costs. RESULTS: Nexplanon was dominant in the base case and in the majority of the sensitivity analyses. Nexplanon® allows to avoid 1.6% pregnancy per year over hormonal IUD, 7.3% over copper IUD and more than 24.7% over COC with savings of 11.5€ over hormonal IUD, 58€ over copper IUD and more than 868€ over COC. At a threshold of 10,000€ per unintended pregnancy avoided, Monte Carlo simulation additionally considered an €2.0% probability for Nexplanon® to be the most cost-effective method. An alternative analysis was proposed evaluating the cost per abortion avoided. In this analysis, the ICER of Nexplanon® versus copper IUD was €8,886 per abortion avoided while all other methods were strictly dominated.

CONCLUSIONS: Nexplanon® is the most cost-effective strategy when compared to other reimbursed contraceptive methods. Additionally, this analysis demonstrates that Long-Acting Reversible Contraception (LARC) is dramatically more efficient than oral contraception.

PIH20

POPULATION COST-EFFECTIVENESS OF A PARENTING PROGRAM FOR THE TREATMENT OF CONDUCT DISORDERS: A MODELLING STUDY TO ASSIST PRIORITY SETTING IN AUSTRALIA

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OBJECTIVES: Conduct disorders (CD) are common psychiatric disorders in children, and place a huge burden on the individuals and society. Parenting programs are the gold standard for the treatment of CD but little is known about their possible longer-term cost-effectiveness. The study evaluated the population cost-effectiveness of Triple P, the most widely researched parenting program, for the treatment of CD in children from the healthcare sector perspective. A Markov cohort model of economic evaluations undertaken at the Centre for Research Excellence in Mental Health Systems improvement in Australia. METHODS: A population-based Markov model was developed to estimate the cost per quality adjusted life year (QALY) averted of Triple P compared with no intervention. The target population was a cohort of 5-9 year old children with CD in the 2013 Australian population followed through age 25. Multivariate linear models were used to conduct uncertainty analysis. The model parameters and analysis were conducted to incorporate uncertainty in the model parameters and investigate the impact of assumptions in the outcomes. RESULTS: Triple P was evaluated in three formats: Group face-to-face, Self-directed (SD)+telephone assisted, and a mixed provision alternative of 50% Group/50% SD+telephone. Group face-to-face had an incremental cost-effectiveness ratio (ICER) of AU$19 069 per QALY averted with a 989% probability of cost-effectiveness, SD+telephone had an ICER of AU$2 903 per QALY averted with a 0.931 probability of cost-effectiveness; and the mixed provision alternative had an ICER of AU$25 494 per QALY averted with a 0.986 probability of cost-effectiveness.

CONCLUSIONS: Triple P for the treatment of CD is good value for money and should be considered as part of the priority setting process for children with conduct disorders in Australia.

PIH21

BIOSIMILARS, ARE THEY REALLY COST SAVING? THE CASE OF RECOMBINANT HUMAN FOLLICLE STIMULATING HORMONE IN PORTUGAL

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OBJECTIVES: To estimate the cost-effectiveness of the original r-hFSH (Gonal-f) when compared with one biosimilar (Bemfola) using the evidence from a head-to-head trial. METHODS: An Excel decision-tree model was developed depicting the different relevant outcomes that result from fertility treatment with r-hFSH. Probabilities were populated using the data from a head-to-head trial in 2nd variant – korifollitropin alfa plus follitropin beta with garexil and follitropin alfa with cetrorelix for ovarian stimulation. METHODS: Analysis of the published clinical trials was conducted to evaluate comparative efficacy and safety of the treatment for women with PCOS. Additionally, the analysis included drug therapy and hospital treatment. Taking into account the hypothesis of equal effectiveness of using korifollitropin alfa with garexil and follitropin alfa with cetrorelix for ovarian stimulation for pharmacoeconomic analysis was chosen the intervention arm (Gonal-f). Direct medical costs were calculated for 1 patient. In this study were performed 2 variants of ovarian stimulation costs, in 1st variant was compared only korifollitropin alfa with garexil and follitropin alfa with cetrorelix, in 2nd variant korifollitropin alfa plus follitropin beta with garexil and follitropin alfa with cetrorelix. RESULTS: According to published trials korifollitropin alfa was a novel and effective treatment option for potential normal responder patients undergoing ovarian stimulation with gonadotropin co-treatment resulting in high ongoing pregnancy rates, equal to or better than other options. The average cost for 1st variant of a course of korifollitropin alfa with garexil was 34 285 rubles (€ 460), and follitropin alfa with cetrorelix – 65 352 rubles (€ 1 220). The average cost for 2nd variant of a course of korifollitropin alfa plus follitropin beta with garexil was 66 886 rubles (€ 1 249), and follitropin alfa with cetrorelix – 65 352 rubles (€ 1 220). The CMA has shown that annual savings when used for ovarian stimulation 1stvariant without follitropin beta will be 18%. CONCLUSIONS: The use of ovarian stimulation with korifollitropin alfa with garexil was more economically justified treatment option.

PIH22

THE COMPARATIVE PHARMACOECONOMIC ANALYSIS OF USING KORIFOLLITROPIN ALFA WITH GAREXIL AND FOLLITROPIN ALFA WITH CETORELIX FOR OVARIAN STIMULATION

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OBJECTIVES: Corifollitropin alfa, a fusion protein, has a longer elimination half-life and extended time to peak than recombinant FSH (rFSH). The main aim of this study was to compare the pharmacoeconomic analysis of using korifollitropin alfa with garexil and follitropin alfa with cetrorelix for ovarian stimulation. METHODS: Analysis of the published clinical trials was conducted to evaluate comparative efficacy and safety of the treatment for women with PCOS. Additionally, the analysis included drug therapy and hospital treatment. Taking into account the hypothesis of equal effectiveness of using korifollitropin alfa with garexil and follitropin alfa with cetrorelix for ovarian stimulation for pharmacoeconomic analysis was chosen the intervention arm (Gonal-f). Direct medical costs were calculated for 1 patient. In this study were performed 2 variants of ovarian stimulation costs, in 1st variant was compared only korifollitropin alfa with garexil and follitropin alfa with cetrorelix, in 2nd variant korifollitropin alfa plus follitropin beta with garexil and follitropin alfa with cetrorelix. RESULTS: According to published trials korifollitropin alfa was a novel and effective treatment option for potential normal responder patients undergoing ovarian stimulation with gonadotropin co-treatment resulting in high ongoing pregnancy rates, equal to or better than other options. The average cost for 1st variant of a course of korifollitropin alfa with garexil was 34 285 rubles (€ 460), and follitropin alfa with cetrorelix – 65 352 rubles (€ 1 220). The CMA has shown that annual savings when used for ovarian stimulation 1stvariant without follitropin beta will be 18%. CONCLUSIONS: The use of ovarian stimulation with korifollitropin alfa with garexil was more economically justified treatment option.

PIH23

EXAMINING THE ECONOMIC BURDEN AND HEALTH CARE UTILIZATION OF MENOPAUSAL WOMEN IN THE U.S. MEDICARE POPULATION

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OBJECTIVES: To examine the economic burden and health care utilization of menopausal women in the U.S. Medicare population. METHODS: Female patients diagnosed with menopausal symptoms and/or those prescribed estrogen hormone therapy were identified using the U.S. Medicare database from 01/01/2008 through 03/31/2010. The first diagnosis or prescription date was designated as the index date. Control patients were identified during the same time period and assigned a random index date. Patients in both cohorts were required to be aged 40-65 years and have continuous, fee-for-service medical and pharmacy benefits, 6 months pre- and post-index date. Controls were matched to cases based on age, state, race and index study year. Health care resource utilization and costs during the 6-month follow-up period were compared between the menopause and control cohorts. Generalized linear models were used to adjust for differences in baseline and demographic characteristics between the cohorts. RESULTS: A total of 71,076 patients were included in each cohort. Patients in the menopause cohort were significantly more likely to be diagnosed with depression (23.4% vs. 17.3%, p<0.001) and anxiety (11.6% vs. 8.0%, p<0.001) compared to those in the control cohort. After adjusting for baseline and demographic characteristics, significantly more patients in the Menopause Cohort had 10.9% vs. 9.6% vs. 9.3% vs. 9.0% vs. 8.7% vs. 8.4% vs. 8.1% vs. 7.8% vs. 7.6% vs. 7.3% vs. 7.0% vs. 6.7% vs. 6.4% vs. 6.0% vs. 5.6% vs. 5.2% vs. 4.8% vs. 4.4% vs. 4.0% vs. 3.6% vs. 3.2% vs. 2.8% vs. 2.4% vs. 2.0% vs. 1.6% vs. 1.2% vs. 0.8% vs. 0.4% vs. 0.0% (p<0.001) and physician office visits (89.7% vs. 74.8%, p<0.001). Higher health care utilizations translated to higher health care costs for menopausal patients ($7,237 vs. $6,739, p<0.001) compared to controls. CONCLUSIONS: Menopausal symptoms or treated with hormone therapy incurred significantly higher health care utilization and costs compared to women without menopausal symptoms or treatment.

PIH24

COST-EFFECTIVENESS OF RECOMMENDED MEDICAL INTERVENTION FOR TREATMENT OF Dysmenorrhea AND ENDOMETRIOSIS IN JAPAN

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OBJECTIVES: To estimate the cost-effectiveness of conjugated estrogens/bazedoxifene (CE/BZA) compar
Ongoing adherence research involves the use of multi-criteria decision analysis tools to assess research quality, using standardized queries. Original works were summarized using a pre-stabilized set of content indicators. A multi-criteria decision analysis tool was developed to assess adherence behaviors and beliefs.

Objective: This study reviews adherence metrics for Phase IV studies. Methods: We conducted a review of adherence metrics in the public domain. We critically appraised adherence metrics used in Phase IV studies. Results: We identified 70 unique self-report measures of adherence. One quarter (26%) were generic and the remaining were disease specific. Instrument length ranged from one to 78 items. One third (34%) only measured adherence behaviors, 37% only measured beliefs and attitudes, and 29% measured both. Just over one quarter (29%) were developed using a conceptual framework. One-fifth (21%) involved qualitative patient input during item generation or pre-testing.

Conclusion: There is a need for adherence metrics with improved face validity, content validity, and construct validity. Adherence metrics must be improved to address patients' beliefs about the need for the medication and perceived need for the medication, perceived medication concerns, lack of perceived drug value, willingness-to-pay, adherence to poly-pharmacotherapy, and beliefs about medication value.

**PH29**

**PREFERRED NO-ADHERENCE AS DERIVED FROM THE PEAR-REVIEWED LITERAT**

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**OBJECTIVES:** Primary non-adherence (PNA) has been found to range from 1% to 5% with a mean and median of 16.4% and 15%, respectively. We abstracted patient-centered reasons for PNA and their prevalence from the peer-reviewed literature. Methods: A backward search of each abstracted article was performed as well as a review of each abstracted article's reference list. Patient-provided reasons for PNA were abstracted from each reviewed article. Results: A total of 131 articles met search-term criteria, and 19 contained patient-provided reasons for PNA. Eleven additional articles were identified from review citation searches and/or review of the 19 article’s reference list for a total of 30 studies. Fifty unique reasons for PNA were abstracted. After qualitative analysis, they were reduced to seven mutually-exclusive reasons. Prescription medication affordability was the most common reason for PNA (80% of studies), followed by lack of perceived need for the medication (67% of studies), perceived medication concerns (53% of studies), lack of perceived drug value (33% of studies), access barriers (33% of studies), patient knowledge (27% of studies). Conclusions: PNA is common both in patients and providers. Few adherence interventions have been developed and evaluated for PNA. The first step in developing adherence interventions for PNA is to gain an understanding of patient-centered reasons for PNA. This review identified the seven foremost reasons for PNA from 30 published studies. These seven reasons were: prescription-medication affordability, lack of perceived need for the medication, perceived medication concerns, lack of perceived drug value, willingness-to-pay, access barriers, and patient knowledge. Researchers should standardize the content of PNA reasons to facilitate comparisons across patient samples. Many of these reasons are addressed with patient-centered counseling at the time of prescribing. If we are to reduce PNA, doctor-patient communication must be improved to address patients' beliefs about the need for the medication and its concerns.

**PH30**

**A NOVEL METHOD FOR CALCULATING MEDICATION ADHERENCE TO POLY-MEDICATION TO Poly-pharmacotherapy by combining general practice prescribing data and pharmacy dispensing records.**

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**Objective:** An adherence measure was developed for mono-pharmacotherapy, such as the Medication Possession Ratio (MPR), are not appropriate to calculate adherence to poly-pharmacotherapy. These standard metrics tend to overestimate adherence because patients may not consistently receive all their medications. This study aimed to develop a new method for calculating medication adherence across a poly-pharmacotherapy prescription to poly-pharmacotherapy. The proposed metric is the multi-Medications Prescribing Ratio (mMPR).

**Methods:** We evaluated existing methods for calculating medication adherence from dispensing data records. Standards for estimating medication adherence to poly-pharmacotherapy were defined. A new approach to calculate adherence to poly-pharmacotherapy was developed. Results: The proposed new approach for estimating medication adherence to poly-pharmacotherapy consists of 2 novel indexes (the multiple-Medications Prescribing Ratio [mMPR] and the multiple-Medications Possession Ratio [mMPR]) and a medication adherence visualization tool (the Prescription and Medication Possession Graph [PMPG]). The mMPR is for calculating adherence to prescribed medications and the mMPR to [refill prescriptions. The PMPG completes the mMPR and the mMPR with indicating medication adherence in time and allowing to evaluate tendencies in the observation period. Among other parameters, number of medications, therapeutic indication, treatment length (e.g., chronic conditions requiring periodic treatment), dosage, generic and therapeutic switching, therapeutic duplication, and oversupply were considered for the construction of mMPR. The mMPR and the PMPG face validity of the approach were demonstrated with four illustrative cases (i.e., generic switching, therapeutic duplication, oversupply, periodic treatment). Conclusion: The proposed new method enables standardized analyzing adherence to poly-pharmacotherapy compared to MPR. The mMPR, the mMPR, and the PMPG would allow GPs to identify substantial adherence issues during consultations and could be routinely used to enhance medication adherence in countries where GPs have access to pharmacy dispensing records of their patients such as in Hungary.

**PH31**

**INCONSISTENCY IN THE EVALUATIONS OF EUROLQ EQ-5D-5L HEALTH STATES IN CHINA WAS MORE REVEALED TO INTERVIEWER AND TO INTERVIEWEE THAN TO RESPONDENTS’ CHARACTERISTICS**

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**Conclusions:** Using the VAS method enabled to use the EQ-5D-5L to compare health status in China and other countries. Using the EQ-5D-5L may allow obtaining consistent health status evaluations in China. In China, inconsistent evaluations were more revealed to the interviewer and the interviewee than to respondents’ characteristics.