to understand patient behavior, however, the relationship between time preference and medication adherence is not widely understood. This study aims to assess 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”, “medication adherence”, “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 adherence to hypertension medication in 196 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 examined time preference as a significant “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.

PH26 A COMPREHENSIVE SURVEY OF MANAGED CARE ORGANIZATION (MCO) MEDICATION ADHERENCE INTERVENTIONS: FOCUS ON DAY Lee JS, Sun F, Conrad CM, Lew HC, Solow RK, Stockel KM OptumRx, Irvine, CA, USA 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 to cover <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 estimate and refine model parameters. 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. Total healthcare cost was modeled using a gamma distribution with a log link function and gamma distribution. RESULTS: Among the 70,502 and 23,505 members included in the development and validation samples, respectively, medication non-adherence ranged from 37% to 73%, depending on the medication class. Baseline adherence and cost were the most important predictors. Predictive performance improved when other variables, such as member demographics and comorbidities, were added to the baseline adherence and cost models. Model discriminative power increased from 0.81 to 0.88; <p<0.0001). The cost model’s R-squared value was 0.43. CONCLUSIONS: The models demonstrated good predictive performance and could be used together to identify members with potential non-adherence to medications and greater healthcare costs for intensive clinical interventions.

PH28 REVIEW OF THE EFFECTIVENESS OF VISUAL MEDICATION TOOLS IN BoostING PATIENT ADHERENCE AND REDUCING HOSPITAL ADMISSIONS Anifowose R Mercy, Newport, CA, USA 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 suggesting 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 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 in search for evidence as a significant “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.

PH29 ASSESSMENT OF LEVEL OF MEDICATION ADHERENCE IN DIFFERENT NON-COMMUNICABLE CHRONIC DISEASES PATIENT IN QUETTA, PAKISTAN: DOSE CONDITION PRODUCES ANY CHANGE Hili I, Shabeen H, Razzaq Q, Younas M, Bashir S1, University of Balochistan, Quetta, Pakistan, 2University of Sargodha, Sargodha, Pakistan OBJECTIVES: This study aimed to assess the level of medication adherence among patients with different non-communicable chronic diseases in Balochistan, Pakistan. METHODS: A cross sectional study was conducted in different non-commicurable chronic diseases patient, visiting outpatient department in public/private hospitals and clinics of Quetta, Pakistan. Morisky 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 test the evaluation relationship among study variables. All analyses were performed using SPSS 20.0. RESULTS: A total of 505 patients with different non- 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 other respectively. The statistical difference (p = 0.004) as present mean medication adherence scores in different non-communicable chronic diseases condition (5.34, 5.05, 4.65, 4.69, 4.59 for diabetics, hypertension, heart diseases, asthma and others respectively). CONCLUSIONS: 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 QETTA BALUCHISTAN, PAKISTAN ul Haq N1, Shabeen H1, Iqbal Q1, Naseem A1, Razzaq Q1, Younas M1, Iqbal J1 1University of Balochistan, Quetta, Pakistan, 2University of Sargodha, Sargodha, Pakistan 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- chronic diseases, visiting outpatient department in public/private hospitals and clinics of Quetta city. Morisky 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 test the evaluation relationship among study variables. All analyses were performed using SPSS 20.0. RESULTS: A total of 505 patients with non- 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 other respectively. The statistical difference (p = 0.004) as present mean medication adherence scores in different non-communicable chronic diseases condition (5.34, 5.05, 4.65, 4.69, 4.59 for diabetics, hypertension, heart diseases, asthma and others respectively). CONCLUSIONS: 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 Anglia BM1, Hov Q2, Miller KM1 1Cerner, Cahlers City, CA, USA, 2Cerner, Kansas City, MO, USA