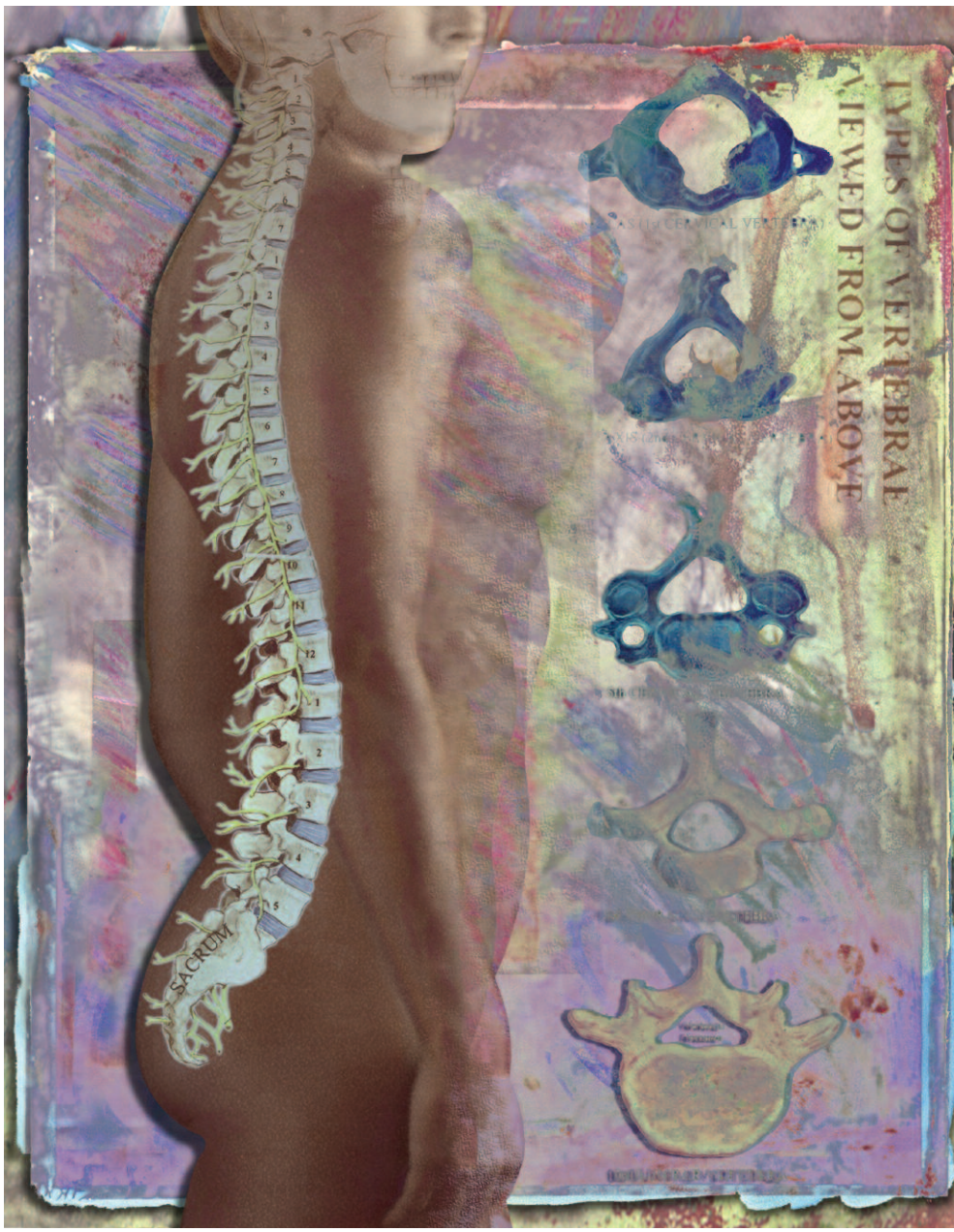
Osteoporosis Diagnosis and Treatment:

Keeping Residents Safe at Home

Joanne Kaldy

It is a safe bet that most—if not all—assisted living facility residents have heard about osteoporosis. However, many think that they don't have this disease because they have no overt symptoms, they don't think they are at risk, or they think that osteoporosis is an inevitable part of aging. What these individuals don't realize is that osteoporosis is responsible for 1.5 million fractures annually and that these injuries often cause lost independence and impaired cognition or functioning. Osteoporosis-related fractures can force residents to leave their AL homes for short- or long-term hospital or nursing home stays. These fractures even can result in death.

Not only is it important for clinicians working with ALF residents to diagnose and treat osteoporosis in this population, it is necessary to educate residents and their families about the benefits of medications, treatment compliance, and lifestyle changes that can keep them healthy and enable them to age in place.



Diagnostic Challenges, Creative Solutions

Bone mineral density (BMD) testing is the cornerstone for making a diagnosis of osteoporosis. The National Osteoporosis Foundation (NOF) guidelines suggest that BMD testing be performed on:

- All women aged 65 and older, regardless of risk factors

- Younger postemenopausal women with two or more risk factors (other than being white, postmenopausal, and female)
- Postmenopausal women who present with fractures (to confirm the diagnosis and determine disease severity)

It is important for ALFs to note that Medicare covers BMD testing for the following individuals aged 65 and older:

- Estrogen-deficient women at clinical risk for osteoporosis
- Individuals with vertebral abnormalities
- Individuals receiving or planning to receive long-term glucocorticoid (steroid) therapy
- Individuals with primary hyperparathyroidism
- Individuals being monitored to assess the responses or efficacy of an approved osteoporosis drug therapy

A National Institutes of Health (NIH) Consensus Development Conference in 2000 acknowledged the benefits of using risk-based assessments for osteoporosis diagnosis and treatment, instead of depending solely on BMD scores. However, many practitioners are conducting individual osteoporosis assessments by analyzing bone turnover via blood and urine tests.

The American Medical Directors Association's (AMDA) clinical practice guideline on osteoporosis states the a "diagnosis of osteoporosis be made on the basis of the patient's personal and family history, physical examination findings, laboratory values, and results of BMD testing." It further notes that "it is currently recommended that persons at risk for osteoporosis be formally evaluated by DEXA [dual-energy x-ray absorphometry] of the spine, hip, and forearm." However, the guideline emphasizes that DEXA findings are not necessary for implementation of treatment. In fact, treatment is appropriate for high risk individuals or those who have signs and symptoms of osteoporosis.

Bringing BMD Testing Home

While it can be costly and time-consuming to transport residents to external facilities for DEXA testing, it is not financially feasible to have testing equipment onsite. However, there are creative ways that ALFs can sponsor screening programs. William Hallett, PharmD, President of Guardian Consulting Services in New York, developed an assessment program specifically designed for assisted living facilities via a partnership with Merck. "The program was an outgrowth of the emergence of bisphosphonates on the market," he recalled. "Merck brought in the screening equipment, and we conducted the assessments and offered education and treatment options for the participants." Dr. Hallett emphasized that the education and information provided was not limited to Merck products. "We laid out the full range of treatment options and modalities, and Merck fully supported this objective approach," he noted.

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The screening involved a machine that measured bone density through the heel. While this screening generally is not as optimal as DEXA testing, it still is considered by many to be useful for detecting bone loss.

"We worked specifically with Sunrise Homes," Dr. Hallett explained, "working through the wellness coordinator." They established a date for the screening; they then posted fliers, posters, and other promotional materials throughout the facility. "We would conduct the screening, give the resident a brochure and other information about osteoporosis, and communicate the findings to each individual's attending physician, who—in turn—would make specific treatment decisions with the resident," he said. Dr. Hallett and his team "worked closely with staff to get as many people as possible to come to the screening."

To encourage participation, Dr. Hallett first went into the facility to conduct an educational seminar. "We wanted to alert the residents about the risks, treatments, and other aspects of osteoporosis. We stressed that preventing and treating osteoporosis can help residents age in place. It may seem like a cliché, but it's absolutely true," he explained, adding, "Once a resident has a fracture, he or she has a 1 in 3 chance of coming back to their previous level of care and a 1 in 3 chance of not surviving at all." The ALF works to maximize residents' quality of life, he noted, "and this goes out the window once people experience a hip, spine, or other fracture."

The pre-screening education and promotion apparently were effective. "Residents who were at the seminar came, and they encouraged others to attend as well," said Dr. Hallett. While some residents who he and facility staff had hoped would participate didn't, he admitted, everyone was pleased by the turnout. He also was pleased—and surprised—by staff participation. "They wanted to be screened too. They understood the importance and weren't afraid to be evaluated," he explained.

Dr. Hallett and his company received no financial benefit from the screening. Nonetheless, he was happy to be a part of the program

and would do it again gladly. "We looked at it from a 'greater good' aspect. Making sure people are diagnosed and treated appropriately for conditions such as osteoporosis is in harmony with our mission statement," he offered, adding, "It was very rewarding."

Persistence, Partnerships, and Positive Thinking

Such onsite screening programs can be arranged in any facility. It just takes creativity, persistence, and partnerships. Dr. Hallett suggested that facilities start by contacting pharmaceutical companies that produce osteoporosis treatments. "Approach various key contacts in various divisions of the company, and keep asking. Don't get discouraged if one person or company says 'no.' Keep asking," he said.

The National Institutes of Health (NIH) also might have some grant money or research programs in this area. "If you are willing to supply data back, there might be an interest here," Dr. Hallett indicated.

Finally, it may be useful to partner with people with whom the facility already has a relationship—such as the consultant pharmacist. "It is a logical approach to work with the pharmacist. He or she understands your facility and your needs and has contacts in the pharmaceutical industry," Dr. Hallett observed. In fact, he suggested, that this type of service is something facilities can look for when they are seeking a consultant pharmacist to work with their residents.

While even a simple screening program will involve an investment of the facility's time and energy, according to Dr. Hallett, it is well worth the effort. "Sunrise felt that this was a 'win' in every aspect. It contributed to keeping people in place and preventing negative outcomes, and that is great. From a public relations standpoint, it was good. Every resident and family member saw it; and it didn't cost the facility anything," he stated.

Exercising Treatment Options

Once assessment indicates that osteoporosis treatment is in order, the options are many and call for an individualized approach. The NOF recommends that clinicians approach osteoporosis treatment as follows:

- Counsel all patients about nutrition and reduction of risk factors.
- Initiate therapy for BMD T-scores <1.5 if other risk factors are present.
- Initiate therapy for BMD T-score <2.0 in absence of other risk factors.
- Initiate therapy without BMD testing in patients aged over 70 years who have multiple risk factors.

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Treatment should include nonpharmacologic interventions such as calcium and vitamin D supplementation, which may retard bone loss. At least one major study involving the aging population showed that such supplementation increased bone density and reduced incidence of fractures.[1] Supplementation in senior populations is important, as most people in this age group don't meet daily calcium and vitamin D requirements through diet alone.

Lifestyle modifications also are an important component of nonpharmacologic treatments. These should include:

- Regular weight bearing exercise (including walking)
- Exposure to sunlight
- Smoking cessation
- Moderation of or abstinence from alcohol consumption

The ALF can help create a positive environment for residents with osteoporosis by ensuring that menus include foods that are rich in calcium and vitamin D at every meal, implementing fall prevention strategies (including environmental modifications), and enabling access to exercise programs and physical activities to meet residents' schedules and preferences.

The Good and Bad of Drug Therapy

The bisphosphonates alendronate and risendronate are considered first-line pharmacologic treatments for osteoporosis, according to William Simonson, PharmD, CGP, a Suffolk, VA-based consultant pharmacist and a past-president of the American Society of Consultant Pharmacists (ASCP). Alendronate generally is well tolerated in older women. However, this drug is contraindicated in individuals who are unable to sit or stand upright for 30 minutes after taking the medication, those who have esophageal abnormalities, those with hypocalcemia, and individuals who have renal insufficiency (with a creatinine clearance of less than 3 ml/min/1.73m^2).[2]

Dosing for these treatments—once weekly for most—is a benefit for assisted living residents. A new bisphosphonate even offers once monthly dosing. However, some may need some kind of reminder to take their medication at the same time each week and to follow dosing instructions.

Bisphosphonates in general may cause upper gastrointestinal disorders such as dysphagia, esophagitis, and esophageal or gastric disorders. So it is important for residents and their family members

to understand the need to report any discomfort they experience once they go on these medications. It also is essential that these individuals understand the importance of taking the medications exactly as they are instructed, ie, on an empty stomach with a full glass of water and no other fluid or food intake for at least half an hour. They also must remain upright for 30-60 minutes after taking the medication. Residents who can't follow dosing instructions should receive assistance with taking these medications. If bisphosphonates are contraindicated for some reason, the resident's prescriber should consider an alternative treatment.

Other pharmaceutical treatment options include:

- Calcitonin (nasal spray)
- Raloxifene (selective estrogen receptor modulator)
- Teriparatide (parathyroid hormone delivered via injection)
- Hormone replacement therapy (estrogen or estrogen/progesterone)

Pain caused by osteoporosis may be treated by local topical treatments such as application of ice packs or drug therapy using analgesics or calcitonin. Clinicians caring for assisted living residents with osteoporosis should ensure that they are assessed regularly for pain and that they receive treatment as necessary.

Communication Encourages Compliance

Communication is key to helping residents and their families understand the importance of being assessed and, as necessary, treated for osteoporosis. "Some people think osteoporosis is an inevitable part of aging and that treatment won't prevent fractures. Or they think that they aren't at risk if they drink milk or take calcium and vitamin D supplements," said Dr. Simonson. He emphasized, "We need to educate residents that osteoporosis treatment reduces fractures and can help residents maintain functioning and quality of life." He added that people often don't realize the morbidity of fractures or that these injuries can result in hospitalizations or even death.

In fact, physicians in one national survey cited "lack of understanding" by patients as a main reason why their patients discontinue their osteoporosis treatment. However, while 85% of physicians reported having patients who discontinued therapy, 71% said that they didn't know why.[3] This suggests a need for improved physician-patient communication. If physicians and other clinicians caring for ALF residents know why adherence with osteoporosis treatment is a problem, they can devise creative and effective ways to help these individuals stay on therapy and receive the maximum benefits.

Residents need to understand that drug therapy is a long-term process: it may take two years to see improvement in bone density.

Some of the key points that residents need to understand about osteoporosis treatment include:

- Drug therapy is a long-term process. It may take about two years to see improvement in bone density.
- Dosing adherence is essential. Esophageal pain or heartburn may suggest problems and should be reported to a caregiver or clinician immediately. "Sometimes these are minor problems; and if patients can tolerate these, it may be worth coaching them through the adjustment to the medication," said Dr. Simonson.
- Even with medications, adequate calcium and vitamin D intake are essential, and lifestyle changes (such as smoking cessation) are important.

Monitoring compliance can be challenging, Dr. Simonson admitted. "It is hard to know when residents aren't taking their medications. For residents who receive assistance with medication administration, we can rely on nursing assistants." For others, it may take a little detective work. Questions at follow-up physician or nurse practitioner visits can help. Family members and staff can be alerted to watch medication vials or cards to see if pills are disappearing at the appropriate times. The pharmacist also can play a key role by alerting the physician when prescriptions are not refilled as required.

"Don't assume that residents are taking their osteoporosis medication," Dr. Simonson cautioned, adding, "Ask frank questions and make education an ongoing process."

Of course, it is important for clinicians to realize that while they should stress the importance of therapy to residents and their families, they can't force anyone to accept treatment if the individual refuses. However, residents and their families should hear about all options, including lifestyle changes, so that they can make informed choices.

Communication between clinicians and patients and family members also is key to osteoporosis prevention. "If someone is at risk, you have to look at the basics," said Dr. Simonson. These include

the resident's calcium and vitamin D intake, history of falls and fractures, and his or her overall risk for osteoporosis. He added that it is important to remind people that men aren't immune from osteoporosis and that, even though the disease doesn't necessarily have overt symptoms in the early stages, it can be very detrimental to residents if it goes untreated. He also noted, "People need to realize that osteoporosis is preventable. But even if they are diagnosed with this condition, it is treatable. Bone loss can be stopped and even reversed."

There are several keys to osteoporosis prevention, including:

- Regular, weight-bearing exercise
- Intake of daily recommended amounts of calcium or vitamin D
- Avoidance of smoking and excessive alcohol consumption

"Exercise and stretching are very important. They help increase strength and balance, thereby helping to prevent falls," Dr. Simonson observed. "The incidence of falls in seniors is massive; and falls are a common cause of accidents, even death."

Increasing awareness, diagnosis, and treatment of osteoporosis among residents is a win-win proposition for assisted living facilities. Everyone benefits from these efforts. However, facility leadership and practitioners who care for residents must be the drivers and work together to keep seniors safe and satisfied in their homes. ALC

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The Medicare Modernization Act May Help ALFs

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necessary to serve as a stable, low-cost/high-quality business strategy for people with serious and disabling chronic conditions.

Under a more fully integrated approach, providers have the flexibility to offer whatever combination of care and services are most clinically effective for an individual without running afoul of Medicare or Medicaid eligibility and coverage rules. This includes providing coverage for long term care and other services that Medicare does not cover.

In developing an ALF/SNP approach, it is also important to keep in mind that under the MMA, the financing of pharmacy benefits will shift from Medicaid to Medicare. Currently, some state Medicaid agencies, such as Washington and Wisconsin, pay ALFs and other specialty providers to provide special packaging of pharmacy services for persons who are dually eligible for Medicare and Medicaid. The assumption is that these dispensing services helped reduce the state's financial burden by reducing premature nursing home placement through an optimization of medication management.

It is not clear how these agreements will work under the new Medicare law. Even if ALFs became classified as an institutional facility, it is not clear that CMS would adopt the same pharmacy policies that some State Medicaid agencies have adopted for ALFs.

The jury is still out on how the Special Needs Plan legislation will affect ALFs over the long-term. However, it is clear that the legislation has "the potential" to strengthen the ability of ALFs to serve high-risk Medicare and Medicaid beneficiaries under a variety of new and yet to be defined, business structures. The more adventuresome ALFs that are interested in exploring their options should keep in mind that:

- Pharmacy policies that are now under the jurisdiction of Medicare and CMS rules governing the new pharmacy benefit.
- Options for serving the dually eligible are significantly related to the degree to which states are willing to pursue waivers and/or modification of Medicaid policy supportive of ALFs and the degree to which CMS is willing or able to recognize ALFs as an institution and/or support more of an integrated strategy for serving special needs individuals.
- The adequacy of SNP payment for ALF services is in large part determined by payment rates established by State Medicaid agencies, and the adequacy of the CMS-HCC payment method for high-cost Medicare beneficiaries.
- The ability for any one ALF to effectively serve as a nursing home alternative is significantly dependent on their ability (individually or in partnership with others) to control acute care costs on the Medicare side and control LTC expenditures on the Medicaid side.

ALFs interested in exploring a SNP option need to do what they have always done best—separate themselves from the pack by serving as a high quality/low cost provider and delivering the services that seniors want by being "special." It will become increasingly important to demonstrate those special features not only to ALF residents and potential SNP business partners but also to regulators and policy makers.

There are still a lot of unknowns, and the winners and losers in the marketplace will be determined—in part—by the skills, capabilities, and creative energies of those leading the way in SNP development. ALC

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