Long-Term Care Survey Alert

BEST PRACTICES: Lower Your Prevalence Of Fall-Related Fractures

Experts explain how to develop an osteoporosis care plan.

Osteoporosis poses a double whammy for residents and nursing facilities in that it not only makes residents more likely to fall, but residents with the bone-thinning condition are more likely to suffer serious fractures from even minor tumbles.

Thus, to protect residents from fractures and lower the facility's survey and malpractice liability, nursing facilities should identify and treat residents at high risk for osteoporosis. "The main goal is fracture reduction by increasing residents' bone quality and quantity and by lowering their risk of falls," emphasized **Jan Maby**, a nurse and doctor of osteopathy, presenting at the June **National Association of Directors of Nursing Administration in Long-Term Care** (NADONA) conference in Cincinnati attended by **Eli**.

Who is at risk for osteoporosis-related fractures? "Before treatment, a verterbral fracture of the spine is the best predictor of future fractures of the hip and spine," according to co-presenter **Ernest Canalis**, professor of medicine and orthopedic surgery at the **University of Connecticut**.

Also think "osteoporosis" when caring for female residents over 65 with the following risk factors:

1. Low bone mineral density (Heel ultrasound is the preferred screening method in the nursing home, say Canalis and Maby.)

2. Presence of a fracture after age 50

3. Low body weight (125 pounds or less)

4. Smoking

5. Maternal history of fracture after age 50

6. Corticosteroid use and other secondary causes of osteoporosis, such as hyperparathyroidism or Cushing's disease

Although osteoporosis is less common in men than in women, estimates indicate that one-fifth to one-third of all hip fractures occur in men, according to the **National Osteoporosis Foundation**. The NOF notes that about 50-60 percent of men with osteoporosis have conditions that produce bone loss, such as low testosterone production, hyperparathyroidism, intestinal disorders, malignancies, ongoing steroid therapy and immobility.

In addition to determining each resident's risk of osteoporosis, Maby suggested doing a fall-risk assessment that includes these parameters:

7. Mobility (inability to rise from a chair without using the arms increases the risk for hip fracture. Also at risk: Residents on their feet four hours or less per day)

8. Gait and transfer ability

9. Continence (Residents who urinate on the floor are at risk for slips and falls, or those with urgency or frequency may try to get up unassisted to use the toilet)

10. Vision

11. Hearing

12. Mood (The NADONA presentation noted that depression is associated with a higher risk of disability, falls, low bone mineral density and increased fracture risk)

13. Cognitive status

14. Use of drugs that impair balance or cognition (for example, benzodi-azepenes or drugs that cause orthosta-tic hypotension).

Based on the assessment, the interdisciplinary team decides whether to do an osteoporosis care plan with specific measures to improve bone health and reduce falls and fall-related fractures. "If the problem is osteoporosis, you address that and if it's incontinence causing the resident to fall, you address that problem," Maby explained.

To help protect their hips, some residents may agree to wear external hip protectors, which have been shown to reduce hip fractures. **Tip**: Look for vendors that sell "crotch-less" products that allow the resident to use the bathroom without removing the protector. (For additional fall-prevention strategies, see the January 2003 Long-Term Care Survey Alert.)

Provide the "Backbone"

Calcium and vitamin D provide the "backbone" in terms of preventing and treating osteoporosis. This simple treatment really works: Women aged 84 who received the recommended supplementation for 18 months had 43 percent less hip fractures than a control group, according to a study reported in the New England Journal of Medicine.

The recommended daily calcium intake for the elderly is 1,500 mg. in divided doses and 800 international units of vitamin D. "The best way to get calcium is by diet, so the dietitian should calculate calcium requirements and recommend calcium-rich foods," Maby suggested.

Some sources suggest that calcium citrate supplements provide better absorption, although it's more expensive. Residents who take a multi-vitamin get 400 units of vitamin D, so they'll require another 400-unit supplement. **Tip**: Don't give the resident two multi-vitamins to provide 800 units of vitamin D, as "that will double the intake of vitamin A, which increases the risk of fractures," Maby cautioned.

To Treat or Not to Treat

The interdisciplinary team will also have to decide who's a candidate for drugs that treat osteoporosis, such as Fosamax or Forteo. "Residents with a previous fracture or those at high risk of falls who have documented osteoporotic changes or evidence of osteoporosis can benefit from treatment," says pharmacist **Thomas Clark**, a spokesperson for the **American Society for Consultant Pharmacists**.

There are some challenges, however, to administering the bisphospho-nates (such as Fosamax and Actonel). For example, the patient must sit upright or stand for 30 minutes after ingesting the medication. And the drugs must be taken first thing in the morning before other meds or food and with water only (instead of juice). Forteo, a new drug that actually builds new bone, has to be injected.

The drugs are also expensive, "so it's a cost-benefit decision," Clark says, and one that the resident and his or her family should weigh in on whenever possible.