to understand patient behavior, however, the relationship between time preference and medication non-adherence is not widely understood. This study aims to summarize the existing literature on the association between time preference and medication adherence. METHODS: A literature search was conducted on Medline, PsycINFO, Pubmed and CINAHL from January 2000 to 2015 using the keywords “time preference”, “patient compliance”, “medication adherence” and “non-adherence”. Studies that did not include medication adherence, lacked empirical data on time preference or assessed time preference with addictive behaviors (e.g. smoking) were excluded. A table summarized results, including the publication year, author, study design, source and findings. RESULTS: A total of 53 articles were identified and nine studies were retained. Only three studies directly investigated the relationship between time preference and medication adherence. Of those, studies in 2001 examined relationships to hypertension medication in 156 older adults and adherence to cholesterol lowering medication in 169 adults. Findings revealed weak to no association between time preference and medication adherence. Conversely, a 2013 study reported time preference as a significant predictor of medication adherence to asthma control medications for 47 patients with persistent asthma. CONCLUSIONS: Taking into account the extent to which patients will worry about adverse future outcomes, this review identified very few studies addressing the objective. More evidence regarding the link between time preference and adherence is needed. This would allow practitioners and researchers to tailor interventions and strategies to better address the risk of medication adherence to chronic diseases.

PH26
A COMPREHENSIVE SURVEY OF MANAGED CARE ORGANIZATION (MCO) MEDICATION ADHERENCE INTERVENTIONS: FOCUS ON DIY ACTIVITIES
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OBJECTIVES: Thirty-two million Americans use three or more medications daily. Approximately 75% of patients fail to adhere to physician prescribed treatment regimens. The economic impact of non-adherence is estimated to cost $100 billion annually. Evidence suggests that the elderly are one of the largest groups contributing to the economic burden associated with non-adherence. Studies support the development of visual focused tools to improve adherence among older persons. The aim of this study was to explore the use of visual adherence tools in the hospital, clinic, and home settings to determine the effectiveness in improving patient adherence and negating hospital readmissions. METHODS: Electronic databases such as Pubmed and Google Scholar were searched from 2000 – 2014. Key words were used as follows: “elderly”, “readmissions”, and “visual adherence tool.” Studies were included if they were conducted outside of the U.S. since few U.S. studies examined visual adherence tools. A custom-designed table included year of publication, author, study design, intervention, findings, and sources. RESULTS: Several studies focused on the clinic and home setting, but few were hospital based. Further research is warranted.

PH27
PREDICTING MEDICATION ADHERENCE AND HEALTHCARE COSTS IN A MANAGED CARE POPULATION
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OBJECTIVES: To develop and validate predictive models that identify members with higher risk of medication non-adherence and increased total healthcare cost over a 12-month period in a managed care setting. METHODS: The study included members insured under a commercial healthcare plan who filled 1 prescription for any of seven targeted medication classes for common chronic diseases between October 2010 and May 2014. Pharmacy and medical claims during the four months before and six months after the member’s first prescription for a targeted medication (index date) were used to generate 85 baseline member variables. These variables were tested for potential model inclusion to separately predict medication non-adherence (propensity scores covered <80%) and total healthcare costs during the 12-month follow-up period. Total costs included pharmacy and medical costs from outpatient, emergency room, and inpatient visits. Members were randomized 3:1 to the development or validation samples. The validation sample was used to evaluate the final model’s performance based on c-statistic and R-squared values. Medication non-adherence was predicted using a logistic regression model. Healthcare cost was predicted using a linear regression model with a log link function and gamma distribution. RESULTS: Among the 70,502 and 20,005 members) filled ≥ 1 prescription, 60% and 80% were females. There were 228, 134, 37, 32 and 74 patients for diabetes, hypertension, heart diseases, asthma and others respectively) who were included in the analyses. Using SPSS 20.0. RESULTS: A total of 505 patients with different chronic diseases (Diabetes, Hypertension, Heart diseases, Asthma and others) were enrolled for the present study. The mean age of the patients was 44.9 years, majority 304 (60.2%) were females. There were 228, 134, 37, 32 and 74 patients for diabetes, hypertension, heart diseases, asthma and others respectively. The c-statistical difference (p = 0.004) as present mean medication adherence scores in different non-communicable chronic diseases condition (%34, 56.5, 4.6, 4.9 for diabetes, hypertension, heart diseases, asthma and others respectively). The present study concluded that different disease conditions did affect the level of medication adherence, efforts should be made to provide specified health education to improve medication adherence in different disease condition for better therapeutic outcome.

PH28
A REVIEW OF THE EFFECTIVENESS OF VISUAL MEDICATION TOOLS IN BOOSTING PATIENT ADHERENCE AND REDUCING HOSPITAL ADMISSIONS
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OBJECTIVES: This study aimed to assess the level of medication adherence among patients with non-communicable chronic diseases and to assess the impact of such adherence on hospital admissions. METHODS: A cross sectional study was conducted in different non-communicable chronic diseases patient, visiting outpatient department in public/private hospitals and clinics of Quetta, Pakistan. Morsky Medication Adherence Scale (Urdu version) was used to collect the data. The descriptive statistics was used to present the demographic and disease related information. Inferential statistics was used to evaluate the relationship among study variables. All analyses were performed using SPSS 20.0. RESULTS: A total of 505 patients with different non-communicable chronic diseases (Diabetes, Hypertension, Heart diseases, Asthma and others) were enrolled for the present study. The mean age of the patients was 44.9 years, majority 304 (60.2%) were females. There were 228, 134, 37, 32 and 74 patients for diabetes, hypertension, heart diseases, asthma and others respectively. The c-statistical difference (p = 0.004) as present mean medication adherence scores in different non-communicable chronic diseases condition (%34, 56.5, 4.6, 4.9 for diabetes, hypertension, heart diseases, asthma and others respectively). The present study concluded that different disease conditions did affect the level of medication adherence, efforts should be made to provide specified health education to improve medication adherence in different disease condition for better therapeutic outcome.

PH30
ASSESSMENT OF MEDICATION ADHERENCE AMONG PATIENTS WITH NON-COMMUNICABLE CHRONIC DISEASES IN QUETTA BALUCHISTAN, PAKISTAN
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OBJECTIVES: This study aimed to assess the level of medication adherence among patients with non-communicable chronic diseases in Quetta Baluchistan, Pakistan. METHODS: A cross sectional study was conducted among patients with non-communicable chronic diseases, visiting outpatient department in public/private hospitals and clinics of Quetta city. Morsky Medication Adherence Scale (Urdu version) was used to collect the data. The descriptive statistics was used to present the demographic and disease related information. Inferential statistics was used to evaluate the relationship among study variables. All analyses were performed using SPSS 20.0. RESULTS: A total of 505 patients with non-communicable chronic diseases (Diabetes, Hypertension, Heart diseases, Asthma and others) were enrolled for the present study. The mean age of the patients was 44.9 years, majority 304 (60.2%) were females. There were 228, 134, 37, 32 and 74 patients for diabetes, hypertension, heart diseases, asthma and others respectively. The c-statistical difference (p = 0.004) as present mean medication adherence scores in different non-communicable chronic diseases condition (%34, 56.5, 4.6, 4.9 for diabetes, hypertension, heart diseases, asthma and others respectively). The present study concluded that different disease conditions did affect the level of medication adherence, efforts should be made to provide specified health education to improve medication adherence in different disease condition for better therapeutic outcome.

PH31
DESCRIBING MEDICATION ADHERENCE ACROSS A POPULATION: THE VALUE OF CONSIDERING MULTIPLE MEASURES
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OBJECTIVES: Among the 70,502 and 20,005 members) filled ≥ 1 prescription, 60% and 80% were females. There were 228, 134, 37, 32 and 74 patients for diabetes, hypertension, heart diseases, asthma and others respectively) who were included in the analyses. Using SPSS 20.0. RESULTS: A total of 505 patients with different chronic diseases (Diabetes, Hypertension, Heart diseases, Asthma and others) were enrolled for the present study. The mean age of the patients was 44.9 years, majority 304 (60.2%) were females. There were 228, 134, 37, 32 and 74 patients for diabetes, hypertension, heart diseases, asthma and others respectively. The c-statistical difference (p = 0.004) as present mean medication adherence scores in different non-communicable chronic diseases condition (%34, 56.5, 4.6, 4.9 for diabetes, hypertension, heart diseases, asthma and others respectively). The present study concluded that different disease conditions did affect the level of medication adherence, efforts should be made to provide specified health education to improve medication adherence in different disease condition for better therapeutic outcome.
OBJECTIVES: Medication adherence broadly describes the extent to which individuals comply with prescribed treatment. Many approaches are used to assess medication adherence, including formulas to measure dosing/frequency compliance and persistence over time. To provide insight into their appropriate-ness for population health research, this study compared several measures of medication adherence. Through a retrospective analysis of onsite pharmacy data, we used a proof-of-concept study to gauge the onsite pharmacy’s impact while adjusting for covariate effects. RESULTS: Across medication types, onsite pharmacy users demonstrated significantly higher adherence rates than community pharmacy users. Factors associated with medication use behaviors included: (1) common health problem, (2) possible solution for common health problems, (3) the knowledge they possess is not enough regarding the vaccines, while 72.3% of the questioned do not know the reactions and possible side effects of the applied vaccination, possible side effects, and they do not apply the vaccination. It is necessary to organize further comprehensive information sharing for the parents during an orientation, which is supported by the results of our research.

PH32 EXPLORING MEDICATION USE BEHAVIOURS: FINDINGS FROM A PILOT QUALITATIVE STUDY CONDUCTED AMONG COMMUNITY LEADERS IN THE STATE OF PERAK, MALAYSIA

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OBJECTIVES: Irational medication use is among major health problems that cause significant economic implications. Little attention has been paid to patient’s belief and perception towards medications use. The aim of the study was to investi-gate drug use behavior among community leaders of Perak and Kelantan states in Malaysia. METHODS: Qualitative focus groups discussion was used in this study. Data was collected through the semi-structured interview guide which was developed by the researcher after extensive literature review and reviewed by expert in that field. Purposeful sampling was used to recruit the participants. The discussion was audio-taped and transcribed verbatim by two independent researchers. Transcript was then analyzed with deductive content analysis for qualitative data analy-sis. RESULTS: Five major themes identified from thematic content analysis: (1) common health problem, (2) possible solution for common health problems, (3) source of medication, (4) factors associated with medication use behaviors, and (5) strategies to reduce medication use problems. The main underlying medication use problem was the lack of knowledge. Factors associated with medication use problems were patient-related factors, therapy-related factors and healthcare system factors. The Health Belief Model has been used to aid our understanding of the findings in this study. CONCLUSIONS: Medications can be a most efficacious medication among the local community. Effective strategies need to be formulated in order to increase patient adherence towards medication since poor adherence cause decreased patient clinical outcome and cause the increased in healthcare cost.

PH33 POSSIBILITIES OF CHILDHOOD VACCINATIONS

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OBJECTIVES: The aim of this research is to examine the factors which deter-mine the vaccination in relation to the standpoint of the parents. METHODS: A descriptive, cross-sectional, prospective and quantitative study made in and around Pápa, Hungary. The research was carried out between 15 January, 2014 and 31 May, 2014. We evaluated 95 appraisable questionnaires that were completed by parents raising children between the age of 0-18. Descriptive statistics with fre-quency range, Chi² test was performed with Microsoft Excel 2010. RESULTS: The information possessed by parents significantly shape their opinion on vaccina-tion (p<0.001) while vaccination is 97.5%. Parents with young age (between 18-30) possess most information regarding vaccination than parents over 40 (p<0.05). 12.6% of the parents are not able to name the diseases which their children are being vaccinated, 27.3% of the questioned do not know the reasons and possi-ble side effects to the vaccination which shows relation to the age (p<0.001). It is very problematic in groups in which no one is vaccinated or vaccination is known at present (p<0.001). More than half of the questioned parents think that the knowledge they possess is not enough regarding the vaccines, while almost 80% would want to take part in an orientation. Parents attach importance to the advice of the GP and the health visitor. However, 50% of them seek answers to their question through the media. CONCLUSIONS: The information possessed by parents significantly shapes their opinion on vaccination but not the vaccina-tion itself. Many of them do not know the disease specific effectiveness of the applied vaccination, possible side effects, and they do not apply the vaccination. It is necessary to organize further comprehensive information sharing for the parents during an orientation, which is supported by the results of our research.

PH34 INTEGRATING PRO-CTCAE RESPONSES INTO THE PERSPECTIVES ON COST-RELATED NON-ADHERENCE AMONG PATIENTS

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OBJECTIVES: Cost-related non-adherence (CRN) is a highly prevalent phenomenon among emerging third-world countries. However, it is estim-ated that around 50% of the adult population resort to CRN under cost pressures, leading to declining health conditions. Currently there is a lack of studies that provide an insight into the issue using primary research data. The objective of this study was to explore pro-active perspectives of CRN, assess the rele-vance of the associated factors, and provide future recommendations for effective strategies targeting CRN behaviors. METHODS: Using a descriptive, cross-sectional design, and convenience sampling, four focus groups were conducted among stu-dents aged 18 years and older at Long Island University (LIU), NY, during a two month period. Data obtained was analyzed using MS Excel and Nvivo. Permission for the study was obtained from the Institutional Review Board of LIU, and individual informed consent was obtained from participants. RESULTS: Using data from 46 consenting participants, it was concluded that medication costs was the num-ber one reason for medication non-adherence in patients. Additionally, the factors out-of-pocket costs and ‘prescription coverage’ were ranked ‘extremely important’ by more than half of the participants. Factors such as ‘burden of chronic illnesses’ was perceived to be major contributor to CRN as well. CONCLUSIONS: The study is unique since it helped understand the phenomenon of CRN among patients from the most important perspective, that of the public. Based on the ranking of important factors associated with CRN, future recommendations are made for effective strategies to ameliorate the high rates of CRN among patients.

PH35 PREVALENCE AND PREDICTORS OF HEALTH RISK BEHAVIOR IN UNDERGRADUATE HEALTH SCIENCES STUDENTS OF KHYBER MEDICAL UNIVERSITY

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OBJECTIVES: The aim of the present study was to evaluate the prevalence and predictors of health risk behaviors in undergraduate health science students of constituent institutes of Khyber Medical University (KMU). Khyber Pakhtunkhwa, Pakistan. METHODS: This was a cross-sectional study conducted at four constituent institutes of KMU. Three hundred and eighty five undergraduate students selected through stratified random sampling were involved in the study. Health risk behaviors were assessed through pretested reliable and valid questionnaire. Statistical Package for Social Sciences (SSPS v 16) was used for data analysis. A p-value <0.05 was considered statistically significant. RESULTS: Of 385 students enrolled in the final year, 86.6% (n=335) were female. An age of participants was 21.05±1.79 years. The most prevalent health risk behavior was insufficient consumption of fresh fruit (90.4%), milk (84.4%), fresh leafy vegetables (80.2%) and fresh fruit juices (75.7%), physical inactivity (72.3%), skipping breakfast (46%), eating excessive fast food (TV 19.3%) and benzodiazepine abuse (9%). Upon cross tabulation, statistically significant association was observed between male gender and cigarette (p-value<0.001) and hashish smoking (p-value=0.041), while female gender had statistically significant association between smoking and alcohol (p-value0.016). Statistically significant association was also observed rural residence and cigarette smoking (p-value=0.006). CONCLUSIONS: The findings of the present study highlight the need of preventive measures to avoid health risk behaviors in health sciences undergraduate students. The constituent institutes of Khyber Medical University should promote healthy life by arranging health promo-tional activities, seminars and workshops.

PH36 THE VALUE WOMEN PLACE ON MENOPAUSAL SYMPTOM RELIEF

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OBJECTIVES: Menopausal symptoms can cause significant distress to women, yet little is known about the value women place on these symptoms. METHODS: In April 2013, 3397 US women, ages 46 to 69, completed an online survey that included 30 paired comparisons. Specifically, respondents were shown two menopausal symptoms described using the Patient-Reported Outcomes Version of the Common Terminology Criteria for Adverse Events (PRO-CTCAE) and asked, “Which do you prefer?” From their choices, we estimated a generalized linear model to assess values women place on symptom relief in terms of quality-adjusted life years (QALYs). RESULTS: The majority of respondents (1753 of 3397, 52%) always preferred reduced lifespan (up to 90 days) instead of experiencing menopausal symptoms at their worst for 30 days. For a majority of the symptoms (248/263, 94%), including low-grade events, QALYs were significantly reduced (p-value<0.05). The value women placed on relief ranged widely by symptom domain: the relief of depression, problems with memory, headache, pain in abdomen, problems with anger, and vomiting were the most valuable. CONCLUSIONS: Overall, the value women place on menopausal symptoms is high. Additional work is needed to directly ask women about their preferences and to estimate the value of menopausal symptom relief on a QALY scale, this work provides critical evidence for health care professionals to make informed decisions in regard to the management of menopausal symptom relief.