distributions. RESULTS: In the base case, NA-E was found to be the most cost-effective alternative. NA-E cost 321 UAH ($5,096) compared to 930 UAH for D-E, 1319 UAH for transdermal N-E to prevent a single pregnancy per patient per year. Monte Carlo sensitivity analysis confirmed these findings. CONCLUSION: The cost-effectiveness ratio NA-E dominated all contraceptive strategies. These direct medical costs, in turn, were driven by differential compliance that favored NA-E.

COST-EFFECTIVENESS ANALYSIS OF CONTRACEPTIVES AVAILABLE IN UNITED STATES

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OBJECTIVE: To conduct a cost-effectiveness analysis of contraceptives available in the United States from a payer's perspective.

METHODS: A Markov model was constructed to simulate method failure (defined as ectopic pregnancy, abortion, or full-term birth) and costs among 17 contraceptive methods over a 5-year period: vasectomy, tubal ligation, injectable, implant, copper-T IUD, LNG-20 IUS, oral contraceptives, diaphragm, male condom, female condom, spermicides, sponge, patch, NuvaRing, withdrawal, periodic abstinence and no method. In each yearly cycle, subjects transition to “continue contraception”, “method failure” or “plan disenrollment”. Subjects remain on the method for the model duration after method failure or adverse effect. We assumed that 60% of unintended births are mistimed and would occur two years later. Failure rate, adverse event rates, and resource utilization were derived from comprehensive literature review and supplemented with expert opinion. Unit costs were obtained from published fee schedules and drug prices. Future costs and effectiveness were discounted at 3%/year. Sensitivity analyses were performed on cost and failure rates. RESULTS: Any contraceptive method is superior to “no method” in terms of costs and success rate. The three least expensive methods were copper-T IUD ($645), vasectomy ($713) and LNG-20 IUS ($930). The most effective methods (>99.6% success rate) were vasectomy, implant, tubal ligation, LNG-20 IUS and copper-T IUD. Results were sensitive to variations in cost of contraception method, cost of unintended pregnancy and plan disenrollment rates. Moreover, with a longer time horizon, methods with high initial costs (ie, copper-T IUD, vasectomy and LNG-20 IUS) and high effectiveness rates become more cost-effective. CONCLUSION: Copper-T IUD, vasectomy and LNG-20 IUS are among the most effective methods currently available in the United States. This analysis demonstrates that differences in efficacy, method costs, cost of unintended pregnancies and time horizon are influential factors that determine the overall value of a contraception method.

IMPACT OF THE RISK SCORING MODEL ON THE COST-EFFECTIVENESS OF PALIVIZUMAB FOR RESPIRATORY Syncytial Virus PROPHYLAXIS IN PREMATURe INFANTS WITH A GESTATIONAL AGE OF 32–35 WEEKS IN CANADA

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OBJECTIVE: Prophylactic therapy with palivizumab, a humanized monoclonal antibody, reduces the number of respiratory syncytial virus (RSV)-related hospitalizations in preterm infants, including those in the 32 to 35 weeks gestational age (GA) subgroup. The cost-effectiveness of this therapy in Canada is unknown. To evaluate the cost-effectiveness of palivizumab as respiratory syncytial virus prophylaxis in premature infants born at 32 to 35 weeks GA, from both the payer (base-case) and societal perspectives. METHODS: A decision analytic model was designed to compare costs and benefits of prophylaxis in this subgroup of premature infants. Sensitivity analyses were performed to ascertain the robustness of the model by varying mortality, health utilities, discount rates and administration costs. SETTING: Canadian publicly funded health care system (base-case analysis). PARTICIPANTS: Canadian infants born at 32 to 35 weeks gestation without chronic lung disease. INTERVENTIONS: Palivizumab prophylaxis versus no prophylaxis. MAIN OUTCOME MEASURES: Expected costs and incremental cost-effectiveness ratio expressed as cost per quality-adjusted life-year (QALY) gained using $CAN 2006. RESULTS: The expected costs were higher for palivizumab prophylaxis as compared with no prophylaxis. The incremental cost-effectiveness ratio for the base-case scenario was $16,605 per QALY after discounting, which is considered cost-effective. Sensitivity analyses showed the model was robust through reasonable estimates of key variables. Sub-analyses that varied risk of RSV based on

THE COST-EFFECTIVENESS OF ROUTINE SCREENING FOR VASA PREVIA AT 18–20 WEEKS GESTATION IN ONTARIO

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OBJECTIVE: To estimate the cost-effectiveness of screening for vasa previa at 18–20 weeks gestation. Several screening strategies were considered for singleton and twin pregnancies. METHODS: We constructed a decision-analytic model to estimate the incremental costs and benefits associated with screening for vasa previa at 18–20 weeks gestation. We compared the

status quo of not screening to scenarios in which all singleton and twin pregnancies were screened using transvaginal color Doppler ultrasound. We also considered strategies in which only high-risk pregnancies were screened. Costs were collected primarily from the London Health Sciences Centre case costing initiative and from the OHIP Schedule of Benefits for Physicians. Other data estimates were obtained from published sources and expert opinion. Health benefits were measured in life-years (LY) gained. Costs and health benefits were estimated for a cohort of pregnancies in Ontario in 1 year. RESULTS: Compared to not screening, screening all twin pregnancies for vasa previa has an incremental cost effectiveness ratio (ICER) of less than $10,000 per LY gained. Among all risk factors in singleton pregnancies, velamentous cord insertion is the strongest predictor of vasa previa. Identifying and screening pregnancies affected by velamentous cord insertion has an ICER of less than $10,000 per LY gained compared to not screening. Compared to screening only pregnancies identified as having a velamentous cord insertion, screening all pregnancies has an ICER of approximately $75,000 per LY gained. Compared to screening for vasa previa in pregnancies identified as having any high risk indicator, routine screening of all pregnancies has an ICER of over $100,000 per LY gained. CONCLUSION: A strategy of screening all twin and all high-risk singleton pregnancies for vasa previa has a very low incremental cost effectiveness ratio and should be considered for adoption. However, routine screening of all pregnancies is not likely to be cost effective.
the validated, Canadian risk scoring model were sensitive to the resulting variation in RSV-related hospitalization rates. In instances where risk was low, palivizumab was not cost-effective. However, for infants with at least moderate risk (2 or more risk factors), palivizumab had incremental costs per QALY that indicated moderate to strong evidence for adoption (range: $1,598 to $30,819 per QALY). CONCLUSION: Palivizumab was cost-effective and our model supports prophylaxis for infants born at 32 to 35 weeks GA, particularly those with moderate risk of RSV.

WITHDRAWN PIH12

A CONCEPTUAL FRAMEWORK TOWARD A MODIFIED REFERENCE CASE FOR DEVELOPING COUNTRIES: INCORPORATING DONOR FUNDING FLOWS IN COST-EFFECTIVENESS ANALYSIS

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To make appropriate use of the growing economic evidence base in health care, developing countries need applications relevant to their own national health objectives. One objective is protection for individuals and governments against the financial risks of ill health, more critical in low-resource settings. Yet, advancements in cost-effectiveness analysis (CEA) have not focused on the importance of efficiency in contributing to this goal. The lowest income nations also rely heavily on external funds from donor countries and organizations. While the recent emergence of non-traditional donors has greatly increased funding levels for global health, the large scale, narrow focus and time limitations of some of the funding have also raised questions of their effects on national health priorities as well as on the opportunity costs of the interventions supported by this funding. In attaining efficiency with a view towards minimizing financial risk, CEA must address two issues in this case: that the additional resources are efficiently allocated and that the resources themselves are not a source of financial risk. This doctoral project proposes a conceptual framework for a CEA “reference case” in the broader context of health financing in developing countries. Suggested modifications of the prevailing reference cases are literature-based, iteratively guided by key informants. Costing and sensitivity analysis with respect to external funding are highlighted. An application to the introduction of rotavirus immunization illustrates the framework. The conceptual framework anticipates the imminent introduction of expensive new vaccines targeted at resource-poor, donor-dependant health systems. It allows analysts and policy-makers to harmonize efficiency and financial risk objectives. It also helps donors in assessing aid effectiveness of assisted programs. Ultimately, this framework improves the transferability and generalizability of existing CEA results by suggesting adjustments relevant to developing countries.

ECONOMIC EVALUATION OF ATOSIBAN VERSUS BETA-MIMETICS IN THE TREATMENT OF PRETERM LABOUR IN GERMANY

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OBJECTIVE: Treatment of preterm labour constitutes in delaying birth to allow neonatal lungs to mature. The study aimed to compare cost implications of adverse events following tocolysis with atosiban and beta-mimetics. METHODS: Major literature databases were systematically searched to identify randomized clinical trials comparing atosiban with beta-mimetics during the initial 48 h of hospitalisation. Adverse events data from three double blind trials were included in a meta-analysis. Clinical resource use was determined based on routine practice in a regional German hospital. Cost of drug treatment was calculated based on trial protocols and German hospital drug purchase costs; analysis was performed for fenoterol, the only beta-mimetic licensed in Germany for tocolysis. Costs per case were calculated with G-DRG Grouper. Costs were expressed in €2007. RESULTS: Use of atosiban was associated with significantly lower frequency of adverse events compared to beta-mimetics. From the payer’s perspective, cost-saving from using atosiban versus fenoterol was €423 per patient starting treatment. From the hospital’s perspective, savings from using atosiban versus continuous fenoterol ranged from €259 for 18 hours of tocolysis to €105 for 48 hours; the respective values for bolus fenoterol were €244 and €55. From the combined perspective, using atosiban versus continuous fenoterol saved from €226 for 18 hours of tocolysis to €71 for 48 hours; versus bolus fenoterol the results were €211 and €21, respectively. In the probabilistic sensitivity analysis atosiban was cost-saving versus both continuous and bolus fenoterol in 100% of iterations at 18 hours and in at least 87% of iterations at 48 hours. CONCLUSION: Atosiban was cost-saving versus beta-mimetics in the treatment of preterm labour in Germany from the payer’s, hospital’s and combined perspectives. The results were robust in the probabilistic sensitivity analysis.

STUDENT PHARMACIST INTERVENTIONS LEAD TO COST MINIMIZATION OF MEDICARE PART D PRESCRIPTION DRUG PLAN COSTS

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OBJECTIVE: Given the complexity of the Medicare Part D (MPD) prescription drug benefit, many Medicare beneficiaries lack the knowledge and experience to select optimal MPD prescription drug plans. This challenge is exacerbated in low-income and other vulnerable populations. A Cost-Minimization Analysis (CMA) was performed to determine whether and to what extent student pharmacists’ interventions reduce out-of-pocket (OOP) prescription drug plan costs for Medicare beneficiaries. METHODS: Trained student pharmacists throughout California provided one-on-one MPD prescription drug plan consultations during community outreach events. Cost information for the participant’s current and lowest-cost plan for 2008 was obtained by conducting a personalized plan search using the online MPD Plan Finder tool. RESULTS: Twenty-two outreach events were conducted statewide and data were collected from 250 Medicare beneficiaries. The mean ± SD age of the participants was 74.3 ± 9.1 years, and 91 (36.4%) were male. The mean ± SD (range) number of prescription drugs per participant was 5.6 ± 3.9 (0–26). Eighty-three participants (33.2%) had limited or no English proficiency, 82 (32.8%) had less than a high school education, and 102 (40.8%) were enrolled in both Medicare and Medicaid. Data from 95 participants (72 of whom were not enrolled in a MPD drug plan during 2007 and 23 of whom had incomplete data) were necessarily excluded for purposes of the CMA. For the other 155 participants, the median annual OOP costs for continued enrollment in their current MPD prescription drug plan in 2008 were $440.00, compared to $200.00 for the