Osteoporosis and Fracture Prevention in LTC
Beyond the Break

Welcome

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Ontario Osteoporosis Strategy for Long-Term Care
October 4, 2013
Osteoporosis and Fracture Prevention

Presentation

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Conflicts of Interest
NONE
Why are osteoporosis & fracture prevention important issues for long-term care?

Because . . .

- Hip fractures are the leading cause of transfers to hospitals from LTC homes
- Hip fractures are the most serious injury from a fall
- 40% of those who sustain a hip fracture in LTC will die within 1 year
- 20% of those who have a hip fracture in the community are admitted to LTC
What can we do to reduce suffering and prevent unnecessary fractures?

**Good news . . .**

☒ Hip fractures and other fractures can be reduced by 40-60% by using a combination of bone health protection strategies

☒ vitamin D and calcium

☒ osteoporosis medications

☒ hip protectors

☒ & exercise
**What is osteoporosis?**

**Normal bone**
- Breaking bones is not part of normal aging

**Abnormal or porous bone**
- Porous bones break more easily
- Bones become more porous with aging

**Fracture**

- For LTC residents... *It is never too late*
  
*For every 10-15 persons, we treat for osteoporosis, we can prevent 1 fracture*
Who gets osteoporosis?

- Men and Women
- All residents are at risk for osteoporosis
- 80-85% of residents have osteoporosis
- Those who have had 1 fracture are 2-11 times more likely to have another
The most common fracture sites

1. Spine
   - Most common

2. Hip
   - Most debilitating

3. Pelvis

- All fractures are serious in LTC
- Spine fractures are a source of significant pain and distress.
- Hip fractures dramatically impact a resident’s quality of life

- Hip Fracture rates go up with age.
- For women, hip fractures . . .
  - over 65% occur after age 80
  - 17% after age 90

- Approx. 2,400 Ontario LTC residents/year will sustain a hip fracture
Falls & Fractures

Fractures are a serious fall-related injury in LTC

- Up to 50% of residents fall each year
- Approx. 6-10% of falls result in serious injury
- Approx. 50% of serious injuries are hip fractures

Osteoporosis + Fall = Fracture
What is the impact of osteoporosis in LTC?

- Increased fractures
- Increased transfers to hospitals
- Reduced mobility and quality of life
- Increased pain and suffering
- Increased dependence for care
- Premature death
It’s never too late to treat osteoporosis and prevent fractures

Key Strategies

- Assessment of Osteoporosis and Fracture Risk
- Vitamin D and Calcium
- Medications
- Hip Protectors
- Exercise
- Safe Transfers
Assessment

- Assessment of Osteoporosis and Fracture Risk
  - Admission
  - Quarterly Reviews
- Falls Prevention Programs
  - Post Fall Assessment Protocol
Vitamin D

- Simple, low cost, effective strategy
- Reduces falls in LTC by 20%
- Assists with balance and muscle coordination
- Vitamin D insufficiency in LTC

For residents with >1 year life expectancy, add Vitamin D + calcium

Daily supplementation: 800 – 2000 IU

- 2000 IU for those who are vitamin D insufficient
**Calcium**

- Residents need to eat foods rich in calcium, dietary calcium is best.

  - **Consume from diet:** 1200 mg

- Adjust LTC diets to increase calcium content in meals (add milk powder, grated cheeses, choose products with added calcium (e.g., orange juice)).

**For Residents unable to consume calcium from their diets**

- 500 mg daily of elemental calcium supplements, can be constipating.
Medications

- There are several medication options for LTC residents
- Medications can be taken:
  - Orally – weekly or monthly
  - Intravenous infusion – annually and infused slowly 30-45 minutes
  - Injection – twice a year
- IV or injections are excellent options for residents with swallowing difficulties or who can’t tolerate the pills
What are hip protectors?

Hip protectors are padded undergarments designed to decrease the impact of a fall on the hip by either absorbing or shunting energy away from the hip, thereby reducing the risk of a hip fracture.

Why Wear Hip Protectors?

- Reduces fractures by 40-70%
- Different designs, but need to wear them in order to provide hip protection
Who should wear hip protectors?

 Residents should wear hip protectors if they:

- have osteoporosis,
- have had a hip fracture,
- are high risk for falls,
- have dementia and wander, and/or
- need assistance transferring but self-transfer
- or have an unsteady gait
Weight-bearing exercise

- Walking is important but not enough to keep bones healthy
  - At least encourage residents to walk to their dining rooms for meals

- Residents should participate in:
  - Weight-bearing cardiovascular exercise
  - Muscle-strengthening exercise
  - Balance challenging exercise
Safe transfers

Safe transferring, repositioning, and lifting of residents with fragile bones is important.

- Use handling procedures that are most appropriate to the resident’s mobility care needs.

- Remember, any movement must be slow and gentle.

- Never pull on arms, squeeze ribs, or grab wrists.
Safe transfers

- **For weight-bearing residents**, use transfer assistive devices such as sit-stand lifts, pivoting disks, grab bars, slide boards, and transfer belts.

- **For repositioning**, use friction-reducing devices such as repositioning sheets, sliding devices, and tilt chairs.

- **For residents who can’t weight-bear**, use friction-reducing devices such as mechanical lifts, lateral slides, and air mattress devices.
It’s never too late to treat osteoporosis and prevent fractures

### Key Strategies

- Assessment of Osteoporosis and Fracture Risk
- Vitamin D and Calcium
- Medications
- Hip Protectors
- Exercise
- Safe Transfers
For more information,

- Osteoporosis Area Managers in Ontario
- Osteoporosis Canada: www.osteoporosis.ca


Any Questions?
References


References (cont’d)


Ontario Osteoporosis Strategy for Long-Term Care

Today’s presentation is one of many activities from the Ontario Osteoporosis Strategy for Long-Term Care promoting evidence-based osteoporosis and fracture prevention practices such as promoting bone health care, education and research in LTC homes (since 2008)

Since 2002, the Ministry of Health and Long-Term Care has committed funding to reduce osteoporosis and improve the bone health of Ontarians across the health care sector.