

**Implementing systematic screening of fracture risk and osteoporosis treatment in Portugal: a feasibility study protocol**

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Dear Editor,

The burden imposed by osteoporosis and fragility fractures (FF) in Europe is alarming<sup>1</sup>. This situation is not better in Portugal<sup>1-3</sup>, where the number of FF continually increased over the last two decades<sup>3,4</sup>. However, no systematic action has been taken to address this public health issue in our country, and there are no updated guidelines endorsed by the Directorate-General for Health. An initial step is the implementation of a systematic fracture risk screening in the community<sup>5,6</sup> to enable timely interventions and prevention measures according to existing recommendations<sup>7,8</sup>. Thus, we designed the OPTIMIST-OP project, aimed at developing and evaluating the feasibility of a systematic programme for screening fracture risk and promoting osteoporosis treatment in primary care units (PCUs), across Local Health Units (ULS) in Portugal. The OPTIMIST-OP builds upon an established network of healthcare professionals, including one nurse and one general practitioner from over 70 PCUs. They work alongside rheumatologists and rheumatology nurses under the coordination of the Functional Coordination Unit of Rheumatology – Centre. Following several collaborative meetings, the group considered that the most feasible approach to avoid overburdening healthcare professionals – whose time is very limited – would be to adopt an “opportunistic” screening strategy. This approach leverages the existing network by incorporating additional inquiries into the colorectal cancer routine screening process (stool analysis), targeting citizens aged 50 to 74 who are followed in these units. Those excluded from colorectal cancer screening based on specific criteria (detailed elsewhere<sup>9</sup>) would also be invited to participate).

To support implementation, our team developed a comprehensive clinical protocol that includes a detailed clinical algorithm (Figure 1), primarily based on the application of the FRAX<sup>®</sup> tool by nurses in “Family Health Units” (USFs). Moreover, we prepared workshops and training/support materials for PCU teams (e.g., five leaflets tailored for patients and caregivers), freely accessible at <https://optimist-op.pt/>.

The implementation will begin with inviting each PCU in the region to designate a nurse and a general practitioner, in articulation with a rehabilitation nurse from a “Community Care Unit” (UCC), to participate in one-day training workshops. This initial training will be supported by complementary online resources and follow-up sessions to ensure continuous support from a central management team. The implementation of this novel intervention will be evaluated based on established methodological guidance<sup>10</sup>, and assessing the following outcomes:

- i. *Acceptance and Adherence Rates:* Percentage of units expressing interest, participating in training, and implementing the protocol over at least one year;
- ii. *Screening and Treatment Impact:* Number of individuals assessed and treated, comparison of osteoporosis diagnosis and treatment rates between participating and non-participating units;
- iii. *Qualitative Insights:* Interviews with a sample of healthcare professionals, managers, and citizens/patients to identify barriers and facilitators to implementation, engagement and satisfaction. These would be key to understanding how difficult it is to follow the proposed algorithm in practice, and adjust it accordingly.

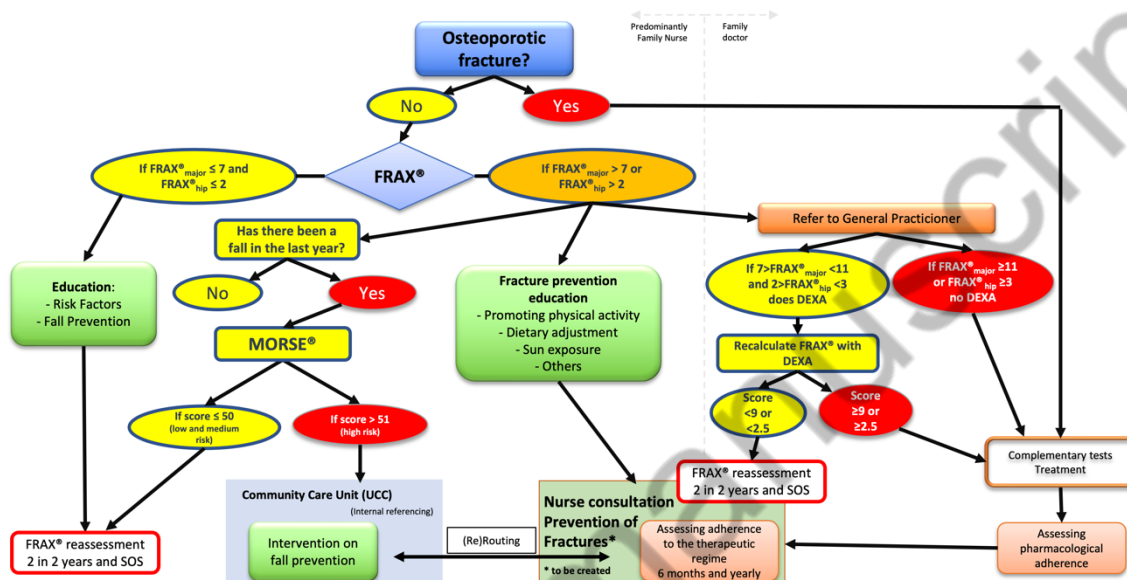
Units that do not initially adhere to the programme will be continuously invited and supported with the ultimate goal of establishing a “cohort”. This will enable the comparison of fracture and mortality rates across regions, leveraging historical data from the past 20 years that we analysed<sup>3,4</sup>, thus determining preliminary evidence of effectiveness.

Several challenges and limitations are anticipated. In primary care, key performance metrics such as the Team Performance Index (IDE) and Global Performance Index (IDG) lack indicators directly addressing osteoporosis or FF, which influences financing allocations and, consequently, implementation. Another issue is the lack of integration of the FRAX<sup>®</sup> tool into the existing medical information systems and procedures. Additionally, while the MORSE<sup>©</sup> scale for assessing fall risk is available within PCU systems, it is not ideal for the community setting. Limited time or willingness of PCU staff to adopt and sustain the programme alongside their existing workload and team communication are likely the main limitations and part of the outcomes to be assessed.

Despite these challenges, the OPTIMIST-OP project holds significant potential to transform osteoporosis care in Portugal. By addressing barriers and leveraging existing infrastructure, the initiative aims to reduce the incidence of osteoporotic fractures and improve patient outcomes nationwide, contributing to making osteoporosis a public health priority.

**Tables and Figures**

**Figure 1** – Proposal of a clinical algorithm for screening of fracture risk and treatment in primary care units in Portugal



The nurse (or general practitioner, GP) begins by assessing fracture history; if a prior fracture is identified, a GP appointment is required. In the absence of fractures, the FRAX<sup>®</sup> tool is used to estimate fracture risk. Based on the results, appropriate measures are implemented, ranging from education to further assessments, such as evaluating fall risk using the MORSE<sup>®</sup> scale (widely integrated into Portuguese medical information systems) or an alternative tool. Effective communication and referrals between healthcare professionals are central to this approach. Ideally, units should establish a dedicated nurse consultation to act as a case manager, facilitating the citizen's and family's journey across services, ensuring care continuity, and promoting treatment adherence.

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