and 97.87% respectively. **Conclusions:** This analysis portends dienogest as a cost-saving alternative for the treatment of EAP compared to GnRHa in Brazil from the public and private payer perspective.

**PH32**

**INVESTIGATING THE IMPACT OF MENTAL HEALTH STATUS ON HEALTH AND SOCIAL CARE COSTS OF OLDER PEOPLE AFTER ACUTE HOSPITAL ADMISSION**


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**Objectives:** In England, nearly two-thirds of older people in acute hospital care suffer from co-morbid physical and mental health conditions. This study investigated the health and social care costs for a group of older (70+) people identified with a mental health condition after hospital admission. **Methods:** The Better Mental Health (BMMH) study recruited 247 patients at hospital admission in Nottingham, England. Electronic administrative records were sought for six months post-hospital discharge (services: general practitioner, hospital, pharmacy, dentistry, social care, transport, intermediate and mental health care). The cohort was characterised by one or more aspects of mental health: cognitive impairment, depression, delirium, and neuropsychiatric health. Differences in mean cost between groups were compared using t-tests, association between mental health and service-level cost was investigated using GLM regression. **Results:** Health and social care costs were derived for all 247 participants, except primary care, derived for 122 (subset) participants due to GP recruitment. In the subset, mean (95% CI, median, range) total cost was £9842 (8573-11256, 7717, 715-48795). Mean cost (95% CI) for mental health care was significantly (p < 0.05) higher for patients: with depression than without (£194 (106-522) vs £55 (37-111)), bottom-50% on the neuropsychiatric health scale (£202 (124-298) vs £55 (16-118)). Patients with delirium, compared to without, had significantly lower costs for GP consultations (£316 (196-492) Vs. £552 (429-701)) and hospital outpatient visits (£333 (253-444) Vs. £497 (400-621)). The GLM did not identify any significant difference between aspects of mental health and service-level costs. **Conclusions:** This study suggests a person’s mental health affects consumption of some, but not all, services evaluated. In general, these patients are costly consumers of health, and any signs of worsening health, and/or purchasing a Spanish sumpum pattern cannot be attributed to one particular aspect of mental health. Future work should investigate the impact of physical and mental health comorbidities on resource-use.

**INDIVIDUAL’S HEALTH – Patient-Reported Outcomes & Patient Preference Studies**

**PH33**

**DETERMINANTS OF NON-ADHERENCE TO MEDICATIONS AMONG CHRONIC PATIENTS IN MACCABI HEALTHCARE SERVICES**

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**Objectives:** Implementation of co-payments may reduce the use of essential medications for the treatment of chronic conditions. The aim of this study was to examine at what extent non-adherence of chronic patients to medication stems from financial reasons and what determinants are associated with non-adherence. **Methods:** Maccabi Healthcare Services conducted a representa-
tional sample of Maccabi Healthcare Services chronic patients aged ≥55 yrs (n=522). Respondents were defined as non-adherent if they reported they had stopped taking certain medications due to the cost of their prescribed medications due to its cost. Additional information collected included: age, gender, income, receiving exemption from a physician regarding the therapy, and out-of-pocket expenditure for prescribed medications. **Results:** Mean age of the study population was 67.9 ± 9.9 yrs (53% were male). Sixteen percent of respondents were defined as non-adherent, in 60% of them it was due to medication’s cost. No significant differences were found between adherent and non-adherent respondents with regard to age, gender, family status, disease severity, self-reported financial situation, self-reported non-adherence, education, or income. In a multivariable logistic regression model, non-adherence was associated with: lack of physician explanation about prescribed medications (OR=2.88, 95%CI: 1.66-5.68; P=0.002), higher out-of-pocket expenditure on medications (OR=5.35, 95%CI: 1.04-3.61; P=0.043), and lower household income (OR=0.81, 95%CI: 0.69-0.96; P<0.01). **Conclusions:** Information provided by physicians is associated with adherence of chronic patients to prescribed medications. Low income and high out-of-pocket expenditure for prescribed medications are associated with non-adherence. Since adherence is strongly affected even by a relatively low and flat co-payment as applied in Maccabi Healthcare Services, health policy makers may consider adopt-
ingation of value-based co-payments that are differentiated by treatment value rather than by its cost, and targeted mainly at chronic patients. This approach may lead to improved adherence and outcomes with the potential of reducing long-term costs.

**PH34**

**SYSTEMATIC REVIEW OF PATIENT PREFERENCES FOR SUBCUTANEOUS MEDICATIONS**

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**Objectives:** To assess for and report for the previous 6 months. ADEs were reviewed by two independent clinicians. HRQOL was measured using EQ-5D. Multilevel Poisson and linear regression models were used. Adherence after adjusting for patient and practice level covariates; socioeconomic status, depression, disease severity, and self-reported non-adherent patients had an increased risk of any ADEs (IRR 1.18; P=0.002). ADEs and hospitalisation were measured by patient medical record. Adherence was measured by: (i) the Medication Possession Ratio (MPR) using national pharmacy claims dispensing data; and (ii) self-report for the previous 6 months. ADEs were reviewed by two independent clinicians. HRQOL was measured using EQ-SD. Multilevel Poisson and linear regression models were used to examine the number of ADEs, utility and hospitalisation varied by adherent status. For patients: of 855 patients aged ≥52 yrs (n=522), 110 patients had a significant association between adherence and self-report coefficient, -0.06, SE 0.01, p=0.01; and an almost two-fold increased risk in the expected rate of any ADEs (RR 1.18; 95% CI 1.05, 1.33; p<0.01). Non-adherent patients had a significantly lower mean HRQOL utility (MPR coefficient, -0.11, SE 0.03, p<0.01; self-report coefficient, -0.06, SE 0.01, p<0.01) and an almost two-fold increased risk in the expected rate of any hospitalisation (MPR IRr, 1.75; 95% CI 1.42, 2.15; p<0.001; self-report IRr, 1.53; 95% CI 1.16, 2.01; p<0.01) compared to adherent patients. **Conclusions:** Non-adherence was significantly associated with adverse health outcomes. Developing methods to assist older adults in accurate and safe management of their medications may increase their quality of life.

**PH35**

**VALIDATION OF ACCEPT, A NEW GENERIC MEASURE TO ASSESS HOW PATIENTS WITH CHRONIC DISEASES BALANCE BETWEEN THE ADVANTAGES AND DISADVANTAGES OF FOLLOWING THE RECOMMENDED TREATMENT REGIMEN IN REAL-LIFE**

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**Objectives:** To develop and validate the accept questionnaire. **Methods:** Accept is a 32-items PRO questionnaire measuring the concept of Acceptance. It was developed based on grounded theory and qualitative research. Each treatment characteristic was assessed on a response scale opposing “easy to accept” with “not easy to accept”. We conducted 18 observational studies with 182 subjects engaged in long-term treatment regimen. Adult patients where consecutively engaged in a network of pharmacists when prescribed with a drug indicated by various chronic diseases (including asthma, diabetes, various cardiovvascular diseases, retroviral infections, osteoporosis). Patients were asked to complete Accept and MMAS-4 questionnaires at Month 1, 3 and 6, except having given their informed consent. The structure was explored through PCA, and confirmed with multi-trait analysis. Internal consistency reliability of dimensions was assessed through Cronbach’s alpha. Scale-scores correlations were calculated. **Results:** After reduction, Accept was made of 25 items organised in 5 overall Acceptance score and 6 dimensions concerning acceptability (cost, side effects, convenience, cost-efficiency, treatment duration, multiple medications). Cronbach’s alpha was 0.85 for overall Acceptance score, which met criterion of ≥0.7. The domain-specific scores showed satisfactory to good results (Cronbach’s alpha ranging from 0.67 - 0.87, convergent valid range from 63% to 100%, and divergent valid range from 33% - 100%). Scale-correlations ranged from 0.02 to 0.58, confirming the multidimensional nature of the questionnaire. The good properties of Accept were stable over time. **Conclusions:** Accept is a brief, comprehensive, generic ques-
tionnaire focused on Acceptance. Initial validation in a population of patients with a wide spectrum of chronic diseases showed promising results and confirmed the position of Acceptance. Further, disease-specific, large prospective study is needed to assess the ability of Accept to predict persistence to treatment.
OBJECTIVES: Of the many routes of drug administration, some are more acceptable to patients than others. For example, when a choice is presented, patients usually prefer an oral over an injectable medication, all else being equal. Patient preference may be expressed in terms of health and non-health-related measures, which include: health technology-related attributes (including ergonomics, ease of use, commonness, safety, and adverse reactions in patients’ perceptions of treatment), and adverse reactions attributable to the route of administration. Preferences may result in process-related (dis)utility, and be revealed as “(non)adherence.” This review aims to examine and analyze patients’ preferences for subcutaneously administered, self-injectable medications, compared with other routes of administration for the same medicines. METHODS: Ten electronic databases were searched for publications published between 2002 and 2012 using terms pertinent to methods of administration, preferences, and adherence. For inclusion was determined through reference to specific criteria by two independent reviewers. RESULTS: Of the 1,146 papers screened, 70 met the inclusion criteria and were assessed. A total of 31 different methods of administration for insulin and treatments of paediatric growth disorders and multiple sclerosis. Pen devices were significantly preferred to needle & syringes administration in 11 out of 12 studies – particularly with respect to ergonomics, convenience and portability; however, preference varied between autoinjectors and pen devices were less pronounced. Oral administration was preferred to subcutaneous administration in 6 studies (but did not reach statistical significance), as was inhaler therapy (favoured significantly in 3 out of 4 studies). CONCLUSIONS: The review identified a number of studies, which revealed important differences in patient preference between methods and routes of drug delivery. Further evidence is required to support the notion that preference translates to better adherence.

PH33
THE EFFECT OF MEDICAL DEVICES WITH DOSE-MEMORY AND REMINDER FUNCTIONS ON PATIENT TREATMENT ADHERENCE, CONFIDENCE AND DISEASE SELF-MANAGEMENT
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OBJECTIVES: Adherence to treatment is an important issue in the management of chronic diseases and an indicator of patients’ ability to self-manage their condition. Some medical devices have been designed to help support patients’ self-management and adherence by including dose-memory and reminder functions. This literature review explored the role and impact of these devices on patients’ adherence to treatment, confidence and disease self-management. METHODS: A search of Medline, Embase and PsycINFO was performed to identify articles published in English from 2003-2013, which studied the effect of devices with memory and/or reminder functions on treatment adherence, confidence and self-management. The main attributes of the abstracts selected for inclusion and full-text review, were summarized. RESULTS: The database search yielded 940 abstracts. Of the 47 meeting the inclusion criteria, 32 were retained. The articles explored the impact of memory and/or reminder devices on treatment adherence, device usability and users’ (patients, health care professionals (HCPs) and caregivers) relationship and attitudes towards the devices. Devices with memory and/or reminder functions were found to improve self-reported and electronically-monitored treatment adherence in prophylactic medication use (e.g. contraceptives) and a range of chronic diseases including HIV, diabetes and asthma. Memory functions were considered an important part of device management by patients. Of particular value was that memory and/or reminder functions provided dose-history information, enhanced patients’ confidence with, and ability to manage their medication and condition, and helped to reduce forgotten or incorrect medication dosing. CONCLUSIONS: The incorporation of memory functions alone and in combination with reminder features in medical devices can improve patient’s adherence, confidence and self-management. This can lead to improved control of disease and clinical outcomes, thereby offering clinical and economic value. This review highlights the importance of conducting further qualitative and quantitative research in this area to fully understand the value of these types of devices to patients and HCPs.

PH34
COMPARISON OF ELDERLY ADULTS BY NUMBER OF RX MEDICATIONS USED:
RESULTS FROM THE NATIONAL HEALTH AND WELLNESS SURVEY ACROSS SEU COUNTRIES
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OBJECTIVES: Compliance with medications among elderly patients is particularly important, as the consequences may be quite serious. Results suggest that use of three or more medications may put a considerable burden on elderly patients and may affect their compliance. This analysis profiles elderly patients across SEU by the number of medications currently used and their compliance related behaviors. Combination products were considered as one prescription medication. METHODS: Results were obtained from the 2011 SEU National Health and Wellness Survey, a nationally representative, self-administered survey. Respondents were adults age 65 and over from France, Germany, Italy, Spain and UK. This analysis focuses on adults age 65 and over. Physical and mental quality of life was measured using the SF12v2 scale. A visual analogue scale was used to measure the importance of each of the 12 items included in the SF12v2 (60 mm) and the impact of each item on the respondent’s quality of life (100 mm). A greater score reflected a greater QoL. CONCLUSIONS: A combination of higher health care costs and greater activity impairment can be seen among elderly patients using more prescription medications. Given the financial burden of using multiple medications, and the lower incomes of these patients, cost-saving methods are more frequently utilized by these patients.

PH35
PRELIMINARY ITALIAN ARCHIVE OF EQ-5D DATA ON INDIVIDUALS FROM THE GENERAL POPULATION AND WITH DIFFERENT DISEASE CONDITIONS
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OBJECTIVES: In the last 15 years our research activity collected several HRQoL data, through the EQ-5D-3L and other specific (SF-36) or condition-specific questionnaires. We are concerned to assess and compare HRQoL among different population subgroups. METHODS: We reviewed all the HRQoL studies conducted by our research group between 1998 and 2012. We identified several conditions to be compared. We selected a random subset of 100% from the dataset, based on socio-demographic variables of interest: sex, age, education, social status and then adjusted for age and sex. RESULTS: The archive included QoL data from 7,754 subjects (51.5% male), grouped in 29 different subgroups: type 1 and 2 diabetes mellitus, moderate to severe haemophilia, major depression, chronic intractable diseases of the skin, atopic dermatitis, scleroderma, chronic obstructive pulmonary disease, asthma, and the lower incomes of these patients, cost-saving methods are more frequently utilized by these patients.