The Health Technology Report Series has been developed by the Institute of Family Medicine and Public Health, University of Tartu

Health checks for the prevention of cardiovascular diseases and diabetes

Summary

Objective: To assess the effectiveness and cost-effectiveness of health checks in healthy adults and to estimate the budgetary impact of the modified health check model in Estonia.

Methods: A semi-systematic literature review was conducted in various databases in April-May 2021 to give an overview of health check models in other countries, their effectiveness and cost-effectiveness and implemented interventions. A modified health check model was proposed for Estonia. A budget impact model was constructed in Microsoft Excel to estimate added costs of the new model compared to current practice.

Results: There is not enough evidence to support the role of systematic health checks in decreasing CVD incidence, CVD mortality or overall mortality. There is less evidence about the effectiveness of opportunistic health checks. The evidence about the cost-effectiveness of health checks is scarce and conflicting. However, clinical guidelines in Estonia emphasize the need to screen for diabetes and CVD risk factors and their implementation in Estonia may currently be inadequate. Also, the effectiveness of any health check will likely depend on the target population, screening activities and frequency, and incidence rate.

Therefore, it was recommended to continue with the current opportunistic health check model which was modified with a more systematic screening for CVD and diabetes risk factors and an additional counselling visit. Health checks are to be targeted at healthy adults aged 35–65 visiting a doctor. If any risk factors of CVD or diabetes are identified during a visit, further interventions, medical treatment, counselling or follow-up are offered. The health check model would benefit from the development of electronic records in finding and following up on high-risk adults, educating primary care workers in motivational counselling, and implementing pre-filled electronic health declarations.

According to the budget impact analysis, initial opportunistic screening of the whole target population will cost 7.8 million euros which could be allocated over a longer period. The annual added cost of screening adults entering the target population is an estimated 0.43 million euros.

Conclusions: Systematic population-based health checks do not decrease CVD incidence, CVD mortality or overall mortality and, thus, are not recommended. Considering the recommendations of Estonian clinical guidelines, high CVD incidence, and inadequate screening for CVD and diabetes, a recommendation to continue with and improve the current opportunistic health check model for identifying, monitoring and treating high-risk patients was made.

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