OBJECTIVES: To assess knowledge towards etiology, treatment and management of HTN among hypertensive patients in Southern Punjab, Pakistan.

METHODS: A convenient sample of 400 HTN patients visiting public hospital in Bahawalpur was selected for the study. A pre-validated, self administered questionnaire was used for data collection. Total 860 responses were done by SSPS. RESULTS: A total of 258 patients were males with an age of 35.69 years with 240 (60%) having bachelor level of education. A total of 180 (45%) of the participants had income below Pakistani rupees 20,000 per month. 296 (74%) patients knew the values of normal blood pressure. 60 (40%) knew the causes and symptoms of HTN. 188 (47%) of patients had hypertensive patients in their families. 308 (77.75%) thought that there should be life style modifications in case of HTN and also stated that HTN is curable. Majority of patients 216 (54%) did not monitor their blood pressure regularly and were depending on signs and symptoms. A total of 139 patients (34.78%) became hypertensive after the age of 30 years while 130 (32.61%) got the age of 40 years at the age of 20. All patients were receiving allopathic treatment but only 130 (30%) were following special diet program. A small number 100 (25%) of patients were receiving counseling services from health care professionals where as 316 (79%) were depending upon opinions from friends, peers and patients already suffering from HTN.

CONCLUSIONS: The study results identified a strong need for education program regarding HTN at the community level. The interaction between patients and health care providers should be increased in order to have maximum therapeutic outcome. Further studies are recommended to identify the contributing factors in the treatment and management of HTN.

PCV75

EFFECT OF ACEI AND ARB ON HEALTH RELATED QUALITY OF LIFE IN PATIENTS WITH HYPERTENSION AND DIABETES

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OBJECTIVES: To assess the effect of angiotensin converting enzyme inhibitors (ACEI) and angiotensin receptor blockers (ARB) on health related quality of life (HRQoL) in patients with hypertension and diabetes. METHODS: Medical Expenditure Panel Survey (MEPS) 2002-2007 was used for the study. Each panel in MEPS followed patients for about 2 years with data collected in five rounds of 4 to 5 months. HRQoL was measured using the physical and mental component scores of the SF-12 quality of life instrument. Baseline HRQoL was measured at the end of round 2. Incident utilization for ACEI and ARB was determined during round 3 or 4, and outcome HRQoL was measured at the end of round 4. Analysis was performed on two populations: patients utilizing either ACEI or ARB vs. neither, and patients utilizing both ACEI vs. ACEI+ARB. Multiple linear regression models were performed to test the unique effect of ACEI and ARB on the physical and mental component of HRQoL while controlling for baseline HRQoL, comorbidities, demographic and socio-economic factors. RESULTS: Overall 60% of patients received either ACEI or ARB. Of the 20% of those who were incident users of ACEI/ARB, ACEI was utilized by 65% of the patients. Multiple linear regression models did not reveal any statistically significant effect of using ACEI or ARB vs neither on the physical (p = 0.27) or mental (p = 0.47) component of HRQoL. Similarly, using ACEI versus ARB did not have any statistically significant effect on the physical (p = 0.30) or mental (p = 0.66) component of HRQoL. CONCLUSIONS: ACEI and ARB, now regarded as quality of care measures for patients with concomitant hypertension and diabetes, did not seem to affect patients’ HRQoL. More research is needed to evaluate the long term consequences of ACEI and ARB use.

PCV76

PATIENT SYMPTOM EXPERIENCES FOLLOWING A MYOCARDIAL INFARCTION

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OBJECTIVES: Cardiovascular disease culminating in myocardial infarction (MI) remains prevalent in society and is responsible for significant morbidity and mortality. Patients may experience a variety of deleterious effects following an MI. An enhanced understanding of patients’ post-MI experiences may lead to improved assessments of post-MI treatment outcomes and, ultimately, improved therapies. METHODS: Participants were 38 patients who had experienced an MI (with or without ST segment elevation) within the past 6 months (n=17) or in the past 6-12 months (n=21). One-hour in-person interviews were conducted using a semi-structured interview guide. Interview responses were coded using ATLAS.ti software. The percent of patients mentioning a specific post-MI experience was used to identify the most relevant and generalizable patient experiences. RESULTS: The average age of the sample was 53 (range 34–74) years; 44% were female. Feeling tired or weak commonly reported post-MI experience, was reported by 76% of patients. Within this tiredness category, patients reported experiencing a loss of physical energy (66%), mental energy (34%), and motivation (26%). A majority of patients also reported experiencing frequently, pain, emotional pain, depression and emotional stress, including worry (61%) and depression (58%), as well as an impact on relationships (58%) and social activities (50%). Time since the MI had little effect on patient experiences. CONCLUSIONS: Patients report a wide variety of negative experiences after an MI. A loss of physical energy is only one component of the tiredness experienced by patients; loss of mental energy and loss of motivation are also common. These experiences may be directly related to the effects of the MI, but may also be secondary to the experience of depression and worry. Further refinement of the concepts associated with the patient’s experience following an MI may yield novel endpoints for use in clinical trials and better therapies.

PCV77

HEALTH-RELATED QUALITY OF LIFE IN HYPERTENSIVE PATIENTS VISITING PUBLIC HOSPITALS OF QUETTA, PAKISTAN

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OBJECTIVES: To assess the Health related quality of life (HRQoL) in hypertensive patients attending public hospitals in Quetta, Pakistan. METHODS: European Quality of Life scale (EQ-5D) was used for assessment of HRQoL. Descriptive statistics were used to describe demographic and disease characteristics of the patients. Chi square test was used to determine association among variables with (p<0.05) considered as significant. HRQoL was scored using values derived from the United Kingdom general population survey. All analyses were performed using SPSS version 16.0. RESULTS: 385 hypertensive patients were enrolled for the study with mean age of 59.02±6.596 years. Majority 186 (48.3%) were categorized in age group of 28-37 years. 265 (68.85%) were males with 3.01±0.939 years of history of hypertension. The mean EQ-5D descriptive score of 0.4674±0.2844 and EQ-Vas score was 63.97±5.621 indicating lower health related quality of life. Education, occupation and duration of disease had significant relation with HRQoL. Bonferroni ad-justments were done to find independent significant factors. Group 1 had significant relation with group 3, 4 and 5 (where group 1 = illiterate, 3, 4 and 5 being Primary, FAVSCc, and BA/BSc respectively). In occupation, group 3 was found significant with group 0 and 2 (where group 3 = Private job, group 0 = jobless and group 2 = Government official). For duration of disease, group 4 was found significant with group 1 and 2 (where group 4 = more than 5 years, group 1 = less than 1 year and group 2 = more than 1 year but less than 3 years). CONCLUSIONS: Lack of health care professionals and little interaction with patients is one of the major health problem. Patients therefore, do not have adequate knowledge about their conditions which in turn affect their HRQoL. To overcome this issue, paramedical staff can be utilized for counseling the patients.

Cardiovascular Disorders – Health Care Use & Policy Studies

PCV79

IMPACT OF DISEASE MANAGEMENT PROGRAM “DE TODO CORAZON” OF MUTUAL SER HO USO A MOTOR CARDIOVASCULAR RISKS, COHORT 2004-2009, COLOMBIA

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OBJECTIVES: Evaluate the impact on cardiovascular risk control and its determinants in patients enrolled in the Disease Management (DM) Program “De Todo Corazón”. METHODS: The objective the DM program is to modify cardiovascular risk (CVR) classified according to Adult Treatment Panel III (ATP III) methodology, the program includes direct physiological intervention, integrated with promotion and prevention activities. This program began in 2004 and 27,596 patients corresponding to a dynamic cohort have received its benefits from it up to December 2009. The effectiveness of the program was assessed through the analysis of trends in the CVR marker variables and goals accomplishments. The study popu-
lation corresponds to participating subjects since 2004 who received continuous annual follow-up visits until 2009. The trend analysis of the different risk factors over time was performed, as well as the estimate of the annual CVR using ATPIII categories (high, moderate and lower risk). RESULTS: 3,870 subjects were included in the assessment with an average age of 60 years (SD = 11.52) at baseline. Of the majority of subjects are women (73%). The results showed a reduction of 30% in smoking. In addition, over the past 5 years, blood pressure (BP) diminished consistently through risk groups (mean reduction of 14 mmHg), LDL cholesterol levels were reduced within high and moderate risk groups (mean reduction of 25 mg/dl) and the speed of kidney damage progression decreased. Complementary analyses with an extended cohort containing over 8,000 patients exhibited similar results. CONCLUSIONS: Cardiovascular Risk DM Program “De Todo Corazón” showed a meaningful impact to modify risk factors in Colombian patients such as smoking, BP, lipid profile and kidney risk. The results of a wider cohort supported that observed positive outcomes trends were generated by this program.

PCV80

MEDICATION THERAPY MANAGEMENT IMPROVES HEALTH CARE UTILIZATION AND COSTS FOR EMPLOYERS

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OBJECTIVES: To determine the health care utilization and potential cost savings for an employer-sponsored medication therapy management (MTM) program.

METHODS: A prospective, pre-/post-intervention study. Employees included in the study were Lucas County employees and their dependents who had diabetes, hypertension, hyperlipidemia, or a combination of the three. The MTM services were provided by independent pharmacists from seven sites in Northwest Ohio. Variables measured included social measures (alcohol consumption, tobacco consumption, exercise, caffeine consumption) and process measures (speciality physician visits, sick days, emergency room visits, flu shot, hypoglycemic events, and self-monitoring of blood glucose). Differences in disease-related spending, pre- and post-employment were analyzed in the group who did not improve or showed negative improvement at their final record visit for process measures. Data was analyzed using SPSS v17.0 and Microsoft Excel.

RESULTS: There was an overall trend of improvement in both the social and process measures. All three specialty physician visits have increased: podiatrist visits by 24%, ophthalmologist visits by 41%, and dentist visits by 26%. Average cost savings for employees who improved or maintained appropriate utilization, ranged from $931.67 to $1437.77 per employee per two years. Approximately 90% of employees who maintained control or had the same amount of sick days employees who had fewer sick days saved almost $1230.79 per employee while employees who took more sick days spent approximately $2146.51 per employee. Employee utilization of flu shots were substantial, with 70% getting a flu shot at least once over the 24 months. Alcohol and tobacco consumption decreased by 50% and 55%, respectively. Caffeine use decreased by 26.47%. Reported exercise increased by 39%.

CONCLUSIONS: Interaction with the pharmacist has had a positive impact on employees’ outcomes related to social and process measures, which might also be helpful in causing reduction in cost burden to the employer.

PCV81

SUSTAINING CLINICAL OUTCOMES OVER 24 MONTHS: IS MEDICATION THERAPY MANAGEMENT (MTM) THE ANSWER?

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OBJECTIVE: To assess the impact of an employer-sponsored, pharmacist-provided MTM program on clinical outcomes in patients with diabetes and hypertension over a 24 month period. METHODS: A prospective, intent-to-treat, pre-post longitudinal study. Patients were Lucas County employees and dependents with diabetes, hypertension, or a combination. The MTM services were provided by independent pharmacists in Northwest Ohio at seven sites. ADA and JNC-VII treatment was provided by independent pharmacists from seven sites in Northwest Ohio. Variables measured included social measures (alcohol consumption, tobacco consumption, exercise, caffeine consumption) and process measures (speciality physician visits, sick days, emergency room visits, flu shot, hypoglycemic events, and self-monitoring of blood glucose). Differences in disease-related spending, pre- and post-employment were analyzed in the group who did not improve or showed negative improvement at their final record visit for process measures. Data was analyzed using SPSS v17.0 and Microsoft Excel.

RESULTS: There was an overall trend of improvement in both the social and process measures. All three specialty physician visits have increased: podiatrist visits by 24%, ophthalmologist visits by 41%, and dentist visits by 26%. Average cost savings for employees who improved or maintained appropriate utilization, ranged from $931.67 to $1437.77 per employee per two years. Approximately 90% of employees who maintained control or had the same amount of sick days employees who had fewer sick days saved almost $1230.79 per employee while employees who took more sick days spent approximately $2146.51 per employee. Employee utilization of flu shots were substantial, with 70% getting a flu shot at least once over the 24 months. Alcohol and tobacco consumption decreased by 50% and 55%, respectively. Caffeine use decreased by 26.47%. Reported exercise increased by 39%.

CONCLUSIONS: Interaction with the pharmacist has had a positive impact on employees’ outcomes related to social and process measures, which might also be helpful in causing reduction in cost burden to the employer.

PCV82

EVALUATION OF RELATIONSHIP BETWEEN BLOOD PRESSURE CONTROL AMONG HYPERTENSIVE PATIENTS AND INTEGRATION OF SERVICES WITHIN PHYSICIAN ORGANIZATIONS

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OBJECTIVES: To assess the relationship between integration of services and the management of hypertensive patients within select physician organizations in the U.S. METHODS: A modified version of the Physician Practice Connection Readiness Survey (PPC-RS), developed by the National Committee for Quality Assurance (NCQA), was completed by physicians at 5.5% of physician organizations in 2010. The integration score included structural, functional, and financial sub-domains with possible scores of 0 to 100; a higher score indicating greater integration of services. Demographic and clinical data were collected from a random sample of 300 adults selected for chart reviews at each participating organization. Site characteristics and integration scores were reported. Hierarchical regression models were estimated to assess the association between an organization’s integration score and patients’ outcomes. RESULTS: Of the 3,870 patients in the intervention sites, 6.24% had diabetes only, 224 with diabetes and one or more comorbidities, 85 with diabetes and CHD, and had more than 50 staff members (76.8%). The average integration score was 46, with mean scores of 64, 33 and 42 for the structural, functional, and financial sub-domains, respectively. Integration scores were generally higher in sites with 50+ physicians as compared to sites with ≤50 physicians (52.8 vs. 36.6, respectively), and were also higher in sites owned by hospitals. Among the 8,400 patients reviewed, approximately 60.5% had controlled BP. A positive correlation was observed between integration scores and controlled BP (Pearson coefficient = 0.39, p<0.05). Additionally, patient BP control was better in organizations with integration scores in the highest quartile (64.3%) than in sites in the lowest quartile (56.8%). Although the point estimates were not significant in the hierarchical model, regression analyses suggested that higher integration scores were associated with better BP control overall. This study provides some evidence that better integration of service in physician organizations is associated with better patient outcomes as reported through the PPC-RS.

PCV83

GAPS AND UNMET NEEDS IN ANTIPLATELET THERAPIES FOR ACUTE CORONARY SYNDROME (ACS) AND CHRONIC CORONARY HEART DISEASE (CHD)

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OBJECTIVES: Antiplatelet therapies with aspirin, ADP receptor inhibitors, and glycoprotein IIb/IIIa inhibitors play an important role in management of acute coronary syndromes and chronic coronary heart disease. An assessment of the literature was conducted to identify evidence gaps and critical unmet needs in antiplatelet therapy in the management of ACS and chronic CHD. METHODS: A targeted literature search was conducted on antiplatelet therapy with a focus on ADP receptor inhibitors using PubMed, Medline and Google Scholar. Parallel searches were initiated for the ACS and chronic CHD. Additional references were identified and included based on citations from reviewed articles. A total of 179 articles were reviewed. Article types considered in the study included review articles, clinical trials, observational studies, and economic evaluations. RESULTS: The review identified gaps and unmet needs in drug therapy for ACS and chronic CHD using established (aspirin, clopidogrel, and glycoprotein IIb/IIIa agents) and newer drugs (prasugrel and ticagrelor). Key evidentiary gaps were identified on the impact of clopidogrel resistance, antiplatelet associated major, minor and nuisance bleeding risk, impact on humanistic outcomes, long term cost-effectiveness, impact on elderly and other high risk subpopulations. Our assessment identified that current antiplatelet therapies are associated with significant downsides, such as increased bleeding risks as well as other untoward effects. CONCLUSIONS: Our assessment revealed important gaps and areas of unmet need associated with current antiplatelet appliers in the management of ACS and chronic CHD. Further studies should be conducted to address these evidentiary gaps, while unmet patient needs should be taken into consideration in future drug development.

PCV84

EFFECTIVENESS OF A MEDICAL EDUCATION INTERVENTION TO TREAT DIADEMASTITION IN PRIMARY CARE

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OBJECTIVES: To report the effectiveness of a CME intervention to improve appropriateness for hypertension, which is in turn has a positive effect on control of hypertensive patients in primary care clinics. METHODS: A secondary data analysis was carried out using data of hypertensive patients treated by family doctors who participated in the CME intervention. The evaluation was designed as a post-CME intervention study with a pre-/post-intervention design. The effect of the CME intervention was assessed using multiple logistic regression modelling in which the dependent variable was uncontrolled blood pressure in the postintervention patient measurement. The model was adjusted by considering the patient’s doctors as a cluster effect. The model allowed controlling for BP in patients including several patients who received treatment by the same doctor. Selection of regression variables was carried out by comparing χ² values of the log likelihood in the models; this was carried out by using the backward stepwise procedure. Goodness-of-fit testing of the model was evaluated using the Hosmer-Lemeshow test. After the CME intervention, the net reduction of uncontrolled blood pressure between stages in the intervention group was 10.3%. The model results were that being treated by a family doctor who participated in the CME intervention reduced by 53% the probability of lack of control of blood pressure, receiving dietary recom-