

agent. **METHODS:** A comprehensive search of MEDLINE, PsycINFO and EMBASE was undertaken in October 2015 which identified 224 studies; studies were classified by the morbidity and clinical area investigated and categorised by evidence level. Randomised controlled trials were primarily used to assess treatment effectiveness. The economic evaluation compared intramuscular testosterone undecanoate to no treatment. Direct treatment costs were calculated and fracture risk reduction estimates (using FRAX® tool) made for a series of example patients with differing characteristics using an economic model. **RESULTS:** Treatment length, dose and administration route of TRT were important factors in bone mineral density changes. However, studies measuring changes in metabolic parameters of men with diabetes reported conflicting findings and there was little evidence of effectiveness regarding the other morbidities associated with ageing. Safety concerns regarding cardiovascular risk remain uncertain. TRT was not found to be a cost-effective anti-fracture treatment, with calculated costs per hip fracture avoided estimates ranging from £75,000-£600,000. **CONCLUSIONS:** The evidence base remains insufficient for TRT via any route to be confirmed as an effective anti-ageing treatment and so its use for this purpose should be limited at this time.

PIH15

A COST-EFFECTIVENESS ANALYSIS COMPARING THE ORIGINATOR RECOMBINANT HUMAN ALFA TO THEIR BIOSIMILARS FOLLITROPIN ALFA FOR THE TREATMENT OF INFERTILITY

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OBJECTIVES: Bioequivalence of the two recent Biosimilars of recombinant human FSH (r-hFSH) has been demonstrated on the number of oocytes retrieved but not on the final outcome of interest for women concerned, the number of live births. Objective of this analysis is to assess the cost-effectiveness (CE) of the originator r-hFSH compared to the two biosimilars available in producing live births in patients undergoing a medically assisted reproduction program from a French perspective. **METHODS:** An Excel-based decision-tree model depicting the different relevant outcomes of fertility treatment with r-hFSH over the 1st cycle was developed (including ovarian hyperstimulation syndrome, OHSS). Clinical and safety outcomes were derived from head-to-head clinical trials evidence provided for the 2 new Biosimilars of r-hFSH European registrations. Resources considered were based on French Health Insurance data; on French comprehensive national hospital database analysis and on French clinical experts opinions through a management questionnaire. A National Health Insurance perspective using official French tariffs (€2017) were considered. In order to test the robustness of results, deterministic sensitivity analyses were carried out on the main variables. **RESULTS:** Treating 100 women with originator r-hFSH resulted in 5 to 9 additional live births compared to the two biosimilars (6 if pooled data are considered). The additional total cost per woman treated with originator r-hFSH ranged from +€259 (for one biosimilar and pooled) to +€279 (for the other biosimilar). The incremental CE ratio (€ per additional live birth) ranged from 3275, 4352 to 4804 (versus 1st biosimilar, pooled and 2nd biosimilar respectively). Analysis included OHSS. All sensitivity analyses carried out support these results. **CONCLUSIONS:** Originator r-hFSH is a cost-effective strategy compared to biosimilars whatever the consideration or not of OHSS. This present CE model is based on clinical trials evidence. It would be of interest to carry out further investigations using French real world evidence (RWE) to confirm these results.

PIH16

THE COST-EFFECTIVENESS OF IVF TREATMENTS GONAL-F® VERSUS HP-HMG IN THE UNITED ARAB EMIRATES (UAE)

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OBJECTIVES: In the UAE, infertility rate is about 2.2%, with growing incidence. In-vitro fertilization (IVF) is one of the commonly used techniques in the UAE for the management of infertility. This study assessed the cost-effectiveness of recombinant human follicle-stimulating hormone (rFSH, Gonadotropin) with highly purified human menopausal gonadotropin (HP-hMG) for ovarian stimulation in IVF treatment in the UAE. **METHODS:** A decision tree combined with a Markov model was developed, simulating each step in the IVF protocol from the start of therapy until either live born, new IVF treatment cycle, or stopping IVF (ovum pickup, fertilization, embryo transfer and life born). Differentiation between Gonadotropin and HP-hMG was based on a published meta-analysis. Three settings were considered that included 1) fresh transfer only, 2) combined fresh transfer and freeze oocytes, and 3) combined fresh transfer and freeze embryos. Costs are listed as 2016 AED. The model was validated by expert gynecologists from the UAE. **RESULTS:** Gonadotropin was cost-effective over HP-hMG with lower average treatment costs and higher live births per patient in all three settings. In setting 1 average treatment cost was estimated at 51,935 for Gonadotropin and 52,371 for HP-hMG. The probability of live born per patient with Gonadotropin was 0.235 versus 0.233 with HP-hMG. In setting 2, these costs were AED 55,715 and AED 56,142, for Gonadotropin and HP-hMG, along with increased probability of live born (0.243 and 0.241, respectively). Setting 3 had lowest average treatment cost of AED 48,080 and AED 48,822 and highest probability of live born, 0.307 and 0.303, for Gonadotropin and HP-hMG, respectively. Sensitivity analysis showed the robustness of the results. **CONCLUSIONS:** Gonadotropin may represent a cost-effective option compared with HP-hMG for ovarian stimulation for IVF treatment in the UAE.

PIH17

COST-EFFECTIVENESS ANALYSIS OF FOUR SURGICAL STRATEGIES FOR THE TREATMENT OF FUNCTIONAL MENORRHAGIA IN FRANCE

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OBJECTIVES: Functional menorrhagia is responsive of significant economic burden, as its initial management is based on surgical strategies and implies hospitalization in case of failure or severe complications. The objective of this study is to compare 4 surgical strategies used for the treatment of functional menorrhagia in terms of costs and failure or complication avoided. **METHODS:** A retrospective database analysis was performed using the French exhaustive national hospital discharge database (PMSI). All hospital stays from 2009 to 2015 with 4 types of menorrhagia surgery identified by CCAM codes associated with ICD-10 codes were extracted: 2nd generation (2G), 1st generation (1G), curettage, hysterectomy. Only incident 35-55 year-old women were analyzed (no surgery since 2006). Rehospitalizations related to surgery failure or severe complication were followed during at least 18 months. Hospital costs associated with these patients were estimated using the French official tariffs expressed in 2017 Euro. A cost-effectiveness analysis was performed comparing each surgical procedure to 2G, in terms of cost and rate of failure or severe complication avoided. **RESULTS:** 7,863 patients with 2G (7%), 39,935 with 1G (36%), 38,923 with curettage (35%), 23,163 with hysterectomy (21%) were included. Mean cost per patient was respectively €4,285 for curettage, €6,064 for hysterectomy, €4,182 for 2G and €3,765 for 1G. Failure or complication occurred in respectively in 17.9%, 30.6%, 10.1% and 21.5% of patients treated by 2G, curettage, hysterectomy and 1G. As compared to 2G, curettage was dominated (less effective and more expensive), hysterectomy was more expensive and more effective (ICER = €24,128 per % of patient with failure or complication avoided) and 1G was less effective and less expensive (ICER = €11,583 per % patient with failure or complication avoided). **CONCLUSIONS:** This study shows 1G and 2G techniques are cost-effective, in line with their recommended use at first stage in France.

PIH18

PROBABILISTIC COST-UTILITY ANALYSIS OF PERGOVERIS IN WOMEN PATIENTS UNDERGOING IVF

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OBJECTIVES: The aim of this analysis is to compare the effectiveness of recombinant FSH (rFSH) + recombinant LH (rLH) and human menopausal gonadotropin (hMG) controlled ovarian stimulation protocols in a well-defined subgroup of patients that underwent IVF in Italy. **METHODS:** A probabilistic decision tree was developed to simulate the therapeutic path of a cohort of patients undergoing IVF, according to a rFSH + rLH or hMG controlled ovarian stimulation protocol. The model considers National Health System (NHS) perspective and a time horizon equal to two years with simulations of biannual cycles and a maximum of 3 therapy cycles. A one-way sensitivity analysis and a Probabilistic Sensitivity Analysis (PSA) were conducted to take into account the variability of the results based on the parameters considered in the analysis. **RESULTS:** The model estimated that patients undertaking therapeutic protocol with rFSH + rLH, have advantages than the women undertaking a protocol with hMG, both in terms of waiting time (13.2 months vs 13.5 months for pregnancy and 7.2 months vs 7.5 months for the test positivity respectively) and in terms of general success rate (23.6% vs. 17.0% - P < 0.001 for pregnancy and 28.2% vs. 20.6% - P < 0.001 for positive tests respectively). The model estimated that, at the end of the analysed period, the ICER per QALY values are below a willingness to pay of €20 - €40,000. The simulations showed, for patients with ≥ 10 and ≤ 15 retrieved oocytes, that with a willingness to pay of €15,000/QALY the probability that rFSH + rLH therapeutic protocol is cost-effective respect to therapeutic protocol hMG is higher than 80%. **CONCLUSIONS:** The cost-utility analysis demonstrated that the rFSH + hMG combination in controlled ovarian stimulation protocol in the IVF patients may be an opportunity from both economic and quality of life perspective.

INDIVIDUAL'S HEALTH - Patient-Reported Outcomes & Patient Preference Studies

PIH19

FACTORS ASSOCIATED WITH MEDICATION ADHERENCE IN KOREAN POSTMENOPAUSAL OSTEOPOROSIS(PMO): RESULTS FROM PMO OUTCOMES RESEARCH(OR)

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OBJECTIVES: This analysis was proposed to investigate factors associated with medication adherence in PMO patients of Korea. **METHODS:** Data in this analysis were from PMO OR, a cross-sectional study from March 2013-July 2014 with 29 participating general-hospitals. Patients' demographic, clinical characteristics, and treatment patterns were collected from medical chart review, and patient-reported outcomes on treatment satisfaction and medication adherence were measured