



# New, improved and less costly treatment for varicose veins

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Varicose veins may result in significant symptoms and therapy-resistant venous leg ulcers, but frequently cosmetic factors underlie patients' desire for treatment. Which methods should be used in the public health service?

Cost-effectiveness analyses inform decision makers regarding which medical interventions provide the most health per monetary unit. The analyses are particularly important when new interventions are introduced, as they provide information on more than therapeutic effect alone.

In the original article now published in the Journal of the Norwegian Medical Association, Næs and colleagues have looked at patients being treated for varicose veins in the Central Norway Regional Health Authority (1). Endovenous steam ablation and traditional vein stripping, performed at two different hospitals in the region, were compared using a microcosting analysis of expenditure per patient treated. This type of analysis entails detailed enumeration and calculation of the cost elements included in a line of treatment – from medical equipment to wage costs, lighting and electricity on the premises in question. The study shows that the hospital's treatment cost for steam ablation is almost half of that for traditional surgery. The patients who underwent surgery using the new method also had a more rapid return to daily activities and a shorter average period of sickness absence. A major part of the cost saving was due to the switch from day surgery to outpatient treatment. Even though the equipment for steam ablation was costlier than that used for venous stripping, the savings were considerable.

The study is worth reading and should inspire more doctors to consider the use of resources for varicose vein surgery. Nevertheless, to some extent it falls between two stools, as it is neither a controlled comparison of therapeutic effects, nor a complete cost-effectiveness analysis. The authors have given no account of the clinical outcome for the two methods over time. It is conceivable, at least in theory, that the patients who underwent steam ablation more often experienced costly complications. However, the international literature does not indicate that this is the case (2). The point must be not to focus solely on costs, but to ensure that new interventions provide a therapeutic effect that is at least as

good as the 'gold standard'. Both the cost and benefit aspect must be included.

Choice of perspective is crucial for the interpretation of results from a cost-benefit analysis. If a health service perspective is chosen, all the costs associated with treatment and follow-up at the hospital are added up. In a societal perspective, costs related to absence from work and other effects outside the hospital's four walls also form part of the calculation (3). Examples exist where different perspectives may lead to entirely different conclusions with regard to cost effectiveness. In a publication from 2018, we conducted a broad-based analysis of available treatment modalities for varicose vein surgery in the Norwegian health service (4). The analysis showed that new endovascular techniques (such as steam or laser) emerged as the best options, especially when compared to traditional surgery. The differences were less obvious from a health service perspective, but were evident when outcomes and costs were calculated at a societal level. A variation in the period of sickness absence from two days in the case of the endovascular modalities to two weeks with traditional surgery represented a significant cost to the economy. This is also underscored by Næs and colleagues (1).

According to the scheme relating to free choice of treatment, there are (as of January 2019) a total of 39 providers of traditional stripping of varicose veins, while 27 offer endovenous treatment (5). Hence the majority of Norwegian hospitals appear to offer a treatment that imposes a burden on society in terms of a high degree of sickness absence annually. The investment costs of changing over to endovenous treatment may be significant. To put it in somewhat extreme terms, a decision maker already faced with pressure on hospital finances may have to choose to continue with a treatment method that results in considerable additional economic costs (6). The current financing system thereby provides an incentive to reject the optimal alternative for society.

Treatment of varicose veins has traditionally been undertaken by the public health service. Figures from the Norwegian Directorate of Health indicate that the costs to the health service of varicose vein treatment under public auspices amounted to at least NOK 160 million in 2017, including co-payments as well as laboratory tests and x-ray examinations (7). Although the illness may result in significant symptoms and venous leg ulcers requiring intensive therapy, cosmetic factors may also underlie the desire for treatment. According to Norwegian guidelines, the moderate degree of severity of the condition therefore indicates a low priority in the public health service. An average waiting time of almost one year for treatment speaks for itself (5). A rapidly growing private treatment service is driven by the population's increasing willingness to pay to avoid waiting lists. Perhaps the Decision Forum for Managed Introduction of New Health Technologies should assess the extent to which varicose veins should be treated in the public health service (if at all), and which treatment methods should be chosen.

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#### REFERENCES:

1. Næs AKL, Halsteinli V, Seternes A. Vanndampbehandling versus stripping av vena saphena magna ved åreknuter. *Tidsskr Nor Legeforen* 2018; 138. doi: 10.1045/tidsskr.18.0525. [CrossRef]
2. Wallace T, El-Sheikha J, Nandhra S et al. Long-term outcomes of endovenous laser ablation and conventional surgery for great saphenous varicose veins. *Br J Surg* 2018; 105: 1759–67. [PubMed][CrossRef]
3. Drummond MF, Schulper MJ, Torrance GW et al. *Methods for the economic evaluation of health care programmes*. 3. utg. New York, NY: Oxford University Press, 2005.
4. Inderhaug E, Schelp CH, Glambek I et al. Cost-effectiveness analysis of five procedures for great saphenous vein reflux in a Norwegian healthcare setting or societal setting. *SAGE Open Med* 2018; 6: 2050312118801709. [PubMed][CrossRef]
5. Helse Norge. Fritt behandlingsvalg. Ventetider for Åreknuter, behandling med laser/steam/radiofrekvens.

<https://helsenorge.no/velg-behandlingssted/ventetider-for-behandling?bid=168> (23.1.2019).

6. Butt A, Kopriva D. Economic implications of endovenous great saphenous ablation in a public health care system. *J Vasc Surg Venous Lymphat Disord* 2018; 6: 471-476.e6. [PubMed][CrossRef]

7. Helsedirektoratet. Aktivitetsdata Somatikk.

<https://statistikk.helsedirektoratet.no/bi/Dashboard/37f4e0dd-61fd-4846-a7c1d87553ce2c1a?efalse&vo-viewonly> (23.1.2010).

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