

Researchers put a price tag on alcohol use

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Alcohol use disorders are associated with high social welfare and health care costs—but what causes them? A new Finnish study looks at the magnitude and reasons behind the economic burden alcohol use disorders have on society.

Earlier studies have shown that alcohol use [disorders](#) lead to various

health and [social problems](#), which cause an increase in the need and use of various services. However, the magnitude and distribution of the related costs have not been studied before.

Researchers at the University of Eastern Finland used a machine learning technique that is based on a Bayesian network model to analyse causal relationships between different [risk factors](#) and the costs associated with them. The analysis included a total of 16 risk factors, including socioeconomic variables such as age, gender, [marital status](#), unemployment status, and social problems like homelessness, illicit drug use, criminal record, and drunk driving. The researchers also looked at what happens when a patient goes into remission, i.e., stops drinking altogether.

Funded by the Strategic Research Council at the Academy of Finland, the study was carried in collaboration between researchers at the University of Eastern Finland, the Finnish Institute for Health and Welfare, and Aalto University. They used a novel approach to control for confounding factors, allowing them to calculate a rough price tag for each risk factor.

The study population comprised 363 Finnish alcohol use disorder patients diagnosed in 2011–2012. Their data were collected from various patient information systems and social welfare databases over a period of five years.

Surprisingly, the number of diagnoses of chronic conditions played the biggest role in the overall cumulation of costs in patients with alcohol use disorder. In patients with at least two chronic conditions, the average 5-year costs of care were 26,000 euros (around 30,000 US dollars) higher than in patients without multiple diagnoses. The costs of care were also increased by earlier use of specialized care (and its high costs), receiving income support, and being over 55 years old. In addition, drug

use, homelessness and the number of psychiatric diagnoses also increased the costs of care. Sustained abstinence, on the other hand, lowered the costs. A model created by the researchers shows that roughly 43% of alcohol use disorder patients who quit drinking belong to the lowest cost quartile, compared with the respective figure of 24% for current drinkers.

The findings shed light on how the cumulation of health and social problems increases the costs of social welfare and health care services.

"Since sustained abstinence reduces the [costs](#) of care, it would be wise to develop rehabilitation services and provide easy access to care. In addition, people with alcohol use disorders should also get better treatment for their non-[alcohol](#) related conditions," Early Stage Researcher and lead author of the article Elina Rautiainen from the University of Eastern Finland says.

More information: Elina Rautiainen et al. Factors Associated with 5-Year Costs of Care among a Cohort of Alcohol Use Disorder Patients: A Bayesian Network Model, *Healthcare Informatics Research* (2020). [DOI: 10.4258/hir.2020.26.2.129](https://doi.org/10.4258/hir.2020.26.2.129)

Provided by University of Eastern Finland

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