DEVELOPING PROFILES OF POSTMENOPAUSAL WOMEN BEING PRESCRIBED ESTROGEN THERAPY TO PREVENT OSTEOPOROSIS

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ABSTRACT: Postmenopausal women with estrogen deficiency are at high risk for osteoporosis. Estrogen therapy has been shown to be effective in preventing postmenopausal bone loss and maintaining bone mineral density. The increasing number of women at risk for osteoporosis and the high cost of treating this condition emphasizes the importance of preventing osteoporosis. This study was designed to identify trends and predictors of estrogen use for osteoporosis prevention among postmenopausal women. A retrospective, cross-sectional study was conducted using Behavioral Risk Factor Surveillance System data (1997–1999). Women 35 years and older who had passed menopause or were currently going through menopause were identified from the states including the BRFSS module that asked questions about estrogen use. Results showed an increasing prevalence in estrogen use from 1997 to 1999 for osteoporosis prevention. In 1999, almost a third of the postmenopausal women surveyed used estrogen to prevent osteoporosis. Prevalence was higher among women 45–64 years of age, whites, and those with higher education levels. Physician counseling on the benefits and risks of estrogen therapy was the strongest predictor of estrogen use for prevention of osteoporosis. Insurance coverage and compliance with other preventive behaviors such as mammograms and Pap smears were also strongly associated with greater estrogen use. However, women who were at risk for acute drinking, not married, overweight or obese, and diabetic were all less likely to receive estrogen therapy for osteoporosis prevention. The relationships demonstrated between estrogen use and demographic characteristics, lifestyle behaviors and health care access and utilization factors underline the importance of targeting specific groups of women for promoting its protective effect against osteoporosis.

KEY WORDS: estrogen therapy; postmenopausal women; prevention; osteoporosis.
INTRODUCTION

There has been a steady increase in the use of postmenopausal estrogen therapy in the United States since the 1980s.\textsuperscript{1} Estrogen, the female sex hormone continues to be among the most prescribed drugs in the United States.\textsuperscript{2} Around 10 million women use estrogen alone or in combination with progesterone and one fourth of them are postmenopausal women.\textsuperscript{2} Since the age of onset of menopause is around 51 years, most women in the United States spend at least one-third of their 80-year life span after menopause.\textsuperscript{3}

Osteoporosis, a systemic skeletal disease, is characterized by low bone mass and micro architectural deterioration with a consequent increase in bone fragility and susceptibility to fracture.\textsuperscript{4} The National Osteoporosis Foundation has reported that osteoporosis is a major threat to 28 million people in the US out of which 80\% are women.\textsuperscript{5} The current costs to the health care system of treating osteoporosis are estimated to be nearly $14 billion annually.\textsuperscript{6} Postmenopausal women with estrogen deficiency are found to be at high risk for osteoporosis.\textsuperscript{7} The other primary risk factors for osteoporosis are age, gender, genetic factors (first degree relative with low trauma fractures), personal history of atraumatic fractures, thin/small frame, diet low in calcium, vitamin D deficiency and early natural or surgical menopause (before the age of 45). The secondary risk factors include use of certain drugs (glucocorticoids and antiepileptics) and lifestyle behaviors (alcohol consumption, smoking and physical inactivity).\textsuperscript{5,8} Studies have shown that long-term use of estrogen therapy may be required to prevent postmenopausal bone loss and maintain bone mineral density.\textsuperscript{9,10} The International Consensus Conference on Osteoporosis also concluded that estrogen replacement therapy (ERT) should be a part of the preventive strategy to reduce the risk of osteoporosis in postmenopausal women.\textsuperscript{11}

In spite of FDA approval for estrogen use\textsuperscript{5,12} and studies showing that estrogen prevents bone loss when begun at menopause\textsuperscript{13} it is estimated that only 15–25 percent of women who might benefit are actually taking it.\textsuperscript{12} However, there is evidence that links estrogen use in postmenopausal women to increased risks of breast\textsuperscript{14} and uterine cancer.\textsuperscript{15} Despite the availability of effective treatments (raloxifene, alendronate, etc.) for reducing morbidity and mortality from osteoporosis, these treatments are expensive and continue to add to the already growing expenditures of this disease. This has increased the importance of preventing osteoporosis and reducing its major risk factors.