technological innovation have to be taken. To reach this goal, the paper takes a case-study approach, i.e. surgical ablation (SA) performed in concomitance with cardiac surgery procedures. **METHODS:** An observational, retrospective, multi-centre study was carried out. Three hospitals were selected based upon the volume of activity (i.e. >50 SA procedures/year). Patients (N = 311) were enrolled during a 16-month period and recruited if they met inclusion criteria. Health care resource consumption was measured in detail through a bottom-up micro-costing approach. **RESULTS:** Direct and full costs of SA and of the concomitant cardiac surgery procedures were calculated per patient by using a standard costing approach. Mean direct cost of surgical interventions (SA and the concomitant procedures) is €9093 (range: 6406–14,746). While there is a large homogeneity among centres as to costs of SA (mean €1889), significant differences ($p < 0.05$) emerge in costs of concomitant interventions (mean €7204) mainly because of different organisational patterns. **CONCLUSIONS:** Hospital managers are struggling to face the tension between scarcity of resources and increasing health care needs. Technological innovation opens new opportunities for hospital activities and patients' health that however need to be assessed against its costs. Which cost (i.e. direct vs. full costing) is to be considered in the decision-making process however is still not clear. There is a tendency to consider full costing of new procedures and to decide whether they are financially sustainable by contrasting it to the relevant DRG(s). Nevertheless, it is here argued that firstly, direct costing better illustrates the true economic value of the innovative procedures and therefore should be primarily used, and secondly, financial hospital sustainability would need to be assessed based upon hospitals' case-mix and not in silos.

PCV104

EVALUATION OF THE PRESCRIPTION PATTERNS OF STATINS THROUGH APPROPRIATE INDICATORS IN TWO ITALIAN LOCAL HEALTH UNITS IN 2004–2006

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OBJECTIVES: Drug therapy should be appropriately prescribed and administered in order to efficaciously prevent cardiovascular events. The study aim was to describe the prescriptions of statins in terms of persistence and compliance with the purpose of identifing appropriate pharmaco-epidemiological indicators close to clinical practice. **METHODS:** Statins (ATC C10AA) prescriptions data were collected from administrative databases in two Local Health Units (LHUs) in Northern Italy. Eligible patients should have had at least one statin prescription in three consecutive years (2004–2006). The adopted indicators for drug utilization included: "Calendar Days (CD)", calculated as the difference between the last and the first prescription dates in each year; "PDD days (PDDd)", calculated as the ratio between total mg prescribed and the surrogated prescribed daily doses; "DDD days (DDDd)", calculated as the ratio between total mg prescribed and the defined daily dose. A Compliance to Therapy Index (CTI) was calculated as the ratio between the total PDDd and the CD: indexes were calculated for each patient and classified in four compliance categories (≤25%, >25% & ≤50%, 50% & ≤75%, >75% & ≤100%). **RESULTS:** Indicators showed an increase in statins use over the study period in terms of both DDD and sPDD. Persistence to therapy for at least two years was around 50% in both LHUs. PDDd was a more reliable measure of the daily dosage in comparison with DDDd, which resulted in a coverage period longer than the CD. CTI analysis showed a decrease in low compliance categories (patients in the range 25%–50% decreased from 26% to 17%) and a raise in the rate of compliant patients (from 48% to 57%). Single prescriptions increased from 1% to 5%. **CONCLUSIONS:** Although statins' use is steadily growing, poor patients' persistence and adherence to therapy would need the implementation of strategies to improve compliance with lipid lowering medications.

PCV105

STATIN PRESCRIBING IN THE CITY OF ZAGREB (2001–2006) AND THEIR ROLE IN SECONDARY PREVENTION OF CARDIOVASCULAR EVENTS

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OBJECTIVES: Cardiovascular drugs account for 40% of total outpatient drug utilization in the City of Zagreb. Among them, utilization of the group of hypolipemics showed greatest rise from 2001 to 2006. The aim of the study was to investigate outpatient utilization of hypolipemics in the City of Zagreb during the 2001–2006 period and to assess the quality of prescribing these drugs in primary health care. **METHODS:** The number of defined daily doses (DDD) and DDD *per* 1000 Zagreb inhabitants *per* day (DDD/1000/day) were calculated on the basis of data on the number of packages of each individual hypolipemic (C10) for each study year. Data on the rate of hospitalization for the leading cardiovascular complications were collected as indirect indicators of the quality of prescribing statins. **RESULTS:** The utilization of hypolipemics was 33.03 DDD/1000/day in 2001 and 72.38 DDD/1000/day in 2006, yielding an almost twofold rise. Two drugs, simvastatin and atorvastatin, predominated in the utilization of statins with 93%. From 2001 to 2006, the utilization of simvastatin showed a 30% increase and that of atorvastatin more than sevenfold increase. During the study period, the overall rate of hospitalization for cardiovascular disorders decreased by 18.5%. **CONCLUSIONS:** The decreasing tendency recorded in hospitalization for cardiovascular diseases points to the improved quality of secondary prevention, including statins. The growing trend observed in the utilization of atorvastatin *vs*. simvastatin is indicative of the still inappropriate prescribing practice, whereas the high rate of hospitalization for hypertension reflects inadequate primary prevention of cardiovascular disorders.

PCV106

PATIENT OUTCOMES AND HEALTH ECONOMICS ASSOCIATED WITH THE USE OF OCTYLCYANOACROLATE TOPICAL SKIN ADHESIVE IN CABG SURGERY

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OBJECTIVES: This study examined the effect of Octylcyanoacrolate topical skin adhesive (DERMABOND Topical Skin Adhesive) on the risk of surgical site infection (SSI) and other clinical outcomes and resource utilization in patients undergoing coronary artery bypass graft (CABG) surgery. **METHODS:** This study utilized the Premier Perspective(tm) Comparative Database, which includes over fice million hospital discharges per year. Qualifying patients who underwent CABG surgery during 2005 and 2006 were identified. Patients were classified into four groups by method of surgical wound closure (sutures only; sutures/DERMABOND; sutures/staples; and sutures/staples/DERMABOND). The primary study outcome was the

occurrence of a surgical site infection (SSI) examined by wound closure method. Post-CABG SSIs were identified by ICD-9, DRG, and APR-DRG codes during the initial hospital admission and re-admissions within 2 months of the initial hospitalization, as well as exposure to antimicrobial drugs from post-operative day 9 to 60 during the initial hospital admission. **RESULTS:** A total of 59,006 patients qualified for the study; 38,799 sutures only, 10,262 sutures/DERMABOND, 8180 sutures/staples, and 1765 sutures/staples/DERMABOND. The groups were similar at baseline regarding patient and disease characteristics. The lowest rate of post-CABG SSI was found in the sutures/DERMABOND group (4.3%, 95% CI = 3.9%–4.7%), followed by sutures only (5.3%, 95% CI = 5.1%–5.5%), sutures/staples (6.2%, 95% CI = 5.7%–6.8%), and sutures/staples/DERMABOND (7.1%, 95% CI = 6.0%–8.4%). The mean (median) hospitalization cost for all patients without post-CABG SSI was $28,061 ($25,527), compared to $47,874 ($40,062) for all CABG patients who developed SSI. **CONCLUSIONS:** The results of this study suggest that the use of both DERMABOND Topical Skin Adhesive and sutures for wound closure following CABG surgery reduces the rate of SSI and improves clinical outcomes. SSI following CABG surgery imposes a significant economic burden in terms of additional hospitalization costs.

PCV107

CLOPIDOGREL PATTERNS OF USE IN ACUTE CORONARY SYNDROME PATIENTS UNDERGOING PERCUTANEOUS CORONARY INTERVENTION IN FIVE EUROPEAN COUNTRIES

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OBJECTIVES: The purpose of this study was to determine the most frequently used clopidogrel dosing regimen in the hospital setting for acute coronary syndrome (ACS) patients undergoing percutaneous coronary intervention (PCI). **METHODS:** This was a retrospective study using the IMS Health Acute Cardiovascular Analyzer. This is an ongoing physician-reported registry dating from 2005 in Germany, France, Italy, Spain and the UK. Data collection timeframe reported here was December 2006–November 2007. The standard dose clopidogrel group was defined as ≤300 mg. Demographic and health characteristics were compiled for the entire cohort and by country. Study data are shown as summary (or descriptive) statistics. **RESULTS:** There were 4455 ACS patients who received clopidogrel and underwent PCI. Patient count by country was: Germany (n = 1098), France (n = 1022), Italy (n = 864), Spain (n = 804), UK (n = 667). Mean age was 63.7 ± 22.9 (SD) years, 46% were age >65; 71% were male. Common co-morbidities and risk factors were: hypertension 66.8%, dyslipidemia 74.6%, diabetes 30.6%, prior myocardial infarction (MI) 12.9%. Medications prior to admission were: clopidogrel 15.9%, statins 34.8%, aspirin 61.3%. The index diagnosis was: ST-elevation MI 45.0%, non ST-elevation MI 33.1% and unstable angina 21.9%. Timing of clopidogrel administration in relation to PCI was: 59.3% pre-PCI, 11.8% at PCI and 17.0% after PCI (11.9% not specified). Loading dose ranged from 75–900 mg. Dosage ≤300 mg by country was: Germany 47.9%, France 67.8%, Italy 90.8%, Spain 85.6%, UK 60.7%. Approximately 95% of patients were discharged on clopidogrel but planned duration varied widely: 1–3 months (25.7%), 6–12 months (19.7%) are greater than or equal to 12 months (26.5%). **CONCLUSIONS:** These 2007 data indicate many patients received clopidogrel prior to PCI at the ≤300 mg dose but there was geographic variation. The vast majority of patients received clopidogrel upon discharge, but the planned duration of therapy varied widely. These data continue to be useful benchmarks for later comparison to treatment guidelines.

PCV108

RISK AND COSTS OF THE FIRST HYPERTENSION-ASSOCIATED EVENT, COMPLIANCE AND PERSISTENCE IN NAÏVE HYPERTENSIVE PATIENTS AFTER INITIATING MONOTHERAPY

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OBJECTIVES: To analyze the risk and costs of the first hypertension-associated event, compliance and persistence in naïve hypertensive patients after initiating monotherapy with any of the first-line antihypertensive drug classes in Germany. **METHODS:** A retrospective cohort study in the IMS Disease Analyzer database was performed. Study subjects included all previously untreated hypertensive adults who were free from hypertension-associated comorbidities and were prescribed initial monotherapy with angiotensin II receptor blockers (ARBs), ACE-inhibitors (ACEIs), beta-blockers (BBs), calcium channel blockers (CCBs) or diuretics. Compliance and persistence were determined for each drug class separately and for the group of non-ARBs (pooled data) within two years. The risk of the first hypertension-associated event (cardiovascular complications, new onset diabetes) was analyzed using a Cox regression model adjusted for sociodemographic variables, compliance and persistence. Based on these results average costs per event were estimated from the German statutory health insurance perspective. **RESULTS:** A total of 7661 patients were identified with a follow-up of at least 2 years. Mean follow-up was 5.6 to 6.3 years. Compliance (0.86 vs. 0.82 and 0.74, respectively) and persistence (509 days vs. 459 and 324 days) was better with ARBs (all $p < 0.05$) than with the group of non-ARBs and diuretics, respectively. The risk of the first hypertension-associated event was higher (all $p < 0.05$) with diuretics (adjusted hazard ratio (aHR) 0.68), BBs (0.79), CCBs (0.78), and the group of non-ARBs (0.81) and was similar with ACEIs (aHR 0.93, $p = 0.37$) compared to ARBs. Similar findings were found for cardiovascular complication rates. The estimated average costs per event for the first event were lower with ARBs (€2339.95) than with the other drug classes (€2531.68–€3910.47). **CONCLUSIONS:** Our real-world data indicate that initiating monotherapy with ARB shows significant benefits in most outcomes including hypertension-related complications compared to other antihypertensive drug monotherapies.

PCV109

PRESCRIPTION DRUG INSURANCE AND EX ANTE MORAL HAZARD

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OBJECTIVES: Economic theory suggests that health insurance will reduce prevention activities (i.e., ex ante moral hazard). For instance, prescription drug insurance could result in behavioral responses that undermine the benefits of increased access to medication. In this paper, we investigate the relationship between prescription drug insurance and preventive health behaviors (physical activity, alcohol consumption, smoking behavior, and weight) among elderly population. Further, we identify two subgroups particularly at risk of substituting prescription drugs for