HIT interventions. Research evaluating the long term health and cost outcomes of improving medication adherence using HIT interventions is also recommended.

PIH50
PERSISTENCE WITH TESTOSTERONE REPLACEMENT THERAPY
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OBJECTIVES: Very limited data exist on patient persistence with testosterone replacement therapy (TRT). Furthermore, no persistence data are available for the long-acting injection (LAI) formulation. Therefore, the objective of this analysis was to compare medication persistence and first switching patterns among patients initiating LAI with those using other testosterone formulations. **METHODS:** This was a retrospective database analysis of 17,385 patients receiving TRT in Germany between 2008 and 2012 based on the IMS®Health German Longitudinal Prescriptions (LRx) database. The main outcome measure was the percentage of patients who were persistent with their index TRT at 24 months from initiation. **RESULTS:** During the study period, patients receiving the LAI remained on their initial therapy significantly longer than patients using capsules, gels or short-acting injections (SAIs) ($p<0.001$). At three months, 70.1% of patients with the LAI were persistent with their initial TRT compared with 39.1% of patients receiving the gels and 14.7% of patients treated with the SAI. At 24 months, 20.2% of those receiving the LAI remained on their initial therapy vs. 9.7%, 5.7% and 0.5% for capsule, gels and SAIs, respectively. Sensitivity analyses showed consistent results. A total of 3,115 (17.9%) patients switched to a different product, with those starting on a LAI having the lowest switching rate (6.2%) and those starting with SAIs having the highest rate (24.2%). **CONCLUSIONS:** While persistence with TRT decreased substantially over time, treatment with the long-acting injection demonstrated higher persistence compared with the gels, capsule, and short-acting injections. Persistence with treatment for low testosterone may be enhanced by the administration of testosterone utilizing a technology that prolongs the availability of drug and reduces dosing frequency.

PIH51
DOSE ESCALATION FOR INFUSION BIOLOGICS WITH FLEXIBLE DOSING SCHEDULES
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OBJECTIVES: To describe the frequency of and time to dose escalation for incident infliximab(IFX) or tociluzumab(TCZ) patients. **METHODS:** This retrospective, observational analysis used national data from Symphony Health Solutions (SHS). All claims for adult IFX or TCZ (index biologic) patients were extracted from January 1, 2009 to December 31, 2011. Proxy eligibility criteria ensured complete claims and excluded pre-index biologic users. IFX and TCZ patients were excluded if their calculated daily dose was <200mg or >1200mg (IFX) and <200mg or >800mg (TCZ) or if the times between infusions were <14 days or <25 days respectively, or if patients had biologic claims in both the prescription and procedure (Px) files. Within the first 180 days post index, patients with ≥3 Px claims were classified by their dose change over the first 3 dosages, reporting any dose increase, dose doubling at any time, the time to dose doubling and the time between claims (infusions). Results are descriptive, and cohorts were not adjusted for differences. **RESULTS:** 25,451 IFX patients (11,948 RA) and 1593 TCZ patients (1584 RA) contributed data. For overall sample, patients with ≥ 3 Px claims (n=20,131 IFX; n=1285 TCZ), mean initial doses were 410mg (IFX) and 456mg (TCZ). By dose 2, 6.9% of IFX and 22.2% of TCZ patients experienced a dose increase. By dose 3, 81.8% of IFX patients and 55.0% of TCZ patients remained on the same dose relative to their initial dose. Within 180 days, 4.9% of IFX and 18.0% of TCZ patients doubled their initial dose. Median time to dose doubling was 99 days (IFX) and 58 days (TCZ). **CONCLUSIONS:** Dose escalation appears to happen more frequently and more quickly after patients initiate TCZ than when initiating IFX. The excess dose doubling with TCZ may have important economic implications.

PIH52
THE CANADIAN EQ-5D VALUATION STUDY: ESTIMATING TIME TRADE-OFF VALUES FOR THE EQ-5D-5L
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OBJECTIVES: The EQ-5D-5L has the same five domains as in the EQ-5D but with 5 response options reflecting no, mild, moderate, severe, and extreme problems in each domain. The primary objective of this study was to develop a value set of the EQ-5D-5L in Canada. **METHODS:** The combination of traditional and lead-time time trade-off (TTO) was one of the main valuation techniques. A total of 80 health states plus the 5 very mild states (with only one dimension at level 2) randomly grouped into 10 blocks were evaluated using the TTO. State "55555"was included in every block. Each participant was asked to complete one block of 10 states through a face-to-face interview. Quota sampling was used to select a representative sample from the Canadian general population in terms of gender, age, and education. Interviews were conducted in Vancouver, Edmonton, Montreal and Hamilton between November 2012 and September 2013. Various functional forms and model estimators were used to estimate a TTO-based value set. **RESULTS:** A total of 1209 participants completed the interview with the mean age of 47.6 years and 54.8% being female. Candidate models were compared using face validity (severer states have lower values), mean absolute error (MAE), mean squared error (MSE), and Akaike Information Criterion (AIC). The main effects were presented using either dummy variables or as linear terms. Additional terms were explored to account for interactions between domains. Among the candidate models, a random effects model with main effects presented as linear terms, terms for level 3 or higher in usual activities, pain/discomfort (PD), and anxiety/depression (AD), a term for whether dimension was at level 4 or level 5, and the interaction term between PD and AD performed better than the other models. **CONCLUSIONS:** This model can be used to estimate a Canadian TTO-based EQ-5D-5L value set.

PIH53
DEVELOPING A GENERIC DESCRIPTIVE SYSTEM FOR CHILDREN'S HEALTH: A QUALITATIVE STUDY
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OBJECTIVES: Although there are several general valuation tools for health states have been developed for adults, there are few of those for children. In addition, it is arguable that the health dimensions included in the health descriptive system developed in the Western countries are valid in the Eastern countries like Korea. The purpose of this study was to elicit health dimensions of children as the first step of developing a general valuation tool for children's health states. **METHODS:** The sample was recruited from one elementary school in Cheonan city, Korea. The total number of participants was 40: 22 boys and 18 girls, 15 from grade 1 through 3 and 25 from grade 4 through 6. Interviews were done in a group of 3 to 4 children of the same grade. Two trained interviewers asked various open-ended questions including "What comes up in your mind when you hear the word 'health' and why do you think so?" All the interviews were recorded and transcribed. NVivo 10 was used for the qualitative analysis. Currently, more samples are recruited from outpatients to a university hospital, which will be added to the analysis by the time of the conference. **RESULTS:** Over 100 words and phrases that were directly or indirectly related to concept of health were extracted. After carefully and repeatedly reviewing these words and phrases, we categorized them into similar meaning units. As a result, we could obtain 13 themes including food/nutrition, physical activity, usual activities, loneliness, depression/anxiety, pain, good mood/joyfulness, robustness/good stature, playing with friends, family, fear, longevity, disease/treatment. **CONCLUSIONS:** The study found new dimensions that had not been included in the previous health descriptive systems for children such as food/nutrition, robustness/good stature, and family. This implies that children from different cultural backgrounds might need different general health descriptive systems.

PIH54
TIME TRADE-OFF UTILITY ASSESSMENT WITH A 10-YEAR TIME HORIZON: WHEN SHOULD ALTERNATIVE APPROACHES BE CONSIDERED?
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OBJECTIVES: In recent years, the time trade-off (TTO) method with a 10-year time horizon has been the most frequently used approach for direct health-state utility assessment. It is likely that researchers have favored this method because the National Institute of Health and Clinical Excellence (NICE) Guide to the Methods of Technology Appraisal states a preference for consistency with the EQ-5D, which has a utility scoring algorithm derived using 10-year TTO valuations. Although comparability to previous utility studies is important, there are situations when the 10-year TTO is not optimal. **METHODS:** A review of the literature was conducted to identify situations when TTO with a 10-year time horizon may not be the most appropriate method for eliciting health-state utilities. **RESULTS:** Five challenges to the 10-year TTO method include mild health states, small differences among health states, temporary health states, pediatric health states, and assessment of samples with particular characteristics. In these situations, the 10-year TTO may not yield valid utility scores, detect small but important differences among health states, or accurately represent the clinical condition being studied. Alternative approaches are suggested, including variations of the TTO (e.g., varying the time horizon), other direct utility assessment methods (e.g., standard gamble with or without chaining), measures developed specifically for children, mapping condition-specific health-related quality of life questionnaires to generic preference measures, and condition-specific preference-based measures derived from longer condition-specific questionnaires using Rasch and item-response theory methods. **CONCLUSIONS:** Rather than simply using the most commonly used method, it is recommended that investigators select a utility assessment method based on its relevance and validity for particular clinical contexts and health states. Pilot studies are often helpful in identifying the optimal approach.

PIH55
DO UTILITY VALUES REFLECT LOST INCOME AND THE FULL OPPORTUNITY COST OF WORK LOSS?
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OBJECTIVES: The US Panel on Cost-Effectiveness recommends excluding productivity losses from numerators of cost-effectiveness ratios. This critical literature review evaluated evidence as to whether individuals consider work loss when completing utility assessments reflected in the denominator. **METHODS:** PubMed/MEDLINE, Cochrane, and EMBASE databases were searched using terms such as "quality of life", "productivity", "utility", and "EQ-5D". Titles/abstracts of 1,114 identified studies were double screened using pre-defined criteria. References from key articles were manually reviewed. Sixteen relevant publications were identified. **RESULTS:** Nine studies representing 6 countries (Australia (1), Japan (1), The Netherlands (4), Sweden (1), Switzerland (1), United States (1)) asked respondents if they spontaneously considered income effects or believed study health states would impact income. Between 31% and 64% of respondents in 6 studies indicated they considered lost income effects in health state valuations in situations where they had been