and gender, including physician visits, pain-clinic visits, psychology-clinic visits, and ED visits. In the 75-84 years age group, frequency of utilization was higher by 22%, 39%, 45% and 48% for these health care resources, respectively.

CONCLUSIONS: Epidemiology of HZ in Israel is similar to that reported for other countries. This illness presents a burden on the elderly population and is related with increased resource utilization.

PIH17 COST BENEFIT ANALYSIS ON THE LONG TERM EFFECTS OF IN VITRO FERTILIZATION (IVF) IN GREECE: AN ANALYSIS BASED ON A LIFETIME MODEL

Fragoulakis V, Maniadakis N
National School of Public Health, Athens, Greece

OBJECTIVES: To quantify the economic effects of in vitro-fertilization (IVF) born persons in terms of productivity gains and net tax revenues for the state in Greece.

METHODS: A mathematical model was developed to assess the lifetime productivity and transactions between an individual and the governmental agencies. The model was developed for the lifetime economic life: 0-100 years, when the government primarily contributes resources through child tax credits, health care, and educational expenses; 2) employment, when individuals begin returning resources through taxes; and 3) retirement, when the government expects additional resources on Social Security and old-age programs. Cost of life birth with IVF was based on a modification of a previous published model developed by the authors. All outcomes were discounted at a 3% discounting rate. The data inputs, namely the economic or demographic variables, were derived from randomized placebo controlled trial with sertraline and one with Premalex, reporting a decrease (95%UI: 200,295 (95%UI: 163,726 - 236,805). The average projected income generated by an individual throughout his productive life, was €200,295 (95%UI: 163,726 - 236,805). Hence, the net present value of IVF was €930,187 USD (€244,553 - €1,192,215) representing a 54% net return on investment. Results remained constant under various assumptions for the main model parameters. CONCLUSIONS: State-funded IVF represents good value for money in the Greek setting, as it has positive tax benefits for the government, notwithstanding its beneficial psychological effect for infertility couples and the overall productivity gains.

PIH18 CLINICAL EFFICACY AND COST-EFFECTIVENESS OF ADDITIONAL IMMUNOTHERAPY IN EARLY-ONSET NEONATAL INFECTIONS

Soldatova I1, Pankratyeva L2, Degtyareva M2, Volodya L3
1Research Center for Clinical and Economic Evaluation and Pharmacoeconomics, Russian National Research Medical University, Moscow, Russia; 2Russian National Research Medical University, Moscow, Russia; 3Scientific Clinical Centre of Pediatric Hematology, Oncology and Immunology, Moscow, Russia

Infections are a major contributor to neonatal mortality and morbidity levels all over the world. OBJECTIVES: To assess clinical efficacy and cost-effectiveness of additional immunotherapy in neonates with severe infections in neonatal intensive care unit (NICU). METHODS: We observed 375 neonates (gestational age (GA) 25-41 weeks) with severe early-onset infections in NICU. Fifty-two neonates with hypogammaglobulinemia were treated with normal human immunoglobulin (NHI), 94 neonates with lymphopenia were treated with human interleukin-2 (HI2), 94 neonates with low mitogen-induced interferon-N production treated with interferon-α2b. A total of 144 were under standard treatment without additional immunotherapy. RESULTS: Administration of NHI reduced NICU length of stay and mortality rates from severe infection (p = 0.07); OR = 0.36 [0.13; 0.98]; RR = 0.41 [0.17; 0.98]; NNT = 9 [4, 214]. Administration of immunotherapy in early-onset neonatal infections leads to substantial cost savings up to €168,896 per patient in case of NICU treatment. €60,910 per patient in case of HI2 treatment and €31,843 per patient in case of NHI treatment. CONCLUSIONS: Administration of immunotherapy in early-onset neonatal infections is a cost-effective intervention that allows to reduce mortality rates and save money.

PIH19 COST EFFECTIVENESS OF PREMALLEX (ESCITALOPRAM) COMPARED TO SERTRALINE FOR TREATMENT OF PMDD (PREMENSTRUAL DYSPHORIC DISORDER). BASED UPON THE CGI-S

Björk-Linné A1, Borg S2, Eriksson E3, Velin B4
1Research Center for Clinical and Economic Evaluation and Pharmacoeconomics, Russian National Research Medical University, Moscow, Russia; 2Russian National Research Medical University, Moscow, Russia; 3University of California, Los Angeles, CA, USA; 4Justus-Liebig University Giessen, Giessen, Germany; 5Universitatsklinikum Carl Gustav Carus at the Technische Universität Dresden, Dresden, Germany

OBJECTIVES: To compare the effectiveness and cost-effectiveness of escitalopram (Premalex) versus sertraline for the treatment of moderate to severe premenstrual dysphoric disorder (PMDD) with Premalex compared to sertraline. RESULTS: Premalex significantly improved clinical symptoms. The average projected drug cost per patient was €9,420 (95%UI: 6,215 - 12,625). Administration of escitalopram was more cost-effective than sertraline. An estimated gain of 0.047 QALYs with Premalex compared with sertraline was given an incremental cost per QALY gained of SEK 4220 (€570). Administration of Premalex was more cost-effective than sertraline, leading to an overall gain of 0.013 QALYs and a savings of SEK 1600 per three years with Premalex compared to sertraline. CONCLUSIONS: Treatment of PMDD with Premalex is cost effective compared to sertraline, from a societal perspective.

PIH20 COST-EFFECTIVENESS OF SUPPLEMENTAL N-3 IN TOTAL PARENTERAL NUTRITION THERAPY IN THE ITALIAN, FRENCH, GERMAN AND UK CONTEXT: A DISCRETE EVENT SIMULATION MODEL

Pradelli L1, Endi M2, Povero M2, Mayer K2, Heller AR3, Muscaritoli M4
1Adresa REL.OR, Turin, Italy; 2University of Torino, Torina, Italy; 3Justus-Liebig University Giessen, Giessen, Germany; 4Universitatsklinikum Carl Gustav Carus at the Technische Universität Dresden, Dresden, Germany

OBJECTIVES: A very recent Meta-Analysis shows that the addition of Omega-3 fatty acids to standard Total Parenteral Nutrition (TPN) is associated with reductions in infection rate, ICU, and overall length of stay (LOS) for both Intensive Care Unit (ICU) and elective surgery patients. Aim of this study is the CE analysis of its use in these patient populations, as compared to standard lipid emulsions. METHODS: Within a Discrete Event Simulation (DES) scheme, a patient-level simulation model was developed, with the inclusion of baseline outcomes rates from the Italian ICU patient population and from published literature, comparative efficacy data for standard and Omega-3 fatty acids-based regimens from the meta-analysis of published randomized clinical trials (conducted on 23 studies with a total of 1502 patients). Sensitivity and economic outcome analyses were performed to test the robustness of these findings. CONCLUSIONS: These results indicate that the addition of Omega-3 to standard TPN is expected to improve clinical outcomes and concurrently give a saving for Italian, French, German and UK hospitals.

PIH21 HEALTH ECONOMIC EVIDENCE IN SUPPORT OF A LOW-DOSE CONTRACEPTIVE LEVONORGESTREL INTRAUTERINE SYSTEM (LNG-IUS 12) IN THE UNITED STATES FROM A THIRD-PARTY PAYER’S PERSPECTIVE

Trussell J1, Hassan F2, Henry N2, Law A3, Pocks1 J, Filonenko A4
1Princeton University, Princeton, NJ, USA; 2JMS Health, London, UK; 3 Bayer Healthcare Pharmaceuticals, Inc., Wayne, NJ, USA; 4Bayer Pharma AG, Berlin, Germany

OBJECTIVES: LNG-IUS 12 is a low-dose levonorgestrel intrauterine contraceptive system for up to 3 years use with an average in vitro release rate of 12ug of levonorgestrel per day. This study was conducted to estimate the relative cost-effectiveness of LNG-IUS 12 versus short-acting reversible contraception (SARC) in the United States from a third-party payer’s perspective. METHODS: A Markov model was constructed to compare the effectiveness and costs of LNG-IUS 12 and SARC over a 5-year period in a cohort of 1000 women aged 20 to 29 years, the age group in which most unplanned pregnancies occur. SARC methods comprise contraceptives commonly used by this age cohort, including oral contraceptives, the ring, the patch and injections. Primary health state included initial/continued use of contraceptive method and method failure (unplanned pregnancies). The impact of switching methods was also incorporated into the model and tested through sensitivity analysis. RESULTS: Estimates for probabilities of failure and discontinuation, resource utilization and costs were derived from a large national observational database and were used. A Premalex dose of 15 mg, the average of 10 and 20 mg, was assumed as a standard TPN both in ICU and in non-ICU patients: in all the four national contexts here considered, reduced mortality rates, infection rates, and overall LOSYs yield a lower total cost per patient. Treatment costs are completely offset by the reduction in hospital costs and antibiotic costs. Sensitivity analyses confirmed the robustness of these findings. CONCLUSIONS: These results indicate that the addition of Omega-3 to standard TPN is expected to improve clinical outcomes and concurrently give a saving for Italian, French, German and UK hospitals.

PIH22 CLINICAL EFFICACY AND COST-EFFECTIVENESS OF HUMAN RECOMBINANT INTERFERON-α2B IN NEONATAL INFECTIONS

Soldatova I1, Pankratyeva L2
1Research Center for Clinical and Economic Evaluation and Pharmacoeconomics, Russian National Research Medical University, Moscow, Russia; 2Russian National Research Medical University, Moscow, Russia

OBJECTIVES: To investigate the cost effectiveness of intermittent treatment of PMDD (premenstrual dysphoric disorder) with Premalex (escitalopram) 20 mg compared to standard treatment with sertraline 50-100 mg based upon the Clinical Global Impressions – Severity (CGI-S), from a societal perspective. METHODS: We identified one randomized placebo controlled trial with sertraline and one with Premalex, reporting the CGI-S as an outcome. Using placebo, the CGI-S was used to make an indirect effect comparison between Premalex and standard treatment. The CGI-S was translated into QALY weights, through the proportion of time spent with a high degree of the anxiety/depression in the EQ-SD. Costs of health care visits were estimated using a local treatment pattern survey among GPs and gynaecologists. Official drug prices were used. A Premalex dose of 15 mg, the average of 10 and 20 mg, was assumed as a
OBJECTIVES: To assess clinical efficacy and cost-effectiveness of human recombinant interferon-α2b for the treatment of moderate to severe neutropenic patients with intravenous infections in neonatal intensive care unit (NICU). METHODS: We observed 151 neonates (gestational age (GA) 25-46 weeks) with severe intravenous infections in NICU. Group 1 included 94 neonates with severe intravenous infections treated with interferon-α2b, 150 000 IU per suppository twice a day per rectum during 7 days in addition to combined anti-bacterial antibiotic therapy, group 2 consisted of 57 neonates observed for 7 days of treatment without additional immunotherapy. Initially neonates of both groups were comparable. Effectiveness data were used to populate a decision model to estimate the cost-effectiveness of interferon-α2b and standard therapy. Direct and indirect costs were calculated. Published and our own cost data were applied to assess differences in treatment costs. RESULTS: Low mitogen-induced interferon-α production (<12 pg/ml) was detected in 25% [18%; 33%] of neonates with severe intravenous infections, its association with significantly higher incidence of pneumonia (p<0.01), necrotizing enterocolitis (p<0.01) and urinary tract infections (p<0.026) was proven. TAP therapy, reducing fever and suffering from severe infections, provides improvement of mitogen-induced production of interferon-α, reduces hospital length of stay and mortality rate (p=0.009, OR = 0.21 [0.05; 0.67], RR = 0.26 [0.07; 0.69], NNT=8 [4.29]). Interferon-α2b administration for severe early-onset neonatal infections decreases direct costs per patient by 20% (direct cost per patient €6,802 and €8,549 for interferon-α2b and control groups, respectively). Interferon-α2b administration for intravenous infections leads to substantial cost savings (up to € 69,247 per patient). CONCLUSIONS: Immunotherapy with interferon-α2b as a cost-effective intervention improves the clinical course and outcome in case of severe intravenous infections.

PH23

A DISCRETE EVENT SIMULATION MODEL USED FOR PHARMACOECONOMIC EVALUATION OF OMEGAVENT® IN THE CHINESE SETTING

Hu Silva1,2, Liao L3, Liu F4, Kulkarni H5, Dai Y6
1Center for Health Development Research, Shanghai Bureau of Health, School of Public Health, Fudan University, Shanghai, China;
2Adhes H埃KOR, Turin, Italy;
3Fudan University, Shanghai, China;
4China Medical Information Co., Ltd., Hong Kong

OBJECTIVES: Several published studies have demonstrated that the supplementation of Omegaven® has better clinical outcomes in Systemic Inflammatory Response Syndrome (SIRS) or elective major surgery patients treated in Intensive Care Units (ICUs), with shorter average lengths of stay in hospital and reduced mortality rate, as compared to standard total parenteral nutrition (TPN) regimens. The objective of the simulation study was to evaluate the CE of the supplementation of Omegaven® vs standard TPN in the Chinese setting. METHODS: A discrete event simulation (DES) model was constructed to compare the nutritional strategies in elective surgery and SIRS patients, by combining outcomes recorded in 79 elective major surgical patients and 56 SIRS patients receiving TPN in the surgical ICU of a tertiary hospital in Shanghai. Omegaven® efficacy estimates from random effects Bayesian meta-analysis on Chinese and international clinical trials, and Chinese tertiary hospital in Shanghai. Omegaven® efficacy estimates from a random effects simulation (DES) model was constructed to compare the nutritional strategies in elective surgery and SIRS patients, respectively.

PH24

ECONOMIC EVALUATION OF ULIPRISTAL ACETATE TABLETS FOR THE TREATMENT OF PATIENTS WITH MODERATE AND SEVERE SYMPTOMS OF UTERINE FIBROIDS

Nagy B7, Tíma G7, Jozwik-Hagymási F5, Kovacs G5, Merész G5, Vámossy I5, Agh T4, Füzesi L4, Yao K2, Kalo Z2
1ELTE, Budapest, Hungary;
2Sígyerek Research Institute, Budapest, Hungary;
3Gedeon Richter Plc., Budapest, Hungary;
4Semmelweis University, Budapest, Hungary;
5Bajcsy-Zsilinszky Hospital, Budapest, Hungary;
6Eötvös Loránd University, Budapest, Hungary

OBJECTIVES: Ulipristal acetate - a selective progestosterone receptor modulator - was proved to be effective for 3 month pre-operative treatment of moderate to severe symptoms of uterine fibroids in adult women of reproductive age. The aim of this analysis was to assess the cost-effectiveness of ulipristal acetate 5 mg as an add-on therapy to standard pre-surgical treatment in Hungary. METHODS: A Markov state-transition economic model was developed over 10 year time horizon. Ulipristal acetate was compared to 1) pre-surgical observation, and 2) immediate hysterectomy with or without hysterectomy in healthy state: non-obstetric complications, bleeding disorder, heavy bleeding disorder, persistent heavy bleeding disorder, myomectomy, post-myomectomy with no/mild bleeding disorder, post-myomectomy with heavy bleeding disorder, hysterectomy, post-hysterectomy, post-menopa and death. Transition probabilities and utility values were drawn from the Pearl Institute for Health Technologies Literature Evaluation. Incremental costs were derived from the consensus panel of clinical experts and National Health Insurance Fund tariffs and publications. Costs and QALYs were discounted at a yearly rate of 3.5%. RESULTS: Addition of 3 month ulipristal acetate to the standard pre-operative therapy was predicted to achieve an additional 0.019 QALYs compared to ob-

PH25

TESTOSTERONE REPLACEMENT THERAPY IN MALES WITH HYPOGONADISM IN SWEDEN: A COST-EFFECTIVENESS ANALYSIS

Arver S1, Fischke A2, Loos B3, Ghatariak O2, Stansio S3, Mueller K3
1Karolinska Institutet, Stockholm, Sweden, Sweden;
2Bayer Pharma AG, Berlin, Berlin, Germany; 3The Swedish Institute for Health Economics, Lund, Skane, Sweden

OBJECTIVES: Testosterone replacement therapy (TRT) is recommended for the treatment of primary and secondary hypogonadism. However, long-term implications of this therapy have not been investigated extensively. Therefore, the aim of this analysis was to evaluate health outcomes and costs associated with life-long TRT in patients suffering from Klinefelter syndrome and late-onset hypogonadism (LOH). METHODS: A Markov model was developed to assess cost-effectiveness of testosterone undecanoate (TU) depot injection treatment compared with no treatment. Health outcomes and associated costs were modeled in monthly cycles per each patient individually along life-time horizon. Modeled health scenarios included development of type 2 diabetes, depression, cardiovascular and cerebrovascu-

PH26

SOCIAL IMPACT OF ADALIMUMAB IN THE ITALIAN PERSPECTIVE

Marcelli A1, Gitti L2, Gianinnonti P3, Russo S3, Menin F2
1University of Rome, Rome, Italy, Italy;
2University of Rome, Rome, Italy, Italy;
3University of Rome, Rome, Italy

OBJECTIVES: The assessment of indirect costs represents an extremely important issue when managing chronic diseases. Patients’ lost productivity is often over-

PH27

ANALYSIS OF NEONATAL AND PEDIATRIC PARENTERAL NUTRITION IN BELGIUM

Walter F1, Dragostis A1, Noersens K2, De Bosschere H1, Blom H1, Maton F4
1Institute for Pharmacoeconomic Research, Vienna, Austria, Austria;
2U.Z. Brussel, Brussels, None, Belgium;
3TU Wien, Vienna, Vienna, Austria;
4Institute for Health Technology Assessment, Gent, Belgium

OBJECTIVES: Parenteral nutrition (PN) is critical in neonatal and pediatric care for patients unable to tolerate enteral feeding. Considering the limited cost data on pediatric PN in Belgium, the aim of this study was to evaluate total Belgian PN costs when admixtures are produced in-house, either in a pharmacy or in the ward. METHODS: A cost-model was used to assess the following: nutrient costs; labor costs (personnel costs to prescribe and prepare); disposables costs (supplies used);