

Ontario Osteoporosis Strategy for Long Term Care

GET THE FACTS Webinar

Tuesday, February 17, 2009: 2:30 – 3:15 pm

Osteoporosis Falls and Fracture Prevention for Long-Term Care



Learning Themes

On completion of this webinar , learners will have

1. Reviewed information about
 - Osteoporosis, falls and fractures, and
 - The impact on residents and long-term care
 2. Reviewed key findings in the 2008 National Report Card on Osteoporosis (Osteoporosis Canada)
 3. Understand more about the Ontario Osteoporosis Strategy
 - Key components that interface with LTC
 - LTC strategy
-


What do you know?

- Let's start talking about Osteoporosis and Fracture Prevention in Long Term Care
- Pop Quiz for everyone
- On the webinar screen, answer these questions

1. Who suffers more morbidity and mortality from osteoporotic hip fractures?


Women Men

POP QUIZ



OSTEOPOROSIS and FRACTURE PREVENTION in long term care

Let's start talking about
osteoporosis and fracture prevention

1. Who suffers more morbidity and mortality from osteoporotic hip fractures?
 Women Men

2. What is the most common and often under-recognized type of osteoporotic fracture?
Hip Spine Ankle Wrist

3. What is the most devastating type of osteoporotic fracture?
Hip Spine Ankle Wrist

4. Taking Vitamin D reduces falls by _____ %
1% 5% 10% 20%



5. What is the biggest cause of fractures in adults over age 50?
Falls Osteoporosis Accidents

1. Men 4. 20%
2. Spine (Vertebral) 5. Osteoporosis
3. Hip

MAKE NO BONES ABOUT IT

ONTARIO
OSTEOPOROSIS
STRATEGY FOR
LONG-TERM CARE

For more information
www.osteostategy.on.ca



JENORX Health Services Research Institute
www.jenorex.com

Feb. 2009

What do you know?

2. What is the most common and often under-recognized type of osteoporotic fracture?

- Hip Spine Ankle Wrist

3. What is the most devastating type of osteoporotic fracture?

- Hip Spine Ankle Wrist


4. Taking Vitamin D reduces falls by _____%?

- 1% 5% 10% 20%

5. What is the biggest cause of fractures in adults over 50?


- Falls Osteoporosis Accidents

POP QUIZ



OSTEOPOROSIS and FRACTURE PREVENTION in long term care

Let's start talking about osteoporosis and fracture prevention

1. Who suffers more morbidity and mortality from osteoporotic hip fractures?
 Women Men

2. What is the most common and often under-recognized type of osteoporotic fracture?
Hip Spine Ankle Wrist

3. What is the most devastating type of osteoporotic fracture?
Hip Spine Ankle Wrist

4. Taking Vitamin D reduces falls by _____%
1% 5% 10% 20%



5. What is the biggest cause of fractures in adults over age 50?
Falls Osteoporosis Accidents

1. Men 4. 20%
2. Spine (Vertebral) 5. Osteoporosis
3. Hip

MAKE NO BONES ABOUT IT

ONTARIO OSTEOPOROSIS STRATEGY FOR LONG-TERM CARE

For more information www.osteostategy.on.ca



Feb. 2009

What are the facts ?



- **Who has osteoporosis?**

Both, women and men

→ Women : 1 in 4 women

→ Men: 1 in 8 men

- **What is the prevalence of osteoporosis in LTC?**

→ 63% (65-74 yrs) to 85% (85+ years)

- **Who has more morbidity from osteoporosis?**

→ Men > after age 70 more morbidity in men than women

(World Health Organization, Osteoporosis Canada, Zimmerman et al. 1999)

What are the facts?

- **How many older adults fall?**
 - 33% of older adults fall each year
- **Do falls result in serious injuries in older adults?**
 - 36% of falls result in serious injuries
 - falls are the biggest cause of injury deaths, serious injuries and functional decline

(Ontario Injury Prevention Resource Centre, 2007/2008)

What are the facts?



- **Are falls costly?**

- Falls: most costly injury, totaling more than \$1.9 million
- Older adults 55+ years accounted for almost half of these costs, at \$962 million.

- **The numbers are overwhelming.....**

- Every 10 minutes in Ontario, at least one older adult visits an emergency department due to a fall.
- Every 30 minutes in Ontario, at least one older adult is admitted to hospital due to a fall.

(Ontario Injury Prevention Resource Centre, 2007/2008)

What are the facts?

- **How many older adults who fall are hospitalized?**
 - ➔ Older adults represent
 - 11% of all visits to an emergency department
 - 40% of all hospitalizations due to an injury
 - 84% of injury hospitalizations in individuals over 65 years were due to unintentional fall
- **By age/gender :**
 - 80+: highest ER and hospitalization rate for fall related injuries
 - women 76-91 : highest hospitalization rate for fall injuries

(Ontario Injury Prevention Resource Centre, 2007/2008)

What are the facts?



- What is the **biggest cause of fractures in older adults together with falls?**
 - **Osteoporosis** (over age 50)
- **Who fractures?**
 - Women 40% *AND* Men 24% % (in their remaining lifetime)
- **What is the most common osteoporotic fracture?**
 - Spinal fractures (vertebral)
 - Spinal fractures are **under-diagnosed** despite high prevalence (40% women, 13% men)

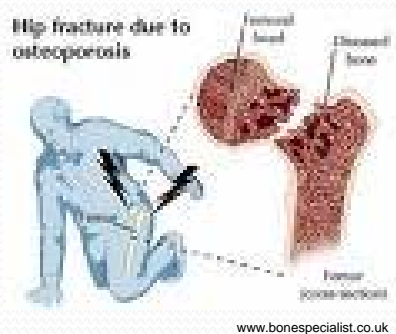
(Papaioannou et al, 2002; Ronald et al. 2008; Sugarman et al. 2002)

What are the facts?

- What is the most devastating osteoporotic fracture?

→ Hip fractures

→ 40% of hip fracture survivors never return to their previous health



→ Life expectancy after a hip fracture is decreased by 6 years

→ Hip fracture dramatically impacts on remaining quality of life

→ Fractures are the most frequent reason for hospitalization of LTC residents (esp. hip, femur)

(Papaioannou et al, 2002; Ronald et al. 2008; Sugarman et al. 2002)

What are the facts?



- **How serious are hip fractures for older persons?**
 - A women at age 50 is as likely to die from a hip fracture in her remaining lifetime as she is from breast cancer
 - 1/3 of all hip fractures occur in men
- **Who suffers more morbidity from a hip fracture?**
Women or men?
 - More morbidity in men
 - The personal disability can be compared to that of a stroke or a heart attack

(World Health Organization, Osteoporosis Canada)

What are the facts?

- Do older adults **die** from a hip fracture?

- YES, older people can die from a hip fracture



- Who has the **higher death rate?** Women or men?

- death rate in the first year after a fracture is higher for men

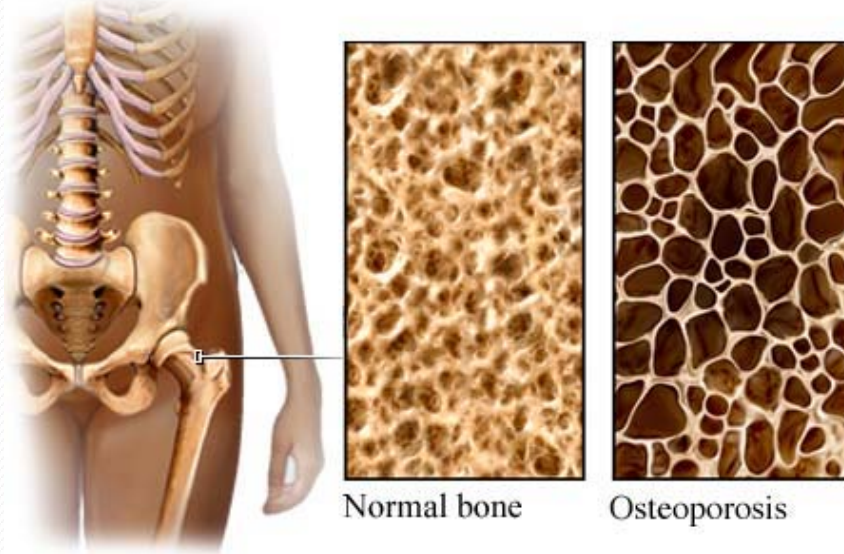
- death rate for men is 34% and women is 20-24% (average 25%)

- death rate for those living in LTC at the time of fracture

- At 6 months: 31.4%
 - At 12 months: 39.0%

(Papaioannou et al. 2000)

What are the costs of hip fractures related to osteoporosis in Canada?



- Approx 25,000 hip fractures each year
 - 70-90% due to osteoporosis
- Annual cost of hip fracture care is estimated at \$650 million
- 2,400 Ontario LTC residents will sustain a hip fracture each year at a cost of \$22 million
- 1 year cost of a resident readmitted to LTC after a fracture is \$33,729, newly admitted to LTC is \$44,156

(Wiktorowicz ME et al. 2001)

What does this all mean for Long-Term Care?

Almost all fractures in LTC are due to falls *and* osteoporosis

- 70% of fractures occur with falls
 - 2.3%-6% of falls result in fractures
 - 1% of falls result in hip fractures
- Most frequent primary cause of hospitalization among LTC resident was femur fractures (2nd pneumonia, 3rd heart diseases)
 - Represents 25.5% of all femur fractures among seniors
- Falls account for 40% of LTC admissions
 - 24% of hip fracture survivors are admitted to institutional care (LTC)

(Papaioannou et al, 2000; Ronald 2008)

What does this all mean for Long-Term Care?

Almost all fractures in LTC are due to falls *and* osteoporosis

- Residents' hip fracture rates are 2.4 to 10.5 times that of similar-aged community older adults
- Longer term mobility is lost in 68% of residents who've had a hip fracture
- 10% experienced another fracture in the follow-up year

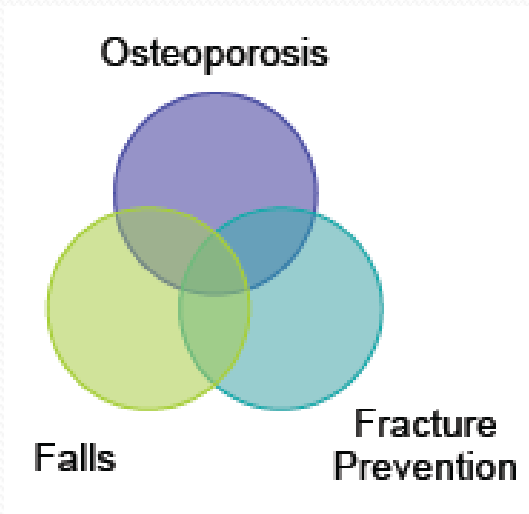
(Papaioannou et al, 2000)

What do LTC staff think?

- 50% of LTC staff feel that not enough is being done to prevent fractures
- 78% believe their should be screening for all residents with risk factors
- Staff (14-80%) noted: there are many barriers to using hip protectors
- 86% of physicians said prevention should be done
 - Only 45% agreed that it was important to provide Vitamin D to all residents
 - Only 18% agreed that bisphosphonates have been shown to decrease the risk for hip fracture
 - Actual calcium intake of ≥ 1000 mg was 20% of residents
 - Actual Vitamin D intake of ≥ 800 IU was 16% of residents

What does this all mean for Long-Term Care?

- **Make Osteoporosis and Fracture Prevention part of your LTC home's falls prevention program**



- It's important that osteoporosis, fracture prevention and falls are recognized as a trio of interrelated health issues
 - any intervention targeting one of these three health issues should acknowledge the other two.
- Residents who have osteoporosis and have had a bone fracture are at high risk for fracturing again

For more information

Contact your local
Osteoporosis
Area Manager

www.osteoporosis.ca

Project Manager
Ontario Osteoporosis
Strategy for LTC

www.osteostategy.on.ca

Mary-Lou van der Horst

Email: dhm9@xplornet.com

Phone: 905.541.0656



References

Ontario Osteoporosis Strategy for Long-Term Care

- Albertsson, DM., Mellstom, D., Petersson, C., & Eggertsen, R. (2007). Validation of a 4-item score predicting hip fracture and mortality risk among elderly women. *Ann Fam Med*, **5**, 48-56.
- Bischoff-Ferrari, H.A., Dawson-Hughes, B., Willett, W.C., et al. (2004). Effect of vitamin D on falls. A meta-analysis. *JAMA*, **291**(16), 1999-2006.
- Canadian Agency for Drugs and Technology in Health. (2008). Hip protectors in long-term care: A clinical and cost-effectiveness review and primary economic evaluation. Ottawa, ON: CADTH.
- Canadian Institute for Health Information. (2009). *Bisphosphonates in osteoporosis. An analysis focusing on drug claims by seniors, 2001-2007*. Ottawa, Canada: Author.
- Canadian Multicentre Osteoporosis Study (CaMos). www.camos.org
- Chandler et al. (2000). Low bone mineral density and risk for fracture in white female nursing home residents. *JAMA* **2000**; **284**(8): 972-977
- Chen JS., Simpson, JM, March, LM., Cameron, ID., Cumming, RG., Lord, SR., Seibel, MJ., & Sambrook, PN. (2008). Fracture risk assessment in frail older people using clinical risk factors. *Age and Ageing* ; **37**, 536-541.
- Colón-Emeric, C., Lyles, KW., Levine, DA., et al. (2007). Prevalence and predictors of osteoporosis treatment in nursing home residents with known osteoporosis or recent fracture. *Osteoporos Int.*, **18**(4): 553-559.
- Jensen, J, Lundin-Olsson, L, Nyberg, L; & Gustafson, Y. (2002). Fall and injury prevention in older people living in residential care facilities. A cluster randomized trial. *Ann Intern Med*, **136**:733-741.
- International Osteoporosis Foundation. www.iofbonehealth.org
- MacLean ,C., Newberry,S., Maglione, M., et al. (2008). Systematic Review: Comparative Effectiveness of Treatments to Prevent Fractures in Men and Women with Low Bone Density or Osteoporosis . *Ann Intern Med*, **148**, 197-213.
- Ontario Injury Resource Centre (2007/2008). *Injuries among Seniors in Ontario: A Descriptive Analysis of Emergency Department and Hospitalization Data and Injuries Among Seniors in Ontario and Compass Newsletter 5(4) April 2008 – Falls from Slips and Trips*. Toronto: Author. Website www.oninjuryresources.ca
- Osteoporosis Canada www.osteoporosis.ca Ontario Osteoporosis Strategy www.osteostategy.on.ca

References

Ontario Osteoporosis Strategy for Long-Term Care

- Osteoporosis Canada (2008). *Breaking barriers. Not bones. 2008 National Report Card on Osteoporosis Care*. Toronto, ON: Author.
- Papaioannou A, Wiktorowicz ME., Adachi JD., et al. (2000). Mortality, independence in living and refracture, one year following hip fracture in Canadians. *J Soc Obstet Gynaecol Can.*,**22**:591-7.
- Papaioannou A., Giangregorio L., Kvern B., et al. (2004). The Osteoporosis Care Gap in Canada. *BMC Musculoskelet Disord.* **5**:11.
- Papaioannou, A., Watts, NB., Kendler, DL., Yuen, CK., Adachi, JD., & Nicole Ferko, N.(2002). Diagnosis and management of vertebral fractures in elderly adults. *Am J Med*, **113**, 220 –228.
- Papaioannou, A. (2000). *J Soc Obstet Gynaecol Can*; **22**(8):591-597.
- Ronald, LA., McGregor, MJ., McGrail, KM., Tate, RB., & Broemling, AM. (2008). Hospitalization rates of nursing home residents and community-dwelling seniors in British Columbia. *Canadian Journal on Aging*, **27**(1), 109-115.
- Sawka, A.M., Nixon, M., Giangregorio, L., et al. (2007). The use of hip protectors in long-term care facilities: A survey of nursing home staff. *J AM Med Dir Assoc*, **8**, 229-232.
- Sawka, A.M., Boulos, P., Beattie, K., et al. (2005). Do hip protectors decrease the risk of hip fracture in institutional and community-dwelling elderly? A systematic review and meta-analysis of randomized controlled trials. *Osteoporosis Int*, **16**, 1461-1474.
- Sugarman JR, Connell FA, Hansen A, Helgerson SD, Jessup MC, & Lee H. (2002). Hip fracture incidence in nursing home residents and community-dwelling older people, Washington State, 1993–1995. *J Am Geriatr Soc*, **50**(10):1638–1643.
- Wiktorowicz ME, Goeree R, Papaioannou A et al. (2001). Economic implications of hip fracture: health service use, institutional care and cost in Canada. *Osteoporos Int*,**12**(4):271-8.
- Zimmerman, Sl., Girman, CJ., Custis Buie, VC., et al. 1999). **The prevalence of osteoporosis in nursing home residents.** *Osteoporos Int*, **9**,151–157

More information available at www.osteostategy.on.ca and www.osteoporosis.ca