

BURDEN OF DISEASE

As one of the most common fractures in adults, distal radius fractures result in significant financial burden. For example, distal radius fractures account for almost 20% of fractures seen by physicians and is the second most common fracture experienced by older adults (Levin LS, 2017). In 2005 alone, the treatment for distal radius fractures in the elderly was estimated at \$500 million. By 2025 this burden is expected to increase by 20% (Burge R, 2007).

ETIOLOGY

Distal radius fractures occur as a result of both high energy and low energy trauma. There is a bimodal distribution of distal radius fractures where high-energy fractures occur in younger persons (predominately male) and high and low-energy fractures occur in older persons (predominately female) (Chen NC, 2007) (Court-Brown CM, 2006).

INCIDENCE

Distal radius fracture is one of the most common fractures seen by orthopaedic surgeons with an incidence of 195.2/100,000 persons per year (Court-Brown CM, 2006).

RISK FACTORS

Age (e.g. older women with osteoporosis) and sex (e.g. young males) are known risk factors for distal radius fracture in adults. Lifestyle can also have an influence on risk for distal radius fracture as playing/sporting activities and motor vehicle accidents are associated with distal radius fractures (MacIntyre N, 2016).

EMOTIONAL AND PHYSICAL IMPACT

Acute distal radius fracture results in pain, limitations in function, stress, and the potential inability to work. Patients may be faced with substantial morbidity and stress/distress (e.g. financial distress) if fracture healing is delayed, there is permanent loss in function, or there is ongoing pain. Additionally, the time to return to normal function after appropriate treatment can be prolonged, and in some cases, never return to normal (MacDermid JC, 2003).

POTENTIAL BENEFITS, HARMS, AND CONTRAINDICATIONS

The aim of treatment is pain relief and return of function while weighing the risks and benefits of nonoperative and operative treatment. Therefore, an open shared decision-making process should be undertaken that includes available treatments and their respective risks and benefits, in the setting of the values and preferences of the individual patient (patient centered care) (Shapiro LM, 2019).

FUTURE RESEARCH

The adoption of technology and novel treatments for distal radius fractures requires evidentiary support of efficacy and effectiveness while acknowledging cost and value. Likewise, current practice patterns, despite being practice norms, may not be supported as high-quality care, and should be evaluated by the same level of scrutiny. The systematic review for this guideline identified areas of care with conflicting evidence, and some areas of care where more focused clinical trials are needed. For example, our evaluation of the evidence for hand therapy after the treatment of distal radius fractures identified areas for potential future research, such as the benefit of supervised therapy for elderly patients with finger arthritis and preoperative stiffness.

View background material via the DRF CPG [eAppendix 1](#)

View data summaries via the DRF CPG [eAppendix 2](#)