

levels (6 studies) and greater proportions of patients achieving LDL goals (5 studies). **CONCLUSIONS:** Policy-driven programs that encourage wide-spread switching of statins without consideration of patient-specific circumstances may impact the delivery of patient care and treatment outcomes.

PCV152

ASSESSING THE IMPACT OF A COMMUNITY PHARMACY BASED MTM PROGRAM ON OUTCOMES FOR EMPLOYEES WITH HYPERTENSION

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OBJECTIVES: To determine the effect of an employer-sponsored pharmacist-provided medication therapy management program (MTMP) on clinical outcomes and social measures in patients with hypertension. **METHODS:** A prospective, intent-to-treat, pre-post longitudinal study. Patients were Lucas County employees and dependents with a diagnosis for hypertension. The face-to-face MTMP was provided by pharmacists from the Toledo Area Coalition of Independent Pharmacies at seven pharmacies. JNC-VII guidelines were used to design interventions and set patient goals. Interventions were provided every six months. Information recorded included demographic information, clinical markers and social measures. Data was documented by pharmacists or pharmacy technicians using intake forms. Data was analyzed using SPSSv 16.0 for two groups i.e. hypertension only (may have other comorbid conditions excluding diabetes) and hypertensive diabetics. Wilcoxon signed-rank test was used to compare 2 time points and the Friedman test was to compare readings at baseline, six and 12 months. **RESULTS:** Two hundred and twenty eight patients have enrolled in the program. For the hypertension only group, mean systolic blood pressure (SBP) improved from 133.73 \pm 17.36 to 130.86 \pm 16.49 ($p = 0.112$). For uncontrolled hypertensive patients in this group, mean SBP improved from 152.54 \pm 11.80 to 139.77 \pm 18.22 ($p = 0.000$). Diastolic blood pressure improved from 99.330 to 91.50 ($p = 0.049$). For hypertensive diabetic patients mean SBP decreased from 135.64 \pm 18.21 to 127.55 \pm 15.26 ($p = 0.003$). Significant decrease was also observed for hypertensive diabetic with uncontrolled blood pressure at baseline (146.26 \pm 13.55 to 131.44 \pm 13.66 mmHg; $p = 0.000$). Mean alcohol and caffeine consumption decreased non-significantly for patients in both groups. **CONCLUSIONS:** Pharmacists interventions assisted uncontrolled patients in reaching their goal BP reading, and for controlled patients, helped in maintaining their level of control. Periodic monitoring by a pharmacist can assist patients in reaching their targeted goal and maintaining that value so as to prevent long-term complications and costs.

PCV153

MARYLAND MEN'S CARDIOVASCULAR PROMOTION—MVP

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OBJECTIVES: African American men have lower hypertension control rates and higher cardiovascular disease mortality rates than those of Caucasian males. We examined how a peer approach to hypertension management could improve blood pressure control for participants, mostly minority males. **METHODS:** This is a longitudinal cohort study. Patients in the intervention group enrolled relatives or friends in the hypertension education program and attended as teams, the monthly education sessions. Patients in the control group followed standard of care. Blood pressure was taken by a nurse, at baseline and every 3 months, for up to 15 months. Other clinical and behavioral information was obtained from medical charts and surveys at baseline and follow-up visits. We used survival analysis to compare time to achieve the defined goal (patients without diabetes: systolic blood pressure (SBP) < 140, patients with diabetes: SBP < 130) between the two groups controlling for confounders and clusters of patients. **RESULTS:** A total of 250 subjects were included in the study; half in the intervention group. Approximately 90% of the participants were African American and 60% were males. The baseline blood pressure levels were 149/88 mmHg and 146/88 mmHg in the control and intervention group ($p > 0.25$). After controlling baseline blood pressure, gender, race, age, diabetes, smoking and patient clusters, we found that patients in the intervention group reached goal at a rate 4.97 times (95% CI: 2.02–12.25) higher than the rate in the control group. However, higher baseline SBP (HR = 0.96, 95% CI: 0.93–0.98), males (HR = 0.54, 95% CI: 0.31–0.95) and smoking (HR = 0.39, 95% CI: 0.20–0.77) were significantly associated with longer time to achieve the goal. **CONCLUSIONS:** Patients who approached hypertension management with their peers were much more likely to achieve blood pressure control in a shorter time than patients in standard of care. These findings have implications for clinical and public health interventions.

PCV154

THE INFLUENCE OF INSURANCE COMPANIES' REGULATIONS ON DRUG UTILIZATION; THE EXAMPLE OF SIMVASTATIN AND PREFERENCE POLICY

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OBJECTIVES: In 2004 and 2005, Menzis, a Dutch health insurance, company stimulated physicians in prescribing cheaper versions of statins and proton pump inhibitors by offering financial incentives to physicians who could reach specific annual prescribing thresholds (preference policy). The objective of this research is to quantify the effect of the preference policy of Menzis on the utilization/demand of statins in the Northern part of The Netherlands. Furthermore, we test the hypothesis of a significant difference in the increase of simvastatin starters between Menzis and the other insur-

ance companies potentially due to the preference policy. **METHODS:** Prescription data originating from the Northern The Netherlands on the amount of simvastatin starters and simvastatin market share were extracted from IADB.nl, an in-house prescription database of the University of Groningen. State-space analysis was used in order to estimate the effect of the preference policy. The Kalman filter was applied on an intervention state space model, followed by diagnostic tests for the independence, homoscedasticity and normality of the standardized prediction errors. **RESULTS:** A sharp increase in the level as well as in the trend of the market share of simvastatin around the last trimester of 2004 was observed, corresponding to the time point when the preference policy was initiated. A steep increase was apparent also on both the amount of Menzis clients that started use of simvastatin, as well as on the market share of simvastatin among Menzis clients. The interventions had a significant, decreasing effect on the cost of simvastatin treatment. **CONCLUSIONS:** The preference policy resulted in an increase of prescribing for simvastatin, the cheaper statin alternative, which consequently resulted in a decrease in cholesterol lowering treatment costs.

PCV155

IMPACT OF EXPANDING PHARMACY BENEFITS ON TREATMENT OF CONGESTIVE HEART FAILURE: THE CASE OF MEDICARE PART D

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OBJECTIVES: In 2006, US Medicare created a new drug benefit (Part D) for older adults. Part D cut down the number of older adults lacking drug coverage and reduced out-of-pocket costs, yet little is known about its effect on treatment of specific conditions. Given Medicare's role in financing 20% of US and 9% of global pharmaceutical expenditures it is important to evaluate its effects. We examined Part D's effect on drug utilization for congestive heart failure (CHF), a condition with substantial morbidity and mortality. **METHODS:** Quasi-experimental study using insurance claims data from 7201 older adults with CHF continuously enrolled in a Medicare plan in 2004–07. Three intervention groups with either no or limited drug coverage in 2004–05 (US\$600 or US\$1400 annual limits) who obtained Part D drug benefits in 2006 were compared with a group with generous pharmacy benefits throughout 2004–07. We estimated Part D's effect on CHF drug utilization and adherence, adjusting for differences in sociodemographic and health status measures. **RESULTS:** Part D was associated with a 37% (95% CI 31–43%) increase in CHF prescriptions filled by the group previously lacking coverage, and increases of 10% (95% CI 6–12) and 7% (95% CI 6–8%) in the groups with limited prior coverage, relative to comparison group. The group previously lacking coverage was more likely to be adherent to angiotensin-converting enzyme inhibitors (ratio of odds ratios 2.20, 95% CI 1.65–2.88) and beta blockers (ratio of odds ratios 2.56, 95% CI 1.95–3.35) after Part D relative to comparison group. Groups with limited prior drug coverage experienced statistically significant, if smaller, improvements in adherence. **CONCLUSIONS:** Medicare Part D was associated with significant improvements in adherence to pharmacotherapy for CHF, the magnitude of which varied with the level of prior drug coverage. These findings have implications for health systems contemplating drug coverage expansions.

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MARKET CONCENTRATION AND ITS CROSS-LINKAGE WITH THE CONSUMPTION OF ACE INHIBITORS AND ARBS

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OBJECTIVES: Market concentration of products affects competition, and thus is a key concern of marketing firms, policy makers, and regulators. Angiotensin converting enzyme inhibitors (ACE inhibitors) and angiotensin receptor blockers (ARBs) are two classes of hypertensive drugs, competing for one of the largest and most profitable pharmaceutical market in the US. However, little is known about how market concentration affects the consumption of these drugs. We sought to measure the concentration of drugs in ACE inhibitors and ARBs and its association with their relative market share. **METHODS:** We used the State Drug Use Data from the Medicaid Drug Rebate Program that provides prescription drugs to 46 million low-income Americans. We linked the data with the WHO Collaborating Centre for Drug Statistics Methodology to obtain Defined Daily Dose (DDD) measurements for drug consumption for four large states, for a total of 16 quarters of continuous measurements between 2005 and 2008. We used a Herfindahl-Hirschman Index (HHI) to measure the concentration in ACE inhibitors and ARBs, by DDD and reimbursements. We conducted multivariate GLS regression analysis by regressing the HHI on the relative market share of ACE inhibitors, adjusted for time trend, the interaction between the HHI and time trend, and random effects of states. **RESULTS:** During the 16 quarters between 2005 and 2008, the mean concentration index for ACE Inhibitors was 339 (s.d. 71) by DDD, 442 (s.d. 148) by reimbursements, and for ARBs 887 (s.d. 277), 693 (s.d. 227) by DDD and reimbursements, respectively. The market share of ACE inhibitors was negatively associated with the concentration in ARBs ($p < 0.001$, $p < 0.001$), and marginally positively associated with the concentration in ACE inhibitors ($p = 0.05$, $p = 0.09$), by DDD and reimbursements, respectively. **CONCLUSIONS:** The relative market share of ACE inhibitors and ARBs is cross-linked with concentration of drugs within each of these two classes.