OBJECTIVES: To determine the loss of work productivity and activity impairment (WPAI) due to non-compliant cost cutting in a diagnosed Atrial Fibrillation (AF) population. METHODOLOGY: The study consisted of data from the 2011 US National Health and Wellness Survey (NHWS), a web-based survey of 75,000 patients’ demographics, health care attitudes and health outcomes. Non-compliant cost cutting strategies were defined as taking less medication than prescribed, cutting prescriptions because of costs, not filling prescriptions and using over-the-counter medications instead, or buying prescriptions less often. Compliant strategies were defined as asking for generic alternatives, asking for samples, buying prescriptions multiple months at a time through mail order, using coupons, and using a discount card. Generalized linear regression models were used to determine the burden of engaging in non-compliant cost cutting strategies on WPAI, controlling for demographics, health history, insurance status, and comorbidities. RESULTS: Out of 1,046 diagnosed AF patients taking a prescription medication for AF, 19.8% reported using non-compliant cost cutting strategies. 41.3% reported using compliant strategies only, and 38.9% reported not using any cost cutting strategies. After controlling for demographics, health history, and comorbid conditions, among the employed respondents, non-compliant patients reported greater presenteeism (28.4%) and overall work productivity loss (11.8% vs. 12.8%, respectively, p < 0.003) before adjusting, but after adjustments, no differences were found. CONCLUSIONS: In AF patients, participating in non-compliant cost cutting strategies was found to be associated with greater presenteeism and overall work productivity loss. These patients should be identified and guided to improve compliance to their prescription medications to help avoid impairment while working.

C3 COMPARATIVE EFFECTIVENESS OF STATINS IN A LARGE MANAGED CARE ORGANIZATION: CARDIOVASCULAR EVENT RATE AND TOTAL HEALTH CARE COST

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OBJECTIVES: To determine if there were differences between statins in terms of cardiovascular event rate and total cost among patients who initiate therapy in a large managed care population. METHODS: Pharmacy and medical claims data were used from 14 geographically diverse health plans in the US covering approximately 14 million members. Members had at least one pharmacy claim for atorvastatin, rosvastatin, simvastatin, simvastatin/ezetimibe, pravastatin, or lovastatin during the period between January 1, 2007 and December 31, 2008. Members who initiated therapy within the follow-up period were stratified into either primary or secondary prevention. Outcomes included cardiovascular event rate and total adjusted cost. Multiple regression models were used to examine the association between statin therapy and cardiovascular event rate or healthcare cost while controlling for demographics and observable clinical characteristics. RESULTS: A total of 33,336 patients were included, of which 20,010 (60.0%) were in primary and secondary prevention, respectively. Adjusted odds ratios for cardiovascular event rates were not significantly different among the statins in either cohort. In the primary prevention cohort, total adjusted cost was lowest for simvastatin ($13,394), followed by lovastatin ($13,394), pravastatin ($13,815), atorvastatin ($18,209), rosuvastatin ($27,246), pravastatin ($27,282), simvastatin/ezetimibe ($30,412), atorvastatin ($30,872), and rosvastatin ($35,295), overall p < 0.001. In the primary prevention cohort, adjusted pharmacy cost was lowest for lovastatin ($4,417), followed by simvastatin ($4,420), pravastatin ($4,715), atorvastatin ($8,210), simvastatin/ezetimibe ($9,204), and rosvastatin ($9,276); overall p < 0.001. Similar pharmacy cost patterns were observed in the secondary prevention cohort. CONCLUSIONS: There were no statistically significant differences in cardiovascular outcomes among the statins. Branded statins were generally associated with higher total cost compared to generic statins, likely driven by differences in pharmacy cost.

CV4 GRACE RISK PREDICTION INDEX, CHARLSON COMORBIDITY INDEX, OR BOTH, TO PREDICT OUTCOMES ASSOCIATED WITH ACUTE CORONARY SYNDROME

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OBJECTIVES: The first objective of this study was to compare the predictive ability of the GRACE Risk Prediction Index (GRPI) and the Charlson Comorbidity Index (CCI) in determining in-patient mortality, mortality within six months of discharge, and occurrence of a second coronary event or procedure after discharge, in patients who were admitted to a university hospital for the treatment of acute coronary syndrome (ACS). The second objective was to determine if combining GRPI and CCI in prediction models improved the ability to determine the same outcomes. METHODS: Data used for this study were obtained from a large academic health system’s acute coronary syndrome patient registry. Registry data is abstracted from the medical record as well as from patient self-report by a telephone follow-up survey 6 to 12 months after discharge. Logistic regression/ROC was used to derive c-statistics for CCI, GRPI, and CCI-GRPI combined predictive models for each of outcomes. Likelihood ratio tests were conducted to determine the contribution of CCI and GRPI to predictive models using the CCI-GRPI model. A total of 1,292 patients had complete data from the index hospitalization. The GRPI model had a higher c-statistic (0.73) versus CCI model (0.68) and similar to the combined model (0.79) to predict in-patient death; the c-statistics for models predicting death during the follow-up period were similar (GRPI: 0.74, CCI: 0.77, Combined: 0.81); and all were similar in predicting secondary events after discharge (GRPI: 0.57, CCI: 0.60, Combined: 0.58). The Likelihood ratio analysis demonstrated that adding the CCI to existing predictive GRPI models was beneficial primarily for predicting secondary events post discharge. CONCLUSIONS: The CCI modestly improves models using GRPI to predict death after discharge for an ACS event. It is an acceptable alternative to the GRPI in predicting death and secondary events if data to derive the GRPI are not available.

PODIUM SESSION II:

EFFECT OF DRUG POLICIES ON HEALTH CARE

DR1 PUBLIC HEALTH INNOVATION: BIOPHARMACEUTICALS LOST IN TRANSLATION?

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OBJECTIVES: While considerable progress has been made, the overall global burden of disease continues to escalate. The promise of translational medicine as a means to translate basic science to greatest unmet need can reduce the burden of disease. Few studies have investigated the relationship between drug development and public health priorities; fewer still have correlated funding, development and global burden as a systemic response to unmet need. To fill crucial evidence gaps, we will present the relationship between the number of drugs in development and global burden of disease measures. METHODS: Burden of disease data (DALYs, YLL, and mortality) for the top 29 most prevalent conditions were obtained from WHO 2004 Global Burden of Disease Project. Data on drugs in development were obtained from Adis R&D Insights (Adis International Limited). Our prior hypothesis was no relationship between the number of drugs in development (2011) and 2004 GBD metrics. Predictor and outcomes variables were log-transformed to reduce positive skew; following univariate linear regression analysis all measure of burden of disease or public interest whose p < 0.05 were included in a stepwise multivariate regression model. RESULTS: Univariate linear regressions demonstrated no measurable effects of current GBD (DALYs, YLL, YLD, mortality; p = 0.31, 0.66, 0.2, 0.15 respectively) correlated with the current drug development pipeline. Further, we examined the correlation between the number of drugs in development and global burden of disease measures. METHODS: Burden of disease data (DALYs, YLL, YLD, and mortality) for the top 29 most prevalent conditions were obtained from WHO 2004 Global Burden of Disease Project. Data on drugs in development were obtained from Adis R&D Insights (Adis International Limited). Our prior hypothesis was no relationship between the number of drugs in development (2011) and 2004 GBD metrics. Predictor and outcomes variables were log-transformed to reduce positive skew; following univariate linear regression analysis all measure of burden of disease or public interest whose p < 0.05 were included in a stepwise multivariate regression model. RESULTS: Univariate linear regressions demonstrated no measurable effects of current GBD (DALYs, YLL, YLD, mortality; p = 0.31, 0.66, 0.2, 0.15 respectively) correlated with the current drug development pipeline. Further, we examined the correlation between the number of drugs in development and global burden of disease measures. METHODS: Burden of disease data (DALYs, YLL, YLD, and mortality) for the top 29 most prevalent conditions were obtained from WHO 2004 Global Burden of Disease Project. Data on drugs in development were obtained from Adis R&D Insights (Adis International Limited). Our prior hypothesis was no relationship between the number of drugs in development (2011) and 2004 GBD metrics. Predictor and outcomes variables were log-transformed to reduce positive skew; following univariate linear regression analysis all measure of burden of disease or public interest whose p < 0.05 were included in a stepwise multivariate regression model. RESULTS: Univariate linear regressions demonstrated no measurable effects of current GBD (DALYs, YLL, YLD, mortality; p = 0.31, 0.66, 0.2, 0.15 respectively) correlated with the current drug development pipeline. Further, we examined the correlation between the number of drugs in development and global burden of disease measures. METHODS: Burden of disease data (DALYs, YLL, YLD, and mortality) for the top 29 most prevalent conditions were obtained from WHO 2004 Global Burden of Disease Project. Data on drugs in development were obtained from Adis R&D Insights (Adis International Limited). Our prior hypothesis was no relationship between the number of drugs in development (2011) and 2004 GBD metrics. Predictor and outcomes variables were log-transformed to reduce positive skew; following univariate linear regression analysis all measure of burden of disease or public interest whose p < 0.05 were included in a stepwise multivariate regression model. RESULTS: Univariate linear regressions demonstrated no measurable effects of current GBD (DALYs, YLL, YLD, mortality; p = 0.31, 0.66, 0.2, 0.15 respectively) correlated with the current drug development pipeline. Further, we examined the correlation between the number of drugs in development and global burden of disease measures.