Osteoporosis

HealthDecision's Osteoporosis tool demonstrates the benefits and harms of taking bisphosphonate medications to reduce fractures.

Using the FRAX® calculation[1] from the International Osteoporosis Foundation, the tool determines a patient's individual risk of hip and other bone fractures over the next 10 years. National guidelines regarding treatment decisions are integrated within the tool. The graphical display aids clinician-patient shared decision making conversations. It does so by simplifying explanations of relative and absolute risk reduction as well as the chance of reducing a major fracture compared to rare but worrisome side effects, such as jaw osteonecrosis or atypical femur fractures.
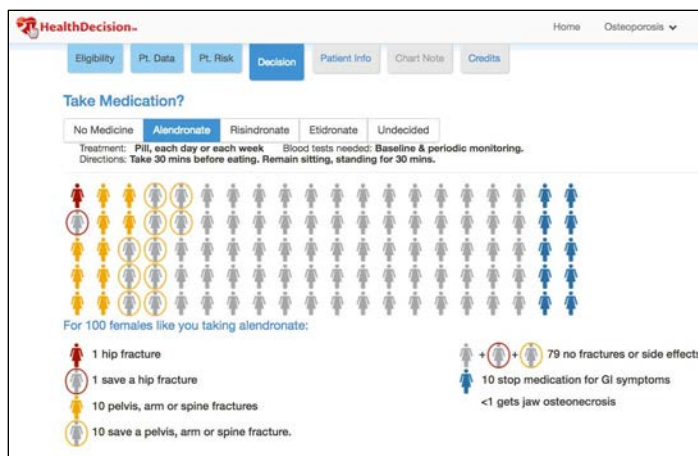
Osteoporosis Tool Workflow

The Osteoporosis tool is designed to be intuitive, integrated into the clinician's standard workflow, and supportive of the clinician/patient conversation.

- **Eligibility**: Prompts the clinician to confirm that the patient is an appropriate candidate for use of the tool with questions addressing previous fractures, previous osteoporosis diagnosis, and medication acceptance.
- **Pt. Data**: Gathers the available patient data from the EHR and allows the clinician to edit and add information as needed. The tool applies these data to the FRAX® calculation,[1] which drives the selection of the appropriate portions of the national guidelines.
- **Pt. Risk**: Displays the patient's 10-year risk of major fracture, displayed as hip and nonhip percentages. Recommendations come from the National Osteoporosis Foundation 2014 guideline.[2]
- **Decision**: Displays the patient's 10-year risk of major fracture, displayed as hip and nonhip percentages.
- **Pt. Info**: Provides summary information that the clinician and patient reviewed during use of the tool. The clinician can print this summary for the patient as well as copy and paste it in the patient's after-visit summary.
- **Chart Note**: Provides a text summary of the conversation and decisions made that the clinician can copy and paste into the clinician's note.

The Decision tab visually displays the patient's individual risk in an intuitive, easy-to-understand format. Clinicians can toggle between medical options to display changing risk scenarios.

Background: Risk Calculator Selection

While there are other fracture risk calculators, the FRAX score has been dominant across multiple countries. HealthDecision embeds a copy of the calculations within its tool as provided by the International Osteoporosis Foundation. This mechanism makes for a very rapid integration of the FRAX score into the clinical workflow using data that can be gleaned from the EHR.

Customization

The Osteoporosis tool supports customization. For example, institution-specific recommendations and guidelines can be presented in the workflow. In addition, medication formularies or other choices specific to an institution can be adjusted.

Decision Support

The tool offers important decision support to the clinician by combining the EHR data, FRAX score, national guidelines, graphical display of benefits and harms, and supportive education and documentation. By placing these elements within the same workflow, clinicians can guide their patients through more accurate and personalized conversations without having to reach outside of the EHR workflow.

Shared Decision Making

The tool supports best practices of shared decision making, including meeting all appropriate standards of the International Patient Decision Aid Standards (IPDAS)[3] Collaboration. The tools are designed for optimal use when embedded in the EHR and used in a format where the clinician and patient can view the screen at the same time, either in person or by telemedicine.

Release Date

Beta testing was started in February 2017. Full release of the Osteoporosis tool is expected in the second quarter 2017.

References

[1] https://www.sheffield.ac.uk/FRAX/reference.aspx
[2] Cosman F et al. Clinician's guide to prevention and treatment of osteoporosis. *Osteoporos In*t 2014;25(10):2359-2381.
[3] http://ipdas.ohri.ca/

For More Information

The Osteoporosis tool is one of several healthcare SDM aids within the HealthDecision suite. Other decision aid tools include Atrial Fibrillation, Cardiovascular Risk, Lung Cancer Screening, and Breast Cancer Screening.

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