

2019

Osteoporosis: What to be aware of as a patient

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Recommended Citation

Borden, Jonathan H., "Osteoporosis: What to be aware of as a patient" (2019). *Family Medicine Clerkship Student Projects*. 462.
<https://scholarworks.uvm.edu/fmclerk/462>

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Slide 1

Osteoporosis: What to be aware of as a patient

Jonathan Borden-Family Medicine Clerkship-April 2019-St. Albans, VT

Faculty Mentor: Dr. Max Bayard

Slide 2: Problem Identification

- ▶ It is estimated that approximately 10.2 million older adults in the US have osteoporosis and that another 43 million would qualify as being osteopenic [1]
- ▶ Patients who have osteoporosis have a 5.67 times higher risk of having a hip fracture at some point than patients without osteoporosis [2]
 - ▶ Hip fractures that occur have a statistically significant higher mortality rate than other fractures [2]
- ▶ Living in Rural areas, such as Franklin county, with social isolation and poor nutrition in a low socioeconomic community puts you at risk for osteoporosis [3]
 - ▶ High cholesterol diets deteriorate bone health [3]
- ▶ Osteoporosis Risk Factors Represented in Franklin County Population [4]:
 - ▶ 95.6% of adults are Caucasian
 - ▶ 19% of adults smoke
 - ▶ 29% of adults are obese
 - ▶ 20% of adults qualify as drinking excessively

Slide 3: Public Health Cost

- ▶ The annual US cost of osteoporosis fractures in the elderly in 2008 was estimated to be around \$22 billion [5]
- ▶ With the increasing number of individuals surviving past age 65 years, the public health burden of osteoporotic fractures will continue to rise if not addressed for risk prevention [6]
 - ▶ Franklin County is 13.4% persons ages 65+ and growing [4]

Slide 4: Community Perspective

▶ Physician 1

- ▶ Vermont has one of the highest rates of osteoporosis in the nation because it is so disproportionately Caucasian [95% in Franklin County]
- ▶ Screening for risk and informing patients about osteoporosis is vital because screening intervention has been shown to be extremely effective in avoiding hip fractures which have a high mortality rate associated with them

▶ Physician 2

- ▶ Providing educational material for at-risk communities in language that they can understand is so important. Many rural community health centers do not have resources such as DEXA scans, so it is very important to educate patients on the topic so that they can take control of their risk for osteoporosis.

Slide 5A: Intervention and Methodology

- ▶ A brochure [next slide] was developed to provide an explanation of what osteoporosis is, who is at risk for having/developing osteoporosis and what to do, as a patient, if they think they are at risk of having or developing osteoporosis
 - ▶ Community physicians were consulted for brochure development
- ▶ The brochure is designed to help patients better understand their risk and to begin implementing preventive practices themselves
- ▶ The brochure's information was tailored specifically to the Franklin County community
 - ▶ Rural
 - ▶ Low-socioeconomic status
 - ▶ 95% Caucasian
- ▶ **Methodology:**
 - ▶ Patients were identified as being “at risk” of osteoporosis by the nursing staff within the clinic
 - ▶ At risk:
 - ▶ Women ages 65+
 - ▶ Women who are post-menopausal but younger than age 65
 - ▶ Men ages 70+
 - ▶ Patients would receive the brochure and a brief counseling regarding osteoporosis

Slide 5B: Brochure

Good Food for your Bones

Food	Nutrient
Milk	Calcium and Vitamin-D
Sardines	Calcium
Salmon, Tuna	Vitamin D
Collard Greens, Kale, Broccoli	Calcium
Spinach, Tomatoes, Potatoes, Sweet potatoes, Raisins	magnesium
Bell Peppers, Oranges	Vitamin C
Kale, Collard greens, Spinach, Mustard greens, Brussel sprouts	Vitamin K

For More Information, please contact:

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Osteoporosis:

What you need to know to stay healthy!!



What is Osteoporosis

It is a disease that makes your bones weak. People with the disease break their bones easily



Who is at risk for having Osteoporosis?

- Women 65 years of age and older
- Women who are post-menopausal and less than 65 years of age
- Men older than 70
- Personal history of fractures
- Family history of hip fractures
- Long term steroid [glucocorticoid] use
- body weight below 127 lb
- Cigarette smoking
- Excess alcohol use
- White/caucasian ethnicity

What can I do to avoid fractures?

- Tell your healthcare provider!!
- Eat more Calcium and Vitamin-D
 - 1,000-1,200 mg of Calcium per day
 - 500-800 mg of Vitamin-D per day
- Stop smoking
- Start moving and being active
 - Even just walking helps!!
- Avoid falling
 - Decrease the amount of alcohol you drink
 - Tuck away electric cords so you don't trip on them
 - Be aware of slippery floors
 - Wear comfortable shoes that you feel sturdy and secure in
 - Have your eyes checked
- Ask your provider about whether any medications you are currently on increase your risk for falling

Slide 6: Response

- ▶ Patient response was very positive
 - ▶ Many did not know what osteoporosis was
 - ▶ Many liked the recommendations for what they can do to avoid fractures
 - ▶ Nutrition guidelines were particularly helpful
 - ▶ All patients felt that the brochure was written in plain language that they could understand

Slide 7: Evaluation of Effectiveness and Limitations

► Evaluation of Effectiveness:

- Based off of patient encounters, the brochure seems to effectively communicate what osteoporosis is and interventions that community members can make within their own lives to combat their risk of fractures.
- If I had time within my clerkship, I would like to provide a pre and post-brochure survey to evaluate the effectiveness of the brochure by looking at patient's knowledge of osteoporosis, risk factors, and what they can do to avoid fractures.
 - It would also be interesting to look at changes they have made within their lives based off of information from the brochure to reduce the risk of osteoporotic fractures/increase bone density

► Limitations:

- Due to the clerkship being so short I wasn't able to distribute the brochure until the last two weeks. This made it difficult to follow up with patients about usefulness of the brochure
- I was only able to distribute the brochure to patients in-office that I saw so the majority of the community did not receive it

Slide 8: Recommendations for Future Interventions

- ▶ Create a magnet from the information in the brochure that patients can take and keep on their refrigerator for reference
- ▶ Copies of the brochure can be provided at locations throughout Franklin county
 - ▶ Gyms
 - ▶ Grocery stores
 - ▶ Dentists
- ▶ Osteoporosis screening can be more effectively incorporated into intake protocols within the Notch Clinic

Slide 9: References

- ▶ 1. Wright NC, Looker AC, Saag KG, et al. The Recent Prevalence of Osteoporosis and Low Bone Mass in the United States Based on Bone Mineral Density at the Femoral Neck or Lumbar Spine. *Journal of Bone and Mineral Research*. 2014;29(11):2520-2526. doi:10.1002/jbmr.2269.
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