were noted. In addition the 2011 South African Census was reviewed. RESULTS: The 2011 census revealed, of 11 official languages, English is the most common ‘everyday’ language in business, politics and the media. However, it’s not the most common language spoken at home. This inconsistency causes translation issues for the following reasons: (1) English names are commonly used for diseases and drugs, as these are referred to ‘home’ languages. With varying localised terms/expressions (2) There is not the same broad vocabulary in the ‘home’ languages, due to the prevalence of English outside of the home, so descriptions are often used to reflect the source word. Biventricular heart failure is subject to cultural differences in South Africa so certain concepts have to be localised and may appear to differ significantly from the source. (3) ‘Home’ languages are not written so have evolved erratically, with different linguists having different opinions on spelling and grammar. METHODS: This discussion between the ‘everyday’ language used in work, education, etc. and the ‘home’ languages causes difficulties with linguistic validation for South Africa. Linguists disagree on the general use of the languages which seems to be forgotten. However, whilst realizing the differences in the varied linguistic process appears to provide the resolutions, where all source wording is translated, reviewed, questioned and discussed in order to find a conceptual equivalent rather than a literal translation.

PRM114 RECOMMENDATIONS FOR THE LINGUISTIC VALIDATION OF PEDIATRIC CLINICAL OUTCOMES ASSESSMENTS
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OBJECTIVES: The objective of this study was to test cognitive debriefing strategies for translation and validation of patient-centered outcomes intended for pediatric populations. METHODS: Two questionnaires were translated into 11 languages, each for a specific pediatric population. One was an assessment on the palatability of medication for children aged 4-12. It was hypothesized that probe questions would be more effective for cognitive debriefing subjects aged 6-12. Subjects were asked how they would respond to the questionnaire in hypothetical conditions to demonstrate comprehension of the translated text. The developed translated questionnaires were then used in an online language (i.e. German and Spanish) validation, and analyzed to determine which probes were not present or required modification. RESULTS: The palatability assessment debriefing on 55 subjects with an average age of 9, and a standard deviation of 1.9. According to the results, the subjects showed probes were deemed to be a success with the younger sample, as they demonstrated their ability to understand how to respond to the questionnaire. The pain VAS scales were debriefed on 50 subjects with an average age of 15 and a standard deviation of 1.4. Results indicated that probes were not necessary if the nature of the questionnaire did not warrant them for subjects of any age. Paraphrasing definitively demonstrated comprehension by subjects for the appropriate translation. CONCLUSIONS: This study demonstrates that translating questionnaires with children can be a success if the probe is a viable method for cognitive debriefing of translated questionnaires. Further research is required to determine the usefulness of these tools to measure caregiver burden for patients with eye diseases in Japan.

PRM115 USE OF WORK PRODUCTIVITY ENDPOINTS IN CLINICAL STUDIES: A REVIEW BY DISEASE STATE AND MEASUREMENT TYPE
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OBJECTIVES: Productivity outcomes are of interest because they describe the consequences of disease in the workplace and impact on productivity. We conducted an analysis of work productivity (WP) endpoints in clinical studies. METHODS: A key word search was conducted on ClinicalTrials.gov for “work productivity” to identify relevant studies. Trials with terminated, withdrawn, or suspended status, those with non-drug interventions, and those without WP endpoints were excluded from analysis. A total of 170 studies were included (111 interventional and 57 observational studies). RESULTS: Of the 170 studies included, 44% were performed outside of the US, 31% were multinational studies including the US, and 25% were conducted exclusively in the US. The most common therapeutic categories investigated were autoimmune diseases (37%), neurology (14%), and psychiatry (9%). Most studies (84%) were sponsored by pharmaceutical manufacturers, with 11% sponsored by other institutions, or a combination of both (6%). The majority of trials investigated WP as a secondary measure (89%), with several, primarily observational studies, reporting WP as a primary outcome (11%). Survey instruments were utilized most commonly, representing 82% of studies, while 9% of studies evaluated WP based on time missed from work. Some studies utilized multiple measures. Generic instruments, such as the Work Productivity and Activity Impairment Questionnaire (WPAI), were used in 54% of studies, while 29% used disease-specific measures. In some cases (15%) a specific tool or instrument for WP was not identified. Most trials (93%) included other patient-reported endpoints, in addition to WP. CONCLUSIONS: WP endpoints were most commonly investigated in manufacturer-sponsored trials as secondary outcomes to demonstrate the clinical benefits of therapeutic areas where more concrete clinical outcomes are limited. Generic instruments are heavily utilized, with approximately one-third of studies utilizing disease specific measures.

PRM116 REVIEW OF CAREGIVER BURDEN SCALES FOR PATIENTS WITH VISUAL IMPAIRMENT IN JAPAN
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OBJECTIVES: Among the societal costs of visual impairment in Japan, cost of both unpaid and paid home care for people with visual impairment has been estimated as a substantial component of indirect cost. However, the degree of burden among individuals caring for visually impaired patients remains unknown. The study objective is to identify the instruments currently available for measuring caregiver burden for visually impaired patients and to identify whether linguistic validation has been done in Japan. METHODS: We performed a literature review on articles describing instruments of caregiver reported outcomes for eye disorders. We summarized the current evidence on the usefulness of the instruments and whether they differentiate between eye diseases and other non-eye related diseases. In addition, we investigated possible hurdles in measuring caregiver burden in eye disorders, given the environment in which biomedicine assessments are conducted. RESULTS: We identified two caregiver burden measurements, one depression measurement, and one life satisfaction scale used in studies for measuring caregiver outcome for patients with visual impairments. A few studies using these instruments demonstrated correlation between the degree of caregiver burden and level of depression and severity of visual impairments. Excluding one caregiver burden instrument, Japanese versions of the remaining three instruments have been developed and validated in Japan. However, there are no recent studies of these instruments are still questionable because: 1) most of the patients with visual impairments in Japan are elderly and increased caregiver burden may be due to conditions associated with older age, and 2) aging of caregivers are also progressing, resulting in increased perceived caregiver burden to its patients. CONCLUSIONS: Our findings indicate that further research is required to identify the usefulness of these instruments to measure caregiver burden for patients with eye diseases in Japan.

PRM117 DEVELOPMENT OF ELECTRONIC DIARY IN PATIENTS WITH BINARY URINARY SYMPTOMS
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OBJECTIVES: Stress Urinary Incontinence (SUI) is a chronic condition with symptoms such as fatigue and itching. To characterize the varied symptoms of SUI and evaluate benefits of new SUI treatments, an electronic diary (e-diary) was developed. METHODS: - 6-day diary - capture of PBC symptoms such as itch and other symptoms of SUI that vary frequently in an e-diary, and usability of the e-diary was supported through interviews with PBC patients. Symptom characterization of itching could be further refined. Funding for this study was provided by GlassoSmithKline

PRM118 ASSESSMENT OF TREATMENT ADHERENCE AND QUALITY OF LIFE IN DIABETIC PATIENTS TREATED WITH INSULIN IN TWO COLOMBIAN CITIES
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OBJECTIVES: Diabetes mellitus is a public health problem and its influence is recognized in the quality of life of patients. According to WHO, only 50% of people with diabetes receive treatment of their disease. The objective of this study was to compare the results of the scales measuring quality of life and adherence to treatment in two groups of patients with diabetes and treatment with conventional or analogue insulins. METHODS: Cross-sectional study in two groups of patients diagnosed with diabetes mellitus type 1 or type 2, in medical treatment with conventional or analogues insulins. RESULTS: 240 patients were included in the study. 17 patients were excluded in the e-diary group: 17 patients were excluded from analysis. The most common adverse events were hyperglycemia and hypoglycemia. CONCLUSIONS: Results provide evidence of the benefits of using the e-diary for focusing on PBC-40 recall period supported the change from “past 4 weeks” to “past 1 week.” Quality of life and treatment adherence is significantly affected in patients with diabetes mellitus, which may also impact its metabolic control. It is necessary to establish individual and group interventions to improve these conditions in patients.

PRM119 IMPORTANCE OF THE CONCEPTUAL DEFINITION OF PRO MEASURES: A CASE STUDY WITH THE LINCOLN TRIBE. IRRAUTABLE BOWEL SYNDROME QUALITY OF LIFE (IBS-QOL) INSTRUMENT IN 17 ASIATIC LANGUAGES
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OBJECTIVES: The Irritable Bowel Syndrome Quality of Life Instrument (IBS-QOL) is a self-report measure developed to assess the impact of IBS and its treatment. The instrument contains 34 items, rated on a five-point scale. The IBS-QOL was...
translated into 17 Asian languages (Chinese for China, Hong Kong, Singapore and Taiwan; Burmese, Gujarati, Hindi, Hungarian, Indonesian, Kannada, Malay, Persian, Punjabi, Telugu, Urdu, Tamil for India and Singapore, and Malay for Singapore). The objective of this study was to identify the main translation challenges, and which items needed the most references to conceptual definitions. METHODS: In each study, a validation list was conducted with the author of the IR5, QOL, using either the standard forward/backward methodology or the adjusted process with reviews by the author, a clinician, and cognitive interviews with 12 patients. The basis for validation was the list of concepts (LOC) elaborated with the author. For each country, the history of the translation process was analyzed. References/reminders of the LOC and author's interventions were counted for each item across countries. RESULTS: Eleven items were found challenging (items 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13), 31% reported efficacy ranking, and 16% reported or referenced the model terms, 65% presented sufficient data to reproduce the analysis, 90% the study We found notable inconsistencies among NMAs. Eighty percent reported search financial support from non-profit institutions or did not receive support (68%).

PrM120
EVALUATION OF MATCHING-ADJUSTED INDIRECT COMPARISON IMPLEMENTED BY A RESAMPLING METHOD
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OBJECTIVES: Matching-adjusted indirect comparison (MAIC) has been proposed as a new approach to indirect treatment comparisons (ITC). In indirect ITC analysis, individual-level data are available from one study, but only summary data are available from another study. This study evaluated the performance of the MAIC method proposed by Malangone and Sherrman (2011) which is implemented by a resampling (bootstrap) technique. METHODS: Two patient-level data sets, similar to two clinical trials, were generated: the first with treatments A and placebo, and the second with treatments B and placebo. Other variables included in both data sets were survival time censoring indicator, and two baseline categorical variables. In both data sets, interactions between baseline characteristics and treatments were incorporated such that differential treatment effects across baseline strata were present. The SAS program illustrated in Malangone and Sherrman were adopted for the MAIC analysis. MAIC was applied to evaluate the difference in whether individual-level data were available from the first data set and individual-level data were available from the second data set. Subsequently, the roles of two data sets were switched and the MAIC analysis was applied once again. RESULTS: Using MAIC, when the first data set provided summary statistics, the hazard ratio (HR) (95% confidence interval [CI]) for A versus placebo was 0.283 (0.246-0.325); the HR (95% CI) for B versus placebo was 0.586 (0.466, 0.740). When the second data set provided summary data, the HR (95% CI) for A versus placebo was 0.489 (0.390-0.619) and for B versus placebo was 0.237 (0.205-0.273). The two comparisons produced opposite significant differences. CONCLUSIONS: The method proposed by Malangone and Sherrman is an alternative approach in the MAIC field, but results could be misleading under some circumstances. Therefore, the conditions under which this method is suitable should be explored further.

PrM121
A SYSTEMATIC REVIEW OF THE METHODOLOGICAL QUALITY OF NETWORK META-ANALYSES
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OBJECTIVES: To evaluate the methodological quality of published network meta-analyses (NMA). METHODS: We performed a systematic review of the NMA literature (through July 2014). For NMAs including pharmaceuticals we assessed general study characteristics, study reproducibility and transparency, methods and reporting of findings. We compared NMAs published in higher impact factor journals with those published in lower impact factor journals, NMAs published before January 1st, 2013, with those published after that date, and studies receiving financial support from industry with those receiving financial support from non-profit institutions or that did not receive support. RESULTS: The systematic literature search identified 318 NMAs meeting our inclusion criteria. Forty-eight percent of studies published after January 1st, 2013, were published in journals with an impact factor greater than 3.0. Fifty-two percent of all NMAs published before January 1st, 2013, were published in journals with an impact factor greater than 3.0. We found notable inconsistencies among NMAs. Eighty percent reported search terms not consistent with the logic Assessment of data quality and the study characteristics of included clinical trials, and 61% the network diagram. Seventy percent reported a risk of bias assessment of included clinical trials, 56% a sensitivity analysis, and 40% an assessment of model fit. Among NMAs with a closed loop, 70% reported evidence of direct treatment effects. We included four percent of NMAs presented the complete matrix of head-to-head treatment comparisons. For Bayesian NMAs, 41% reported the probability of each treatment being best, 31% reported efficacy ranking, and 16% reported or referenced the model code. NMAs published in higher impact factor journals and those that did not receive financial support from industry performed better across our assessment domains. We did not find substantial differences between NMAs published before January 1st, 2013, with studies published after that date. CONCLUSIONS: There is substantial variation in the NMA literature. Consensus among NMA guidelines is required to improve methodological quality, consistency, and transparency of study conduct and reporting.

PrM122
APPLICATION OF DIFFERENCE-IN-DIFFERENCE METHODOLOGY IN COMPARATIVE EFFECTIVENESS RESEARCH WITH UNBALANCED GROUPS
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OBJECTIVES: Propensity score matching (PSM) and Inverse Probability of Treatment Weighting (IPTW) are analytical methods used in comparative effective research (CER) when comparing outcomes for medications with differences in baseline characteristics; however, these methods may not be applicable in studies with small sample sizes and unbalanced comparison groups. In such cases, where there is an unbalanced design due to unmeasured factors, difference-in-difference (DD) can be applied to estimate treatment effects. This method aims to apply DD to a small sample of multiple sclerosis (MS) patients with unbalanced comparison groups. METHODS: A retrospective study was conducted using MarketScan Commercial Claims and Encounters and Medicare Supplemental and Coordination of Benefits Databases to compare MS patients who switched from glatiramer acetate (GA) to fingolimod (FTY) with another group maintaining continuous use of GA. IPTW and DD were applied to balance the comparison groups; PSM could not be implemented due to imbalance between groups. Using DD, the treatment effect was assessed using instruments similar to 1-year baseline period and the 1-year follow-up period as: (difference in relapses in the GA vs. FTY group) minus (difference in relapses in the GA-only group). RESULTS: IPTW was first employed to balance the treatment comparison group (GA vs. FTY) in 144 groups; despite the use of IPTW, the comparison groups could not be balanced on multiple factors such as patient demographics and clinical characteristics; therefore, DD was utilized to estimate treatment effects. In the baseline and follow-up periods were 30% and 13.8%, respectively (D = 16.2%); in the GA-only group, the percentage of patients with relapse in the baseline and follow-up periods were 14% and 11.5%, respectively (D = 2.5%). The estimated reduction of MS relapse rate from GA to FTY was 13.3% (16–2.5%). CONCLUSIONS: DD is an effective methodology which allows for estimating treatment effects from populations with unbalanced comparison groups.

PrM123
LOW-MOLECULAR-WEIGHT HEPARIN TREATMENT OF DEEP-VEIN THROMBOSIS: A NETWORK META-ANALYSIS
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OBJECTIVES: It is estimated that up to 400,000 persons in Mexico are hospitalized yearly for deep-vein thrombosis (DVT). DVT is the presence of a blood clot (thrombus) in the deep veins of the body. The main objective was to indirectly compare the effectiveness and safety of different LMWHs, and the objective was to evaluate the efficacy of low molecular weight heparins (LMWH) for the treatment of deep-vein thrombosis using a network meta-analysis (NMA). METHODS: To identify suitable studies for a systematic review of treatment with the following conditions: treated with any LMWH, without exclusion criteria; published in MEDLINE, Pubmed, EmbASE, CENTRAL (all via The Cochrane Library), Imbioned, HTA, for relevant studies recorded between 1994 to April 2014. Only randomized controlled trials assessed in adults included in this analysis; studies that had to report the proportion of patients having recurrence of DVT (eficacy) and the proportion of patients having major bleeding (safety). Titles and abstracts were screened, data were extracted and risk of bias assessment was undertaken. Bayesian NMA was used to compare the different treatments. RESULTS: Four studies, assessing four low molecular weight heparins (LMWH), were judged to be sufficiently comparable for inclusion in the NMA. For the proportion of patients having recurrence of DVT or major bleeding, enoxaparin 1 mg/kg twice daily, tinzaparin 175 IU/kg once daily and nadroparin 100 IU/kg twice daily had a higher probability of being more effective and safe than unfractioned heparin. None of the LMWHs demonstrated a significant superiority over each other in terms of efficacy and safety; therefore, the group of LMWHs is suitable for a further cost minimization analysis and reference price implementation. CONCLUSIONS: We found no evidence of differences between tinzaparin, nadroparin and enoxaparin for recurrence of DVT and major bleeding. Tinzaparin may be preferred by clinicians because it is usually given once daily.

PrM124
ALTERNATIVE WEIGHTING APPROACHES FOR MATCHING ADJUSTED INDIRECT COMPARISONS (MAIC)
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OBJECTIVES: The use of indirect comparisons (IC) is now an integral part of the assessments of new and marketed treatments. When two treatments are assessed, individual patient data (IPD), if available, can be used for comparison with published aggregated (AGR) data. Methods exist to assess heterogeneity and inconsistency of IC, however in the absence of sufficient studies, IC may be required, especially when inclusion/exclusion criteria define the existing outcomes and patient characteristics. Signorovitch (2010) has proposed the use of MAIC when IPD is available and provided various methods for matching the IPD to the AGR study. METHODS: Through simulations we assessed different approaches to weight calculations, to compare indirect comparisons methods.