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HELICOBACTER PYLORI INFECTION RATES IN THE FIRST THREE YEARS OF LIFE: US-MEXICO COHORT STUDY. *KJ Goodman, K O'Rourke, RS Day, C Wang, K Mena, A Campos, JM de la Rosa. (University of Texas School of Public Health, Houston, TX 77225)

The Pasitos Cohort Study follows children from El Paso, Texas, and Ciudad Juarez, Mexico to identify determinants of *H.pylori* infection. Pregnant women were recruited from WIC clinics in El Paso and Mexican Social Security Institute clinics in Juarez during 1998–2000. Active H.pylori infection was detected in children by the 13C-urea breath test; results were corrected for body-size-dependent metabolic variation using Klein's method. This analysis estimates the incidence rate of *H.pylori* infection from birth through three years of age. As of January 2003, 472 children entered the cohort (with one or more follow-up visits) and breath test results were available for 360, 340, 268, 216, 170, and 137 children around target ages of 6, 12, 18, 24, 30 and 36 months, respectively. The total person-time at risk of a first detectable infection was 727 person-years; 149 infants had one or more positive breath tests, thus the incidence rate of first detectable infection was 0.21/year [95% CI, 0.17–0.24]. Incidence rates for subgroups: Juarez infants, 47/253 person-years = 0.19/year [0.13–0.24]; El Paso infants, 102/474 person-years = 0.22/year [0.15–0.24]; boys, 67/337 person-years = 0.20/year [0.15–0.25]; girls, 82/390 person-years = 0.21/year [0.17–0.26]; first year of age, 76/406 person-years = 0.19/year [0.15–0.23]; second year of age, 52/222 person-years = 0.23/year [0.17–0.30]; third year of age, 21/100 person-years = 0.21/year [0.12–0.30]. In this cohort, *H.pylori* infection occurred with similar frequency among children on both sides of the Rio Grande, with incidence rates ranging from 19–23%/year among subgroups based on age and sex.

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INFLUENZA SURVEILLANCE USING AN ELECTRONIC MEDICAL RECORD AND VARIATIONS IN SYMPTOMS OVER THREE INFLUENZA SEASONS. *A. Haws, K. T. Hegmann,, K. B. Hegmann, S. C. Alder, G. L. White Jr, J. L. Lyon, and A.M. Wendelboe (University of Utah, SLC, UT 84108).

Influenza surveillance for the 2001–03 seasons is being performed at the University of Utah using an electronic medical record on a patient population of ~100,000. Influenza epidemics in each season have been identified using multiple statistical process control charts. Signs and symptoms of influenza cases were analyzed and unexpectedly demonstrated significant amounts of abdominal symptoms such as nausea, vomiting, and diarrhea. In influenza cases confirmed by a rapid influenza test, there was not a significant difference between years in the prevalence of reported nausea and vomiting, although there was for diarrhea (15.4% vs. 4.9% [2003 vs. 2002 respectively] $p < 0.001$). When rapid test positive cases were compared to those not confirmed for 2003, a statistically significant difference was seen (vomiting 25.6% vs. 6.1%, $p<0.05$; nausea 23.1% vs. 9.1%, $p < 0.05$). Thus far in 2003, patients diagnosed with influenza were statistically less likely to have fever, cough, sore throat, myalgias/arthralgias, headache, chest congestion, sinus pain/pressure, and earache than those diagnosed with influenza in 2002 (all $p < 0.001$). Other respiratory diagnoses not specifically related to influenza have also been monitored to detect an early influenza epidemic potentially undiagnosed due to cases. The differences in signs and symptoms reporting between years suggests that either influenza presents somewhat differently in different seasons, or many cases may have been misdiagnosed. This finding suggests a need for further research in this area to potentially improve the quality of patient care for influenza.

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SYNDROMIC CRITERIA TO IMPROVE GUD DIAGNOSIS. *c. Hoyo, I. Hoffman, B. K. Moser and M. Hobbs (Duke University, Durham, NC 27710)

Most settings rely on syndromic criteria to diagnose genital ulcer disease (GUD). However, etiologic pathogens vary temporally and geographically. Thus, it is necessary to periodically evaluate these criteria to ensure they reflect changes in prevalence of underlying pathogens. From 136 consecutive GUD patients in a sexually transmitted disease clinic in Malawi, we estimated the prevalence of treponema pallidum (*T Pallidum*), herpes simplex virus (*HSV*) and hemophelus ducreyi (*HD*), as detected by multiplex polymerase chain reaction. Regression models were used to identify correlates of *HSV* using relative risks (RR) and 95% confidence intervals (CI). Factors identified were then used to develop weighted and unweighted diagnostic algorithms, where weights were beta-coefficients corresponding to each factor. The prevalence of *T pallidum, HD* and *HSV* were 3%, 30%, and 35%, respectively. Corresponding proportions in the same population in1992 were 29%, 26% and 8%. *HSV* correlates were female sex (RR = 4.8; 95%CI = 1.9, 12.4), early consultation (RR = 3.18; 95%CI = 1.4, 7.5), older age (RR = 2.56; 95%CI = 1.1, 5.0), shallow ulcers (RR = 3.12; 95%CI = 1.4, 10.0), and lymphadenopathy (RR = 3.84; 95%CI = 1.3, 10.0). Conversely, *HD* patients had deep ulcers, and were younger. Receiver operating characteristic curves for *HSV* produced areas under the curves of 67.6% and 66.5%, for the weighted and unweighted algorithms, respectively, with no difference between the explanatory performance of the weighted and unweighted scores ($p = 0.383$). Syndromic criteria can be used to improve diagnostic accuracy of GUD without accounting for the strength of the association. However, they require updating to reflect the prevalence of underlying pathogens.

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BACTEREMIA AND RELATED FACTORS IN AN UNIVERSITY HOSPITAL. *F. Jaimes, C. Arango, J. Cuervo, G. Ruiz, and J Botero. (Johns Hopkins Bloomberg School of Public Health, Baltimore, MD)

The time elapsed between the suspicion of sepsis and the confirmation of microorganisms in the blood could be the difference between survival and death. In order to enhance the clinician's suspicion criteria for bacteremia, we developed a prediction rule based in common clinical findings. We followed consecutively 500 patients with initial diagnosis of sepsis or bacteremia in which blood cultures were requested. The variables examined included: age, co-morbidity, trauma or surgery, length of hospital stay, previous antibiotics, central venous catheter, mechanical ventilation, heart rate, temperature, leucocytes and Glasgow coma scale. The dependent variable was positive blood culture. The following steps were used: 1. Univariate data analysis. 2. Evaluation of colinearity, interactions and linearity. 3. Backward stepwise logistic regression. 4. Hosmer-Lemeshow Goodness-of-fit test. 5. C- Statistic 6. Bootstrap in the complete set with 1000 iterations of the logistic regression. 58.6% of the patients were males, the median age was 46 years, the mortality was 22.6% ant there were positive blood cultures in 20.2%. The final predictors were heart rate ≥ 100 per minute (OR 1.71, CI 95% 1.09, 2.68), 14 or more days in length hospital stay (OR 1.87, CI 95% 1.16, 3.0) and catheter use (OR 2.19, CI 95% 1.22, 3.9). The goodness-of-fit test showed a p value of 0.327 and the C statistic was 0.633. Those tests in the bootstrap samples were 0.221 and 0.641 respectively, and the estimators had bias lower than 10% of their standard errors. Suspicion of bacteremia in patients with high heart rate, long stay and catheters should receive priority for testing.

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