

# **Large regional differences in endoscopic sinus surgery in Finland**

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Chronic rhinosinusitis (CRS) is a common disease that is usually treated with intranasal medication and nasal saline lavage. Endoscopic sinus surgery (ESS) is considered when CRS is difficult to treat. The surgery aims to restore ventilation of paranasal sinuses and reduce inflammation.

A new research published in *BMJ Open* studied the frequency of endoscopic sinus [surgery](#) performed due to chronic rhinosinusitis. The nationwide annual age- and gender-standardized rate of ESS in Finland was 0.71 per 1000 people. However, the rates between hospital districts varied from 0.25/1000 to 1.15/1000.

The regional differences remained statistically significant after adjustment with gender and age of the patients. The availability of medical services was independently associated with higher ESS rates.

"However, there remained unexplained variation in ESS rate, which could be explained by the different individual operation decision making of physicians," says the first author of the research, Sanna Toppila-Salmi from the University of Helsinki.

The study group performed a cross-sectional nationwide evaluation of Finnish register data of all CRS patients who underwent ESS in 2013-2015.

The study does not provide information on the optimal ESS rate nor give information on which patients, when and how should ESS most optimally be performed to achieve maximum beneficial improvement of health.

"There is limited knowledge on optimal treatment of [chronic rhinosinusitis](#), and the optimal timing, patient selection and extent of [endoscopic sinus surgery](#). In the future, controlled studies comparing

different treatment options of CRS would thus be needed," Salmi-Toppila says.

Previous, non-nationwide studies in the US have also shown regional variation in ESS rates. The strength of the current study was that it comprised a population-based nationwide design including all patients undergoing ESS in both public and private hospitals in Finland and information concerning the diagnoses, procedures performed, and individual level patient history data.

**More information:** Sanna Toppila-Salmi et al, Regional differences in endoscopic sinus surgery in Finland: a nationwide register-based study, *BMJ Open* (2018). [DOI: 10.1136/bmjopen-2018-022173](https://doi.org/10.1136/bmjopen-2018-022173)

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