ADDRESSING CHILDHOOD OBESITY IN MEXICO: SAVINGS ON HEALTH CARE EXPENDITURES FROM REGULATING FOOD AND BEVERAGE SALES IN BASIC EDUCATION SCHOOLS
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OBJECTIVES: Estimate potential direct savings for the Mexican Healthcare System generated by the operation of the "Technical Guidelines for distribution of food and beverages in establishments of basic education" targeting population of 6 to 14 years of age.

METHODOLOGY: The authors use the micro-simulation model "chronic Disease Prevention (CDP)" developed by the OEC-DWHO for projecting health gains and costs of treatment in a period of 100 years. The model was adjusted to accommodate the range of ages stated in the Guidelines and uses information of incidence, prevalence, mortality, population at risk, annual unit costs and relative risk of select chronic diseases (diabetes mellitus type 2, hypertension, cardio- and cerebro-vascular, hypercholesterolemia) attributable to obesity as well as the treatment of obesity as disease itself for the Mexican context. Sensitivity analyses were developed for most variables used in the model.

RESULTS: Under the base case scenario present value of potential savings in total spending on medical care associated with the implementation of the Guidelines amounts to USD1,052.2 million in 2008. 

Most savings are derived from averted cases of hypertension (32.7%), obesity-overweight (28.6%) and diabetes mellitus type II (17.8%). Results are robust to changes in all parameters analyzed. Amounts obtained are an underestimation of potential savings as neither expensive complications as renal failure nor other chronic diseases attributable to obesity as arthritic, colorectal or breast cancer were included.

CONCLUSIONS: The Guidelines, developed by both Ministry of Public Education and Ministry of Health, represents a good example of cooperation among different sectors to solve a complex public health problem. Results show the importance of implementing preventive interventions aimed at reducing the prevalence of chronic diseases related to poor eating habits, inadequate physical activity and obesity in Mexico. The implementation of the Guidelines involves significant direct savings that can be assigned to other health needs of the Mexican population.

PIH3
RESOURCES USE AND ASSOCIATED COSTS FOR THE TREATMENT OF HEAVY MENSTRUAL BLEEDING WITH LEVONORGESTREL RELEASING INTRAUTERINE SYSTEM (LNG-IUS) VERSUS HYSTERECTOMY: THE BRAZILIAN PUBLIC HEALTHCARE SYSTEM (SUS) PERSPECTIVE
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OBJECTIVES: To describe the resource utilization and the costs related to heavy menstrual bleeding (HMB) control with either an LNG-IUS or hysterectomy in the Brazilian Public Health Care System (SUS) on patients treated at the Department of Obstetrics and Gynecology, School of Medical Sciences, University of Campinas, Brazil.

METHODS: We performed an observational retrospective descriptive study with costs evaluation and budgetary impact calculation from data extracted from medical files of patients diagnosed with HMB, treated either with the LNG-IUS or hysterectomy. The measured outcomes were HMB control, LNG-IUS induced complications (expulsion, uterine perforation, pelvic inflammatory disease), LNG-IUS continuation rate and hospital costs after one year, as well as the budgetary impact of LNG-IUS in the treatment of HMB compared vs. hysterectomy.

RESULTS: Two hundred sixty-seven medical files were initially retrieved for analysis. A total of 246 patients were included in this study, 122 received the LNG-IUS and 124 were treated with hysterectomy. The mean age was 39.7 years in the LNG-IUS group and 47.9 in the hysterectomy group. At 1 year, 88.7% maintained the LNG-IUS for over one year and 83.1% had successful bleeding control. Costs for the LNG-IUS insertion in a one-year time horizon were R$ 762.64 versus R$ 870.03 for the hysterectomy procedure. CONCLUSIONS: When applied to the eligible population in SUS the budgetary impact of the LNG-IUS adoption was an economy of almost R$ 3.6 million.

PIH4
ANALISIS DE COSTO-EFECTIVIDAD DEL USO DE LEVONORGESTREL-IUS FRANTE A OTROS TRATAMIENTOS EN MENORRAGIA IDIOPATICA
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OBJECTIVOS: Establecer la Costo-efectividad de levonorgestrel-IUS (LNG-IUS) en el tratamiento de MenorragiaIdiopática comparado con otras opciones de tratamiento.

MÉTODO: Se realizó un análisis de costo-efectividad desde la perspectiva del tercer pagador evaluando como desenlace el tiempo libre sin sintomatología ginecológica y el número de histerectomías evitadas. Las probabilidades de transición fueron obtenidas de estudios clínicos. Se tomaron los costos directos de atención, y la tasa de eficacia. No se incluyó la Ablación endometrial por ser de uso en Colombia Se aplicó un descuento del 3% anual para costos y desenlaces. Se realizó un análisis de sensibilidad tipo Monte Carlo con 2000 iteraciones y un análisis univariado tipo tornado.

RESULTADOS: Para una cohorte hipotética de 100 mujeres y un horizonte temporal de 5 años el costo del brazo con LNG-IUS fue de 100,993 USD frente a 116,726 USD, 127,513 USD, 103,497 USD y 125,330 USD (Anticonceptivo Oral Combinado, Acido Tranexámico, Acido Mefenamico y Naproxeno respectivamente). Con LNG-IUS se lograron 5.413 meses sin sintomatología frente a 5.110, 4.975, 5.026 y 4.791 respectivamente. Con LNG-IUS se evitó 1 Histerectomía frente a 58, 74,75 Y 65 respectivamente. LNG-IUS fue dominante frente a los demás comparadores para los desenlaces analizados. El análisis de sensibilidad tipo Montecarlo mantuvo dominancia del LNG-IUS en más del 99%.

CONCLUSIONES: El uso del LNG-IUS como primera opción de tratamiento, es la mejor alternativa ya que es menos costoso y más efectiva desde la perspectiva del tercero pagador en Colombia.

PIH5
REPLACING MMR BY MMRV IN MEXICO: ASSESSMENT OF COST-EFFECTIVENESS BASED ON A DYNAMIC TRANSMISSION MODEL
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OBJECTIVES: To predict the cost-effectiveness of vaccination with measles, mumps, rubella, and varicella (MMRV) vs MMR in Mexico.

METHODODS: A dynamic mathematical model was used to reproduce the age-related incidence of varicella and zoster. The impact of introducing varicella vaccination was predicted at population-level including costs and quality of life. Empirical age-specific contact rates between individuals were used. Amounts obtained are an underestimation of potential savings as neither expensive complications as renal failure nor other chronic diseases attributable to obesity as arthritis, colorectal or breast cancer were included.

CONCLUSIONS: MMRV vaccination should result in significant reduction in varicella and zoster cases in the long-term. We predicted the replacement of MMR by MMRV to be dominant under both scenarios.