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Osteoporosis Education: An Insight into Risk Factors & Prevention

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OSTEOPOROSIS EDUCATION:
AN INSIGHT INTO RISK FACTORS & PREVENTION

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PROBLEM IDENTIFICATION

• Osteoporosis is a disease of the bone that makes a person’s bones weak and more likely to break.

• Approximately 10 million Americans have osteoporosis and another 44 million have low bone density, placing them at increased risk.

• One in two women and about one in four men over age 50 will break a bone due to osteoporosis.

• In longitudinal studies of women residing in northern latitudes (i.e. Vermont), bone loss was most pronounced during winter months when sun exposure and weight-bearing activities are more limited.

• Although information about screening and treatments for osteoporosis are widely available to patients, there appears to be a gap in education about risk factors that predispose one to this silent yet deadly disease as well as strategies for prevention.
PUBLIC HEALTH COST

• Osteoporosis is costly:
  • Osteoporosis-related bone fractures cost patients, their families, and the healthcare system $19 billion annually.
  • By 2025, experts predict that osteoporosis will be responsible for 3 million fractures resulting in $25.3 billion in costs.
COMMUNITY PERSPECTIVES

• I interviewed several community members with osteoporosis and a few nurses who work at UVMMC. Here are some of the takeaways from my conversations:
  
  • Many of these community members reported not receiving adequate education from their healthcare providers about risk factors for osteoporosis other than deficiencies in vitamin D and exercise.
  
  • Some expressed that their providers did not explain what kind of exercises are conducive for maintaining healthy bones.
  
  • Many also expressed a lack of knowledge on which foods contain adequate amounts of vitamin D and calcium, especially during the winter seasons in Vermont when there is inadequate sunlight exposure.
  
  • Some of the nurses feel that more education and conversations need to happen between a patient and his/her provider regarding prevention of osteoporosis.
INTERVENTION

• In response to my conversations about osteoporosis, I decided to focus my intervention on educating the community about osteoporosis risk factors, recommended weight-bearing exercises, and the types of foods that contain adequate amounts of vitamin D and calcium.

• A poster serving as an educational guide was created by compiling information from the National Osteoporosis Foundation and the CDC.

• The poster will hopefully increase awareness about osteoporosis risk factors and motivate patients (both females and males) to start conversations with their healthcare providers on how to best prevent osteoporosis.
RESULTS

• A poster promoting awareness of the various risk factors for osteoporosis and strategies for prevention.

• Poster can be displayed in the waiting area and in the examination rooms at all the UVMMC family medicine practices and other affiliated sites of the University of Vermont Health Network.

• Posters with minimum amounts of text and populated with interesting photos are generally more visually appealing and thus noticeable; this can be an effective initial step of generating awareness to the community.

• Posters displayed in waiting areas and inside examination rooms are more likely to be perused while patients wait to be seen by their providers.
EFFECTIVENESS AND LIMITATIONS

• **Assessing effectiveness:**
  - Survey healthcare providers about whether they have engaged in more conversations with their patients about osteoporosis. Also ask if they have noticed an increase in weight-bearing exercises as well as consumption of foods rich in vitamin D and calcium.

• **Limitations:**
  - Medical practices have a multitude of educational materials on their walls so patients may not have the time or capacity to peruse and reflect on everything.
  - It would be helpful to discuss the poster with patients and obtain their input on its usefulness.
RECOMMENDATIONS FOR FUTURE INTERVENTIONS

• Survey healthcare providers about whether they have engaged in more conversations with their patients about osteoporosis.

• Survey patients about the number of servings of vitamin D/calcium-rich foods that they consume as well as weight-bearing exercises that they incorporate into their daily routines. This can be a good starting point for lifestyle counseling and motivational interviewing.

• Set up an educational class in the community that discusses risk factors, prevention strategies, and the importance of screening/treatment to reduce morbidity and mortality from osteoporosis.
REFERENCES


• Food and your Bones – Osteoporosis Nutrition Guidelines. https://www.nof.org/patients/treatment/nutrition/

• Does Osteoporosis Run in your Family? https://www.cdc.gov/features/osteoporosis/index.html

• Osteoporosis Overview. https://www.bones.nih.gov/health-info/bone/osteoporosis/overview

INTERVIEW CONSENT FORM

Thank you for agreeing to be interviewed. This project is a requirement for the Family Medicine clerkship. It will be stored on the Dana Library Scholar Works website. Your name will be attached to your interview and you may be cited directly or indirectly in subsequent unpublished or published work. The interviewer affirms that he/she has explained the nature and purpose of this project. The interviewee affirms that he/she has consented to this interview.

Yes _____ / No _____