

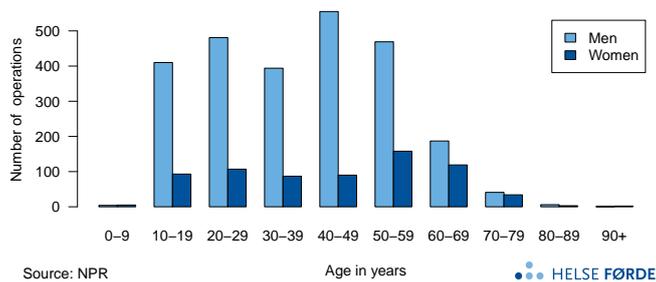
Clavicular fractures

The incidence of clavicular fractures is increasing and accounts for 5–10 % of all fractures. Mostly children and young people break their clavicle, and it is more common in men than in women. Because of their more flexible bones, fractures in children are somewhat different in nature and heal faster. Most clavicular fractures are treated conservatively. Surgical treatment is mostly considered in cases where the fracture is clearly displaced or there is a risk of damage to blood vessels, the lung or the nerve network located directly under the clavicle. It can also be considered for young and active patients who need to return quickly to physical activity. Several countries have seen an increase in the number of patients, adolescents and adults alike, who receive surgical treatment for clavicular fractures. This development is taking place despite a ongoing debate on whether benefits of surgical treatment of clavicular fractures outweigh the risks in adolescent patients.

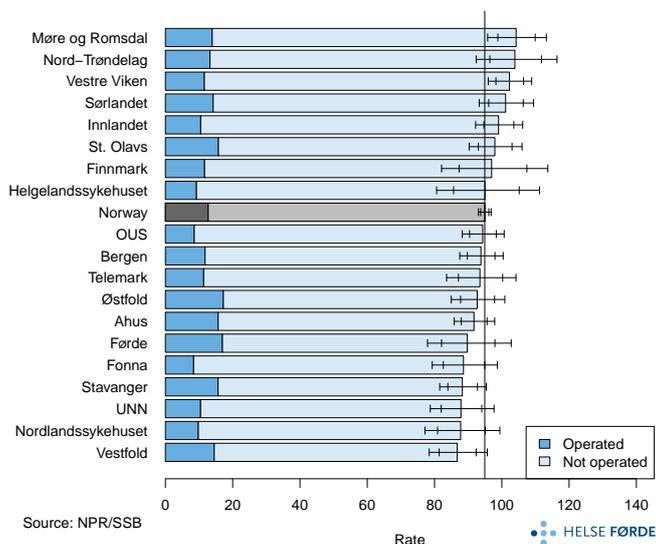
Background

Clavicular fracture is defined by a primary or secondary diagnosis of S42.0 (ICD-10). Surgical treatment is defined by a diagnosed clavicular fracture in combination with one or more of the procedure codes NBJ22, NBJ32, NBJ42, NBJ52, NBJ62, NBJ72, NBJ82, NBJ92 (NCSP). Conservative treatment is defined by a clavicular fracture diagnosis and the absence of procedure codes for surgical treatment as listed above. Patients of all ages are included in the analyses of clavicular fractures.

Each year there are approx. 5,000 clavicular fractures in Norway, and 13% of patients with clavicular fractures have surgery.



Total number of operations for clavicular fractures during the period 2012–2016, for Norway as a whole. The patients have been broken down by gender and age group.

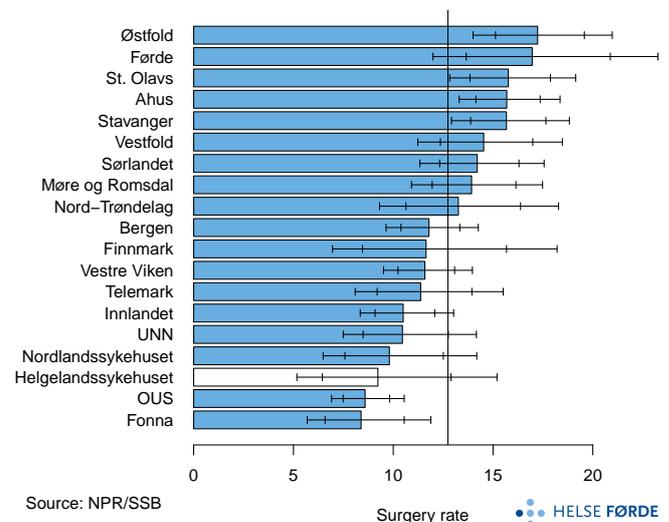


Fracture rate: number of clavicular fractures per 100,000 population (all ages), broken down by hospital referral area and for Norway as a whole. Bars show average value per year with 95 % and 99.8 % confidence intervals, and are broken down by operated and non-operated fractures. The vertical line indicates the rate for Norway as a whole. Rates have been adjusted for gender and age.

Results

Surgical treatment for clavicular fracture is twice as common in Østfold as in Fonna hospital referral area. With few operations performed, and small changes in number operated on can have significant effect on rates.

The percentage of patients operated for clavicular fractures is highest in Førde hospital referral area (21 %) and lowest in the OUS area (9 %). Children under the age of 10 are rarely operated for clavicular fractures. In the age group 10-19 years, 9 % of patients have surgery, and most of them are 16 years or older.



Surgery rate: Number of operated clavicular fractures per 100,000 population (all ages), broken down by hospital referral area. Bars show average value per year (2012–2016), with pertaining 95 % and 99.8 % confidence intervals. The vertical line indicates the average for Norway as a whole. Rates have been adjusted for gender and age. Helgelandssykehuset: the calculation is based on fewer than 40 unique persons, and this makes the rate uncertain.

Comments

Variation in surgical treatment for clavicular fracture is moderate. While the highest surgery rate is double compared to the lowest, the number of operations performed is small, and a relatively high proportion of the observed variation may be random. The number of clavicular fractures did not vary much between hospital referral areas, and we cannot rule out the possibility that part of the variation in surgical treatment may be unwarranted.