

Publication

Economic evaluation of a novel genetic screening test for risk of venous thromboembolism compared with standard of care in women considering combined hormonal contraception in Switzerland

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The aim of this study was to assess the cost effectiveness of the Pill Protect (PP) genetic screening test for venous thromboembolism (VTE) risk compared with standard of care (SoC), for women considering combined hormonal contraceptives (CHCs) in Switzerland.; A two-part microsimulation model was developed to estimate VTE events, costs and quality-adjusted life years (QALYs) associated with the PP and SoC strategies. In the first portion of the model, a cohort of 1Swiss first-time seekers of a CHC were simulated. It was determined whether each women would receive a CHC or non-CHC by using prescribing patterns elicited from a modified Delphi study. These results formed the basis of the SoC strategy. For the PP strategy, a PP test was included and the results considered in addition to SoC practice. Each woman then entered a Markov model that captured morbidity and mortality over a lifetime. The risk of having a VTE was derived from the risk algorithm that underpins the PP test. The remaining model inputs relating to population characteristics, costs, health resource use, mortality and utilities were derived from published studies or national sources. The model was validated and calibrated to align with population-based studies. Extensive uncertainty analyses were conducted.; From a Swiss health system perspective, the PP strategy in comparison with the SoC strategy generated an additional CHF 231, and gained 0.003 QALYs per woman, leading to an incremental cost-effectiveness ratio of CHF 76 610 per QALY gained. Assuming a threshold of CHF 100 000 per QALY gained, the PP strategy is likely to be cost effective. Our results were generally robust to variations in the parameter values.; The PP test may be cost effective in Switzerland for screening women seeking CHCs for their risk of VTE based on the current evidence.

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