OBJECTIVES: Despite the clearly evident better clinical outcomes with prophylaxis compared to on-demand therapy, on average only 55% of patients diagnosed with severe hemophilia receive prophylactic factor replacement therapy in the US. Prophylaxis generally drops with age, partly due to patients becoming more independent and less compliant as they reach adulthood and partly due to reduced perceived benefit. High treatment costs of prophylaxis therapy also remains a barrier. Further, the development of long-acting factor products offering a modest improvement in convenience is likely to drive-up treatment costs. This study aims to understand hemophilia patient preferences and their willingness-to-pay for hemophilia therapies (on-demand, standard prophylaxis, longer-acting prophylaxis). **METHODS:** U.S. adult patients and caregivers of children with hemophilia (n = 79) completed a discrete-choice survey that presented a series of trade-off questions, each including a pair of hypothetical treatment profiles, that had an assigned cost for attaining improvement in health states. The relative importance of treatment attributes such as out-of-pocket treatment costs, dose adjustment, treatment related complications and clinical efficacy & dosing regimen was analyzed using mixed logit models. Based on the attribute estimates, patients' WTP was determined. **RESULTS:** Out-of-pocket treatment costs (P < .001), treatment complications (P < .001) and clinical efficacy & dosing regimen (P < .001) were perceived to be the most important treatment attributes. Patients were willing to pay on average $150 per/month for improvement in each of the prophylaxis dosing regimens (i.e. 3 times weekly vs 2 times weekly vs. 1 time weekly vs. 1 time in two weeks). **CONCLUSIONS:** The results suggest that patients are willing to pay more for improvements in treatment related complications, clinical efficacy & dosing regimen. These estimates of patients' willingness-to-pay can be used to provide guidelines for resource allocation. Literature also suggests that patient preferences are likely to directly translate into increased treatment adherence, leading to greater treatment effectiveness.

PSY43

PSYCHOMETRIC PROPERTIES OF THE ADHD RATING SCALE-IV (ADHD RS-IV) AND ADULT ADHD SELF-REPORT SCALE (ASRS) IN A PHASE 3B CLINICAL TRIAL OF PATIENTS WITH PHENYLKETONURIA

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OBJECTIVES: Phenylketonuria (PKU) is the most common in-born error of metabolism and is associated with neuropsychiatric sequelae. Interviews among adults and parents of children with PKU have established that inattentiveness is an important psychiatric symptom. Although the Adult ADHD Self-Rating Scale (ASRS; self-report) and ADHD Rating Scale (ADHD RS-IV; parent-report) instruments have been validated for measuring symptoms of inattentiveness in persons with ADHD, their psychometric value for measuring PKU-related inattentiveness has not been established. This study investigated the psychometric properties of the ASRS and ADHD RS-IV inattentiveness subscales in a PKU population ≥8 years old. **METHODS:** A post-hoc analysis was conducted in participants ≥8 years of age in a Phase 3b double blind, placebo-controlled clinical trial in PKU over a 13-week period. The ASRS/ADHD RS-IV reliability, construct validity, and responsiveness were measured using clinician- and adult-/parent-reported outcomes collected in this clinical trial. **RESULTS:** Data analysis revealed strong internal consistency reliability for both measures (α ≥0.87). In addition, the test-retest analyses resulted in ICCs ≥0.87, indicating outstanding agreement between the Baseline and Week 4 (re-test visit) measures for both the adult- and parent-rated inattentiveness subscales. Both inattentiveness measures demonstrated an ability to discriminate between known groups (p<0.0001) defined by the Clinical Global Impression-Severity (CGI-S) scale. Correlations between the ASRS/ADHD RS-IV with the CGI-S and age-appropriate Behavior Rating Inventory of Executive Function (BRIEF) Working Memory subscale were consistently moderate-to-strong (r ≥0.56). Similarly, results of the change score correlations were moderate (r ≥0.43) for both measures when compared to changes over time in the BRIEF Working Memory subscale. **CONCLUSIONS:** These findings of reliability, validity, and responsiveness of both the ASRS and the ADHD RS-IV inattentiveness sub-scales, in addition to content validation results, further support their use for the assessment of inattentive symptoms among persons with PKU ≥8 years old in clinical trials.

PSY44

THE ROLE OF PRO DATA IN THE DRUG APPROVAL PROCESS OF PRODUCTS FOR THE TREATMENT OF CYSTIC FIBROSIS IN THE UNITED STATES AND EUROPEA REVIEW OF GUIDANCE DOCUMENTS AND AUTHORIZATIONS OF MEDICINAL PRODUCTS

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OBJECTIVES: The objective of this research was to review the role of patient-reported outcomes (PROs) in drug approval and labeling of products authorized for the treatment of cystic fibrosis (CF) in Europe and in the United States. **METHODS:** This research was conducted through a systematic manual review of CF specific regulatory guidelines and product labelings (US and EU). The PROLabels database was used for the label review. FDA medical reviews and EMA assessment reports were also used to review the clinical studies performed for regulatory approval. **RESULTS:** In its guideline specific to CF, the EMA recommends the use of the Cystic Fibrosis Questionnaire-Revised (CFQ-R) and labels it as a quality-of-life endpoint. The CFQ-R is a disease-specific instrument designed to measure impact on overall health, daily life, perceived well-being and symptoms. There is no specific FDA guidance on CF: the corresponding FDA guidance only covers exocrine pancreatic insufficiency drug products and recommends steatorrhea as the main endpoint. A total of seven different products (seven brand names, six INN) indicated for the treatment of cystic fibrosis were identified: five were approved by the EMA, and five by the FDA. Three products were common to both agencies: aztreonam lysine, ivacaftor and tobramycin. Two products were identified with a PRO claim in Europe and in the United States, i.e., aztreonam lysine and ivacaftor. In both cases, the claim was based on the same clinical studies and corresponded to improvement in respiratory symptoms (as measured by the CFQ-R). In one case, the improvement in respiratory symptoms was considered as primary endpoint (aztreonam lysine – one study). **CONCLUSIONS:** There are few PRO labeling claims in products approved for CF in Europe and the United States. Discrepancies exist in the CF guidance issued by the FDA and the EMA, where EMA is more favorable to PRO endpoints.

PSY45

PAIN-RELATED DISABILITY, SELF-EFFICACY, AND COPING STRATEGIES OF ADULTS WITH CHRONIC LOW BACK PAINA DESCRIPTIVE CORRELATIONAL STUDY

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OBJECTIVES: Chronic low back pain is a persistent disabling condition that impairs the individual's functional status and poses as an economic burden to the society. The objectives of this study were to examine the pain-related disability, self-efficacy and coping strategies of adult patients with chronic low back pain and their relationships, the differences in pain-related disability, self-efficacy and coping strategies used among socio-demographic and clinical characteristic subgroups, and to identify the predictors of pain-related disability. **METHODS:** A descriptive, correlational questionnaire survey design was used. A convenience sample of 65 patients aged 21 years or above with a diagnosis of chronic low back pain was recruited from a public hospital in Singapore from September 2012 to January 2013. Roland-Morris Disability Questionnaire, Chronic Low Back Pain Self-Efficacy Scale, and Coping Strategies Questionnaire-24 were used to collect data. Descriptive statistics, independent sample t-test, analysis of variance, and Peanson Product-moment Correlation Coefficent were used to analyse the data. **RESULTS:** The participants had moderate levels of pain-related disability and self-efficacy, and used both active and passive coping strategies. Significant differences in pain-related disability, self-efficacy and coping strategies used were found among subgroups of various socio-demographics. Significant differences in pain-related disability were found within one subgroup of clinical variable. Pain-related disability had a significant negative relationship with self-efficacy and positive relationship with passive coping, while self-efficacy had a significant positive relationship with active coping and a negative relationship with passive coping. Self-efficacy, ethnicity and monthly income were predictors of pain-related disability. **CONCLUSIONS:** Our findings indicate the need to enhance patients' self-efficacy and reduce the use of passive coping strategies in order to decrease pain-related disability. Future intervention studies improving patients' self-efficacy and coping are needed to improve patients' well-being and quality of life.

PSY46

PATIENT-REPORTED MEASURES OF VASO OCCLUSIVE CRISIS OUTCOMES – GRADING THE LITERATURE

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OBJECTIVES: Patient-reported measures of Vaso Occlusive Crisis (VOC) outcomes reported in literature were identified and quality of evidence for each type of measure was assessed. **METHODS:** PubMed, COCHRANE and CINAHL databases (1966 through August 2012) and reference lists of identified articles were searched for any patient-reported measures employed to assess VOC outcomes. Identified measures were categorized as: measures assessing pain, and measures assessing quality of life (QoL) due to VOC. Studies were assessed for quality of evidence based on risk of bias (coded '1' for randomized controlled study without any serious limitations, else '0'), consistency (coded '1' for demonstrated clinical and methodological homogeneity, else '0'), directness (coded '1' for use of non-surrogate endpoint, else '0') and precision (coded '1' if total number of cases across all studies of measure was greater than 400, else '0'). Overall quality of evidence was calculated by summation of each domain score, where '4' meant 'high,' '3,' 'moderate,' '2,' 'low' and scores less than or equal to '1' denoted 'very low' quality of evidence. **RESULTS:** A total of 1,620 potentially relevant studies were identified and reviewed. Of those, 63 studies passed inclusion criteria and were retained for analyses. Twenty-three unique patient-reported measures of VOC outcomes were identified and categorized. Fifty-seven studies employed pain based measures and 12 studies employed QoL based measures. While, overall mean quality of evidence score was 2.17, mean quality of evidence score for pain based measures was 2.35 and for QoL based measures was 1.42. The most commonly employed pain based measures were Visual Analog Scales (VAS), (28 studies), whereas, the most commonly employed QoL based measure was school/work attendance, (4 studies). **CONCLUSIONS:** A variety of patient-reported measures of VOC outcomes were identified and categorized. VAS, and face based scales had higher quality of evidence compared to measure of school/work attendance.

PSY47

PATIENT-REPORTED OUTCOME (PRO) CLAIMS IN PRODUCTS INDICATED FOR THE TREATMENT OF RARE DISEASES AND APPROVED BY THE EUROPEAN MEDICINES AGENCY (EMA)

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OBJECTIVES: 1) To identify products indicated for the treatment of rare diseases approved through the centralized procedure in Europe, and (2) To list the products which obtained a PRO labeling claim. **METHODS:** The search was performed on the European Medicines Agency (EMA) website (11/12/2013). The European public assessment reports (EPARs) were browsed by type (i.e., orphan medicines). Products refused were excluded. Then, the PROLabels database was searched for each product retrieved to identify any PRO claim in the corresponding label. **RESULTS:** A total of 69 orphan medicines were identified on the EMA website, representing 11 different