

# Time trends and treatment pathways in the prescribing of individual oral anticoagulants in patients with non-valvular atrial fibrillation: an observational study of more than three million patients from Europe and the United States

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## Abstract

**Background:** Data directly comparing trends in the use of different oral anticoagulants (OACs) among patients with atrial fibrillation (AF) from different countries are limited. We addressed this using a large-scale network cohort study in the United States (US), Belgium, France, Germany and United Kingdom (UK). **Methods:** We used nine databases (claims or electronic health records) that had been converted into the Observational Medical Outcomes Partnership Common Data Model with analysis performed using open-source analytical tools. We identified adults with AF and a first OAC prescription, either vitamin K antagonist (VKA) or direct oral anticoagulant (DOAC) from 2010–2017. We described time-trends in use, continuation and switching. **Results:** In 2010, 87.5%–99.8% of patients started on a VKA. By 2017, the majority started on a DOAC: 87.0% (US), 88.3% (Belgium), 93.1% (France), 88.4% (Germany), 86.1%–86.7% (UK). In the UK, DOACs became the most common starting OAC in 2015, 2–3 years later than elsewhere. Apixaban was the most common starting OAC by 2017: 50.2%–57.8% (US), 31.4% (Belgium), 45.9% (France), 39.5% (Germany), 49.8%–50.5% (UK), followed by rivaroxaban; 24.8%–32.5% (US), 25.7% (Belgium), 38.4% (France), 24.9% (Germany), 30.2%–31.2% (UK). Long-term treatment was less common in the US than in Europe, especially the UK. A minority of patients switched from their index OAC, both in the short- and long-term. **Conclusions:** From 2010–2017, VKA use had significantly declined and DOAC use had significantly increased in the US and Europe; apixaban was the most prescribed OAC in 2017 followed by rivaroxaban.

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