Clinical recommendations for prevention of secondary fractures in patients with osteoporosis
Implications for dental care

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Osteoporosis is a common metabolic bone disease affecting nearly 10 million Americans and resulting in 1.5 million fractures per year.1,2 Another 44 million Americans have low bone mass.1,2 The American Society for Bone and Mineral Research (ASBMR) and the Center for Medical Technology Policy (CMTP) assembled a coalition to develop a plan to prevent secondary fractures in patients with osteoporosis. Their consensus recommendations, which were published in January 2020,3 focus on data in which evidence was strongest and are intended as general guidance for a specific population: patients 65 years or older with a hip or vertebral fracture. Importantly, these recommendations are directed to all health care professionals who participate in the care of these patients and hence clearly include dentists. Their recommendations highlight that the optimal management of the care of these patients is in the context of a multidisciplinary clinical system and emphasize the importance of fracture prevention because osteoporosis is an ongoing chronic condition. Thirteen recommendations are provided and can be reviewed in detail.3 This commentary highlights the recommendations that are particularly relevant to health care in the dental setting.

Recommendation 1 centers on communication and emphasizes that patients should be aware that if they have a hip or vertebral fracture, they are at a higher risk of breaking more bones, especially within the 2 years after the initial fracture.4 Older women face a 5-fold greater risk of experiencing an additional fracture during the 12 months after their first osteoporotic fracture.5 Fractures result in significant declines in mobility and independence, with only one-third to one-half of hip fracture survivors regaining prior ambulatory function.6 The risk of experiencing future fracture can be reduced with treatment by the patient’s medical provider team. Communication with patients and family caregivers includes the understanding that a fracture is more than a single unfortunate event but is an indicator of an underlying chronic lifelong condition (osteoporosis) and that the patients are at risk of breaking more bones. This recommendation sets up the opportunity for dental health care providers, after gathering a detailed medical history, to engage in discussions with their patients that emphasize the importance of general musculoskeletal health and regular follow-up with their medical providers to monitor this chronic medical condition.

The ASBMR-CMTP coalition is judicious in their recommendation that careful steps for initiating pharmacologic therapy in these patients be used. One aspect of their Recommendation 4 guides medical providers to "consider patients’ oral health before starting therapy with bisphosphonates or denosumab." They lay out the awareness that there are rare instances of...
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Other medications may include teriparatide, abaloparatide, or romosozumab, which are anabolic versus antiresorptive. We should be accustomed to patients reporting the use of oral bisphosphonates. We need to be attentive to the documentation of intravenous and subcutaneous medications because these are administered directly in the health care setting at 6-month and 1-year frequency and, hence, could be omitted when patients report “current” medications. Furthermore, owing to the long half-life of bisphosphonates, current and previous use of bisphosphonates should be designated on a health history. A pointed question of whether the patient has had a diagnosis of osteopenia or osteoporosis and whether they have had a fracture of the hip or spine is also prudent to include on health questionnaires.

The optimal duration of pharmacologic therapy for these patients is not known. Recommendation 12 suggests that the need for bisphosphonate therapy should be reassessed after 3 through 5 years and that, regardless of the pharmacologic approach, the decision to stop therapy needs to be considered carefully again with risk to benefit ratios. Importantly, the Conley and colleagues consensus report reinforces that the strategy of a “drug holiday” before performing dental procedures has not been investigated sufficiently and, hence, should not be recommended. In certain instances, for example, with denosumab, stopping therapy without starting another antiresorptive drug can result in rapid bone loss and increased fracture risk. Notably, the withdrawal of a medication recommended for
systemic health should not be recommended without consultation with the prescribing medical provider and discussion with the patient. The concept of a drug holiday in patients who require a tooth extraction is still controversial and requires future research. Such research is a challenging proposition considering the low incidence of ONJ in people with osteoporosis. It is not clear what, if any, change in ONJ risk occurs with the cessation of bisphosphonate therapy; however, reports indicate that the risk of experiencing an osteoporotic fracture could increase by up to 40% in the 36 months after stopping the medication. Again, the risk to benefit ratio should be considered by the medical provider, and the patient should be informed appropriately.

CONCLUSIONS
Critical issues brought forward in the ASBMR-CMTP initiative and pertinent to dental providers focus on improving communication with patients and among health care providers; recognition of the risk and implications of experiencing future fractures, especially in the absence of therapy; and effective treatment and monitoring of patients with the chronic, lifelong condition of osteoporosis. As dentists and dental health care providers, our communication with our patients regarding their chronic metabolic conditions such as osteoporosis and the recognition of oral-systemic connections with such debilitating disorders are key. We have an opportunity to be part of the prevention not only of oral health conditions but of debilitating conditions such as osteoporotic fractures by being aware of these conditions, communicating the benefit of therapy, and minimizing the risk of experiencing adverse yet rare events.

Disclosure. Dr. McCauley reports that she owns stock in Amgen.