guanfacine extended release (GXR), to long-acting psychostimulants vs. maintaining existing long-acting psychostimulant monotherapy in children and adolescents with ADHD and suboptimal response to psychostimulant monotherapy. **METHODS:** A one-year Markov model was developed from a US third-party payer perspective. Effectiveness was measured by quality-adjusted life year (QALY). The model assumed patients transitioned among four health states (normal, mild, moderate, and severe), defined based on the Clinical Global Impressions-Severity (CGI-S) scale. Transition probabilities were estimated in an ordered logit model using patient-level data from a Phase III clinical trial comparing psychostimulants plus psychostimulants plus placebo (n=461). The model assumed that patients in moderate or severe states after week eight would discontinue ADHD treatment and remain in that state. Direct costs included drug wholesale acquisition costs (WAC) and medical costs, in 2010 US dollars. Health state utilities were obtained from the literature. Disutilities associated with adverse events were applied for the first four weeks. One-way sensitivity analyses (SA) were conducted by varying key model inputs. **RESULTS:** Adding GXR to existing psychostimulant monotherapy was associated with an incremental drug cost of $1016 but lower medical cost of $124, resulting in a total one-year incremental cost of $892. The addition of GXR led to an incremental QALY of 0.03 and an incremental cost-effectiveness ratio (ICER) of $31,660/QALY. In one-way SA, ICERs ranged from $19,723/QALY to $46,631/QALY. **CONCLUSIONS:** This is the first cost-effectiveness analysis of psychostimulants with adjunctive medication. Adjunctive therapy of GXR with psychostimulants is cost-effective based on a willingness-to-pay threshold of $50,000/QALY.

PIH24
INTRA MUSCULAR TESTOSTERONE UNDECANOATE (TU) (NEBIDO®) AS TESTOSTERONE REPLACEMENT THERAPY (TRT) FOR ANDROGEN DEFICIENCY IN THE AGING MALE (ADAM) AND DIABETES MELLITUS TYPE 2 (DM2) PATIENTS: BRAZILIAN ECONOMIC MODELING
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OBJECTIVES: To determine the cost-effectiveness of TRT with TU (NEBIDO®) compared with placebo for patients with ADAM and DM2, from the Brazilian Private Healthcare System perspective. **METHODS:** The study was a cost-effectiveness analysis based on Markov modeling to estimate costs and consequences of treatments. Epidemiological and efficacy data derived from a critical appraisal of the scientific literature. Only direct medical costs were considered. If available, costs of clinical events (CE) were obtained from burden of disease studies. If not, Brazilian official guidelines were obtained to determine the resources used to treat the CE. Drug, hospital daily admission rates, procedures and laboratory tests unit costs were obtained from Brazilian official databases. Costs and benefits were discounted at 5% yearly. Outcomes were expressed as CE avoided. Probability sensitivity analysis (PSA) was conducted to assess model robustness. Life time horizon was analyzed. **RESULTS:** The systematic review showed that although the absence of studies directly evaluating the impact of TU on cardiovascular events, their favorable influence on cardiovascular disease intermediate markers suggests that TU may have clinically relevant effect in patients at risk, especially in patients with metabolic syndrome and/or DM2. The analysis showed higher clinical benefits and costs for TU. Considering 100 patients, 75.2 and 140.0 CE happen in TU and placebo arms, respectively. The average time-horizon cost per patient was R$34,120(€14,896) and R$23,489(€10,255) for TU and placebo, respectively, resulting in an incremental cost-effectiveness ratio (ICER) of R$16,390/CE avoided (€7,155/CE avoided). PSA demonstrated that in 83.2% of the simulations TU was more effective with higher cost and in 16.8% of the simulations TU was dominant compared to placebo. **CONCLUSIONS:** Our study demonstrated that TU have clinically relevant effect in reducing CE being highly cost-effective for ADAM treatment in patients with DM2 at willingness-to-pay beyond R$19,000/CE avoided (€8,296/CE avoided) (Brazilian GDP per capita). PSA confirmed this determinist result.

PIH25
COST-EFFECTIVENESS OF INTERVENTIONS AGAINST CHILDHOOD OBESITY
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OBJECTIVES: To estimate values for cost and effectiveness that assess the long-term efficiency of public health intervention to prevent and correct childhood obesity. **METHODS:** A Markov model was developed that takes into account five diseases strongly associated with obesity: Diabetes Mellitus Type 2, Heart Disease, Breast Cancer, Colon Cancer and Stroke. Selection of disease was in base of high rates of morbidity and mortality. In the model, we considered 2 main states: normal weight (BMI < 30 kg/m2) and obese (BMI >= 30 kg/m2). From them, individuals can transit to states which representing the 5 diseases and death. Individuals can transit between normal weight and obese until they reach a certain age (30) when they can transit to the rest of states. The time horizon was 70 years. A literature review was performed in order to estimate parameters. The measure of effectiveness was QALYs and a discount of 3% was applied to costs and utilities. A 2-way probabilistic sensitivity analysis was made over 2 parameters which define the intervention: relative risk and cost of intervention. Also, a multivariate and probabilistic sensitivity analysis by 2nd order Monte Carlo (MC) simulations was performed for all parameters. Finally, acceptability curves and the expected value of perfect information were calculated. **RESULTS:** If the willingness to pay is € 30,000/QALY, any intervention that exceeds 1% prevention/correction, incurring in cost not exceeding € 2 per child and per year should be implemented, because the probability of hitting the decision is over 90% and does not incur on any opportu-

nity cost. **CONCLUSIONS:** Long term efficient public health interventions, to prevent/correct childhood obesity, are low cost (not exceeding € 5 per child per year) due to the effectiveness of interventions, usually lower than 2% of prevention/correction over non-intervention.

PIH26
ECONOMIC EVALUATION OF DIENOGEST FOR ENDOMETRIOSIS IN THE CONTEXT OF KOREA NATIONAL HEALTH INSURANCE
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OBJECTIVES: Dienogest (Visanne ®) is a progestin that has recently been approved in Europe, Australia and Japan (not in Korea yet) for the treatment of endometriosis at a dose of 2 mg orally per day. Dienogest provides potent progestogenic effects, combined with moderate suppression of estrogen levels and has no significant androgenic, mineralocorticoid, or glucocorticoid activity. The aim of this analysis is to evaluate cost-effectiveness of dienogest, thereby assessing its eligibility for National Health Insurance coverage. **METHODS:** We carried out a cost-effectiveness analysis comparing dienogest to leuprolide acetate, a gonodotropin releasing hormone agonist (GnRH-agonist), the current standard treatment for endometriosis associated pain after laparoscopy. Patients requiring additional treatment because of pain after laparoscopy were included in the analysis. A third-party-payer perspective was taken. The time horizon of analysis was one year. Response to treatment, time horizon of analysis, recurrence rate following discontinuation of GnRH-a and the incidence of adverse event were considered as major factors for the decision tree analysis. An expert survey was conducted to investigate the treatment pattern. Costs of endometriosis were also assessed. In the base case scenario patients do not receive any sequential treatment after non response or pain recurrence. Sensitivity analysis was performed for major variables. **RESULTS:** At the base case analysis, dienogest was dominant. Sensitivity analysis showed that the result was robust for the most variables. Drug cost was the most influential factor of all. **CONCLUSIONS:** Dienogest is a cost-effective and cost-saving alternative in the Korea National Health Insurance context. However the analysis is covering only one year and long-term clinical data is required to draw a solid conclusion.

PIH27
POTENTIAL HEALTH AND ECONOMIC IMPACT OF ADDING ROTARIXTM TO ROUTINE INFANT VACCINATION PROGRAMS IN CANADA
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OBJECTIVES: To evaluate the projected health outcomes, costs, and cost-effectiveness of universal mass vaccination (UMV) with Rotarix™ (GlaxoSmithKline) in Canada compared with no vaccination. **METHODS:** An age-compartmental, deterministic, static Markov cohort model was developed to simulate the disease process of acute diarrhea events caused by rotavirus infection up to the age of 5 years in 'monthly' time cycles, using Canadian demographic and epidemiology data. The base-case analysis was performed to estimate the direct effects of a UMV program with two doses of Rotarix™ at 2 and 4 months of age compared to no vaccination, assuming 90% vaccination coverage. Costs and utilities were discounted at 3.5%. The efficacy of Rotarix™ was based on published clinical trial results. Model outputs include clinical endpoints (deaths, hospitalizations, emergency department (ED) visits and outpatient visits), and economic measures (net costs per case/death prevented and quality-adjusted life year gained). Incremental cost-effectiveness ratios (ICERs) were calculated from the healthcare system perspective, and productivity loss was reported separately. One-way sensitivity analysis was performed to evaluate the robustness of the model to variations in the underlying input parameters. **RESULTS:** Without vaccination, a Canadian birth cohort of 380,000 can be expected to have 152,000 rotavirus diarrhea events, 9,000 hospitalizations, 20,849 ED visits, 2,812 nosocomial infections and 6 deaths over 5 years. The base case results show that a UMV program with Rotarix™ could reduce these events by 69%, 81%, 68%, 76% and 79% respectively over 5 years. At $60 per dose plus $9 administrative fee, the cost per QALY gained over no vaccination is $28,653. **CONCLUSIONS:** A UMV program with Rotarix™ is projected to substantially reduce the health and economic burden of rotavirus infections, and is cost-effective relative to no vaccination in the Canadian health care system.

PIH28
ECONOMIC EVALUATION OF PNEUMOCOCCAL CONJUGATED VACCINES FOR ARGENTINA
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OBJECTIVES: Evaluate the potential benefits of the 10-valent pneumococcal non-typeable Haemophilus influenzae (NTHi) protein D-conjugated vaccine (PHiD-CV) and the 13-valent conjugated pneumococcal vaccine (PCV-13) for Argentina. **METHODS:** A cohort Markov model was used. The model simulated the impact of pneumococcal and NTHi related diseases (Invasive Disease (ID), Community Acquired Pneumonia (CAP), and Acute Otitis Media (AOM)) in an argentinean cohort followed over lifetime. Argentine epidemiology, disease management, and costs were included in the model. Base case includes conservative assumptions on the rates of NTHi infections. A 2+1 vaccination schedule was assumed, with vaccine coverage of 90% and 2 prices/dose scenarios a) PAHO Revolving Fund 2011 prices, or b) price parity. Results of the quality adjusted life years gained (QALYs) and future averted costs, using a 3.5% discount rate, using the health payer perspective, are presented. **RESULTS:** The model estimated comparable results between vaccines