(od) and 25.1% rivaroxaban 15 mg od; 72.4% had prior anticoagulation therapy. Mean age (± SD) was 70.5 (10.48) years (>75 years: 34.8%) and mean weight was 80.0 (17.79) kg; 57.1% were male; 52.2% had first available CrCl ≥50 ml/min (missing values: 36.4%); 18.4% had newly diagnosed AF, 37.3% paroxysmal AF, 16.2% persistent AF and 27.7% permanent AF. Co-morbidities included congestive heart failure (21.2%), hypertension (76.2%), diabetes mellitus (22.3%), prior stroke/non-central nervous system (CNS) systemic embolism (SE)/transient ischaemic attack (TIA; 21.3%) and prior myocardial infarction (MI; 8.9%). Mean (± SD) CHADS2 and CHA2DS2-VASc scores were 2.0 (1.28) and 3.5 (1.74), respectively; mean HAS-BLED score was 2.0 (1.07). Rates of treatment-emergent major outcomes were (events/100 patient-years [95% CI]): major bleeding 1.7 (1.5–2.0) (fatal 0.2 [0.1–0.3]); all-cause mortality 1.9 (1.6–2.2); stroke/non-CNS SE 1.0 (0.8–1.2); stroke 0.9 (0.7–1.1) (ischaemic 0.6 [0.5–0.8]; haemorrhagic 0.2 [0.1–0.3]); non-CNS SE 0.1 (0.1–0.2); TIA 0.4 (0.3–0.6); MI 0.4 (0.3–0.6); any AE 47.2 (45.7–48.8); any SAE 17.7 (16.8–18.5). Treatment persistence at 1 year was 77.4% (lowest persistence in East Asia: 66.4%; highest persistence in Eastern Europe: 84.4%).

Conclusions: This large analysis in >11,000 patients shows low bleeding and stroke rates in AF patients treated with rivaroxaban for 1 year. Treatment discontinuation in ~23% of patients illustrates the need to develop care models that ensure consistent delivery of evidence-based therapy.

Acknowledgement/Funding: Bayer AG

P3593 | BEDSIDE
Oral anticoagulant use in patients with atrial fibrillation: pre- vs. post-direct oral anticoagulant era comparisons

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Background and aims: Suboptimal guideline adherence and underuse of anticoagulants in patients with atrial fibrillation (AF) have been reported worldwide. This study aimed to compare anticoagulation practices in Australia during the pre- and post- direct oral anticoagulant (DOAC) eras.

Methods: Between January 2011 to July 2015, patients with AF admitted to our Hospital, were evaluated retrospectively. The pre- and post-DOAC era cohorts included admissions from January 2011 to July 2013 and August 2013 to July 2015, respectively. Anticoagulation practices were compared in the two eras using contemporary guideline recommendations for OAC use in AF.

Results: Overall, 2261 patients (1169 from the pre-DOAC and 1092 from the post-DOAC era) met our inclusion criteria. The overall rate of anticoagulation increased from 54.1% in the pre-DOAC era to 61.4% in the post-DOAC era ($p<0.001$). Further, OAC prescribing among high-risk patients was significantly higher in the later cohort than prescribing in the prior cohort (56.9% vs. 63.8%, respectively, p=0.003). There was no statistically significant change in OAC over-prescribing in the low-risk group between the two periods (35.0% vs. 42.9%, p=0.59). In multivariate analysis, DOAC era (odds ratio [OR], 95% confidence interval [CI], 1.37, 95% CI 1.15–1.63), valvular heart diseases (OR 2.89, 95% CI 1.61–2.19) and CHA2DS2-VASc >2 (OR 1.82, 95% CI 2.09–1.97) were independent predictors of OAC prescribing. Conversely, aging and prior bleeding were inversely associated with OAC prescribing.

Conclusions: There has been a significant increase in OAC use attributable to the availability of DOACs. However, OAC underuse in intermediate and high-risk and overuse in low-risk patients were observed, highlighting the need for further improvement.

P3594 | BEDSIDE
Stroke risk in patients with asymptomatic atrial fibrillation (AF) detected incidentally in general practice is comparable to symptomatic AF presentation, and AF presenting first to hospital

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Background/Introduction: Previously unknown AF is associated with almost 10% of ischemic strokes, suggesting that screening for unknown AF could prevent these strokes. However, the prognosis of asymptomatic ambulatory AF (AA-AF) detected by AF screening is uncertain. The closest approximation is AA-AF detected incidentally in general practice, but it is unknown how stroke risk of such patients compares with symptomatic presentations in general practice, or hospital AF presentation.

Purpose: To estimate the cumulative risk of stroke in patients with incident AF by AF presentation (source of AF diagnosis and presence of symptoms)

Methods: The study cohort comprised patients with a first-time recording of AF and a non-AF cohort between Jan 2001 and Oct 2010 derived from the UK's Clinical Practice Research Datalink (CPRD) with additional data from hospitalizations and causes of death. Based on the source of AF diagnosis and symptoms, patients were allocated to one of four groups: (1) asymptomatic ambulatory AF (AA-AF) detected incidentally, (2) symptomatic ambulatory AF (SA-AF), (3) AF recorded as primary diagnosis and during first hospital episode (PH-AF), and (4) AF recorded as secondary diagnosis or during subsequent hospital episode (non-PH-AF). The non-AF group consisted of up to five patients from the CPRD cohort matched on birth year, gender, and index day on the AA-AF cohort only. Patients in all cohorts with a diagnosis or treatment for cancer in the year before the first AF (index day) recording were excluded.

The outcome of interest was fatal and non-fatal stroke (ischaemic or unspecified stroke excluding intracranial bleeding) recorded by the general practitioner, or as a hospital discharge diagnosis or in a death certificate.

Competing risk analysis was performed to present crude cumulative risk over time accounting for mortality as competing risk. Adjusted cumulative risk curves were derived by standardizing all sub cohorts to the baseline prevalence of AA-AF cohort characteristics and use of oral anticoagulants (OACs).

Results: The study cohort consisted of 5409 with AA-AF, 5913 with SA-AF, 4989 with PH-AF, 5724 patients with Non-PH-AF and 23605 non-AF. Mean age ranged from 67.3 years in PH-AF to 71.8 in non-PH AF. Overall, Non-PH AF had a higher CHADSVASC scores and prevalence of other chronic comorbidities. The cumulative incidence of stroke was greatest in Non-PH-AF, comparable in patients with AA-AF and SA-AF, lower in PH-AF and lowest in Non-AF (Figure).

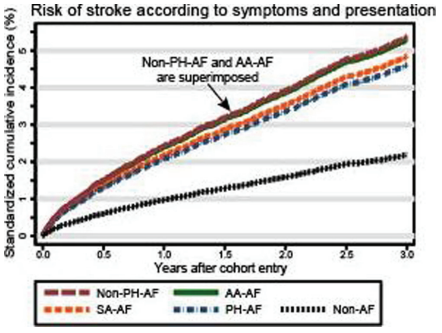

Figure 1

Conclusions: Asymptomatic AF diagnosed in an ambulatory general practice setting is not a benign condition and bears a significant risk of stroke. The stroke risk is comparable to symptomatic AF diagnosed in the ambulatory setting or AF leading to hospital admission, and much greater than matched patients without AF. This suggests that screen-detected AA-AF would have a similar adverse prognosis with a stroke risk high enough to warrant treatment.

P3595 | BENCH
Non-valvular atrial fibrillation, anticoagulants and stroke: the stroke prevention and anticoagulants (SPA) case-control study

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Background/Introduction: This study was conducted upon request from the French health authorities to assess the impact of dabigatran on morbidity and mortality in patients with non-valvular atrial fibrillation (NVAF) compared with vitamin K antagonists (VKA). It was hypothesized that the drug effect would be comparable to the effects reported in the RELY clinical trial.

Purpose: To assess the relative risk of stroke in patients with NVAF taking dabigatran or other non-VKA oral anticoagulants (NOAC) compared with VKA.

Methods: This systematic case-referent study ran from December 2013 to October 2016. Cases and controls were selected from the PGRx-Stroke and the PGRx-Atrial Fibrillation systematic registries, respectively. Cases were patients with an incident fatal or non-fatal ischemic or haemorrhagic stroke. Both cases and controls had NVAF diagnosed at least 24 hours before the index date. Cases were matched to controls on age, sex, time since NVAF diagnosis, source of information on exposure, and index date (stroke date for cases and recruitment date for controls). The main analysis used a multivariate conditional logistic regression where patients were categorised according to use of dabigatran, other NOAC, any VKA (reference), no use of OACs, and switchers within 30 days prior to index date.

Results: Out of 26,394 strokes reviewed, 2607 were retained cases from the PGRx registry, of which 2586 were matched to 4810 controls from a pool of 5103 documented NVAF, recruited by 68 stroke units and neurology departments for cases and 150 cardiologists and general practitioners for controls. As compared with VKA use, adjusted OR for total stroke was 0.60 [95% CI: 0.45 - 0.82] for dabigatran, 0.68 [95% CI: 0.57 - 0.83] for other NOAC, 2.99 [95% CI: 2.48 - 3.61]

for no use of OACs, and 1.84 [95% CI: 0.92 - 3.69] for switchers in the 30 days before index date, respectively. Dabigatran use was associated with reduced risk of haemorrhagic (OR, 0.30 [95% CI: 0.14 - 0.67]) and ischemic stroke (OR, 0.70 [95% CI: 0.50 - 0.97]) compared with VKA. When stratified by time since diagnosis of AF, dabigatran, was associated with an adjusted OR of stroke occurrence of 0.52 [0.24 - 1.12], 0.51 [0.31 - 0.81] and 0.65 [0.38 - 1.13] in patients with AF lasting <1 year, 1 to 5 years, >5 years, compared with VKA.
Conclusion: Compared with VKA, dabigatran is associated with a significantly lower risk of stroke of any type, an observation consistent with results from the RELY trial.
Acknowledgement/Funding: Study conception and data analyses were conducted independently of Boehringer Ingelheim that subscribed data from PGRx data registry for the SPAstudy

P3596 | BEDSIDE
Dabigatran, rivaroxaban, and apixaban versus vitamin K antagonists for atrial fibrillation patients at low to intermediate stroke risk: a Danish nationwide cohort study

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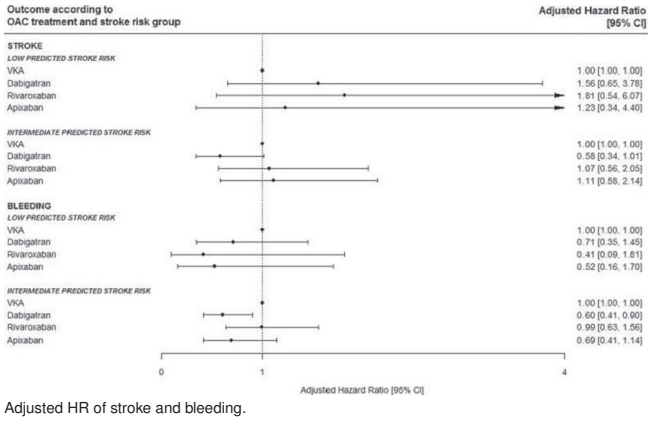
Background: Patients at low risk of stroke were not included in the trials that lead to the approval of non-vitamin K antagonist oral anticoagulants (NOACs) for stroke prevention in atrial fibrillation (AF).
Purpose: To compare the risk of stroke and bleeding in Danish AF patients at low or intermediate stroke risk initiated on dabigatran, rivaroxaban, or apixaban, respectively, versus vitamin K antagonists (VKAs).
Methods: AF patients initiating VKA, dabigatran, rivaroxaban, or apixaban from 22 August 2011 to 30 September 2016 were identified through Danish nationwide administrative registries. Only standard dose NOAC initiators were included, i.e. dabigatran 150 mg bid, rivaroxaban 20 mg od, apixaban 5 mg bid. Patients were categorized into low and intermediate stroke risk groups (men with CHA2DS2-VASc score 0 and 1, respectively; women with CHA2DS2-VASc score 1 and 2, respectively) and followed for up to 2 years. Absolute risks of stroke and bleeding were estimated by cumulative incidences when accounting for death, stop or shift of oral anticoagulation treatment as competing events. Adjusted hazard ratios with VKA as reference were estimated using multivariable Cox regression models.
Results: The study population comprised 4,381 patients with low stroke risk (VKA 42.7%, dabigatran 29.7%, rivaroxaban 13.1%, apixaban 14.5%) and 9,128 patients with intermediate stroke risk (VKA 38.2%, dabigatran 27.7%, rivaroxaban 16.3%, apixaban 17.8%). In general, patients from the intermediate risk group had higher mean age and HAS-BLED score than patients from the low risk group. In the low risk group, the cumulative incidence (95% CI) of stroke and bleeding at 1 year after initiation was: 0.5% (0.2–0.8) and 1.3% (0.8–1.9) for VKA, respectively; 0.7% (0.2–1.1) and 0.9% (0.4–1.4) for dabigatran, respectively; 0.9% (0.1–1.7) and 0.4% (0.0–0.9) for rivaroxaban, respectively; 0.7% (0.01–1.3) and 0.8% (0.01–1.6) for apixaban, respectively. In the intermediate risk group, the cumulative incidence (95% CI) of stroke and bleeding at 1 year after initiation was: 1.0% (0.7–1.4) and 1.7% (1.3–2.2) for VKA, respectively; 0.4% (0.2–0.6) and 1.0% (0.6–1.4) for dabigatran, respectively; 1.1% (0.5–1.7) and 1.9% (1.2–2.7) for rivaroxaban, respectively; 0.9% (0.4–1.4) and 1.4% (0.8–2.0) for apixaban, respectively. In the intermediate stroke risk group, dabigatran treatment was associated with a significantly lower hazard rate of bleeding compared with VKA treatment after adjustment for relevant risk factors (see Figure).



Adjusted HR of stroke and bleeding.

Conclusions: In terms of stroke, no significant difference was seen between VKA and any of the investigated NOACs among AF patients at low or intermediate predicted risk of stroke. In contrast, among patients at intermediate predicted risk of stroke, dabigatran treatment was associated with a significantly lower hazard rate of bleeding compared with VKA treatment.

P3597 | BEDSIDE
Synergic effects of blood pressure control and quality of anticoagulation control on outcomes in patients with atrial fibrillation: the SPORTIF III and V trials

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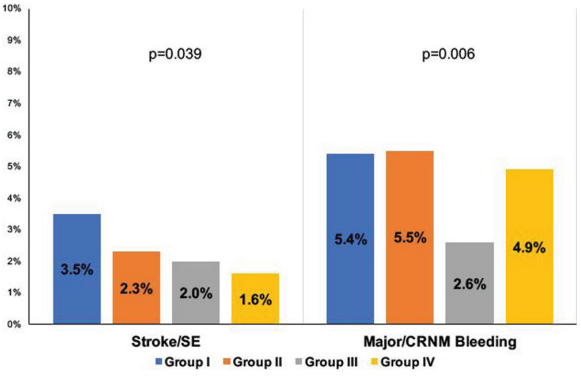
Background: Good quality anticoagulation control reduces the risk of major adverse outcomes in patients with atrial fibrillation (AF) taking warfarin. In addition, optimal blood pressure management minimizes the risk of stroke and serious bleeding, particularly intracranial bleeding. We hypothesized that the interaction between these two factors would contribute to major adverse events in AF patients.
Methods: An ancillary analysis of patients enrolled in the warfarin arm of the SPORTIF III and V trials was performed. BP control was defined according to baseline average BP at trial enrolment. Optimal BP control was defined as BP<130/80 mmHg. Quality of anticoagulation control was based on the average time in therapeutic range (TTR), with optimal anticoagulation control defined as TTR>70%. Stroke/Systemic Embolism (SE) and Major/Clinically Relevant Non-Major (CRNM) bleeding were assessed as outcomes.
Results: Overall 3615 patients were studied: Group I, 1174 (32.5%) patients with suboptimal BP and TTR control; Group II, 745 (20.6%) with optimal BP control only (suboptimal TTR); Group III, 1062 (29.4%) with TTR>70 (and suboptimal BP control); and Group IV, 634 (17.5%) with both optimal BP control and TTR>70%. Proportion of patients at high thromboembolic risk (CHA2DS2-VASc ≥2) was similar across the groups (p=0.108). The proportion at high bleeding risk (HAS-BLED ≥3) was higher in Group I and progressively lowered to Group IV (p<0.001). After a median [IQR] follow-up of 568 [493–652] days, there was a progressively lower rate of stroke/SE from Group I to Group IV (p=0.039). There was a significant lower rate of major/CRNM bleeding in Group III (p=0.006) [Figure]. Kaplan-Meier analysis showed that patients in Group I had the highest risk for stroke/SE (Log-Rank: 8.699, p=0.034). Kaplan-Meier analysis for major-bleeding showed that both patients in Group I and Group II had the highest risk (Log-Rank: 15.967, p=0.001). Multivariable Cox regression analysis found that patients in Group III and Group IV were at lower risk for stroke/SE (hazard ratio [HR]: 0.57, 95% confidence interval [CI]: 0.34–0.97, p=0.039 and HR: 0.46, 95% CI: 0.23–0.91, p=0.026, respectively). For major/CRNM bleeding outcome, patients in Group III had a significant lower risk for adverse event occurrence (HR: 0.44, 95% CI: 0.28–0.69, p<0.001).



Adverse Event Rates

Conclusions: In patients with AF, the synergic effect of an optimal BP and good anticoagulation control was independently associated with a lower risk of thromboembolic events. The risk of major/CRNM bleeding was numerically lower in patients with both suboptimal and optimal BP and good anticoagulation control. After multivariate analysis, due to an interplay of other comorbid risk factors, only patients with suboptimal BP and good anticoagulation control had a significantly lower risk.

P3598 | BEDSIDE
Anticoagulation control in different ethnic-minority patients receiving vitamin K antagonists for stroke prevention in atrial fibrillation: the west Birmingham AF Project

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Introduction: Efficacy and safety of vitamin K antagonists (VKAs) is optimised in atrial fibrillation (AF) patients when the International Normalised Ratio (INR) is 2.0–3.0. Anticoagulation control comparing different ethnic groups has not been well-assessed, although epidemiological studies suggest poorer INR control in non-White cohorts.
Objective: To examine the quality of VKA control in AF patients in a multi-ethnic cohort.
Methods: VKA control was assessed by time in therapeutic range (TTR) (Rosendaal method) and percentage INRs in range (PINRR) among 991 White, Afro-Caribbean and South-Asian AF patients [overall mean (SD) age at AF di-