8	1689.3
<b>4 – Metro</b>	<b>26.5</b>	<b>1776.5</b>
<b>5 – West</b>	<b>30.0</b>	<b>2032.4</b>
6 – South	16.0	1311.8
7 – East	19.8	1646.6
8 – South Bay	22.9	1583.7
Los Angeles County	23.0	1670.2



**Consequences of falls**

Injury and mortality

Twenty to 30% of adults 65 years and older who fall suffer moderate to severe injuries such as bruises, hip fractures, or head trauma, that limit mobility and independent living and can increase risk of premature death.<sup>10</sup> Hip fractures are the most common disabling outcome of falls for older adults and can lead to premature death.<sup>13</sup> In Los Angeles County, in 2007, 5,853 older Angelinos were hospitalized for hip fractures.<sup>7</sup>

Decreased quality of life

Falls can also have serious consequences for the quality of life of older adults. Fear of falling can increase a person’s actual risk of falling, as fearful adults limit their activities, resulting in decreased physical fitness, as well as decreased independence, depression, feelings of helplessness, and social isolation. This apprehension is valid: people 75 years and older who fall are four to five times more likely to be admitted to a long-term care facility for a year or longer.<sup>10</sup> Additionally, falls are a key factor contributing to the decision of older persons and their families to pursue placement in a nursing home.<sup>24</sup> Recognition of older adults’ reluctance to report falls or seek help for fear of being placed in a nursing home is crucial for prevention and intervention strategies.<sup>14,25</sup>

***Consequences of Falls***

*Hip fractures are the most common disabling consequence of falling.*

*Falls can result in decreased quality of life and nursing home placement.*

*Fear of falling can result in decreased independence, depression, and social isolation.*

## The high cost of falls

The high cost of fall hospitalizations and institutionalization places an increasing financial burden on the health care system as well as older adults and their families. In 2000, the total direct cost of all fall injuries for adults 65 years and older nationwide exceeded \$19 billion, and by 2020, the annual direct and indirect cost is expected to reach \$55 billion.<sup>11</sup>

### **Costs of Falls**

*The average cost of a fall related hospitalization in Los Angeles County during 2007 was \$50,300*

*The average annual cost per patient in Los Angeles County nursing homes in 2007 was \$62,000*

In Los Angeles County in 2007, the average cost of a fall hospitalization for adults 65 and older was \$50,300, nearly double the cost in 2000.<sup>7</sup> Additionally, 45% of Angelinos 65 years and older hospitalized for a fall in 2007 were discharged to long-term care facilities, including nursing homes and residential care facilities.<sup>7</sup> In 2007, the average annual cost per patient in Los Angeles County nursing homes was \$62,000 per patient (all ages); with half of revenue coming from MediCal, 31% from Medicare, and 10% self-pay.<sup>8</sup>

Fall injuries can also place a burden on informal family caregivers' finances, health, and well-being. According to the 2007 Los Angeles County Health Survey, 779,000 residents reported providing care in the past month to an adult age 65 and older.<sup>16</sup> The estimated worth of one year of caregiver services in California in 2004 was \$36,300, based on the potential cost of care if informal caregiving had to be replaced by paid workers.<sup>2</sup>

## Preventing falls in Los Angeles County

The following section discusses five general recommendations for preventing falls. A variety of fall prevention resources related to these recommendations, including local data, fall prevention information and checklists, and links to local resources, are available on IVPP's website: [www.ph.lacounty.gov/ivpp](http://www.ph.lacounty.gov/ivpp).

### Take a multifactorial approach to fall prevention that includes physical activity

A wide variety of factors contributes to fall risk. One of the most effective fall prevention strategies for adults of all ages is regular physical activity that improves strength and balance. According to the Centers for Disease Control and Prevention (CDC), the most effective fall prevention programs: "focus on exercise, alone or as part of a multifaceted approach that includes medication management, vision correction, and home modifications".<sup>12</sup> The American Geriatrics Society (AGS) also recommends a multifactorial approach to fall prevention that includes physical activity.<sup>1</sup>

Effective fall prevention strategies use a multifactorial approach, including:

- Physical activity that improves strength and balance
- Risk assessment
- Vision screening and correction
- Medication review and management
- Home safety assessment and modification

## Address fall risk factors

### **Common risk factors for falls**

- Increased age
- Muscle weakness
- Gait and balance problems
- Poor vision
- More than one chronic disease
- Dementia or Alzheimer's
- Osteoporosis
- Stroke
- Arthritis
- Heart Disease
- Parkinson's Disease
- Multiple health conditions
- History of falling
- Lack of physical activity
- Taking more than 4 medications
- Poor lighting and clutter in the home
- Poor public design (e.g., uneven sidewalks)

### *Fall risk increases with age*

The risk of being seriously injured from a fall increases with age. The average age of Angelinos hospitalized with a fall-related injury is 65 years, with rates peaking among residents in their 90s.<sup>22</sup> In Los Angeles County, adults 85 and older are six times more likely to be hospitalized for injuries from falls than adults 65-74, and eight times more likely to die from fall injuries (2003-2007 data).<sup>3,7</sup>

### *Health-related risk factors for falls*

Risk factors for falls include muscle weakness, gait and balance problems, poor vision, and taking more than four medications. As the number of health conditions increase, so does the risk for falls. In 2006, 31% of people who died from a fall also had a circulatory system disease, such as heart disease, hypertension, or cardiac arrest that contributed to their death.<sup>4</sup> Additionally, those who have fallen or stumble frequently are two to three times more likely to fall within the next year.<sup>9</sup>

## Standardize the use of fall risk assessment

Despite mandates, fall risk assessments are rarely a part of senior's routine health care, even if they have had a fall or fall injury.<sup>19,23</sup> Barriers cited for lack of screening among healthcare providers include the misconception that falls are not preventable, competing time demands, and provider lack of expertise.<sup>20,23</sup> AGS recommends that all older persons should be asked at least once a year about falls and that older persons who report falls or gait/balance problems should have a full risk assessment.<sup>1</sup> Fall risk assessment can be incorporated into intake procedures or as a routine part of older adults' annual exams.<sup>1, 20, 23</sup> Additionally, organizations such as the CDC offer short fall risk and prevention checklists for older adults and their caregivers.

## Modify the environment for safety

According to the CDC, "Home or environmental risk factors play a role in about half of all falls".<sup>19</sup> Additionally, most falls among adults 65 years and older occur in or near the home or place of residence.<sup>9</sup> Some studies suggest that indoor falls are more common among frailer adults, while outdoor falls are more common among active older adults.<sup>15</sup> Home modifications such as reduced clutter, improved lighting, and installation of bathroom grab bars, stair railings and ramps can reduce fall risk indoors. Additionally, relatively easy environmental modifications, such as frequent cleaning of streets and sidewalks, installing ramps at intersections, marking curbs, and improved lighting, can substantially reduce the risk for outdoor falls.<sup>19</sup>

## Educate the public about fall prevention

Many older adults, their families and caregivers, are unaware of fall-related risk factors and that preventive actions can be taken to reduce their risk.<sup>19</sup> According to the 2007 California Health Interview Survey (CHIS), only 39% of Los Angeles County adults 65 years and older who fell received professional advice about how to avoid falls.<sup>5</sup> Providing accessible information and resources to older adults and their families, as well as caregivers, physicians, and senior service providers, is an important step in preventing falls in Los Angeles County.

### What public health professionals and senior service providers can do to prevent falls

- ✓ *Encourage regular physical activity among adults to help reduce fall risk as they get older*
- ✓ *Explore the development of fall prevention programming in your practice, using a multifactorial approach*
- ✓ *Educate staff working with older adults about fall risk factors and prevention strategies*
- ✓ *Be proactive in assessing fall risk among older adult clients/patients*
- ✓ *Advocate for the adoption of fall prevention programs and policies in your organization*
- ✓ *Modify the environment of homes and public spaces to enable older adults to move around safely*
- ✓ *Provide accessible fall prevention information and resources to older adults and their families*

## Get involved in fall prevention activities in Los Angeles County

### Fall Prevention Coalition – Los Angeles (FPC-LA)

FPC-LA was initiated with a grant from the Kaiser Foundation to address the issue of falls in the Los Angeles area. The Coalition brings together a diverse membership, including the Department of Aging, Department of Public Health, Los Angeles Fire Department, the Fall Prevention Center of Excellence, non-profit organizations, and health and senior service providers, who all share a commitment to preventing falls, one step at a time. To learn more or become involved, contact: Emily Nabors at [emily.nabors@usc.edu](mailto:emily.nabors@usc.edu) or Anna Nguyen at [annaquyen.nguyen@usc.edu](mailto:annaquyen.nguyen@usc.edu), the Fall Prevention Center of Excellence, USC Andrus Gerontology Center, Room 228, Los Angeles, CA 90089, 213-740-1364, [www.stopfalls.org](http://www.stopfalls.org).

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