

# Rising consumption of anticoagulants in Central and Eastern European countries in the period 2007–2019

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**Introduction and Aim:** Due to the growing incidence of thromboembolic disease and atrial fibrillation, increasing trends in anticoagulants consumption can be expected. The aim of this study was to analyse the consumption of anticoagulants in the Czech Republic, Croatia, Hungary, Romania, and Slovakia between 2007 and 2019.

**Methods:** A retrospective analysis of anticoagulants comprising B01AA, B01AB, B01AE, B01AF and B01AX was performed using ATC/DDD methodology. The analysis was initiated in the year before the launch of the first non-vitamin K oral anticoagulant (NOAC). The consumption of each drug was assessed based on annual data and was expressed as DDD per 1,000 population per day (DDD/TID).

**Results:** The overall rates of anticoagulant consumption increased in all countries. Specifically, doubled in the Czech Republic, Croatia, and Slovakia, more than tripled in Hungary and more than quadrupled in Romania. Parenteral anticoagulant consumption remained stable or decreased, while the proportion of oral anticoagulants increased from an average of 61.41% in 2009 to 66.95% in 2019. The use of vitamin K antagonists declined, with the highest rate in the Czech Republic (11.16 DDD/TID in 2019). NOAC consumption showed substantial growth: from 0.002 to 8.33 DDD/TID in the Czech Republic, 0.001 to 6.73 in Croatia, 0.009 to 8.31 in Hungary, 0.0005 to 5.40 in Romania, and 0.03 to 10.77 in Slovakia. By 2019, rivaroxaban was the most commonly used NOAC in all countries, apart from Romania.

**Conclusion:** The study showed an overall increase in the anticoagulant consumption. However, specific characteristics of individual countries need to be further analysed to better understand the different factors influencing utilization patterns.

**Key words:** drug utilization analysis, Europe, oral anticoagulation, parenteral anticoagulation.

## Rostoucí spotřeba antikoagulancií v zemích střední a východní Evropy v letech 2007–2019

**Úvod a cíl:** S rostoucí incidencí tromboembolických onemocnění a fibrilace síní lze předpokládat rostoucí trend ve spotřebě antikoagulancií. Cílem práce bylo analyzovat spotřeby antikoagulancií v České republice (ČR), Chorvatsku, Maďarsku, Rumunsku a na Slovensku v letech 2007–2019.

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