

# Stable Rates of Surgical Management for Distal Radius Fractures in Ontario: a 10-year Review

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## Background

Open reduction and internal fixation (ORIF) management of distal radius fractures has become increasingly common.

**U.S. medicare beneficiaries** (Chung 2009):

- ORIF: 4% in 1997 → 17% in 2007
- Cast immobilization (CI): 83% in 1997 → 74% in 2007.

This shift is seen in other countries, such as Sweden and Finland, which have a single payer model similar to Canada. Systematic review comparing the four common methods of management found equivalent functional outcomes amongst patients age 60 and over. This has some authors questioning whether this shift is justified.

## Objective

The purpose of this study is to examine population trends in the treatment of distal radius fractures over a 10-year period in Ontario, Canada.

## Methods

This is a population based, retrospective cohort study examining the treatment of distal radius fractures over a 10-year period (2004-2013). It utilizes the Canadian Institute for Health Information administrative discharge abstract database, National Ambulatory Care Reporting System and Ontario Health Insurance Plan (OHIP) billing data sources. Access is available at the Institute for Clinical Evaluative Sciences and datasets are linked using patient-specific encrypted identifiers. OHIP billing codes were used to categorize primary treatment modality as (1) cast immobilization (CI), (2) CI with percutaneous pinning (CI+P), (3) external fixation (EF), and (4) ORIF.

We report on the yearly gross number of fractures, fracture treatment type, and frequency of fracture treatment type.

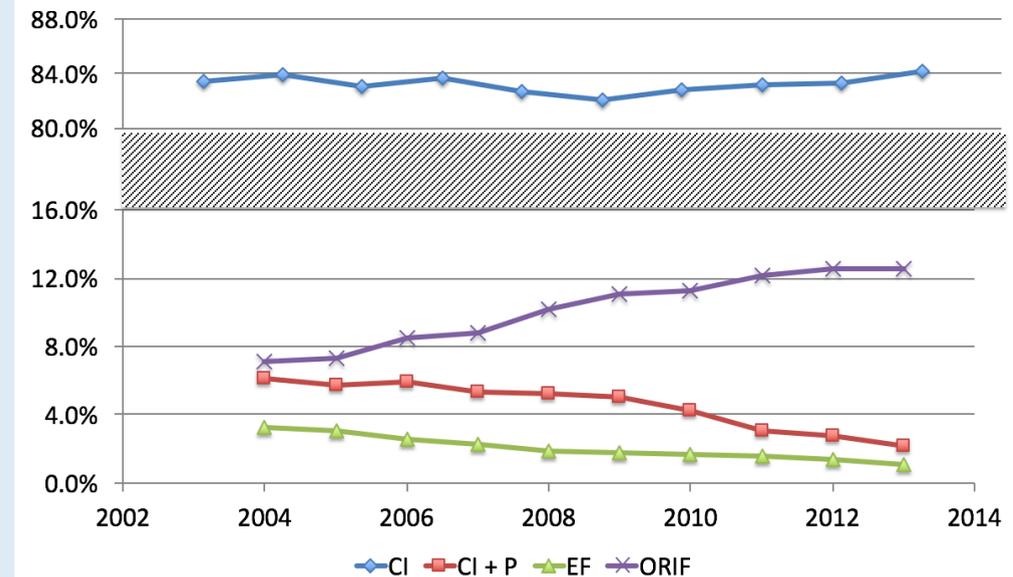
## Results

Ontario has a population of 13.6 million, representing almost 40% of the entire Canadian population. On average, 22 290 distal radius fractures occur yearly amongst individuals 18 years and older.

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The yearly age-sex adjusted incidence rate was stable between 2.32 to 2.70 per 1000 persons.

### Treatment of Distal Radius Fractures (2004-2013)



## Conclusion

Ontario has experienced stable rates of non-operative and operative treatment over a 10-year period. The mix of operative treatment has shifted to favor ORIF. **This points to the need for high-quality studies evaluating outcomes after operative and non-operative treatment of distal radius fractures.**