

PIH6

EVALUATING THE RELATIONSHIP BETWEEN IN-UTERO METHYLPREDNISOLONE EXPOSURE AND BIRTH DEFECTS

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OBJECTIVES: To investigate the association between early pregnancy methylprednisolone use and risk of cardiac defects in a national level dataset. **METHODS:** Maternal and child medical claims data were obtained from Truven Health Analytics for all live births from 2000 and 2014. Logistic regression was used to measure the association between early pregnancy exposure to methylprednisolone and risk of structural defects overall, and cardiac and orofacial cleft birth defects specifically. **RESULTS:** Our dataset contained 1,149,145 live births from 1,004,175 mothers. Of these, 22,777 infants were exposed to methylprednisolone in-utero during the first trimester, and 61,830 infants were diagnosed with structural birth defects (32,100 with cardiac birth defects and 1,590 with orofacial cleft defects, specifically). No covariates met the definition of confounding and therefore none were added to the logistic model. First trimester exposure to methylprednisolone was associated with a statistically significantly increased risk of structural defects in general (OR: 1.90 95%CI: 1.80-2.00) and cardiac defects (OR: 2.16 95% CI: 2.02-2.30) and orofacial clefts (OR: 1.57 95% CI: 1.23-2.19) in the exposed mother-child pairs compared to those with no antiemetic exposure in the first trimester. **CONCLUSIONS:** Our research provides evidence showing increased risk of structural defects associated with early pregnancy exposure to methylprednisolone.

PIH8

HYSTERECTOMIES FREQUENCY IN A POPULATION AFFILIATED TO A PUBLIC HEALTH INSURER IN COLOMBIA; 2012 - 2016

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OBJECTIVES: To describe the frequency of hysterectomies of women affiliated to a public health insurance company in Colombia, segmented by five-year groups over a period of five years. **METHODS:** A retrospective dynamic cohort from a subsidized and public health insurance company was followed between 2012-2016. An average of 2,034 annual hysterectomies were performed on an average population of 765,431 women. To calculate the incidence of hysterectomies, the number of events (hysterectomies) were taken from the procedures database performed by the insurer. Every procedure was identified through the unique procedure codes (CUPS) from Colombia. Risk of hysterectomies (number of hysterectomies / number of women) and hysterectomy rates (# of hysterectomies / 10,000 women-year) were calculated from the number of events identified and follow-up of the dynamic cohort. **RESULTS:** The cumulative incidence of hysterectomies was 0.002. The frequencies of hysterectomies on the population presented a normal distribution, where the highest number of hysterectomies performed during the five years was concentrated in women between 45-49 years (23.7%), followed by women between 40-44 (22.5%). The hysterectomy rate for the age group of 45-49 was 98.9 per 10,000 women-year (95% CI 79.9-121.9) and for the 40-44 group was 91.5 per 10,000 women-year (95% CI: 75.5-102.1). The risk of hysterectomies in women aged 45-49 years was 1.009% (95% CI 0.84% -1.15%), while for the 40-44 group it was 0.93% (95% CI 0.82% -1.03%) during the period. Diagnoses that most generated these procedures were leiomyoma of the uterus without another specification (49.9%) and unspecified abnormal vaginal and uterine bleeding (11.6%). **CONCLUSIONS:** Similar to other studies findings, hysterectomies were related mostly to leiomyomas diagnoses and were mostly concentrated in the group of 40 to 49 years.

PIH9

PREDICTORS OF LAPAROSCOPIC HYSTERECTOMY FOR LEIOMYOMA SURGICAL REMOVAL IN THE UNITED STATES

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OBJECTIVES: Leiomyomas (uterine fibroids) are benign tumors that are prevalent among women of reproductive age and affect approximately 80% of premenopausal women. Hysterectomy is one of the most common surgical procedures for removal of uterine fibroids. Laparoscopic hysterectomy (LH) has increasingly been used as an alternative to the open surgical hysterectomy (OSH). The purpose of this study was to identify predictors of LH procedures among leiomyoma patients. **METHODS:** The National Inpatient Sample (NIS) is the largest publicly available inpatient healthcare database in the US, containing a 20% stratified systematic random sample of all US community hospital discharges. Thirteen years of available data, 2002-2014, were used for this analysis. International Classification of Diseases 9th revision (ICD-9) codes were used to identify all records of women with primary discharge diagnosis of uterine leiomyoma who had undergone either LH or OSH. Multivariate logistic regression analysis was conducted to identify significant predictors of LH. Population sampling weights were used to extrapolate results to national estimates. **RESULTS:** There were 310,150 leiomyoma LH procedures from 2002 to 2014, corresponding to 22.5% of the total number of leiomyoma hysterectomy procedures. The mean age of patients undergoing LH was significantly higher than those undergoing OSH (45.69 years vs 43.29 years; $p < 0.001$). After adjusting for covariates, significant predictors of LH procedures included age > 50 years (OR=3.18; 95% CI=3.57-4.07), hospital location in the West (OR=1.46; 95% CI=1.38-1.86), and hospital urban non-teaching status (OR=1.20; 95% CI=1.04-1.38). **CONCLUSIONS:** The study shows that despite the advances in surgical technologies, there are very few

predictors of non-conventional laparoscopic approach to leiomyoma hysterectomy. Our findings suggest that there is a differential access to LH procedures among the US population which may be, in part, a result of racial and socioeconomic differences and centralization of laparoscopy services in urban areas.

INDIVIDUAL'S HEALTH - Cost Studies

PIH11

THE ECONOMIC IMPACT OF SHINGLES VACCINE DISPARITIES AMONG HISPANICS

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OBJECTIVES: The primary objective of this study was to quantify the economic burden associated with the excess herpes zoster cases occurring in elderly Hispanic patients due to disparities in receipt of Zostavax®. **METHODS:** Markov models were utilized to estimate the costs and number of cases of herpes zoster occurring in elderly U.S. Hispanics ages 60 to 84 over a 20 year period. Direct medical costs and indirect costs were included and the study was conducted from a societal perspective. In the status quo scenario 9.1% of Hispanics age 60 to 64 and 19.2% of Hispanics over age 65 were assumed to receive the shingles vaccine in accordance with recent CDC data. In the health equity scenario 25.1% of Hispanics age 60 to 64 and 38.3% of Hispanics over age 65 were assumed to receive the shingles vaccine in accordance with recent CDC data. The incidence of shingles in the absence of vaccination was age dependent and varied from 5.90 to 9.76 cases per 1,000 person years in accordance with epidemiological data. The vaccine effectiveness varied according to the age of the recipient and the number of years the vaccine had been received with a mean effectiveness of approximately 51%. Direct medical costs for treatment of herpes zoster and resulting complications were obtained from the medical literature and updated to 2016 dollars using the medical CPI. Costs to estimate lost productivity were estimated from the literature and updated using the social security wage index. **RESULTS:** Shingles vaccine disparities were demonstrated to be associated with over 34,000 cases of preventable shingles cases. The shingles vaccine disparities were demonstrated to lead to over \$172,000,00 in potentially avoidable treatment costs. **CONCLUSIONS:** Continued failure to achieve health equity in shingles vaccine status is likely to result in a substantial public health and economic burden.

PIH12

EMPLOYER-PERSPECTIVE COST COMPARISON OF SURGICAL TREATMENTS FOR ABNORMAL UTERINE BLEEDING

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OBJECTIVES: Abnormal uterine bleeding (AUB) affects women's health and work productivity. Cost comparison analyses for surgical treatment of AUB from a self-insured employer perspective have not been undertaken. Employer-paid insurance claims data were analyzed to estimate direct and indirect costs associated with surgical treatment of AUB with global endometrial ablation (GEA), outpatient hysterectomy (OPH), and inpatient hysterectomy (IPH). **METHODS:** The Truven Health MarketScan Commercial and Health and Productivity Management Databases were used to identify female employees aged 30-55 years with AUB who had GEA, OPH, or IPH during 01/01/2013-6/30/2015. Direct costs included costs of AUB surgical intervention, complications, and reintervention (for GEA patients), along with all other healthcare costs incurred one year post-surgery. Indirect costs of absenteeism and short-term disability (STD) were calculated using a wage constant (\$23.88/hour) specific to women in the age group. A subset of analyses disaggregated results by 10 employer type classifications. All costs were 2017 US \$. **RESULTS:** Total one-year healthcare costs paid by employer insurance for women with surgical AUB treatment were \$14,715 for GEA, \$22,425 for OPH, and \$24,749 for IPH (direct cost Δ: \$7,709-\$10,033). Gynecology-related costs also were comparatively lower for GEA treatment. Costs varied when disaggregated by industry type; largest cost savings for GEA vs. OPH and IPH were for patients employed in "Agriculture/Forestry/Fishing" and "Finance, Insurance, Real Estate." Work absence was 8.7 days less for GEA vs. OPH and 10.8 days less for GEA vs. IPH (indirect cost Δ: \$1,665-\$2,068). STD work days lost were 13.1 days less for GEA vs. OPH and 13.2 days less for GEA vs. IPH (indirect cost Δ: \$2,500-\$2,519). **CONCLUSIONS:** Study results suggest strong financial favorability for GEA vs. OPH or IPH from an employer perspective and should help inform self-insured employers seeking cost-effective AUB treatments.

PIH13

ANNUAL DIRECT MEDICAL COST OF PEDIATRIC PULMONARY HYPERTENSION HEALTH CARE IN CENTRO MEDICO NACIONAL 20 DE NOVIEMBRE (NMCISSTE, MEXICO)

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OBJECTIVES: To estimate the burden of annual costs for Pediatric Pulmonary Hypertension (PPH) health care considering the public perspective in Mexico. **METHODS:** A retrospective cohort study was conducted using medical records from a pediatric cardiology service at NMC ISSSTE, Mexico City. All patients who had PPH included were aged under 18 years (2013-2015). Clinical and economic variables were collected; direct healthcare costs were medical visits, hospitalization days, emergency visits, diagnostic or therapeutic procedures and medication. Prescriptions (acute, chronic, or upon request) were quantified based on mean dosage/patient, all resources used was obtained directly from patient's charts and prices were obtained from [www.compranet.funcionpublica.gob.mx](#). A descriptive analysis was performed, the bivariate analysis included linear correlation and mean differences, costs were compared by ANOVA test of initial functional class. A log