

A NATIONAL FRAGILITY FRACTURES REGISTER

U. Tarantino, C. Rao, J. Baldi, M. Feola

Division of Orthopaedics and Traumatology, "Policlinico Tor Vergata" Foundation, University of Rome "Tor Vergata", Rome, Italy

In Italy, osteoporosis is a disease potentially affecting five million people, 80% of whom are post-menopausal women. The natural history of this disease culminates, dramatically, in fragility fractures. The incidence of fragility fractures is now reaching epidemic proportions and, indeed, can no longer be underestimated. In Italy, epidemiological data can be derived only from hospital discharge record (HDR)-based statistics supplied by the Ministry of Health. Since these records contain data relating only to patients discharged from hospitals and institutes providing inpatient care, they provide a figure much lower than the estimated 280,000+ new fractures every year. Despite the availability of these instruments, statistics on hospital admissions may be deemed reliable only in relation to the number of hip fractures, which in 2007 led to over 90,000 hospitalisations. Fragility fractures of other skeletal districts, on the other hand, are often treated non-invasively in the ER and therefore "slip through" the HDR net, leading to an absence of relative data, both as regards numbers and diagnoses. Data collected using the HDR system, which records information on the principal diagnosis (the reason treatment was needed and diagnostic investigations performed) and on secondary diagnoses (coexisting conditions at the time of hospital admission), constitute a resource for studying, assessing and planning admissions. This information, coded using the International Classification of Diseases 9 (ICD 9), is transmitted to regional authorities and then, by them, to the Ministry of Health. The ICD 9 classification is based on two main criteria: one is aetiological (the cause of the fracture) and the other anatomical (the site of the fracture); the latter is the one used most. In the case of fragility fractures, the presence of osteoporosis can be signalled only as a secondary diagnosis, thereby minimising its role in their pathogenesis. From this perspective, the limits of the classification system influence the definition of the real extent of fractures linked to bone fragility, therefore resulting in underestimation of the phenomenon. This separation of the fracture event from the diagnosis of osteoporosis means that the patient does not receive adequate treatment for the underlying disease.

In an attempt to resolve these problems, Italy's present health minister, Ferruccio Fazio, on the occasion of the World Osteoporosis Day (October 20, 2009), unveiled a project to set up, with the collaboration of the Italian regions, a national fragility fracture register (NFFR), the only one in the world. Registers of this kind are instruments for the systematic collection, nationally, of the data needed to analyse the efficiency of processes and methods involved in health service provision to citizens. The NFFR will collect: demographic data, "process" outcomes (days of hospitalisation, treatments, timing of surgery, complications, types of discharge, etc.) and "final" outcomes (mortality, residual pain, functional recovery, residual disability, etc.). The data will be drawn from the HDRs of ordinary inpatient departments, from ER HDRs, from analyses of local health authority databases, and possibly from subsequent outcome surveys of quality of life and residual disability. There are plans to create a national data collection centre, to be run and coordinated by the Health Ministry, into which will be entered data from the regional registries. In this context, the aim of the NFFR is to establish the quality of interventions at regional and national level, to compare different local settings and identify areas where there is room for improvement in health service delivery, and to define reference standards of care, ranging from optimal to minimum acceptable standards. The NFFR will make it possible to establish more clearly the real extent of the problem and of its social and economic impact, allowing conditions of skeletal fragility to be reported, and thus adequately assessed and treated. The assigning of each individual patient with an alphanumeric code will be useful in the event of further interventions or re-fractures and for the creation of a risk card, a single unified card for collecting a patient's history, that will be a further useful instrument for defining an individual's bone fragility status. These further data could usefully complete the data collected in the NFFR, thereby improving the approach to and management of the multifaceted problem of fragile bones. It is necessary to promote a multidisciplinary approach to the patient, as well as the creation of "fragility fracture units", an organisational model based on a pathway ensuring constant synergy between the different specialties involved in the care of the fracture patient. The NFFR will allow monitoring of the fragility fracture phenomenon so as to rationalise resources and monitor the efficacy of health policy interventions.