measure cost-effectiveness. RESULTS: The total costs for the average patient are lower when using menotrophin (DKK 13,324; 95% CI: 12,583−14,282) compared with rFSH (DKK 15,852; 95% CI: 15,164−16,614). Furthermore, the cost per clinical pregnancy was lower with menotrophin (DKK 59,282; 95% CI: 50,207−72,056) compared with rFSH hormone (DKK 82,474; 95% CI: 68,389−102,867). Menotrophin is therefore less expensive both to the patient as well as to the health care sector. A result which was supported by a bootstrap analysis with 1000 replications. Use of menotrophin can result in savings up to 16 million DKK on the drug budget per year. Savings that could finance 1400 additional IVF cycles. CONCLUSION: The analysis has shown that menotrophin compared with rFSH is a cost-effective choice that is rational to the society and to the health care sector leading to savings to the patient and the drug budget.

### PIH3

**VACCINATION WITH RIX4414 IS COST-EFFECTIVE IN A BELGIAN SETTING**

Fruytier A1, Van Schoor J2, Standaert B3

1UCI, Marche, Luxembourg, Belgium, 2GlaxoSmithKline Belgium, Genval, Brabant, Belgium, 3GlaxoSmithKline Biologicals, Rixensart, Belgium

OBJECTIVES: RIX4414, an oral live-attenuated human rotavirus (RV) vaccine, has shown to be highly protective against RV gastroenteritis. The question rises whether the implementation of vaccination is a cost-effective (CE) management strategy.

METHODS: An economic modelling exercise was performed to evaluate the CE of vaccination in a Belgian setting. The model used a Markov process tree, the cycle length was one month with a lifetime horizon. Effect of seasonality of the infection and of breastfeeding protection was captured through the model. Acute diarrhoea events were recorded until the age of 5. Assumed was that the risk for acute RVGE rapidly decreases after age 5 due to the acquired natural immunity. Estimates on RV epidemiology were obtained from Belgian databases and literature. QALY was the overall effect measure. Utility-score estimates for age-groups and health states were obtained through the EQ-5D from a UK study. The vaccine effect was as reported from phase IIIb European trial (102247-NTC0014686). Annual discount rates for cost and effect measures were 3% and 1.5%, respectively. 100% coverage was assumed in base-case analysis but sensitivity analyses were performed on key variables in the model.

RESULTS: The model estimated the direct medical cost (DMC) at around €6.75 million/year (hospitalisation costs accounted for 64%), whilst indirect costs accounted for an additional €12 million/year. Threshold for being CE was set at €50,000/QALY. The analysis indicated that over a lifetime horizon vaccination with RIX4414 is cost-effective including only DMC (€774/dose). This strategy with the same price/dose induced cost savings when also indirect costs were included in the equation. Sensitivity analysis indicated that when emergency visits and hospitalisation rates were substantially reduced (<20%) vaccination was cost-effective when DMC and indirect costs were considered. CONCLUSIONS: RIX4414 vaccination is a cost-effective strategy in a Belgian environment selecting a wide variety of scenarios in a societal perspective.

### PIH5

**COST-EFFECTIVENESS OF DUTASTERIDE IN THE TREATMENT OF BENIGN PROSTATIC HYPERPLASIA (BPH)**

Kaczor M1, Pawlik D2, Becla L, Dardzinski W, Jasinska A1, Wojcik R1, Walczak J1, Nogas G, Cel M, Glogowski C1, Zespół-Instytutu A1

1Arcana Institute, Cracow, Poland, 2GSK Commercial Sp. z o.o., Warsaw, Poland

OBJECTIVES: To compare the clinical and cost-effectiveness of dutasteride with placebo and finasteride in BPH. METHODS: Systematic review according to Cochrane Collaboration guidelines and clinical effectiveness analysis according to Polish Pharmacoeconomic Guidelines were performed. In the absence of relevant head-to-head RCT dutasteride vs finasteride on clinical hard endpoints, meta-analysis was performed using an indirect comparison, with placebo as the common reference (Bucher method). Cost-effectiveness Markov model was performed from payer perspective (health insurance), using costs data from published sources and a lifetime horizon. RESULTS: Dutasteride vs placebo: 3 clinical trials were included. Dutasteride treatment was associated with statistically significantly greater reduction in urological symptoms (AUA-SI scale) compared to placebo, with difference in changes of 1.1, 1.4 and 2.2 points after 12, 18 and 24 months, respectively. There was statistically significant difference in BPH Impact Index after 6 months (p < 0.005) and after 24 months of follow-up (p < 0.001). Dutasteride significantly reduced risk of acute retention of urine (OR = 0.42), prostate cancer (OR = 0.56) and necessity of surgical intervention (OR = 0.51). Average costs (including costs of drugs, complications and prostate cancer treatment) and effects (life-years with no surgery/prostate cancer) were: dutasteride 5298 PLN/8 LY; placebo 2426 PLN/6.25 LY. ICER for dutasteride vs placebo comparison was 1645 PLN/LY without surgery/prostate cancer. Dutasteride vs finasteride: 12 trials were included (1 direct and

### PIH4

**THE COST EFFECTIVENESS OF IVF IN ITALY: IMPLICATIONS OF A NEW LAW**

Dale PL

United BioSource Corporation, London, UK

OBJECTIVES: The Italian government recently banned embryo cryopreservation for in vitro fertilization (IVF). The objective of this study was to compare the cost effectiveness of IVF with and without the option of embryo freezing over three cycles of IVF from the Italian NHS perspective. METHODS: A decision analytical model was developed to evaluate the cost and cost-effectiveness of two potential treatment approaches in couples attempting IVF: (A) To perform three IVF fresh cycles including the option of frozen embryo transfer; and (B) To perform three IVF fresh cycles with no frozen embryo transfer. No treatment was used as the reference strategy. Efficacy data were derived from clinical trials and the Italian IVF registry. A micro-costing approach was used to determine the cost of fresh and frozen IVF cycles. Drug costs and hospitalization costs were derived from published sources. The primary outcome was measured in terms of a live birth. Uncertainty surrounding the CE ratio was tested using one-way sensitivity analysis. RESULTS: The model predicted a cumulative live birth rate after three completed IVF cycles of 30.9% in the strategy using cryopreservation compared to 25.3% in the IVF without cryopreservation approach. The total cost per treatment was €4905 with the no frozen embryo transfer strategy versus €5453 for the frozen embryo transfer. The strategy to perform IVF without cryopreservation was extensively dominated by the combination of no treatment and IVF plus cryopreservation strategies. The incremental cost per additional live birth was €21,863 for the IVF with embryo cryopreservation compared to the no treatment alternative. Results were most sensitive to variations in the cost of an IVF treatment cycle. CONCLUSIONS: Providing three cycles of IVF with the frozen embryo option on the National Health Service in Italy compares favorably to the option of allowing infertile couples only three cycles of IVF.
11 indirect comparisons). All the results were obtained from indirect comparison. Dutasteride, compared to finasteride, significantly improved AUA-SI score (WMD = 1.53), and influenced PSA concentration (WMD = −1.33). Average costs (including drugs costs, complications and prostatic cancer treatment) and effects (LY with no surgery/prostastic cancer) were per patient: dutasteride 5655 PLN/6.23 LY; finasteride 6081 PLN/5.13 LY. Dutasteride was dominant therapy compared with finasteride (more effective and less costly). CONCLUSIONS: Dutasteride is clinically more effective and more cost-effective in BPH compared to both placebo and finasteride.

PIH6
ECONOMIC EVALUATION OF CARBETOCINE FOR THE PREVENTION OF UTERINE ATONY IN PATIENTS WITH RISK FACTORS IN MEXICO
Del Angel-García O1, García-Contreras P2, Constantino-Casas P2, Nevarez-Sida A1, López-González N1, García-Constantino M1, Zuluiga M1
1Instituto Mexicano del Seguro Social, México City, Mexico; 2Mexican Institute of Social Security, México, Distrito Federal, Mexico; 3Mexican Institute of Social Security, México City, Mexico

OBJECTIVE: To evaluate the cost-effectiveness of IMSS formula that was used to prevent uterine atony in patients with risk factors. METHODS: A final report of a randomized pragmatic clinical trial at the Mexican Institute of Social Security (IMSS) is presented. Carbetocine and oxytocin are the only drugs within IMSS formula for preventing uterine atony. Risk factor included fetal macrosomia, polyhydramnios, low insertion of the placenta, multiple gestation, prolonged labor, uterine myomas and chorioamnionitis. The effectiveness was defined as the reduction of the number of patients with uterine atony. The use of resources was obtained from the clinical trial and the costs were obtained from financial information from IMSS, and are expressed in US 2006 dollars. Squared ji and U de Mann Whitney test were used. Univariate and probabilistic sensitivity analyses, a Monte Carlo microsimulation with 10,000 iterations was performed using probability distribution data from the clinical trial. A 95% confidence interval of ICER was calculated by ellipse method.

RESULTS: Seventy-seventeen patients received carbetocine and 75 oxytocin. Both groups had similar obstetrics and sociodemographic characteristics. Uterine atony was reported in 19% in the carbetocine group and 500–1000 mL in the oxytocin one (p < 0.0001). Mean cost per patient treated with carbetocine was $3525 vs. $4054 for oxytocin (p < 0.0001). Mean cost-effectiveness ratio for oxytocin was $4944, while for carbetocine $3874; ICER showed that carbetocine was dominant. Univariate analysis supported those results. The acceptability curve and health net benefits showed that carbetocine group was superior independently of WTP. CI 99% by ellipse method showed that carbetocine was dominant in 100% of cases. CONCLUSIONS: Carbetocine was dominant in preventing uterine atony in patients with risk factors.

PIH7
COST-EFFECTIVENESS OF SINGLE-EMBRYO-TRANSFER (SET) VERSUS DOUBLE-EMBRYO-TRANSFER (DET) STRATEGIES IN IN-VITRO FERTILIZATION
Poulsen PB1, Ingerslev HJ2, Kesmodel U1, Heegaard A1, Pinborg A1, Henriksen TB1, Ottosen LD4
1MUUSMANN Research & Consulting AS, Kolding, Denmark; 2Fertility Clinic, Aarhus University Hospital, Århus N, Denmark; 3Institute of Epidemiology and Social Medicine, University of Aarhus, Aarhus, Denmark; 4Fertility Clinic, Aarhus University Hospital, Aarhus N, Denmark

OBJECTIVE: As part of a health technology assessment comparing a single-embryo-transfer (SET) in In-Vitro Fertilization (IVF) with the traditional double-embryo-transfer (DET) used today in Denmark the cost-effectiveness of SET was compared with DET. The aim was to inform decision-makers about the economic consequences of the eventual adoption of a SET policy in Denmark. METHODS: The analysis was based on prospective collection of resource use and costs of singletons and twins. A total of 213 pregnant women at the fertility clinic have been reporting resource use (health care and so-cial sector), and years absent from work in cost diaries during a year (from pregnancy scan to until three months after delivery). Clinical effectiveness data of SET and DET came from a Scandinavian multi-center trial, and a recent Cochrane review. RESULTS: The advantage of SET is delivery of few expensive twins compared with DET (25%). The cost-effectiveness per clinical pregnancy of DET (DKK 115,321 per clinical pregnancy and DKK 120,934 per delivery) was lower than using that of SET (DKK 131,446 per clinical pregnancy and DKK 149,833 per delivery). The cost-effectiveness of DET is explained by a higher clinical pregnancy rate, a higher rate of delivery, and more children born. However, DET is also a more expensive alternative for the average patient treated, because of higher costs for delivery and neonatal care. The extra cost per patient using DET is around DKK 82,000 per extra child born using DET. CONCLUSION: The cost per delivery and per child born is lower using DET compared with SET. However, the total costs for DET is higher due to higher antenatal, delivery and neonatal costs, as well as production loss. A higher rate of twin deliveries using DET explains this. These extra costs using the more effective DET policy are moderate.

PIH8
PROPORTION OF HERPES ZOSTER (HZ) PATIENTS DEVELOPING POST-HERPETIC NEURALGIA (PHN) AND ITS MANAGEMENT IN THE UK
Gauthier A1, Remy V1, Martin M1, Pedalino B2
1i3 Innovus, Uxbridge, Middlesex, UK; 2Sanofi Pasteur MSD, Lyon, France

Quantitative information on the management of PHN, a complication of HZ, is scarce, with the most recent data from 1975. With the imminent arrival of a prophylactic Zoster vaccine, it is important to document the burden of PHN in the UK. OBJECTIVES: To estimate the proportion of HZ patients developing PHN, the duration, resource use and costs of PHN sufferers, using two definitions: pain persisting one (1-month definition) or three months (3-month definition) after HZ onset. METHODS: Records of immuno-competent individuals of ≥50 years, diagnosed with HZ between 2000 and 2005, and with ≥1-year follow-up were selected from the UK General Practice Research Database (GPRD). PHN episodes were identified by formal diagnosis and prescriptions of typical neuropathic pain medications.