(13.9% of all patients). Apixaban, dabigatran and rivaroxaban were underdosed in 14.2% of the reduced dose prescriptions and overdosed in 4.5% of the full dose prescriptions. **CONCLUSIONS:** This study provides real-world evidence that underdosing of NOACs occurs more often than overdosing. Crucial patient-specific information to determine the correct dose is often lacking. Periodic population-based monitoring of anticoagulant prescriptions can help to achieve vigilance in stroke prevention with NOACs along the years.

#### PCV138

## TREATMENT PATTERNS OF PATIENTS WITH VENOUS THROMBOEMBOLISM TREATED WITH ORAL ANTICOAGULANTS IN ENGLAND



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OBJECTIVES: Treatment for venous thromboembolism (VTE), including deep vein thrombosis (DVT) and pulmonary embolism (PE), focuses on inhibiting clotting factors and breaking up existing clots. This descriptive study investigated anticoagulation treatment patterns in patients with VTE in the real-world setting in England. METHODS: Linked primary (Clinical Practice Research Datalink) and secondary (Hospital Episode Statistics) care data were used to identify patients aged ≥18 years who experienced an incident VTE event between January 2013 and July 2017. Patients treated with either apixaban, rivaroxaban or warfarin within 30 days of their VTE were included. RESULTS: A total of 3,300 VTE patients were identified; 34.9% with PE, 61.8% with DVT and 3.2% experiencing both. Overall, 48.6% were male and the mean age at index was 62.6 years. In the period studied, the first anticoagulation treatment received following a VTE was warfarin for 63.4% of patients, apixaban for 5.6% and rivaroxaban for 30.7%. In 2013, 95.2% of patients first treatment was warfarin, 0% apixaban and 4.8% rivaroxaban; by 2016 21.8% of patients received warfarin, 17.6% apixaban and 60.6% rivaroxaban. At 90 days of follow-up, Kaplan-Meier estimates of index treatment persistence were 81.01% (95%CI 73.91-86.35) in apixaban, 81.44% (95%CI 79.67-83.07) in warfarin, and 58.97% (95%CI 55.74-62.06) in rivaroxaban-treated patients, respectively. At 180 days of follow-up treatment persistence was 54.73% (95%CI 45.29%-63.21%) in apixaban, 47.1% (95%CI 44.81%-49.36%) in warfarin, and 41.21% (95%CI 37.8%-44.57%) in rivaroxabantreated patients, while at 365 days, the same estimates were 42.2% (95%CI 32.04%-52%) in apixaban, 18.13% (95%CI 16.29%-20.06%) in warfarin and 27.11% (95%CI 23.75%-30.56%) in rivaroxaban-treated patients, respectively. CONCLUSIONS: Our findings suggest VTE patients treated with apixaban remain persistent on-treatment more frequently than those treated with warfarin, particularly after 180 days of follow-up. However, the precision of these estimates is limited given our small sample size and they should be interpreted with caution

CARDIOVASCULAR DISORDERS - Patient-Reported Outcomes & Patient Preference Studies

## PCV141

MEDICATION ADHERENCE AND POTENTIAL DETERMINANTS FOR NON-ADHERENCE IN YOUNG AND MALE PATIENTS AT CVD RISK IN KOREA



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OBJECTIVES: This aimed to investigate medication adherence and potential determinants for non-adherence in young and male patients on statin. METHODS: The data included in this analysis was extracted from The Cvd RISk ouTcomes research, CRistar study. CRistar study was a cross-sectional, observational study conducted at 26 tertiary-hospitals in Korea during Dec 2014 and Oct 2015. In this analysis, male patients, who were on statin (>6 months, but <2 years) and younger than 50 years, were included. 8-item of Morisky Medication Adherence Scale(MMAS-8) questionnaire was used to examine patients' self-reported adherence to statin treatment. MMAS-8 consists of a total of 8 items, with scores ranging from 0 to 8 points. Adherence level is defined based on scores (8=High, 6-7=Moderate, <6=Low). Patients were further classified into 2 groups, 1) high adherence=adherence, 2) moderate and low adherence=non-adherence. Reasons for non-adherence were also investigated in patients who missed at least single dose of statin. **RESULTS:** A total of 288 male patients ( $\leq$ 50 years) were included in this analysis. The mean age was 44.2±5.1 years old. A majority (95.8%) of patients had at least one comorbid disease, and hypertension(51.0%) was the most common. About 1/3 patients were adherent whereas remaining (63.2%) was determined as non-adherent. Of 132 patients who missed at least single dose of statin, the most prevalent reason for nonadherence was forgetfulness(73.5%), and business due to work(25.8%) was followed. Patients' baseline characteristics were compared by adherence status. More percentages of patients with lower education level, currently drinking, currently smoking, less physical exercises, no lipid-lowering diet and non-cohabitant/family who helped taking medication were present in non-adherences. Also, the duration of statin use was shorter in non-adherence patients than adherent patients. CONCLUSIONS: This revealed the considerable percentages of young and male patients was non-adherent to statin. This suggests that educational life-style modifications and interventions be introduced to enhance statin adherence.

### PCV142

ADHERENCE TO ORAL ANTICOAGULATION TREATMENT IN ATRIAL FIBRILLATION AND THE IMPACT OF PATIENT SATISFACTION Mueller S<sup>1</sup>, Meinecke A<sup>2</sup>, Buchwald S<sup>3</sup>, Heideman L<sup>4</sup>, Eriksson D<sup>3</sup>, Wilke T<sup>5</sup> <sup>1</sup>Ingress-Health HWM Gmbh / Institute for Pharmacoeconomics and Medication Logistics (IPAM, affiliated institute of the University of Applied Sciences Wismar), Wismar,



Germany, <sup>2</sup>Bayer AG, Wuppertal, Germany, <sup>3</sup>Bayer AG, Berlin, Germany, <sup>4</sup>Blueprint Partnership Ltd, Manchester, UK, <sup>5</sup>Ingress-Health HWM GmbH, Wismar, Germany

OBJECTIVES: Treatment adherence is of utmost importance for providing effective treatment with oral anticoagulation treatment in atrial fibrillation (AF) patients. However, there is still a lack of knowledge why patients do not adhere to treatment, especially which role patients' satisfaction with their treatment plays in this context. **METHODS:** A cross-sectional survey was conducted in France, Germany and UK including AF patients currently receiving a non-vitamin K antagonist oral anticoagulation (NOAC). Adherence to treatment was assessed using the Morisky Medication Adherence Scale (@MMAS-8, @2006 Donald E. Morisky). Treatment satisfaction of patients was measured based on a single-item measure (scale ranging from 1 'not satisfied' to 10 'extremely satisfied'). Additionally, it was assessed whether a patient would prefer a different dosing regimen, compared to that of the current NOAC therapy (either once or twice daily). The effect of treatment satisfaction/preference on the probability of low adherence was estimated by a logistic regression. In this model further covariates were considered (age/gender/country/ comorbidity level/number of concomitant medications/type of treating physician/ treatment duration/NOAC pre-treatment). RESULTS: 898 patients were included in the survey (mean age: 71.9 years; males: 57.2%; mean duration of NOAC treatment: 2.1 years; once-daily (OD)/twice-daily (BID) NOAC: 52.2%/47.8%). The mean MMASscore was 7.2 (SD:1.1). In total, 10.5%/38.9% of the patients reported low/medium adherence to their anticoagulation treatment. The mean satisfaction score was 8.64 (SD:1.6). While 47.8% of the patients treated with a BID NOAC would prefer another dosing regimen only 1.3% of patients on an OD NOAC do so. In our regression model, a lower treatment satisfaction was associated with a higher risk of low adherence (HR:1.325;p<0.001). Furthermore, patients who strongly preferred another dosing regimen showed a higher probability of low adherence (HR:3.500;p<0.001). CONCLUSIONS: Prescribing OAC treatments that AF patients prefer can help to increase long-term adherence with the prescribed treatment. Use-of-the-MMAS-isprotected-by-US-and-International-copyright-laws.-Permission-for-use-is-required.-A-license-agreement-is-available-from:-Donald-E.-Morisky,-MMAS-Research-(MORISKY), -294-Lindura-Court,-Las-Vegas,-NV-89135-1415;-dmorisky@gmail.com.

#### PCV14/

## EFFECT OF CONVENIENCE OF ORAL ANTICOAGULANT THERAPY ON MEDICATION ADHERENCE: RESULTS OF AN INTERNATIONAL STATED PREFERENCE SURVEY



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OBJECTIVES: Adherence to oral anticoagulant therapy (OAC) is of great importance to patients suffering from non-valvular atrial fibrillation to reduce the risk of stroke (AF). The objective of this study was to elicit patient preferences for convenience of OAC therapy, patient perception of the effect of convenience on medication adherence and estimate willingness-to-pay for improved convenience. METHODS: The attributes of OAC were identified using literature review, patient focus groups, and expert consultation. An online survey was distributed in five European countries among patients with AF who were taking OACs. Preferences for drug convenience (intake frequency; need for routine monitoring of coagulation; diet and/or drug interactions; pill intake; and pill type) were elicited using a discrete choice experiment. Additionally, patient's current adherence, adherence to their preferred scenario and their willingness-to-pay for the most convenient scenario were elicited. Descriptive data analysis, Chi squared-test, independent ttest, and mixed logit analysis were used to analyse the data. RESULTS: The respondent sample consisted of 508 patients with AF. No need for routine monitoring had the highest impact on the perceived value of OACs (38.1%), while type of pill had the lowest impact (5.8%). Lower intake frequency (OR=1.26, p<0.001) and no need for routine monitoring (OR=1.04, p=0.013) were significant predictors of higher stated adherence to OAC, and the impact of drug convenience was larger in less adherent patients. The majority of patients (84.1%) were willing to switch from their current drug to a more convenient OAC and 45.5% were willing to pay additional co-pay (median of €23/month) for a more convenient therapy. **CONCLUSIONS:** Patients prefer a once-daily OAC which can be taken anytime, has limited drug/food interactions and does not require routine monitoring of coagulation. This study suggests that once instead of twice daily intake frequency and omitting the need for routine monitoring medication could improve adherence.

### PCV145

# A SYSTEMATIC LITERATURE REVIEW (SLR) ON HEALTH STATE UTILITIES ASSOCIATED WITH ANGINA AND REVASCULARISATION Natani H<sup>1</sup>, Gogna S<sup>1</sup>, Jindal R<sup>1</sup>, Laires PA<sup>2</sup>, Cristino J<sup>2</sup>



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OBJECTIVES: Cost-utility analyses for secondary cardiovascular prevention require health state utility values in order to calculate quality-adjusted life-years (QALYs) for each health state. This review aimed to identify and describe the utility values associated with unspecified/unstable angina and revascularisation reported in the available literature. METHODS: An SLR was conducted to identify English publications in Embase®, MEDLINE® and the grey literature published in the last 10 years (2008-2017). Two reviewers independently conducted the screening, data abstraction, and the quality assessment with a third reviewer consulted in case of any discrepancies. All types of original research studies reporting utilities data associated with angina/revascularisation were included. Studies providing utility values only for stable angina were excluded. RESULTS: Twenty-seven studies

values only for stable angina were excluded. **RESULTS:** Twenty-seven studies (sample size: 49 to 18,017) met the inclusion criteria (revascularisation: 17 studies; angina: 10 studies). Majority of them used EQ-5D assessment method (N=22; revascularisation: 16; angina: 6) and were conducted in Europe (N=12;