

Could a cast be as good as surgery for treating wrist fracture for older people?

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Credit: AI-generated image ([disclaimer](#))

Wrist fractures are one of the most common fracture types. The burden of injury and costs of wrist fractures globally are substantial, with surgical treatment the popular treatment choice without strong supporting evidence.

The CROSSFIRE study has shown that surgical treatment for wrist fracture (volar-locking plates) does not offer clinical advantages in pain and function after 12 months compared to non-surgical treatment (cast immobilization).

"Wrist fractures are very common in older patients and there is [considerable variation](#) in treatment with a rise in the use of surgical treatment in the last two decades—it's possible these common injuries are being over treated with unnecessary surgery," says Andrew Lawson, lead researcher from Whitlam Orthopaedic Research Centre and Ph.D. candidate at the Southwest Sydney Clinical School, UNSW.

"Our findings should encourage practitioners to carefully consider the indications for surgical treatment for these patients," says Mr Lawson.

The CROSSFIRE study is the largest and most rigorous of [clinical trials](#) of its kind, involving over 300 patients over 60 from 19 hospitals in Australia and New Zealand.

The study compared the two most common treatments for wrist fracture—non-surgical treatment with cast immobilization and surgical treatment by using a volar-locking plate. The [surgical treatment](#) is estimated to cost 10 times more.

In Australia, annual direct costs from [wrist fractures](#) are estimated at more than A\$130 million dollars, and in the US, Medicare alone paid \$170 million in wrist fracture-related payments for older patients in 2007.

"These findings add important new evidence for wrist fracture treatment in older people—if implemented into practice, they have the potential to deliver substantial benefits in savings by avoiding unnecessary surgery in older people," says Professor Ian Harris, co-author from the Ingham

Institute for Applied Medical Research at UNSW.

The incidence of wrist fracture is highest among older people because of osteoporosis and increased risk of falls.

"What's needed now is to ensure these findings inform clinical guidelines globally so there can be less variation in treatment, and importantly, evidence-based treatment can be accessible to all patients, especially vulnerable populations such as [older patients](#) and those living in [low-resource settings](#)," says Professor Rebecca Ivers, co-author and Head of the UNSW School of Population Health.

In [tandem](#) to publication of the CROSSFIRE study findings, the researchers have published a systemic review in JBJS Reviews supporting its findings.

More information: undefined undefined et al. Surgical Plating vs Closed Reduction for Fractures in the Distal Radius in Older Patients, *JAMA Surgery* (2021). [DOI: 10.1001/jamasurg.2020.5672](https://doi.org/10.1001/jamasurg.2020.5672)

Andrew Lawson et al. Volar Locking Plate Fixation Versus Closed Reduction for Distal Radial Fractures in Adults, *JBJS Reviews* (2021). [DOI: 10.2106/JBJS.RVW.20.00022](https://doi.org/10.2106/JBJS.RVW.20.00022)

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