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Cost-Effectiveness of in-hospital motivational smoking cessation counselling and proactive referral to primary care follow-up

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BACKGROUND

Smoking cessation programs can be very effective at tackling nicotine addiction and can be an effective tool for counselling, education and mental health support. Nurses are an important component in these interventions. [1]

OBJECTIVES

Evaluating the cost-effectiveness of a nurse-led, in-hospital smoking cessation intervention with proactive referral to primary care follow-up offering free cessation drugs among patients with atherosclerotic cardiovascular disease (ASCVD).

KEY FINDINGS

An in-hospital, motivational smoking cessation intervention with proactive referral is highly likely to be cost-effective for patients with ASCVD from a hospital perspective.

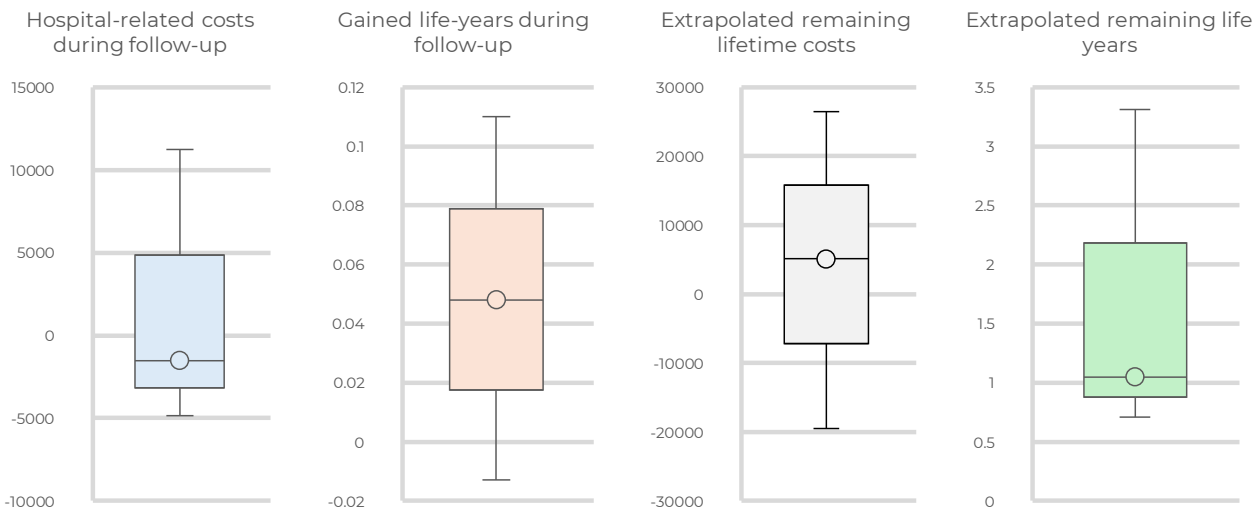
METHODS

Data was obtained from an intervention designed as a prospective, randomised, open-label trial with blinded endpoint evaluation. Primary outcome was the net monetary benefit, measured by total per patient costs and total per patient life-years gained. Total costs included the cost of the intervention, hospital-related healthcare costs over a 16-month follow-up and predicted remaining life-time costs. Hospital-related costs included all in- and outpatient contacts, monetized using Diagnosis-Related Group (DRG) points. Total life-years gained included life-years gained during the 16-month follow-up period and predicted future life-years. Predicted remaining life-years were calculated via a survival model based on age-, sex-, and ASCVD-adjusted mortality rates. Future life-years and costs were discounted by the conventional 4% rate. A willingness-to-pay threshold of €38,346 per life-year was used for calculating net monetary benefit (NMB).

RESULTS

The cost of the intervention was €97.0 in the intervention group, and €16.2 in the control group. The cost difference was mainly driven by the additional components of the nurse-led counselling and follow-up procedure. Over the 16-month follow-up, the intervention group experienced a reduction in hospital-related per-patient costs by €4,859 (95% CI: –€1,514 to €11,232) relative to the control group. The intervention group also yielded an increase of 0.048 undiscounted life-years during the 16-months follow up (95% CI: –0.013 to 0.110). When extrapolating this data, the estimated difference was €5,091 (95% CI: -€19,529 to €26,488) in remaining life-time costs and 1.05 (95% CI: -0.71 to 3.31) in remaining life-years. The estimated NMB was €37,475 (95% CI: -€15,868 to €107,797), with a 90.5% probability that the intervention is cost-effective.

Figure 1: Results. Differences between the intervention group and the control group



Contact

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References

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