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Effectiveness of a multi-faceted implementation strategy to increase usage of the diagnostic primary care guideline for deep venous thrombosis

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Background & Aim: A clinical decision rule (CDR), combined with a negative D-dimer test can safely rule out deep venous thrombosis (DVT) in primary care patients. This diagnostic strategy is currently recommended by numerous guidelines, also in The Netherlands. Yet, uptake of the guideline by general practitioners (GPs) is low. Therefore, we wanted to evaluate a multi-faceted implementation strategy aimed at increasing usage of the guideline recommended CDR plus D-dimer test in primary care patients with suspected DVT.

Method: This multi-faceted implementation strategy was applied to 217 Dutch GPs (index group) and consisted of educational outreach visits, financial reimbursements and periodical newsletters. The implementation outcomes ‘acceptability’, ‘feasibility’, ‘fidelity’ and ‘sustainability’ were evaluated with an online questionnaire. Also, patient outcomes in the index group were compared with a control group of approximately 450 GPs using a parallel group design, and included the proportion of non-referred patients and the proportion of missed DVT cases in those not referred.

Results: 89 index GPs filled out the questionnaire (43%). Acceptability and feasibility of the guideline were high. Self-reported guideline use increased from 42% (before the study) to an expected continuation of use of 91% (expected sustainability). The educational outreach visits showed highest fidelity. 135 index group GPs included 619 analyzable patients; 336 (54%) were not referred, missing 6 (1.8% (95% CI 0.7% to 3.9%)) DVT cases. 32 GPs in the control group included 62 patients. of those, 31 (50%) were not referred, missing no DVT cases.

Conclusions: This multi-faceted implementation strategy aimed at increasing usage of a guideline recommended CDR and D-dimer test in primary care patients with suspected DVT was successful, resulting in high acceptability, feasibility and expected sustainability, and safely reduced patient referral to secondary care.