ECONOMIC EVALUATION OF ANALGESIC MANAGEMENT AFTER TOTAL ABDOMINAL HYSTEROCTOMY AT THE SOCIAL SECURITY MEXICAN INSTITUTE

OBJECTIVES: The use of multimodal analgesic management has been implemented for minimizing adverse events and to improve the patient recovery process which will have a significant impact on clinical and economic outcomes. The aim of this study was to develop an economic assessment of parecoxib, ketorolac and morphine for treatment of postoperative pain (POP) for patients after total abdominal hysterectomy at the Social Security Mexican Institute (IMSS) from an institutional perspective.

METHODS: A Bayesian decision-tree model was developed to simulate costs and health outcomes over time period in patients treated with multimodal analgesic. Comparators assessed were: morphine (61.5 mg/day) plus parecoxib (40 mg/day); morphine (61.5 mg/day) plus ketorolac (90 mg/day) and morphine (61.5 mg/day) alone. The effectiveness measure was: percentage of successful response without adverse events (AE) meeting the highest possible score for patient global recovery survey (excellent). This survey has been previously validated in Mexico. Costs and resource use were collected from hospital records related to patients undergoing total abdominal hysterectomy at IMSS in 2008 (n=98). Transition probabilities were collected from international published literature and were calibrated according to international pharmacoeconomics guidelines. One way and probabilistic sensitivity analyses were performed by Monte Carlo Simulation second-order approach. RESULTS: Percentage of successful response without AE resulted for parecoxib in 35%, followed by ketorolac (24%) and morphine with 20%. Treatment costs per patient treated were lower for ketorolac (US$5,309.20) followed by morphine (US$5,343.96) and parecoxib (US$5,375.78). No meaningful statistical differences were found in costs among competing alternatives (p>0.05). ICER for additional successful response was US$8,679 for parecoxib against ketorolac. Acceptability curves showed that parecoxib is the most cost-effective therapy with 90% at a willingness to pay of US$4,500. CONCLUSIONS: Parecoxib represents a cost-effective analgesic alternative for POP management in patients who underwent abdominal hysterectomy at the IMSS.

COST-EFFECTIVENESS OF DESVENLAFAXINE FOR THE TREATMENT OF VASOMOTOR SYMPTOMS IN BREAST CANCER PATIENTS IN MEXICO

OBJECTIVES: To evaluate the cost-effectiveness of pharmacological treatments for VMS in BC patients from an institutional perspective. METHODS: A Markov model was performed to estimate the cost-effectiveness of pharmacological treatments for VMS in BC patients from an institutional perspective. METHODS: A Markov model was developed to simulate VMS outcomes over time period in patients treated with venlafaxine (V), desvenlafaxine (D) and tibolone (T) for 6-month cycles. Effectiveness measures were: reduction of hot flashes (H11005 flashes (ICER US$0.39/ additional hot flash avoided) and gained 0.75 QALY with D. In hysterectomized women, matched analysis showed that D resulted more costly (US$564.94; 95% CI: $3,039.20); D was more cost-effective against T (US$1,072.68), but avoided 2,753.8 more hot flashes (H11005; -0.38 QALY H11001). MENOPAUSAL SYNDROME IN MEXICAN POPULATION COVERED BY THE NEW GENERATION MEDICAL INSURANCE

OBJECTIVES: To evaluate the cost-effectiveness of an intervention, Advancing Better Living for Elders (ABLE), which was shown to reduce mortality in community-dwelling elders in a randomized trial. MEXICO NIT 319 community-living older adults randomized to ABLE or no-treatment control group, were included in the economic analysis. ABLE involved occupational and physical therapy home and telephone sessions and home modifications (e.g., grab bars) to address functional difficulties over 12 months. Using a home-care agency perspective, the incremental cost-effectiveness ratio (ICER) was expressed as the additional cost to bring about one additional year of life. To account for potential variations in costs of implementing ABLE in different settings, two models were developed: cost of implementing ABLE and cost +10%. Probabilistic sensitivity analysis was conducted to account for variation on model parameters. Confidence intervals for the ICERs were calculated using the Fieller theorem method. RESULTS: Total cost of ABLE per participant after discounting was $908. In the secondary cost-effectiveness analysis, total cost per QALY gained was $12,985 (95% CI: $4,637-$87,905); and $14,271 (95% CI: $5,068-$107,539); respectively. CONCLUSIONS: This economic evaluation suggests that the additional cost in this program may be worth depending on ones willingness to pay. However, confidence intervals varied widely due to small effect in reducing mortality.

THE IMPACT OF LONG-TERM DISABILITY COSTS ARISING FROM IN-VITRO FERTILIZATION (IVF) TREATMENT: THE COST-EFFECTIVENESS ANALYSIS OF REDUCING MULTIPLE BIRTHS

OBJECTIVES: We have examined the impact of long term disability costs arising from increased use of IVF treatments in relation to multiple births reductions in Canada. METHODS: Using the Canadian Fertility Cost Model we estimated the potential cost savings of reducing the number of multiple pregnancies in Canada. A series of probabilistic analyses were performed to account for the effect of uncertainty in disability costs on the cost effectiveness of reducing multiple births. Values for disability rates were sampled from a beta distribution and costs were sampled from a log-normal distribution. Simulation results were generated by simultaneously varying long-term disability rates and costs. The outcomes were modeled age-specific disability costs with incremental costs per live birth. RESULTS: Assuming reductions in multiple births rates equal to those reached by selected European countries, we estimated that, over the next five years in Canada, the multiple birth costs could be reduced from 28.8% to 13.1% in Monte-Carlo simulations, the potential cost savings range from $150 million to $558 million, and the reduction in over-all incremental cost per live birth range from $8,560 to $31,897. The proportions of children with lifetime disabilities range from 6.0% to 24.0% for current practice, and 4.3% to 17.3% assuming reductions in multiple births. For women under 35, aged 35-39, and over 40, reductions in over-all incremental cost range from ($9,555-$35,616), ($7,814 - $29,977) and ($6,031 - $22,543), respectively. The bulk of cost reductions (ranging from 50% to 87%) would be attributable to reductions in disability costs. CONCLUSIONS: Our analysis shows that a reduction in multiple births would result in potential cost savings. The amount of variation in the long term outcomes and disability costs make the projections, nevertheless, highly unstable.

COSTS AND EFFECTS OF A MULTIFACETED INTERVENTION TO IMPROVE THE QUALITY OF CARE OF CHILDREN IN DISTRICT HOSPITALS IN KENYA

OBJECTIVES: To improve care for seriously ill children, a multifaceted approach employing guidelines, training, supervision, feedback and facilitation was developed, for brevity called the Emergency Triage and Treatment Plus (ETAT +) strategy. We assessed the costs and efficiency of delivery of the ETAT + strategy in district hospitals in Kenya. METHODS: A cost-effectiveness analysis from the provider’s perspective was conducted alongside a cluster randomized study that compared the delivery of ETAT + in four district hospitals in Kenya to four control district hospitals receiving a standard version of the intervention between 2005 and 2009. Effectiveness of the intervention was measured using 14 process measures that capture improvements in quality of care and span the assessment, diagnosis and treatment on admission in children under five. Economic costs were estimated through interviews with hospital staff, costing of interventions, accounting and clinical record reviews. An annual discount rate of 3% was used and one way sensitivity analyses were used to assess uncertainty. Incremental cost-effectiveness ratios (ICERs) were defined as the cost per percentage improvement in quality of care. RESULTS: The cost per child admission was US$5.74 in intervention hospitals compared to US$31.06 in control hospitals, while the quality of care as measured by the 14 process measures was 23.05% higher in intervention hospitals than in the control hospitals. These results suggest an additional cost of US$0.85 to achieve a percentage improvement in quality of care. CONCLUSIONS: The delivery of ETAT + as a multifaceted intervention presents significant improvements in quality of care at a lower cost. Knowing what value decision makers place on quality improvement would be useful in making decisions about their adoption explicit.

ECONOMIC EVALUATION OF THE USE OF EXOGENOUS PULMONARY SURFACTANTS IN PRETERM NEWBORNS WITH RESPIRATORY DISTRESS SYNDROME IN MEXICAN POPULATION COVERED BY THE NEW GENERATION MEDICAL INSURANCE

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