

Direct, indirect and intangible costs of acute hand injuries: A systematic review

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Background

- Injuries sustained to the hand and wrist are common and account for approximately 20% of all emergency department presentations¹.
- The burden of these injuries can be very extensive increasing with severity contributing significant cost to both the individual and society².
- Cost-of-illness studies (COIs) calculate how much a society spends on a particular disease by totaling Direct costs (medical expenses incurred, e.g. surgery, imaging, outpatient care); Indirect costs (value of lost productivity); and Intangible costs (beyond the monetary costs of goods and services life, e.g. quality of life)⁴.
- Health economic evaluations (HEEs) evaluate the cost and consequences of alternative interventions⁵.

Objectives

Provide an accurate estimate of the burden of injury from a societal perspective using COIs and HHEs by systematically reviewing published estimates relating to acute hand and wrist injuries with a specific focus on direct, indirect and intangible costs.

Method

A search of COIs and HHEs in various databases was conducted. Study design, population, intervention, and estimates and measurement methodologies of direct, indirect and intangible costs were independently extracted by two reviewers. Reported costs were converted into US-dollars and adjusted into 2015 US-dollars.

Results

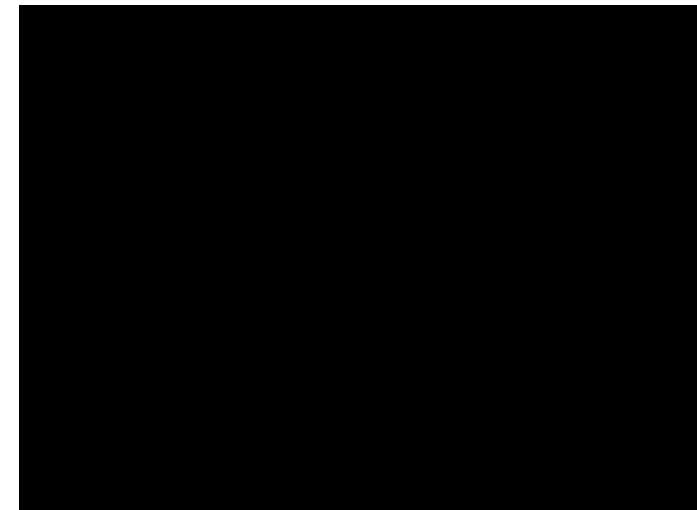
Twenty-one studies involving 264,978 individuals (range 30-266,000) with acute hand or wrist injuries published over a 22-year period (1993-2015) were included.

Settings included Austria, China, Denmark, Ireland, Netherlands, Slovenia, Sweden, Switzerland, Turkey and the USA.

Investigated injuries included non-specific acute hand injuries (n=8), scaphoid fractures (n=3), digit amputation (n=1), ulnar and/or median nerve repair (n=1), digital nerve injury (n=1) and zone II flexor tendon repair (n=1).

The median total cost per case of all injury types was US\$6,951 (IQR \$3,357-\$22,274) for COIs and US\$8,297 (IQR \$3858-\$33,939) for HHEs.

Summary Points



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