

WHO tool underestimates need for osteoporosis treatment, study finds

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The World Health Organization's tool for assessing bone fracture risk underestimates the true dangers for people who are younger than 65 or have been treated for a single broken bone, according to a new study published in the Endocrine Society's *Journal of Clinical Endocrinology & Metabolism (JCEM)*.

A WHO task force developed the Fracture Risk Assessment Tool (FRAX) to help predict the likelihood of adults between the ages of 40 and 90 breaking a bone. FRAX is designed to evaluate the chances that a person will break a bone in a minor fall, which is called a fragility fracture. Such fractures can reduce mobility and even increase the risk of death.

The FRAX tool is designed to help physicians identify osteoporosis cases that cannot be readily diagnosed through bone [mineral density](#) testing. More than half of fragility fractures occur in people who do not meet the [bone mineral](#) density standards to be diagnosed with osteoporosis.

"Although FRAX is a helpful tool and provides important information, it should not be used as the unique and definitive gold standard for determining whether or not to treat a patient for osteoporosis or weakening bones," said one of the study's authors, Gilles Boire, MD, MSc, of the University of Sherbrooke in Quebec, Canada. "The test fails to identify some [patients](#) who would benefit from treatment to prevent future fractures."

The prospective cohort study used the Canadian BMI-FRAX form of the tool to gauge fracture risk among 1,399 patients who were identified with a fragility fracture between June 2007 and May 2012. The Canadian version of the tool incorporates national data on fracture rates.

Prior to sustaining the fragility fracture, only 42.7 percent of these patients were considered high risk, according to the Canadian BMI-FRAX tool. Even after sustaining an initial fracture, 24 percent of the patients remained categorized as low risk and nearly 20 percent were considered moderate risk. During a four-year follow-up period, more than a third of the patients who had recurrent fractures were not categorized as high risk under the Canadian BMI-FRAX calculation.

In more than half of the patients treated for an initial fragility fracture, the FRAX score did not reach the Canadian threshold for preventative treatment. The risk calculator was most likely to underestimate the likelihood of future broken bones in younger patients, men and people presenting their first fragility fracture.

"Identifying individual patients at [high risk](#) for fractures would allow for more timely and targeted prevention," Gilles Boire said. "Physicians should always consider whether osteoporosis treatment would benefit a patient presenting a fragility fracture, regardless of their FRAX or [bone mineral density](#) scores."

More information: The study, "The World Health Organisation Fracture Risk Assessment Tool (FRAX) Underestimates Incident and Recurrent Fractures in Consecutive Patients with Fragility Fractures," is scheduled to appear in the July issue of *JCEM*.

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