

## The Human and Economic Costs of Osteoporosis in California

**Osteoporosis is estimated to have caused 171,000 bone fractures in Californians in 2005, costing \$1.43 billion.<sup>1</sup> Non-white populations represent over 1/5<sup>th</sup> of fractures, growing to 36% in 2025. Fracture cost is projected to be \$2.11 billion in 2025,<sup>2</sup> mostly paid by Medicare and Medicaid. Many of these fractures and debilitating consequences can be prevented by identifying individuals at risk and intervening swiftly.**

**Osteoporosis is a common, serious medical condition that can cause morbidity, disability, and death. What is Osteoporosis?** It is a bone disorder in which compromised bone strength increases risk of fracture.<sup>3</sup> **What are Consequences of Osteoporotic Fractures?** Fractures can lead to height loss, deformity, pain, gastrointestinal and respiratory problems, depression, loss of self-esteem, disability, and impairment of daily activities.<sup>4</sup> *For people with severe osteoporosis, simple actions like hugging a grandchild may be out of reach.*

**California will shoulder a large and growing burden of care for osteoporosis,** shared by public and private health plans, patients, their families, and taxpayers.

- 4.30 million California residents were estimated to have osteoporosis or osteopenia (low bone mass) in 2002. Prevalence is expected to grow 22% to 5.25 million by 2010 and 52% to 6.54 million by 2020.<sup>5</sup>
- Fracture incidence in California was estimated to be 171,000 in 2005, with direct medical cost of \$1.43 billion,<sup>1</sup> increasing to 254,000 fractures in 2025 at a cost of \$2.11 billion.<sup>2</sup>
  - Women accounted for 73% of estimated direct medical costs of osteoporosis in 2005,
  - Fractures outside the spine accounted for 96% of costs, and
  - Hospital care represented over half (56%) of total costs and nursing home care one-third (32%).<sup>2</sup> Medicaid pays about half of long-term care costs (~\$230 million); Medicare plans pay for hospital costs.
  - Hispanics had longer hospital stays after hip fracture (6.6 and 6.2 days in men/women) than whites (5.9 and 5.7 days), whereas whites appeared more likely to be discharged to nursing homes (68% and 74% in men/women) than Hispanic men and women (59% and 60%, respectively).<sup>2</sup>
  - Hispanics accounted for 11% of fractures in 2005.
  - Fractures among Hispanics are projected to increase 258% over 20 years (2005-2025).<sup>2</sup>
  - By 2025, non-white populations will account for 36% of fractures in California.<sup>2</sup>

**A substantial gap persists between guidelines and medical practice.**

- **Recommendations:** In 2002, the US Preventive Services Task Force recommended routine osteoporosis screening for women aged 65 years and older.<sup>6</sup> In 2004, the US Surgeon General called for prevention, lifestyle changes, and early diagnosis and treatment to prevent osteoporosis and fractures.<sup>4</sup>
- **Reality:** Three-fourths of US women aged 65 years and older (73%) are at risk for fracture because they have osteoporosis (25%) or osteopenia (48%),<sup>7</sup> yet most do not know that Medicare helps pay for diagnostic testing,<sup>8</sup> and few are screened by the Medicare program (9% in 2000).<sup>7</sup>

**Although osteoporosis is highly manageable, the majority of people with osteoporosis remain undiagnosed and untreated.** *Despite effective therapies to treat osteoporosis and prevent fractures, many seniors and their physicians continue to accept osteoporosis as a natural part of aging.*<sup>4</sup>

- **Many people are not aware that osteoporosis can cause fractures across the body.** In California, 40% of osteoporotic fractures occur at the pelvis and other sites such as ankle, arm, or shoulder.<sup>2</sup> *These fractures may not trigger an evaluation for osteoporosis, which is traditionally associated with hip, spine, and wrist fractures.*
- **Diagnosis and treatment are uncommon even in high-risk patients who have already fractured.** Only 18% of US women in Medicare Advantage plans were either tested or treated for osteoporosis in the six months following a fracture in 2004.<sup>9</sup>
- **The serious and debilitating consequences of osteoporosis are often unrecognized.** After a hip fracture, about 20% of people die within a year,<sup>10</sup> one-fourth become disabled because of the fracture,<sup>11</sup> and one fifth require nursing home care.<sup>12</sup> A hip fracture is as likely to impair mobility as a stroke.<sup>13</sup>

**Osteoporosis education programs should include a special focus on senior citizens to avert fractures.**

- 89% of California's osteoporosis costs occur in people aged 65 years and older.<sup>2</sup>

There is an urgent need for diagnosis and treatment in high-risk populations. Disease management should also include diet and lifestyle changes to maintain bone health and environmental changes to help prevent falls.

**Active intervention is crucial now to assure earlier diagnosis and appropriate treatment of individuals at risk for bone fracture.** As Dr. Richard Carmona, U.S. Surgeon General, stated:

*"Our reward for this effort will be to prove the forecasters wrong — instead of seeing ever-increasing numbers of individuals suffering from the agony of bone disease and fractures, we will see the day when fewer and fewer Americans bear this burden."<sup>4</sup>*

<sup>1</sup> Solomon D et al. Burden of osteoporosis by race/ethnicity in five state populations. *Arthritis & Rheumatism* 52 (12), 2005.

<sup>2</sup> Burge RT et al. The burden of osteoporosis: A total United States and multiple state analysis. Procter & Gamble Pharm, June 2005, Pharmacoeconomics Research Report PE-03002-ACT. Note: The traditional sites of hip, spine, and wrist comprised 60% of estimated fractures in California in 2005; other sites and pelvis comprised 40%.

<sup>3</sup> Osteoporosis Prevention, Diagnosis, and Therapy. NIH Consensus Statement 2000 March 27-29; 17(1): 1-36.

<sup>4</sup> US Department of Health and Human Services. Bone health and osteoporosis: A report of the Surgeon General. Rockville, MD: US Department of Health and Human Services, Office of the Surgeon General, 2004.

<sup>5</sup> National Osteoporosis Foundation. America's bone health: The state of osteoporosis and low bone mass in our nation. Feb. 2002.

<sup>6</sup> US Preventive Services Task Force. Screening for osteoporosis in postmenopausal women: Recommendations and rationale. *Ann Intern Med* 2002;137:526-528.

<sup>7</sup> King et al. Fracture reduction affects Medicare economics (FRAME): Impact of increased osteoporosis diagnosis and treatment. *Ost Int* 2005;16:1545-1557.

<sup>8</sup> Adler GS and Shatto A. Screening for osteoporosis and colon cancer under Medicare. *Health Care Financing Review* 2002;23:189-200.

<sup>9</sup> HEDIS® 2005. Documentation for Reporting Year 2004. Data from 121 MA plans.

<sup>10</sup> Leibson CL et al. Mortality, disability, and nursing home use for persons with and without hip fracture: A population-based study. *J Am Geriatr Soc.* 2002;50(10):1644-50.

<sup>11</sup> Magaziner J et al. Changes in functional status attributable to hip fracture: A comparison of hip fracture patients to community-dwelling aged. *Am J Epidemiol* 2003;157(11):1023-31.

<sup>12</sup> Chrischilles EA et al. A model of lifetime osteoporosis impact. *Arch Intern Med* 1991;151(10):2026-32.

<sup>13</sup> Lieberman D et al. Characterization of elderly patients in rehabilitation: Stroke versus hip fracture. *Disabil Rehabil* 1999;21(12):542-7.