

RESULTS: A total of 3,975 women with HSDD and 11,925 controls were identified for the 12-month follow-up period. Women with HSDD had significantly fewer inpatient admissions (0.07 vs. 0.09) and more general outpatient medical (29.26 vs. 19.13), behavioral health office (1.82 vs. 0.71) and more radiology (3.10 vs. 2.30) visits in the 12-month follow-up period versus controls. Cost differences were also observed among women with HSDD relative to their controls—with greater costs for general outpatient medical (\$3427), behavioral health office (\$197) and radiology (\$515) visits in the 12-month follow-up period among women with HSDD than for controls (general outpatient medical visits: \$2334; behavioral health office visits: \$77; radiology visits: \$377; all $p < 0.001$). Differences in utilization and costs persisted in the 24 and 36-month follow-up periods. **CONCLUSIONS:** Women with HSDD have higher 'downstream' costs than women without any sexual dysfunction. The development of treatment modalities that effectively control HSDD symptoms may present an opportunity to better manage health care utilization and costs in this population.

PIH14

COST-EFFECTIVENESS OF A HIGHLY PURIFIED HUMAN MENOPAUSAL GONADOTROPIN (HP-HMG) VERSUS RECOMBINANT FOLLICLE-STIMULATING HORMONE (rFSH) IN PATIENTS PARTICIPATING IN AN ASSISTED REPRODUCTIVE TECHNOLOGIES (ART) PROGRAM

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OBJECTIVES: To determine the cost-effectiveness of HP-HMG (menotropin, MENOPUR[®]) compared to rFSH (folliotropin alpha, GONAL-F[®]), in producing live births in the ovulatory patient participating in an ART Program. **METHODS:** A previously validated and published European Markov model was adapted to the Canadian setting to estimate the incremental cost per additional live birth gained for HP-HMG compared to rFSH, projected over three treatment cycles. These cycles included an initial fresh cycle then two additional cycles, as needed, of either fresh or cryopreserved embryos. Live birth rates were derived from a published meta-analysis comparing HP-HMG menotropin to rFSH follitropin alpha. Factors such as discontinuation, oocyte fertilization and pregnancy rates were derived from the published literature. All clinical outcomes were validated against published Canadian ART registry data and through clinical expert review. The analysis focused on direct medical costs only from the perspective of a provincial public health care system (Quebec). Cost data were obtained from a variety of sources including published references, provincial health care sources and expert opinion. All costs were reported as 2009 Canadian Dollars (\$CAD). Given the short time-horizon discounting was not applied. Multiple sensitivity analyses were undertaken to test the robustness of the model to variations in key parameters including the cost and relative outcomes of comparators. **RESULTS:** The base case analysis indicates that HP-HMG results in a total cost per patient of \$CAD 11,742 over 3 cycles compared to \$CAD 13,202 for rFSH. Further, treatment with HP-HMG results in more live births than rFSH with 0.485 versus 0.421, respectively. Thus, treatment with HP-HMG is dominant relative to rFSH (less costly and more effective). Results were robust over multiple sensitivity analyses. **CONCLUSIONS:** Treatment with HP-HMG (MENOPUR) is cost-effective compared to rFSH (GONAL-F), providing a greater number of live births at a lower cost to the public health care system.

PIH15

COST EFFECTIVENESS ANALYSIS OF FDA APPROVED ORAL EMERGENCY CONTRACEPTIVES

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OBJECTIVES: Unintended pregnancies, a health problem with significant economic burden on US could be avoided by use of FDA approved oral emergency contraceptives (ECPs) namely Plan B one-step (one pill regimen) and Next choice (two pill regimen). The objective of this study was to conduct a head-to-head comparison of these oral ECPs. **METHODS:** A cost effectiveness (CE) decision tree model was developed using data from published randomized controlled trials (effectiveness values) and primary data collection. Cost of each drug was obtained by taking an average of the price of drug from 5 large chain pharmacies. Outcomes considered were no pregnancy, birth, induced abortion, spontaneous abortion or ectopic pregnancy. Cost and probabilities of each outcome was derived from past literature and included only the direct costs. All adverse events with a probability of more than 5% and the direct cost associated with treating each of those adverse events were considered. These adverse events generally last for duration of one week, which was used to derive cost information for adverse events. The analysis involved only a onetime cost of taking an emergency contraceptive. Results were validated using one way and two way sensitivity analyses by varying the cost and effectiveness by a range of 25% each. **RESULTS:** The brand name drug Plan B one-step as opposed to the generic counterpart available, Next Choice, emerged as the cost effective option to avoid unintended pregnancy. The cost of treatment with Plan B one-step was \$859 as opposed to \$1075 for Next Choice. Two-way sensitivity analyses were robust and indicated that treatment with Plan B one-step completely dominated Next Choice. **CONCLUSIONS:** Plan B one-step; a one pill emergency contraceptive drug, with a higher retail price was found to be more cost effective than Next Choice.

PIH16

COST-EFFECTIVENESS ANALYSIS FOR TREATMENT OF SYMPTOMATIC UTERINE FIBROIDS AMONG PREMENOPAUSAL WOMEN SEEKING TO RETAIN UTERUS

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OBJECTIVES: To determine the cost-effectiveness of different treatment options and optimal number of treatments for symptomatic uterine fibroids among premenopausal women who would prefer to retain uterus. **METHODS:** A Markov model with a 1-year cycle length was developed. Women entered the model at diagnosis with symptomatic fibroids and were followed to menopause or age 60 years, when all women were assumed to reach menopause. Treatment options included watchful waiting, myomectomy, and one-time, 6-month use of gonadotropin-releasing hormone (GnRH). In the model, women treated unsuccessfully or whose symptoms recurred could undergo up to three additional treatments or stop treatment at any point. Data on treatment efficacy, quality-of-life, and medical costs (2007 US\$) were from published studies. For myomectomy, the probabilities of repeat procedures and of emergency hysterectomy were from a large US claims database analysis. Age-specific rates for pregnancy and menopause were based on US data. Total costs and quality-adjusted life years (QALYs), discounted annually at 3%, were calculated for each treatment strategy for women diagnosed at different ages. Incremental cost-effectiveness ratios (ICERs) were calculated and an efficiency frontier was plotted. **RESULTS:** Base-case results for women diagnosed at age 20 years showed treatment strategies including GnRH were dominant compared with treatment strategies including myomectomy only and were cost-effective compared with watchful waiting (ICER range: \$3789-\$7456 per QALY gained). Additional procedures for women whose symptoms recurred led to increased medical costs and QALYs, resulting in an incremental cost per QALY gained of \$13,307, \$15,433, and \$17,555 for the second, third, and fourth myomectomy, respectively. Results were sensitive to age at diagnosis, number of treatments, and the disutility associated with a woman losing her uterus via emergency hysterectomy. **CONCLUSIONS:** This model is the first to assess the cost-effectiveness and optimal number of treatments specifically for a woman with fibroids seeking to retain her uterus.

PIH17

COST-EFFECTIVENESS ANALYSIS OF FOUR EMBRYO TRANSFER STRATEGIES

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OBJECTIVES: The objective of this study was to evaluate the cost and clinical outcomes of single versus double embryo transfer using cleavage-stage or blastocyst-stage embryo in assisted reproduction. **METHODS:** Markov model was designed to simulate outcomes of: 1) single-(cleavage-stage) embryo transfer (SET); 2) double-embryo transfer (DET); 3) single-blastocyst transfer (SBT); and 4) double-blastocyst transfer (DBT). Model inputs were estimated from literature and cost analysis was conducted from health care provider's perspective. **RESULTS:** The base-case analysis showed that DBT was the most costly (US\$5173) and effective strategy (birth rate = 0.311) in fresh cycle. The cumulative cost and birth rate of SET were the highest in all cycles. Monte Carlo 10,000 simulations showed that the probability of DBT to be cost-effective in fresh cycle was the highest when willingness-to-pay (WTP) per live birth was \geq US\$85,000. In all cycles, the probability of SET to be cost-effective was the highest when WTP was \geq US\$50,000. **CONCLUSIONS:** CONCLUSIONS DBT appears to be the most costly and most effective strategy in fresh cycle whereas SET seems to have the highest cumulative cost and live birth rate.

PIH18

ANALYSIS OF NECROTIZING ENTEROCOLITIS COSTS AMONG EXTREMELY PRETERM INFANTS FED EXCLUSIVELY HUMAN-MILK BASED DIET VS. HUMAN-MILK FORTIFIED WITH BOVINE-MILK BASED SUPPLEMENTS

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OBJECTIVES: To estimate the incremental costs of necrotizing enterocolitis (NEC) among extremely preterm infants (GA < 28 weeks) and to evaluate the cost-effectiveness of an exclusively human-milk based diet (fortified with Prolacta + HMFTM) vis-à-vis human-milk fortified with a bovine-milk based supplement in the prevention of NEC. **METHODS:** California OSHPD 2007 hospital discharges database was used to estimate the incremental costs of NEC and surgical NEC among all preterm infants. Costs were adjusted for confounding by demographics, gestation age, mortality and comorbidities. Expected medical costs of NEC among extremely preterm infants fed either exclusively human-milk based diet or human-milk fortified with bovine-milk based fortifier were calculated based on findings from a randomized controlled trial comparing neonatal outcomes of extremely preterm infants fed either of these diets. **RESULTS:** The adjusted incremental costs of NEC and surgical NEC among extremely preterm infants in 2009 US\$ were 69,185 and \$198,490 respectively per infant ($p < 0.0001$). Expected medical costs of NEC were higher among infants fed human-milk fortified with bovine-milk based supplement resulting in net savings of \$16,875 per infant for infants fed exclusively human-milk based diet ($p < 0.0001$). The societal costs savings for the US population of premature infants is estimated to be US\$