PCV101
THE IMPACT OF MULTIPLE CARDIOVASCULAR DISEASES ON ANTIDIABETIC MEDICATION ADHERENCE IN A CALIFORNIA MEDICAID POPULATION WITH COMORBID TYPE II DIABETES AND CARDIOVASCULAR DISEASE
Wu J1, Nichol MB1, An J2, Knight TK1, Priest J1, Cantrell C1
1University of Southern California, Los Angeles, CA, USA, 2GlaxoSmithKline, RTP, NC, USA
OBJECTIVES: To investigate the impact of comorbid cardiovascular disease (CVD) on antidiabetic medication adherence. METHODS: Eligibility and claims data (2002-2004) were used to identify patients 240 years of age with a diagnosis of type 2 diabetes concurrent with hypertension (HYPT), coronary artery disease (CAD), and/ or heart failure (HF), and at least two prescription fills for an antidiabetic medication. Medications were assessed using proportionally distributed multivariable logistic regressions were used to assess CVD and other risk factors associated with nonadherence with antidiabetic medication using 2004 data. RESULTS: A total of 16,922 patients were identified. Patients with two comorbid CVD were more likely to use or be adherent with combination cardiovascular and antidiabetic medications [HYPT + CAD (79%/82%), represented as proportion of use/adherent rate], HF + CAD (88%/31%)] than with those single comorbid CVD [HYPT (68%/21%), CAD (65%/21%), and HF (72%/21%), respectively, p < 0.0001]. The adherence rate for use of both antidiabetic and cardiovascular medications was only 24%. The major significant predictors of diabetic medication nonadherence included no fill of (OR:2.62, 95% CI:2.28–3.01) or nonadherent with (OR:3.43, CI:3.13–3.75) cardiovascular medication; Medicaid-only eligibility (OR:1.76, CI:1.62-1.91 vs. MediCal-Medicare eligible); nonadherence with diabetes care guidelines (no eye examination, no foot examination, and/or no diabetes self-monitoring) (OR:1.41, CI:1.01–1.94) vs. no adherence to these; race (Black race (OR:1.41, CI:1.06–1.87); White race (OR:1.29-1.66 vs. White); type of comorbid CVD vs. HF + CAD (HYPT (OR:0.73, CI:0.65–0.81), CAD (OR:0.73, CI:0.62–0.85), HF + CAD (OR:0.76, CI:0.63–0.91), CAD or more cardiovascular medications fill (OR:1.35, CI:1.18–1.55). CONCLUSIONS: CVD comorbidity and nonadherence with cardiovascular medications and diabetes care guidelines were major significant factors associated with nonadherence to antidiabetic medications in a California Medicaid sample. Patient nonadherence behaviors should be considered when providing care for diabetes patients with comorbid CVD.

PCV102
HEALTH BELIEFS AND THEIR IMPACT ON MEDICATION ADHERENCE IN PATIENTS WITH COEXISTING DIABETES, DYSLIPIDEMIA AND HYPTERTENSION
Wittein J1, Peterson A2, Agarwal M2, Hanke A2, Plummer R2, Cascade E3, McGahan W1
1University of the Sciences in Philadelphia, Philadelphia, PA, USA, 2Gardar, Inc, Princeton, NJ, USA
OBJECTIVES: As individual treatment guidelines for diabetes, dyslipidemia and hypertension have evolved with more aggressive treatment targets, there may be an unintended consequence of poor medication adherence in patients having all three conditions. The study objective was to investigate how patient health beliefs affect medication adherence in patients coexisting diabetes, dyslipidemia and hypertension. METHODS: An online survey was administered in December 2008 to iGuard, org., a company where patients taking at least 1 medication for diabetes, dyslipidemia and hypertension were invited to participate in the nationwide survey (n = 2150). Survey items included demographics, the Medication Adherence Report Scale (MARS)—(score = 3–25), potential adherence barriers and adherence trade-off scenarios. Patients were assigned a patient health belief profile based on responses to the trade-off scenarios. Medication adherence rates between diabetes and hypertension health belief groups (dyslipidemia group excluded due to small sample size) and trade-off scenario selections were compared using t-tests. RESULTS: A total of 325 patients completed the survey. 218 patients demonstrated a dominate health belief for diabetes, 81 for hypertension, 13 for dyslipidemia and 13 with no dominate health belief. In trade-off scenarios, patients consistently stated they would choose taking diabetes medications over hypertension and dyslipidemia medications. (p < 0.01) Complete adherence (MARS score = 25) with diabetes medications was higher in the diabetes health belief group (39.4%) compared to hypertension health belief group (22.2%) (p = 0.008); however there was no difference between the groups with complete adherence to hypertension (p = 0.811) or dyslipidemia (p = 0.278) medications. CONCLUSIONS: Diabetes therapy was considered the most important therapy to the majority of patients with coexisting diabetes, dyslipidemia and hypertension. However, in patients who considered hypertension therapy most important, there was significantly less adherence to diabetes medications while exhibiting similar adherence to hypertension and dyslipidemia medications. These insights could be considered by clinicians when assessing adherence in these complex patients.

PCV103
A METHODOLOGY FOR USING CLAIMS DATA FROM ELECTRONIC PRESCRIBERS TO ASSESS FIRST FILL FAILURE RATE OF ANTIHYPTERTENSIVE PRESCRIPTIONS
Belletti DA1, Lee HY2, Xing Y3, Cooke CE4
1Novartis Pharmaceuticals Corporation, East Hanover, NJ, USA, 2CareFirst BlueCross BlueShield, Baltimore, MD, USA, 3University of Maryland, 4Yoshii-Health, Inc, Ellicott City, MD, USA
OBJECTIVES: Despite numerous studies on medication adherence, there is little research on the first prescription fill rate. Our study used claims data from electronic prescribers to calculate first fill failure rate for antihypertensive prescriptions. METHODS: This retrospective study combined administrative, medical and pharmacy claims data from a health plan to find the percentage of enrolled, first fill antihypertensive prescriptions, the primary outcome. Adult members with new antihypertensive prescriptions prescribed by electronically prescribing physicians were included. We allowed only prescriptions written by physicians who were electronically prescribing in order to capture antihypertensive prescriptions that would likely be adjudicated with a claim captured. Each antihypertensive prescription was assigned one outcome: paid claim (patient obtained prescription) and denied claim (unclaimed prescription), RESULTS: The cohort consisted of 14,693 new antihypertensive pre- scripts prescribed by 164 electronically prescribing physicians. First fill failure rate was 15.6% for prescriptions which affected 24.3% of patients. We examined the accuracy of verifying prescription and predicted claim (unclaimed prescription). Our methodology identified 97.2% of the prescribed antihypertensives and implies 2.8% of prescriptions would not have been identified. CONCLUSIONS: Using electronic prescribers to proxy electronic prescribing is a new method for assessing first fill rates. The intent was to identify most of the prescribed antihypertensives so that matching pharmacy claims would determine whether the prescription was obtained. With a potential error rate of 2.8% of prescriptions, this methodology appears sensitive and accurate to determine adherence to first fill prescriptions. Future research should examine the correlation between the use of electronic data and electronic prescriptions.

PCV104
AN ASSESSMENT OF ADHERENCE TO SINGLE-PILL VERSUS MULTI-PILL COMBINATION LIPID-MODIFYING THERAPIES AMONG PATIENTS WITH MIXED DYSLIPIDEMIA IN A MANAGED CARE POPULATION
Chang CL1, Bullano MF2, Kamat SA1, Yan S2, Cziraky MJ1, Hanover, NJ, USA, 3Novartis Pharmaceuticals Corp., Walnutport, PA, USA, 4Novartis, East Hanover, NJ, USA, 5Care Management International, Marlborough, MA, USA
OBJECTIVES: To compare medication adherence among patients initiating single-pill combination (SPC) versus multi-pill combination (MPC) lipid-modifying therapies. METHODS: Administrative claims data from the nationally representative Core Integrated Research Database (HRD®), representing 32.1 million fully insured US members, was used to identify patients who newly initiated SPC therapy (simvas- tatin/ezetimibe SP, simvastatin/niacin SP, or lovastatin/niacin SP) or equivalent medications dispensed as MPC therapy from January 2005 through November 2008. Adherence to therapy was compared between SPC and MPC groups and measured using the National Quality Forum-endorsed proportion of days coverage (PDC) metric. Multivariate regression models were used to control for baseline differences between groups such as demographic characteristics, comorbid conditions, and health resource utilization and to estimate the association between type of treatment group and optimal adherence (PDC ≥ 0.80). RESULTS: A total of 42,460 patients [38,847 SPC, age 56.3 ± 12 (mean ± SD), 55% men; 3,613 MPC, age 54.8 ± 11.6, 62% men] were identified. The mean PDC was 0.76 and 0.70 in the first 3 months of treatment, 0.54 and 0.65 in the second 3 months, and 0.50 and 0.61 for the remaining 30 months of follow-up for the SPC and MPC groups, respectively (p < 0.01 for each time period). This observed trend in sustained higher PDC for the SPC group compared to the MPC group remained even after controlling for baseline patient characteristics. Furthermore, multivariate logistic regression indicated that SPC patients were 31% more likely to be optimally adherent to therapy than MPC patients (OR = 1.31, 95% CI: 1.27–1.35; p < 0.01). CONCLUSIONS: Medication adherence among patients receiving the three disease-staging therapies compared to multi-pill combination therapies. The results suggest single-pill therapies may improve health outcomes in patients due to improved medication adherence. Single-pill dyslipidemia therapies, where indicated, may be an important addition to health plan drug formularies because of their improved medication adherence profile.

PCV105
UNDERSTANDING BARRIERS TO MEDICATION ADHERENCE FOR THE MEDICAID POPULATION IN NEW JERSEY
Nair KV1, Jan S2, Belliss DA2, Doyle J2, Allan RR2, Parcel J1
1University of Colorado, Aurora, CO, USA, 2Horizon Blue Cross Blue Shield of New Jersey, Newark, NJ, USA, 3Novartis Pharmaceuticals Corp., Warwick, PA, USA, 4Novartis, East Hanover, NJ, USA, 5Care Management International, Marlborough, MA, USA
OBJECTIVES: Although hypertension is a major risk factor for cardiovascular disease, medication adherence to hypertension medications is low. Previous research identifying factors influencing adherence have focused primarily on broad, population-based approaches. Identifying specific barriers for an individual is more useful in designing meaningful interventions. Using a customized telephonic outreach, we examined the specific barriers influencing hypertensive patients’ non-adherence in order to identify targeted interventions. METHODS: Sample represented members from a health plan in 2008 with ≥2 prescriptions for hypertensive medications. Non adherent members had 1 medication Possession Ratio (MPR) of <0.80 for at least one of their hyperten- sive drugs. Telephone script was based on the “target” drug with the lowest MPR. Study was implemented in fall 2008. RESULTS: Response rate was 28.2% (n = 8692); 22.6% commercial and 49.8% Medicare respondents. Mean age was 63.4, 53.4% were female; mean MPR was 0.61 for the target drug. MPR ≥0.60 had adherence levels between 60–79%. However, only 38.2% of Medicare and 60.4% of commercial respondents reported “missing a dose of medication”. Primary reason was forgetfulness (61.8% Medicare; 60.8% commercial) followed by