patients had a prescription filled for a beta-blocker during 2002. Of the CHF patients receiving a beta-blocker, less than 45% were prescribed either of the two indicated agents (carvedilol or extended-release metoprolol succinate) for CHF. Furthermore, less than 40% of patients prescribed either carvedilol or extended-release metoprolol succinate achieved target CHF doses. Thus, of those CHF patients currently on beta-blocker therapy, less than 17% received an appropriate regimen. **CONCLUSIONS:** This evaluation illustrates that less than ten percent of CHF patients in this managed care plan are receiving optimal beta-blocker therapy. Future quality improvement efforts should be focused on provider-based educational initiatives to improve beta-blocker prescribing patterns in the CHF population. Increased use of beta-blocker therapy in patients identified with CHF would significantly improve the morbidity and mortality associated with this disease.

PCV52

IMPACT OF MARKET FORCES ON STATIN PERSISTENCE PATTERS IN A CALIFORNIA MEDICAID POPULATION

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OBJECTIVES: To investigate statin usage patterns in terms of termination, switch and/or augmentation, and to associate these patterns with changing market conditions. **METHODS:** The study is based on a 20% sample of California Medicaid (Medi-Cal) fee-for-service claims on statin prescriptions from 1995 through 2002. The length of the first statin therapy phase is presented with Kaplan-Meier curves. The switch and/or augmentation pattern is studied by tracking each patient for 12 months from the date of the first fill (index date). Results are presented by the year of index date. There are six statins included in the study: Cerivastatin, Fluvastatin, Atorvastatin, Lovastatin, Pravastatin and Simvastatin. **RESULTS:** Atorvastatin (N = 15,686, Median survival days = 244) and Simvastatin (N = 9162, Median survival days = 200) had longer therapy phases while Cerivastatin (N = 2022, Median survival days = 101) and Lovastatin (N = 8910, Median survival days = 99) had shorter therapy phases. About 40% of Atorvastatin and Simvastatin patients were still on their initial medication after one year, but only 20% of patients initiated on Lovastatin or Cerivastatin remained on their medication. The introduction of Atorvastatin was associated with a sudden increase of switch/augmentation events among patients initiated on other statin brands. When Cerivastatin was withdrawn from the US market and Lovastatin was phased out of the Medi-Cal formulary, the proportion of switch/augmentation events also increased. **CONCLUSIONS:** The introduction of Atorvastatin, the withdrawal of Cerivastatin and the phase-out of Lovastatin may be key factors in statin persistence patterns. Market forces should not be overlooked when analyzing medication compliance and medication usage patterns. Because changes in the market are more likely to be unique events, their effect may overshadow other adjustments in comparison of medication compliance.

PCV53

IMPACT OF THE ANTIHYPERTENSIVE AND LIPID-LOWERING TREATMENT TO PREVENT HEART ATTACK TRIAL (ALLHAT) ON PHYSICIAN PRESCRIBING PATTERNS AND PATIENT UTILIZATION OF ANTIHYPERTENSIVE MEDICATIONS

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OBJECTIVES: To analyze the changes in utilization and prescribing patterns of antihypertensive drugs before and after the publication of the ALLHAT results in 2002 that recommended the use of thiazide diuretics in new starts. **METHODS:** Utilizing pharmacy claims, member and provider data from a managed care plan of over 2 million members, this study selected two cohorts of patients who received two or more claims for antihypertensive or diuretic products from the same providers in the first 9 months of 2002 (Period 1) or the first 9 months of 2003 (Period 2). The providers who prescribed antihypertensive or diuretic medications for both periods were included. The patients were continuously enrolled adults who did not receive any antihypertensive or diuretic products in the 3 months prior to index date. Changes in physician prescribing patterns for initiation of hypertension treatment in Period 1 and Period 2 were analyzed. Utilization of different medications between the two periods, especially the likelihood of receiving thiazide diuretics, was also examined. **RESULTS:** The study identified 7605 physicians who prescribed antihypertensive drugs to 25,519 patients in Period 1 and 26,300 patients in Period 2. Across the two periods, the percentage of physicians who prescribed any thiazide diuretics increased from 14.5% to 16.1% ($p < 0.01$), while utilization of ACE inhibitors or CCBs as initial treatment decreased approximately 2% ($p < 0.01$). A logistic regression model indicated that patients in Period 2 were 22.8% more likely to receive thiazide diuretics and 9.9% more likely to receive any diuretics than patients in Period 1 ($p < 0.01$), controlling for demographics, comorbidities measured by chronic disease scores (CDS), and provider specialties. **CONCLUSION:** ALLHAT results increased prescribing of thiazide diuretics as initial treatment of hypertension.

PCV54

IMPACT OF THE NATIONAL SERVICE FRAMEWORK (NSF) FOR CORONARY ARTERY DISEASE (CAD) ON PHYSICIAN COMPLIANCE OF PRESCRIBING ASPIRIN AND STATINS FOR SECONDARY PREVENTION IN THE UNITED KINGDOM (UK)

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OBJECTIVE: The NSF guidelines for CAD, introduced in March 2000 in the UK, advocate that by April 2002, 80–90% of the patients discharged from hospital following myocardial infarction (MI) should be receiving prescriptions for aspirin and statins for secondary prevention. A time-trend analysis was performed to assess the impact of NSF on physician compliance with the prescribing guidelines. **METHODS:** The UK-Mediplus, a nationally representative general-practitioner database was used to identify all individuals with diagnosis of their first MI (index-date) between April 1997 and March 2003, and surviving at least 90 days following the index-date. Patients receiving at least one prescription of statin and aspirin, linked to their MI diagnosis, during the 90-day follow-up period were considered NSF-compliant with those drugs respectively. Annual trends in proportion of NSF-compliant patients, for aspirin, statins and aspirin-statin combination, were compared between pre- and post-NSF (after March 2000) periods. Logistic regression was used to estimate the effect of age and gender on compliance. **RESULTS:** Of 8598 eligible first-MI patients with a mean age of 70.4 (S.D. = 13.2), 65.5% were males, and 67.2% were elderly (age 65+). Aspirin-statin combination use increased from 13.7% to 23.5% between April 1997 and March 2000, and increased to 42.1% by March 2003. Aspirin and statin use alone were 49.5% and 71.6% respectively by end of March 2003. Relative to non-elderly, the elderly were less likely to receive aspirin-statin combination. However, the odds ratio (OR) for the elderly receiving combination improved during post-NSF period (OR = 0.64, $p < 0.05$

vs. OR = 0.47, $p < 0.05$). Compliance between males and females remained similar in both periods ($p > 0.05$). **CONCLUSION:** Despite significant improvement in recent years, the proportion of post-MI patients in UK, particularly the elderly, receiving aspirin-statin combination is significantly less than the NSF treatment goals. Intensive dissemination efforts are required to achieve greater impact of this policy.

PCV55

DELAY IN DIAGNOSIS AS A FACTOR IN INITIATION OF TREATMENT FOR HYPERCHOLESTEROLAEMIA

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OBJECTIVE: It is known that initiation of drug therapy for hypercholesterolaemia once diagnosed, is improving and now stands at around 60%. What is unclear is whether there is a delay between patients being identified with elevated cholesterol and a subsequent diagnosis of hypercholesterolaemia. To address this uncertainty, this database study followed patients with an initial recording of cholesterol greater than 5 mmol/L, through diagnosis and advice to treatment. **METHODS:** The DIN-LINK database, containing anonymised medical records from 1.5 million patients collected via GP practice computers, was used to identify and follow-up a cohort of patients with a recorded cholesterol level greater than 5 mmol/L. For inclusion, each patient had to have a baseline measurement taken between April 2001 and April 2002, a minimum of 12 months follow-up data and not been diagnosed with hypercholesterolaemia or be prescribed cholesterol lowering medications prior to the cholesterol measurement. **RESULTS:** A total of 3418 patients were identified as meeting the criteria. Of these, 991 (29%) were diagnosed as hypercholesterolaemic within 12 months, three-quarters of these on the same date as the recording of the elevated cholesterol. Of the initially identified 3418 patients, only 257 (8%) were prescribed cholesterol lowering medication within 12 months of the initial reading. **CONCLUSIONS:** For patients who are known to have elevated cholesterol 71% fail to receive a diagnosis of hypercholesterolaemia and 92% do not receive medication within 12 months of initial reading. Further analyses are required to determine the impact of these delays in diagnosis on patient outcomes.

PCV56

DELAY IN DIAGNOSIS AS A FACTOR IN INITIATION OF TREATMENT FOR HYPERTENSION

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OBJECTIVE: It is known that initiation of drug therapy for hypertension, once diagnosed, is now relatively high at around 85%. What is unclear is whether there is a delay between patients being identified with elevated blood pressure and a subsequent diagnosis of hypertension. To address this uncertainty, this database study followed patients with an initial recording of systolic blood pressure greater than 150 mmHg, through diagnosis and advice to treatment. **METHODS:** The DIN-LINK database, containing anonymised medical records from 1.5 million patients collected via GP practice computers, was used to identify and follow-up a cohort of patients with a recorded systolic blood pressure greater than 150mmHg. For inclusion each patient had to have a baseline measurement taken between April 2001 and April 2002, a minimum of 12 months follow-up data and not been diagnosed with hypertension or be prescribed antihypertensive medications prior to the blood pressure measurement. **RESULTS:** A total of 2880 patients were identified as meeting the criteria. Of these, 1469 (51%) were diagnosed as hypertensive within 12 months, two-thirds of these within one month of the recording of elevated blood pressure. Of the initially identified 2880 patients, only 579 (20%) were prescribed blood pressure lowering medication within 12 months of the initial reading. **CONCLUSIONS:** For patients who are known to have an elevated blood pressure 49% fail to receive a diagnosis of hypertension and 80% do not receive medication within 12 months of initial reading. Further analyses are required to determine the impact of these delays in diagnosis on patient outcomes.

PCV57

ASSOCIATION BETWEEN INSURANCE COVERAGE AND OUTCOMES FOR INDIVIDUALS HOSPITALIZED FOR NONHEMORRHAGIC STROKE

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OBJECTIVES: To evaluate associations between insurance coverage and length of stay, death, and discharge destination of patients hospitalized for non-hemorrhagic stroke. **METHODS:** A retrospective analysis was conducted of patients hospitalized for <30 days with a primary diagnosis of nonhemorrhagic stroke (ICD-9 code = 436) identified from a 10% sub-sample (745,099 cases) of the Health care Cost and Utilization Project (HCUP) 2000 database. The database contains hospitalizations from hospitals in 28 U.S. states. Associations between insurance coverage (Medicare, Medicaid or private/HMO) and length of stay, in-hospital death, and discharge destinations were analyzed using ANOVA, logistic and multinomial regression respectively, controlling for age, gender, race, admission type, admission source, comorbidities and socioeconomic status. Statistical analyses of the data were performed using SAS for Windows Version 8.2. An alpha of <0.05 was required for significance. **RESULTS:** Insurance type was not statistically significant in predicting LOS after adjusting for other risk factors ($p = 0.2095$). The interactions between insurance coverage and age, and between insurance and admission source were significant. After controlling for risk factors, insurance type had a significant association with in-hospital death rate ($p = 0.0335$). Medicare cases were significantly more likely to be discharged to home-health care ($p = 0.0006$), while private/HMO cases were less likely to be discharged to home-health care ($p = 0.0071$), even after controlling for risk factors. **CONCLUSIONS:** Insurance coverage had a significant association with in-hospital death risk and discharge destination in patients hospitalized for non-hemorrhagic stroke. Further study is needed to elucidate the basis for these associations.

PCV58

USE OF GPIIB/IIIA INHIBITORS IN PATIENTS UNDERGOING PERCUTANEOUS CORONARY INTERVENTION WITH DRUG-ELUTING STENTS

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OBJECTIVE: The objective of this study was to determine whether use of a drug-eluting stent (DES) affected the likelihood of receiving a glycoprotein (GP) IIb/IIIa inhibitor among patients undergoing percutaneous coronary intervention (PCI) with a stent. GP IIb/IIIa inhibitors have been used in conjunction with PCI to reduce ischemic events at or just following the time of the procedure. Drug-eluting stents, approved by the FDA on April 23, 2003, have been reported to decrease restenosis of a vessel over the long-term. GPIIa/IIIa inhibitors and drug-eluting stents