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MEDICATION USE AND ASSOCIATED ANNUAL COSTS IN PATIENTS AT RISK OF ATHEROTHROMBOSIS: RESULTS FOR GERMANY, SPAIN AND THE UK FROM THE REDUCTION OF ATHEROTHROMBOSIS FOR CONTINUED HEALTH (REACH) REGISTRYMahoney EM¹, Wang K¹, Bruggenjurgan B², Bakhai A³¹New England Research Institutes, Watertown, MA, USA, ²Charite University Medical Center, Berlin, Germany, ³Barnet & Chase Farm NHS Trust, Barnet, UK

OBJECTIVES: Atherothrombosis is the leading cause of death worldwide which creates a huge economic burden. The REACH Registry is an international prospective registry with 67,888 patients from 44 countries, at risk of atherothrombotic events due to coronary artery (CAD), cerebrovascular (CVD) and/or peripheral arterial disease (PAD), or the presence of ≥ 3 atherothrombotic risk factors. **METHODS:** We examined medication (MED) use and estimated annual MED costs (€) in 5594, 2516, and 618 patients from Germany (GE), Spain (SP) and the UK, respectively, using baseline data from REACH. Classes of drugs examined included antiplatelet agents, oral anticoagulants, NSAIDs, lipid lowering agents, antihypertension agents, nitrates or other anti-angina agents, and peripheral arterial claudication medications. Country-specific unit costs were obtained for the 3–4 most commonly prescribed drugs in each MED category, and a weighted average of MED-specific costs, by market share, was applied to annualized utilization rates. **RESULTS:** Within each country, average # MEDs increased with # diseased vascular sites (GE:3.6/4.3/5.0;SP:3.4/3.8/4.1;UK:3.6/4.2/4.7, for 0/1/2–3 vascular sites, respectively). Patients with CAD only reported greater # MEDs (GE:4.7;SP:4.5;UK:4.4) than patients with CVD only (GE:3.7;SP:3.0;UK:3.3) or PAD only (GE:3.5;SP:2.5;UK:3.1). Greater than two thirds reported taking at least 1 lipid lowering agent (GE:74%;SP:68%;UK:85%), and >85% reported taking at least 1 antihypertensive agent (GE:94%;SP:86%;UK:88%). Average costs were higher for GE compared to SP and UK due to higher unit costs for nearly all MEDs. Lipid lowering and antihypertensive agents accounted for >50% of MED costs (GE:70%;SP:54%;UK:76%). Costs tended to increase with # diseased vascular sites (GE:€770/€993/€1164;SP:€492/€586/€710;UK:€546/€553/€668, for 0/1/2–3 vascular sites, respectively). **CONCLUSION:** In this population of patients with either stable vascular disease or multiple atherothrombotic risk factors, use of multiple medications was common. Medication use and associated costs tend to increase with the number of diseased vascular sites, and contribute to the economic burden of atherothrombosis.

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COST-UTILITY ANALYSIS USING A MARKOV MODEL TO COMPARE PRESCRIPTION STATINS VERSUS POTENTIAL OVER THE COUNTER STATINS IN USAGandhi PK¹, McGhan WF², Peterson AM²¹University of Florida-Gainesville, Gainesville, FL, USA, ²University of the Sciences in Philadelphia, Philadelphia, PA, USA

OBJECTIVES: A Markov model was developed to compare the cost-utility of statins available via prescription (Rx) versus hypothetical over the counter (OTC) status in the USA. **METHODS:** Cost-utility of Rx statins and hypothetical OTC statins was ascertained from a societal perspective in US dollars expended per quality-adjusted life-years (\$/QALYs) using a Markov model over 10 years. The probability rates for coronary events and coronary deaths were obtained from 8 randomized clinical trials, and rate of adverse drug events were obtained from national prescribing services. Baseline costs (including drugs, adverse events,

cardiovascular events, physician visits) and health outcomes were discounted at 5% annually. Average acquisition and dispensing costs for Rx statins were compared to the assumed average lower dose costs for potential OTC statins in the United States. **RESULTS:** Based on societal drug acquisition costs with basic assumptions, OTC statins would be less expensive compared to the Rx statins. OTC statins had a calculated cost-utility of \$1490/ QALY compared to \$1914/ QALY for Rx statins. Varying the discount rate simultaneously for cost and QALYs from 0%–10% resulted in a \$/QALY gained for Rx ranging from \$1951 to \$1880 respectively, compared to the OTC range of \$1533 to \$1450. **CONCLUSIONS:** Rx statins with baseline assumptions had a higher percent LDL reduction and fewer coronary events. Rx statins had higher cost per QALYs gained and OTC statins were observed to be the optimal strategy choice. More research is needed on the impact of OTC statins, including appropriate assessment of lab monitoring, adverse event monitoring and compliance and adherence measures to facilitate a better understanding of the clinical and economic outcomes. Availability of future lipid lowering drugs with varying acquisition costs and potency will require further analyses.

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EFFICACY AND SOCIOECONOMIC RELEVANCE OF HAWTHORN EXTRACT (CRATAEGUS) WS® 1442 IN THE TREATMENT OF NYHA II CHF PATIENTS—RESULTS FROM A PROSPECTIVE THREE-YEAR PHARMACOECONOMIC STUDYRychlik R¹, Ernen C¹, Daniel D¹, Klapper HG², Habs M²¹Institute of Empirical Health Economics, Burscheid, NRW, Germany, ²Dr. Willmar Schwabe GmbH & Co. KG, Karlsruhe, Baden-Württemberg, Germany

OBJECTIVES: To evaluate the pharmacoeconomics of hawthorn extract (crataegus), compared to any other therapy of congestive heart failure (CHF), NYHA II, a prospective, 3-year, observational cohort study was conducted from 1999 to 2002. A cost-utility-analysis was performed to compare the direct costs of the treatment alternatives proportional to health related quality-of-life (costs per quality-adjusted life year). **METHODS:** The open observational study with matched-pairs evaluation included general practitioners and internists. The crataegus cohort (CC) comprised patients who received WS® 1442 for CHF (mono or add-on). In the Standard cohort (SC), patients who received any other treatment but crataegus were observed. Efficacy and tolerability of the treatment alternatives were evaluated. Calculation of the direct costs of the treatment comprised costs for diagnostic and therapeutic measures, drugs and hospitalisations, cure and rehabilitation measures. For measuring the patients' quality-of-life and calculating the gained quality-adjusted life years (QALY), the EuroQoL-5D was applied. **RESULTS:** Data of 153 pairs (306 patients) were available for the statistical analysis. The pairs were established based on age, gender and concomitant cardiac diseases. Both efficacy and tolerability of the crataegus therapy were evaluated as significant superior to standard therapy. Mean direct costs per year amounted to €807.15 in cohort C and €798.09 in cohort S. Gained quality-adjusted life years were 0.080 and 0.078 in the C- and the S-cohort, respectively. **CONCLUSIONS:** Direct costs and gained QALY were similar in both cohorts. Both mono and add-on applications of crataegus extract in the treatment of congestive heart failure, NYHA II, represent a cost-effective alternative compared to standard medication. Crataegus treatment was associated with a substitution of standard medication like ACE-inhibitors and diuretics. Concerning the documented very good tolerability of crataegus and the need of long-term treatment of the considered indication, crataegus therapy provides an additional benefit for the affected patients.