Osteoporosis and Falls Among Native American Elders

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Background
Falls are a common cause of non-fatality injuries and hospital admissions for traumatic injuries among adults aged 65 and older (Sleet et al., 2008). Among men and women, fall rates are nearly 60% higher for men than women; yet, fall injuries are higher among women (Sleet et al., 2008). Of those who fall, 20% to 30% will suffer moderate to severe injuries including fractures, traumatic brain injuries, significant disability, reduced mobility, decreased independence, and early admission to nursing homes (Sterling et al., 2001; Stevens et al., 2006). In 2010, more than 21,000 elders in the United States died as a direct result of unintentional falls (CDC, 2010). There are several documented fall risk and protective factors among elders including gender, history of cognitive and psychological impairment, and chronic diseases such as arthritis and osteoporosis (AGS 2001; Fletcher & Hirdes, 2002). Osteoporosis occurs when the creation of new bone does not keep up with the removal of old bone. The bones become weak and brittle—all brittle that falls or mild stresses can cause fractures (http://www.mayoclinic.org). Many Native Americans are born lactose intolerant and research has indicated that this population has a low dietary calcium intake (DCI) and high prevalence of osteoporosis.

Methods
Data was gathered from the National Resource Center on Native American Aging over three cycles, each cycle is three years, and was collecting using the Identifying Our Needs: A Survey of Elders instrument.

Cycle III (2005 – 2008)
Cycle IV (2008 – 2011)
Cycle V (2011 – 2014)

Information on Osteoporosis was compared with age group, gender, and falls. Data was obtained from Cycle III, IV, and V. The prevalence of these factors was compared between each cycle. Cross tabulations were used to test associations between osteoporosis and falls during the cycles.

Results

Results Cont.

The comparison of Cycles III, IV, V of the Identifying Our Needs: A Survey of Elders instrument showed:

Women in every cycle reported significantly more osteoporosis than men.

After comparing “Falls Recorded and Age Group”, the highest percentage of falls are recorded for men and women between the ages 60 to 69 in the 1 to 4 falls category.

When looking at falls by gender, more women than men reported falls in each cycle. Most people who fell reported falling between 1 to 4 times in the past year.

Cycles III, IV, and V of Osteoporosis and Gender, women reported much higher rates than men.

When looking at Osteoporosis and falls by Gender: over 40% of men and women with osteoporosis reported 1-4 falls in the past year.

Women between the ages of 60 to 69 who have fallen 1 to 4 times have a significantly higher rate of osteoporosis.

Discussion

The bone depletion caused by osteoporosis puts elders at an increased risk for injuries due to falls. Osteoporosis appears to be a considerable issue in Indian Country. Specifically Native American women appear to suffer to a greater extent in that they have higher rates of Osteoporosis which are likely contributing to the greater number of falls there are enduring in all categories.

To prevent falls when speaking in terms of osteoporosis, eat or drink sufficient calcium including milk, yogurt, cheese, fish, shellfish, and selected vegetables such as broccoli, soybeans, collards, and turnip greens, tofu and almonds help to reduce injuries do to falls. Get sufficient vitamin D in order to enhance calcium. Also, getting exercise can increase strength, improve balance and reduce falls (CDC, 2008; Tremblay, Jr. & Barber 2001).

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