

## Managing Osteoporosis in a Managed Care Population

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*Faculty members participated in a discussion at the Fracture Prevention in Osteoporosis roundtable held October 4, 2005, in Nashville, Tenn. Below are the highlights and conclusions from this discussion.*

### Identifying At-risk Patients

In the managed care setting, the identification and treatment of patients at high risk for fracture in the commercial population has been relegated to low-priority status in favor of high-profile diseases, such as asthma and diabetes. However, the anticipated doubling in healthcare spending for osteoporosis-related fractures over the next 2 decades secondary to a burgeoning elderly population and the influx of elderly into the managed care system as a result of the new Medicare Modernization Act warrants a re-evaluation of the potential impact of osteoporosis-related fractures on managed care.

In a commercial managed care population, the incidence of osteoporosis-related fractures is generally so low that it is difficult to justify allocating resources for special initiatives aimed at reducing fracture risk. However, because certain subpopulations are at a higher risk for fracture and are, thus, high healthcare resource users, they warrant proactive intervention from managed healthcare organizations. In 1 health plan it was noted that the incidence of fracture in their retiree population was triple that seen in their commercial population.

It is important to target higher-risk populations, identified from healthcare databases or medical records, for case-finding and intervention to avert the potentially devas-

tating clinical and economic consequences of fracture. Although identifying at-risk patients in the managed care environment can be challenging, clinical research continues to refine which subpopulations are at higher risk for fracture—and some of these subpopulations can easily be identified from available commercial claims data. One approach to facilitate this process is to use data from health risk assessment forms completed by new enrollees and from claims data to more easily identify elderly patients at high risk for fracture:

- Women 65 years of age or older
- Men 70 years of age or older
- Those with prior fractures
- Patients taking corticosteroids on a long-term basis

In some cases, medical records can be used to identify additional higher-risk subpopulations, such as postmenopausal women with low body mass index (BMI), a smoking history, or a family history of osteoporosis or fracture.

Pharmacy data, chiefly prescription refill rates, can be used to identify patients taking 1 or more medications that may increase the risk for falls, or reduce bone density in patients. These data may also be used to help identify patients who are nonadherent with currently prescribed drugs to manage osteoporosis. In addition, prescription refill

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data may delineate patients with osteoporosis who are noncompliant with therapy from those who are not treated at all, clearly a high-priority group for screening. In the managed care environment, patients diagnosed with osteoporosis, largely Medicare patients, may be the easiest to identify, and fracture reduction programs targeting this population may yield cost savings per fracture averted in high-risk patients.

**Engaging the Higher-risk Patient**

Once higher-risk patients are identified, how should they be engaged by managed care organizations (MCOs) to optimize outcomes and reduce long-term costs? The faculty identified several possible mechanisms:

- Traditional disease or case management programs that manage a subset of higher-risk patients.
- Newsletters, offering coupons that would reduce the purchase price for calcium or vitamin D supplements for patients >65 or 70 years of age who have low calcium or vitamin D intake.
- Direct phone contact to promote adherence.

To facilitate adherence, responsibility for contacting patients directly via phone can be accomplished internally or by outsourcing this endeavor to independent organizations or automated services that are now available.

For MCOs, responsibility for identifying and treating patients at risk for fracture should go beyond simple steps such as mass screenings and mailings to include a more proactive management approach that encompasses patient education related to fracture prevention and steps to motivate physicians to ensure that their higher-risk patients are optimally treated. This latter step includes promoting effective discharge planning from the hospital or emergency department for patients who had been treated for fractures and effective treatment by primary care physicians who may manage patients with vertebral and nonvertebral fractures that do not require hospitalization. Early intervention in patients with previous fractures provides an opportunity to improve clinical outcomes.

Further, MCOs may consider offering positive incentives to physicians that promote

the timely identification and treatment of individuals at risk for fracture. For instance, “grades” or report cards can be provided to physicians based on the number of at-risk patients in their practice who start osteoporotic treatment or those who remain on treatment based on prescription refill rates.

To make sense, any fracture-reduction initiative that increases short-term cost must demonstrate value, not only in terms of clinical outcome, but also in terms of monetary outcomes. In the “real world,” employers exert considerable influence on the direction of their healthcare plans. As a consequence, employers, especially those companies with high retiree health benefit costs, must easily discern a return on investment before they completely “buy-in” to any new health program that increases immediate costs. In the population > age 65, the number of patients needed to treat to prevent 1 fracture decreases substantially and the cost of treatment for a fracture increases markedly, perhaps providing a more compelling basis for fracture reduction interventions.

In addition, the presence of Health Employers Data Information Set (HEDIS) measures for osteoporosis management can help bring fracture reduction programs to the forefront among MCOs and add credibility to these programs among employers. Currently, the HEDIS performance measure for osteoporosis treatment applies only to secondary prevention for Medicare members, a population at higher risk for fracture. The measure includes the percentage of patients who have been evaluated for osteoporosis and the percentage of patients who are being treated for osteoporosis after a fracture. Clearly, the HEDIS secondary prevention measures recognize the importance of previous fracture as an established risk factor for a subsequent fracture.

The panel agreed that the fundamental goal of programs to reduce fracture risk is not only to identify higher-risk patients, but also to raise awareness of those higher-risk patients who remain undiagnosed and untreated.

**Who Should Be Tested?**

Because it remains one of the least expensive and most accurate testing

options, dual-energy x-ray absorptiometry (DXA) retains its status as the gold standard for osteoporosis screening in the opinion of the faculty. Some faculty members advocated “casting a wide net” with DXA testing to identify and treat as many higher-risk individuals as possible.

Before DXA testing, however, physicians should take a complete patient history to evaluate an individual patient’s risk for osteoporosis or a fracture and to exclude secondary causes of osteoporosis. The faculty advocated that requirements for DXA testing should follow the National Osteoporosis Foundation (NOF) guidelines, since they are well established and well accepted among physicians. These guidelines recommend testing women  $\geq 65$  years of age, and men  $\geq 70$  years of age without a prior fracture; all patients with a prior fracture; individuals treated with corticosteroids on a long-term basis; and postmenopausal women with other risk factors, such as smoking, which increases the metabolism of estrogen. The faculty noted that low BMI, a family history of osteoporosis, a fracture history, as well as tobacco smoking are critical factors that increase the chances of a fracture by up to 2-fold over a 10-year period.

If patients are continuing therapy and have normal bone mineral density (BMD), DXA testing, although not required, was recommended by the panel every 2 years, or at a time considered appropriate by the physician, to ensure bone stability. Generally, testing every 2 years obviates prior authorization. Faculty members pointed out that fracture risk is not directly linked to BMD, but to a constellation of factors, and that many fractures occur in patients with BMD scores above those considered by guidelines as the threshold for intervention.

### Initiating Therapy

The faculty agreed that all patients with risk factors for fracture should be considered for treatment. The treatment plan should include nutritional counseling and counseling about the need for increased exercise, as well as education about potential household dangers that increase the risk for falls.

As a foundation for treatment, each MCO member should be advised about the importance of adequate vitamin D intake and the relationship between sunlight and vitamin D synthesis. For instance, minimal exposure (10 minutes 3-5 times weekly, depending on latitude) to direct sunlight directed at the face, arms, and/or legs without sunscreen can be an important step in achieving consistent and adequate vitamin D levels. In addition, the faculty agreed that pharmacologic intervention should be consistent with NOF guidelines—an approach that can be easily supported among MCOs, employers, as well as patients and physicians.

The faculty viewed bisphosphonates, in conjunction with lifestyle changes, as first-line therapy for treating of osteoporosis and reducing the risk of fracture. When evaluating the efficacy of bisphosphonates, priority should be given to the actual reduction in fracture incidence, not just improvements in surrogate markers, such as BMD or bone turnover measurements. With long-term use, bisphosphonates yield striking reductions in vertebral fracture risk, reducing fracture incidence by at least a third and, in some studies, by two thirds. Furthermore, the data have shown significant reduction in nonvertebral fracture with alendronate and risedronate. Yet there appears to be a meaningful difference in the onset of actual fracture reduction among the various bisphosphonates, the earliest onset of action, in terms of both vertebral and nonvertebral fracture reduction, beginning at 6 months with risedronate treatment. Although only a minor issue in a large commercial managed care population generally, in Medicare or other higher-risk populations this difference in the actual number of fractures prevented could be substantial.

The selective estrogen-receptor modulators were viewed as having a limited role in the management of osteoporosis, considered only as a therapeutic alternative for patients intolerant of bisphosphonate therapy. In addition, the faculty viewed calcitonin as an alternative treatment for patients with osteoporosis and concurrent gastrointestinal problems or renal insufficiency. The faculty agreed that teriparatide injections are an alternative for those with

severe osteoporosis and that such therapy should be followed by bisphosphonate therapy to maintain the increase in bone mass produced by teriparatide.

### **Improving Management Strategies**

The faculty agreed that patient “buy-in” to the therapeutic regimen is essential for successful outcomes. It is critically important for the patient to understand that the treatment of osteoporosis will require long-term therapy and strict adherence to the therapeutic regimen prescribed. Evidence of low BMD and increased 10-year fracture risk may act as motivating factors to improve adherence in some patients. Because of a typically heavy workload among case managers, intensive case management of higher-risk patients was viewed by the panel as impractical. Suggested as 1 alternative, automated outbound phone systems can be used as a tool for reminding patients to adhere to their treatment regimen. In addition, after hospitalization, postdischarge follow-up calls can also be used to ensure that the patient is adhering to therapy. Because of limited resources, case management efforts are usually of low intensity, but the faculty agreed that they should not be completely absent. Patients at higher risk for fracture may already be participating in case management or disease management programs for other conditions, and, once these patients are identified, those programs can easily be enhanced to offer services and follow-up targeting fracture reduction. Another management strategy offered was to ensure that orthopedic surgeons and primary care physicians are aware of the importance of treating both vertebral and nonvertebral

postfracture patients from discharge forward, a step that is consistent with HEDIS requirements, and that these patients receive postdischarge phone contacts to bolster adherence.

### **Conclusion**

Inexorable long-term demographic changes and the recent implementation of a Medicare drug program should propel increasing numbers of elderly patients into managed health-care. The inclusion of such large populations of patients at higher risk for osteoporosis and, in turn, fracture should compel MCOs to elevate the prevention and treatment of osteoporosis-related fracture to high-priority status. In this context, the cost-effective management of osteoporosis and prevention of fracture are paramount considerations. The use of bisphosphonates, because of their clear efficacy, remains a key step in reducing the risks for osteoporosis-related fracture. Yet, measures of the cost effectiveness for a specific bisphosphonate therapy should not be restricted to the cost savings resulting from reductions in fracture risk alone, but should include a consideration of the differences among bisphosphonate products in terms of onset of action and tolerability, especially the incidence of bisphosphonate-related gastrointestinal effects, as potential cost variables. For managed care, screening to identify patients at higher risk for osteoporosis-related fracture and implementing prevention programs that include lifestyle changes and the most cost-effective osteoporosis treatment options are essential for stemming the anticipated substantial increase in the health plan cost of treating fractures and its debilitating consequences.