

Fragility Fracture Postoperative Mobilization (FFPOM): A National Collaboration to Determine the Epidemiology and Postoperative Weightbearing Practice of Fragility Fractures

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Multiple institutions - collaborative study, UNITED KINGDOM and Ireland, UNITED KINGDOM

Purpose: The purpose of this multicenter study was to determine the epidemiology and weightbearing practice of operatively managed lower-limb fragility fractures in the UK and Ireland National Health Service.

Methods: A multicenter prospective analysis of all adult patients aged 60 years and over receiving surgery for a lower-limb fragility fracture 1 January 2019 to 30 June 2019 and 1 February 2021 to 14 March 2021 was conducted. Fractures arising from high-energy transfer trauma, patients with multiple injuries, and those associated with metabolic deposits or infection were excluded. Epidemiological and descriptive data were collected. The study metric was the British Orthopaedic Association standard 'The care of the older or frail orthopaedic trauma patient,' which states "all surgery in the frail patient should be performed to allow full weight-bearing for activities required for daily living and within 36 hours of admission."

Results: 430 collaborators from 84 hospitals submitted retrospective and prospective data from 20,193 patients. After exclusions, 19,557 patients (16,241 hip fracture and 3316 non-hip fracture patients) with a median age of 83 years (70.4% female) were included in the analysis. The non-hip fracture population was significantly younger (median 74 vs 84 years), more likely to be independently mobile prior to injury (75.1% vs 57.1%), more likely to have normal cognition (89.8% vs 69.7%), and waited longer for surgery (median 41.3 vs 23.5 hours). In the non-hip fracture population, the most common fractures were foot and ankle (45.1%), distal femur (16.7%), femoral shaft (15.2%), and proximal tibia (6.2%). 15,543 hip fracture (95.7%) and 1071 (32.3%) non-hip fracture patients were allowed to weight-bear immediately postoperatively. Despite being demographically similar, the proportion of patients with a femoral fracture instructed to weight-bear without restriction postoperatively varied significantly depending on location within the bone; shaft 47.8%, distal femur 64.6%, and proximal femur 95.7%. 45.6% of distal femur and 44.2% of femoral shaft fractures were periprosthetic, compared to 2.2% of proximal femur fractures.

Conclusion: This collaborative study of over 19,500 patients reports, in detail, the epidemiology of operatively treated lower-limb fragility fractures. There is significant disparity in weight-bearing restrictions placed on these patients despite the publication of a national guideline: surgeons intentionally restrict postoperative weightbearing in the majority of fractures outside the hip, while in contrast are content with unrestricted weightbearing following hip fracture operations.