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The impact of Pharmaceutical Care interventions on the effective and safe use of oral anticoagulants – A systematic review

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Background and Objective: Oral anticoagulants (OAC) have a beneficial effect on the long term survival of patients with atrial fibrillation and venous thromboembolism. However OACs have also side effects such as bleeding, especially when used inappropriately. Pharmaceutical care interventions aim to optimize medicines use and improve patient health outcomes. The literature lacks a review on the impact of Pharmaceutical Care interventions in patients using OAC. Therefore, we systematically assessed the impact of Pharmaceutical Care interventions on the effective and safe use of OAC compared to usual care.

Setting and Method: A systematic review was performed in PubMed and Embase with synonyms/detailed specifications of the terms oral anticoagulants and pharmaceutical care. Studies were eligible if (1) a Pharmaceutical Care intervention was compared with usual care in patients using OAC and (2) the article was written in English, Dutch, German, French, Italian or Spanish. The percentage of time during which patients had their INR value within target values (time in therapeutic range (TTR)) and adverse events were retrieved. The data were categorized by type of intervention.

Main outcome measures: TTR, number of adverse events.

Results: Of the 11,171 titles/abstracts screened, 125 articles were included. Studies with a statistically significant higher TTR in the Pharmaceutical Care group applied pharmacogenetic dosing (4 out of 7 studies), patient education (3 out of 5 studies), shared care programme (1 study), anticoagulation management service (13 out of 19 studies), self-testing (8 out of 10 studies), and medical training (1 study) as interventions. Studies applying clinical rules (1 study) and medical training (1 study) had a significantly decreased incidence of adverse events compared to usual care.

Conclusion: Several Pharmaceutical Care interventions have a substantial impact on the effective and safe use of oral anticoagulants as demonstrated by a greater TTR and few adverse events.

Disclosure of Interest: None Declared