dabigatran and rivaroxaban appear to have better safety and efficacy profiles when compared with warfarin. Apixaban and dabigatran 110mg consistently demonstrated reduced risk of bleeding when compared with rivaroxaban and dabigatran 150mg. Dabigatran150mg demonstrated increased efficacy on multiple endpoints when compared with rivaroxaban, while discontinuation rates were increased. Head-to-head studies would help clarify any differences among these medicines for efficacy and bleeding.

PCV17

META-ANALYSIS OF SAFETY OF DABIGATRAN AND WARFARIN FOR TREATMENT OF ATRIAL FIBRILLATION

Aggarwal S, Segal J

Novel Health Strategies, Bethesda, MD, USA

OBJECTIVES: Atrial fibrillation (AF) is an irregular and often rapid heart rate that commonly causes poor blood flow to the body. Dabigatran and Warfarin have shown safety and efficacy for treatment of AF. The objective of this study was to conduct meta-analysis and present evidence for safety of Dabigatran versus Warfarin for treatment of AF. **METHODS:** For this meta-analysis we included randomized controlled trials (RCTs) evaluating Dabigatran for the treatment of AF. We included studies that were: (1) a RCT in humans; (2) an investigation of patients with nonvalvular atrial fibrillation; (3) an evaluation of dabigatran compared with warfarin or each other; and (4) a report of results of stroke or systemic emboli and major bleeding. A systematic literature search for dabigatran trials was undertaken for the databases Pubmed, Embase, Biosis, Google Scholar, and Cochrane. Data was collected for the study size, interventions, year and total bleeding events. For meta-analysis, random effects and fixed effects models were used to obtain cumulative statistics. **RESULTS:** Two RCTs with a total of 12,268 patients were identified. The pooled event rate for Dabigatran for total bleeding events was 31.9% (95% CI 31%-33%). The pooled response rate for Warfarin for total bleeding events was 35.1% (95% CI 34%-37%). The cumulative relative risk for total bleeding events with Dabigatran versus Warfarin was 0.91 (95% CI 0.89-0.93) **CONCLUSIONS:** Meta-analysis shows Dabigatran has a slightly lower rate of total bleeding events compared to Warfarin.

PCV18

EFFECT OF IVABRADINE ON THAI CHRONIC STABLE ANGINA PECTORIS PATIENTS

Rojkajornnaphalai S

Chest Hospital, Nonthaburi, Thailand

OBJECTIVES: To evaluate efficacy/safety of ivabradine in chronic stable angina pectoris(CSAP) Thai patients. **METHODS:** Ivabradine 5-7.5 mg bid was prescribed to CSAP patients. Hemodynamic parameters including systolic/diastolic blood pressure(SBP/DBP) in mmHg and heart rate(HR) in beats per minute(bpm) were recorded at entry and after 1,4 months follow-up. A standardized digital device was used to monitor BP and HR. Acceptability was evaluated in patient interviews. **RESULTS:** A total of 256 patients, men/women ratio of 1.04, mean(SD) age 67.1(12.4) years, 149(58%) were >65 years old, 64(25%) and 76(29.7%) of patients had previous intervention and heart failure(HF). 127(50%)&51(20%) received beta-blockers&nitrate as initial medication. Patients' assessment was made using Canadian Cardiology Society angina pectoris classification(CCS). At entry, 34.9%, 52.2% and 10.8% of patients were found with CCS grades 3, 2 and 1. Among 76 HF patients, 35.8%, 58.2% and 6.0% were found with stage 3, 2 and 1 of NYHA classification. In overall population, mean(SD) baseline HR was 86.9(11.2) bpm and SBP/DBP 137.8(24.6)/81.7(15.9) mmHg. After 4 months, mean(SD), HR significantly reduced to 69.96(7.13)bpm (p<0.001) and SBP/DBP lowered to 126.5(12.9)/73.9(8.9) mmHg, while mean arterial pressure(MAP)was optimally maintained at 100.4(17.6) mmHg. The highly significant drop in mean difference(SE) HR of 16.9(0.7) was observed with 95% CI between 15.5-18.3 bpm. No significant mean difference(SE),[95% CI] SBP drop, between patients with/without HF, and with/without previous intervention of 7.32(1.17),[4.99-9.64] and 8.15(2.07),[4.02-12.2764], or 8.14(1.27),[5.61-10.67] and 7.46(0.89),[5.69-9.22] (p=0.502, p=0.691) respectively. Improvement for CCS 3 and CCS 2 angina class, reduced to 1.9% and 36.1% whereas the NYHA classification for stage 3&2 reduced to 3.2%&56.4%(p<0.001). Common AE reported were palpitation(2.5%) and nausea(1%). **CONCLUSIONS:** Ivabradine is a well-tolerated heart rate reducing agent, effective for both chronic stable angina pectoris and heart failure. It effectively reduces elevated heart rate without affecting other hemodynamic parameters. In this Thai setting, ivabradine significantly improves CCS and NYHA classifications with minimal side effects being reported.

PCV19

EVALUATION OF THE POTENTIAL EFFICACY OF IVABRADINE IN HEALTH CARE OF THE REPUBLIC OF BELARUS

Kozhanova I[1], Romanova I[1], Gavrilenko L[1], Sachek M[2]

[1]*Belarusian State Medical University, Minsk, Belarus,* [2]*The Belarusian Center for Medical Technologies, Computer Systems, Administration and Management of Health, Minsk, Belarus*

OBJECTIVES: To determine the potential population of patients with stable angina pectoris in Belarus who need prescription of ivabradine and setting the amount of the effect of the drug in this group of patients. **METHODS:** In the research pharmacoeconomic Markov model of ivabradine application in patients with stable angina, national surveillance data, analysis of literature have been used. Patients with stable angina after revascularization, patients with contraindications to beta-blocker use, not applying the dihydropyridines and having a contraindication to ivabradine use have been used to determine the target population. The number of prevented or postponed events – PPE - (nonfatal myocardial infarction and unstable angina, cardiovascular death, the number of surgical revascularization) has been calculated. For the potential efficacy of ivabradine use in patients with stable angina and heart rate ≥ 70 bpm calculating the data about efficacy in accordance with the results of the Beautiful study were used **RESULTS:** The total number of patients with stable angina pectoris in Belarus in 2011 was 242943. The total number of patients with stable angina who have indications for ivabradine was 17559 people. The number of prevented cases of non-fatal myocardial infarction and unstable angina was 244 cases per year. The number of prevented cases of cardiovascular death was 95 cases per year. The number of prevented cases of surgical revascularization was 260 cases per year. **CONCLUSIONS:** The analysis allowed to identify Belarusian patients in need of ivabradine use by estimating the size of the target group of patients with stable angina and elevated heart rate for whom antianginal therapy is inadequate or impossible and who need an ivabradine prescription and potentially could make the most effective reaction to the therapy.

PCV20

EVIDENCE THRESHOLDS IN THE ABSENCE OF EFFECTIVE ALTERNATIVES: THE CASE OF INTERMITTENT COMPRESSION IN CRITICAL LIMB ISCHEMIA

Moran P, Teljeur C, Harrington P, Ryan M

Health Information and Quality Authority, Dublin, Ireland

OBJECTIVES: Intermittent pneumatic compression (IPC) is proposed as an adjunct to medical care for people with critical limb ischemia (CLI) who are unsuitable for revascularisation. Given the lack of treatment options for these patients, a safe therapy that can be shown to provide even a modest clinical improvement may make a significant contribution to the management of this condition. This research aims to synthesise and critically appraise the evidence supporting the use of this technology in this cohort. **METHODS:** A systematic review of the clinical effectiveness of IPC in non-reconstructable CLI was performed. Medline, Embase and trial registries were searched for randomised controlled trials (RCTs), non-randomised controlled trials (nRCTs) and controlled before-and-after (CBA) studies comparing IPC plus medical care to medical care only. **RESULTS:** No RCTs or nRCTs were identified. Two CBA studies, both with a high risk of bias, found that IPC was associated with improved limb salvage and wound healing (OR 7, 95% CI 1.82 to 26.89, p<0.05 for both outcomes) as well as improved quality of life scores in bodily pain (mean difference [MD] 32.7, 95% CI 29.4 to 36.0, p<0.05) and physical functioning (MD 18.8, 95% CI 14.1 to 23.6, p<0.05). Improvements were also reported for initial and absolute claudication distances (MD 26.9m, 95% CI 21.7 to 32.1, p<0.05; MD 52.9m, 95% CI 42.2 to 63.6, p<0.05, respectively). No serious adverse events were reported. **CONCLUSIONS:** Despite some promising results there is a lack of high-quality evidence demonstrating the effectiveness of IPC in addition to medical management in non-reconstructable CLI. Where findings are equivocal a question arises as to the minimum level of evidence required to support the introduction of a technology when no effective alternatives exist. Competing interpretations of the balance of risks and benefits between different stakeholders in the decision-making process in these circumstances are discussed.

PCV21

EFFECTS OF EXCESS USE OF CORONARY ANGIOGRAPHY AND ITS ASSOCIATION WITH MORTALITY RATES, HEALTH CARE COSTS AND HOSPITAL QUALITY IN TURKEY

Baser O[1], Burkan A[2], Baser E[3], Koselerli R[2], Ertugay E[2], Altinbas A[4]

[1]*STATinMED Research/The University of Michigan, Ann Arbor, MI, USA,* [2]*Social Security Institution, Ankara, Turkey,* [3]*STATinMED Research, Ankara, Turkey,* [4]*Diskapi Yildirim Beyazi Education and Research Hospital, Gastroenterology Clinic, and STATinMED Research, Ankara, Turkey*

OBJECTIVES: To evaluate excess use of coronary angiography prior to coronary artery bypass graft (CABG) surgery and its association with mortality, health care costs and hospital quality in Turkey. **METHODS:** MEDULA, a nationwide integrated system shared between general health insurance and health care providers in Turkey was used to analyze coronary angiography utilization. Patients age 18–99 years who underwent CABG surgery between April 1, 2009 and October 1, 2010 were identified and assigned to "standard-therapy" or "excess-use" groups based on whether they had one or more coronary angiography, respectively, within 3 months of the first CABG diagnosis date (index date) during the identification period. Survival rates and annual health care costs of patients in the coronary angiography standard-therapy and excess-use groups were compared using propensity score matching. The empirical Bayes approach was used to combine mortality and hospital volume for quality index. Chi-squared tests were used to assess the relationship between hospital quality and excess use of coronary angiography excess use. **RESULTS:** From a total of 20,126 identified patients, 7.27% underwent excessive coronary angiography procedures, at average annual costs that were 9.7% higher than patients with a single angiography (p<0.01). Operational mortality associated with excessive use was significantly higher as well (7.4% vs. 5.4%, p<0.02). Use of coronary angiography across cities and hospitals varied. Patients who underwent cardiac surgery in high-quality hospitals were less likely to have excessive angiography use than those in low-quality hospitals (7.0% vs. 9.5%, p<0.01). **CONCLUSIONS:** In Turkey, excess use of coronary angiography prior to CABG surgery is associated with higher operational mortality, higher expenditures and lower hospital quality.

PCV22

ANTICOAGULANT USE IN HOSPITALIZED PATIENTS WITH ACUTE VENOUS THROMBOEMBOLISM IN THE UNITED STATES

Liu X[1], Xie L[2], Phatak H[3], Mardekian J[1], Tan W[1], Baser O[4], Schneider RF[1], Ramacciotti E[3]

[1]*Pfizer, Inc., New York, NY, USA,* [2]*STATinMED Research, Ann Arbor, MI, USA,* [3]*Bristol-Myers Squibb Company, Princeton, NJ, USA,* [4]*STATinMED Research/The University of Michigan, Ann Arbor, MI, USA*

OBJECTIVES: To examined anticoagulant use and associated factors in hospitalized patients with acute venous thromboembolism (VTE) in the US clinical practice setting. **METHODS:** Adult VTE patients were selected from the linked MarketScan and Hospital Drug database in an inpatient setting between 07/01/2006-12/31/2011. The first hospitalization with a diagnosis of VTE was designated index hospitalization (IH). Patients were required to have at least 6 months continuous enrollment and