Effective Health Care

Screening and Management of Osteoporosis in Populations with Complex, Long-term Disabilities Nomination Summary Document

Results of Topic Selection Process & Next Steps

- A systematic review on the topic, *Screening and Management of Osteoporosis in Populations with Complex, Long-term Disabilities*, is not feasible due to the limited data available at this time.
- *Screening and Management of Osteoporosis in Populations with Complex, Long-term Disabilities* could potentially be considered for new comparative effectiveness research.

Topic Description

Nominator(s): Individual

Nomination Summary: This topic was identified as a priority for a systematic review by a physician who treats patients with complex, long-term disabilities. The nominator notes that this patient population is at increased risk of osteoporosis due to immobility, limited exposure to sunlight, lack of exercise, neuromuscular problems, and side-effects of medications. The nominator is concerned that patients with disabilities are at an increased risk for fractures if they develop osteoporosis, and that such fractures are difficult to diagnose, increase long-term care costs, and are associated with patient discomfort and further decreases in mobility. The nominator also noted that due to a lack of clear guidance regarding how to treat osteoporosis in this patient population, he is unsure how to treat his patients, resulting in poor patient outcomes.

Staff-Generated PICOs
Population(s): Patients with complex, long-term disabilities with stable functional status
Intervention(s): Screening: Dual-energy X-ray absorptiometry (DXA), calcaneal quantitative ultrasound (QUS), quantitative computed tomography (QCT) radiography, analysis of biochemical markers, and fracture risk assessment tools (e.g., FRAX, OST, SCORE)
Comparator(s): Those listed above (i.e., compared to each other), standard care, or no screening
Outcome(s): Disability, level of pain, quality of life, incidence of fractures, functional status, mobility, occurrence of adverse events

Population(s): Patients with complex, long-term disabilities with stable functional status, diagnosed with osteoporosis
Intervention(s): Management: dietary modifications, dietary supplements (e.g., calcium,

Vitamin D), physical activity, pharmacotherapies
Comparator(s): Those listed above (i.e., compared to each other), standard care, or no intervention
Outcome(s): Disability, level of pain, quality of life, incidence of fractures, functional status, mobility, occurrence of adverse events

Key Questions from Nominator:

1. What is the comparative safety and effectiveness of strategies and interventions to screen for osteoporosis in patients with complex, long-term disabilities?
2. What is the comparative safety and effectiveness of strategies and interventions to manage osteoporosis in patients with complex, long-term disabilities?

Considerations

- The topic meets EHC Program appropriateness and importance criteria. (For more information, see http://effectivehealthcare.ahrq.gov/index.cfm/submit-a-suggestion-for-research/how-are-research-topics-chosen/.)
- Osteoporosis affects more than 200 million people worldwide, including more than 10 million Americans. Patients with complex, long-term disabilities are at increased risk for developing osteoporosis due to immobility, limited exposure to sunlight, lack of exercise, neuromuscular problems, and side-effects of medications. If they develop osteoporosis, these patients are at an increased risk for fractures. Such fractures are difficult to diagnose, increase long-term care costs, and are associated with patient discomfort and additional decrease in mobility.
- Without specific guidance, it is unclear to clinicians and patients if standard care is effective for this patient population, or if other strategies should be employed instead. Further information regarding the identification and management of osteoporosis in patients with long-term disabilities may inform clinical guidelines specific to this patient population, and thus improve patient outcomes.
- We identified one guideline and one systematic review related to screening in populations with a specific disability.
    - Sullivan WF, Berg JM, Bradley E, et al. Primary care of adults with developmental disabilities: Canadian consensus guidelines. Can Fam Physician. 2011; 57(5):541-53, e154-68.
    - Fehlings D, Switzer L, Agarwal P, et al. Informing evidence-based clinical practice guidelines for children with cerebral palsy at risk of osteoporosis: a systematic review. Dev Med Clin Neurol. 2012; 54(2):106-16.
- We identified three systematic reviews related to osteoporosis treatment in populations with a specific disability.
    - Conwell LS, Chang AB. Bisphosphonates for osteoporosis in people with cystic fibrosis. Cochrane Database of Systematic Reviews 2014, Issue 3. Art. No.: CD002010. DOI: 10.1002/14651858.CD002010.pub4.
    - Fehlings D, Switzer L, Agarwal P, et al. Informing evidence-based clinical practice guidelines for children with cerebral palsy at risk of osteoporosis: a systematic review. Dev Med Clin Neurol. 2012; 54(2):106-16.
    - Newman M, Barker K. The effect of supported standing in adults with upper motor neuron disorders: a systematic review. Clin Rehabil. 2012; 26(12):1059-77.

- While we identified three systematic reviews and one guideline specific to screening or management for individuals with specific disabilities or disorders such as cystic fibrosis, cerebral palsy, and motor neuron disease, we found limited evidence related to screening and management for osteoporosis specifically for patients with long-term disabilities. Given the limited evidence available, an AHRQ systematic review is not feasible at this time.