

Health economic aspects of stroke

Stroke prevention and spouses' healthcare consumption and income

Akademisk avhandling

Som för avläggande av medicine doktorsexamen vid Sahlgrenska akademien, Göteborgs universitet kommer att offentligen försvaras i Arvid Carlsson, Medicinaregatan 3, den 10 februari, klockan 13:00

av Frida Labori

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Avhandlingen baseras på följande delarbeten

- I. Labori, F., Bonander, C., Persson, J., & Svensson, M. Clinical follow-up of left atrial appendage occlusion in patients with atrial fibrillation ineligible of oral anticoagulation treatment- a systematic review and meta-analysis. *Journal of Interventional Cardiac Electrophysiology*, 2021, 2:215–225
- II. Labori, F., Persson, J., Bonander, C., Jood, K., & Svensson, M. Cost-effectiveness analysis of left atrial appendage occlusion in patients with atrial fibrillation and contraindication to oral anticoagulation. *European Heart Journal*, 2021, 31;43(13): 1348-1356.
- III. Labori, F., Bonander, C., Svensson, M., & Persson, J. Long-term effects on healthcare utilisation among spouses of persons with stroke. *Submitted manuscript*
- IV. Labori, F., Persson, J., Svensson, M., & Bonander, C. The impact of stroke on spousal and family income: longitudinal evidence from Swedish national registries. *Manuscript*

**SAHLGRENKA AKADEMIN
INSTITUTIONEN FÖR MEDICIN**



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The overall aim of this thesis was to investigate two health economic aspects of stroke: (i) the clinical and cost-effectiveness of stroke prevention with left atrial appendage occlusion (LAAO) among persons with atrial fibrillation (AF) and contraindication to OAC, (ii) the long-term consequences of stroke on spouses' healthcare utilisation and financial situation and its potential impact in health economic evaluations.

The long-term clinical effectiveness and cost-effectiveness of LAAO among persons with AF and contraindications to OAC were estimated using a systematic review, meta-analysis, and a decision-analytic model. These studies show that LAAO is clinically effective and cost-effective. Further, spouses of persons with stroke healthcare utilisation and financial situation were investigated using a difference-in-differences approach. A significant increase in the number of days with inpatient care was identified among spouses. No statistically significant differences were seen among the overall population of spouses' financial situation. However, younger female spouses' income from paid work significantly decreased.

In conclusion, LAAO is clinically and cost-effective in a subpopulation of persons with AF that currently can be recommended LAAO in Europe. Further, there is a limited impact on healthcare utilisation and financial consequences in the overall population of spouses of persons with stroke.

Keywords: healthcare utilisation, income, informal care, left atrial appendage occlusion, spouse, stroke prevention