

197-S

INVERSE ASSOCIATION BETWEEN HUMAN HERPESVIRUS 8 (HHV-8) ANTIBODY TITERS AND PRESENCE OF HHV-8 DNA. *Laney AS, Dollard SC, Jaffe HW, Offermann MK, Spira TJ, Gunthel CJ, Pellett PE, and Cannon MJ. (Emory University and the Centers for Disease Control and Prevention, Atlanta, GA 30333)

HHV-8 infection is necessary for the development of Kaposi's sarcoma (KS). To better understand the relationship between HHV-8 infection and the host immune response, we studied 90 men (45 with KS) seropositive for both HIV-1 and HHV-8. For each man, we analyzed data from 4 visits separated by 3-week intervals. During the 2-month follow-up, HHV-8 antibody levels, as measured by titers against peptides from open reading frames (ORF) 65 and K8.1, tended to remain constant within individuals. HHV-8 DNA was present sporadically. Geometric mean antibody titers were higher in men with KS than in men without KS for both ORF65 (2877 vs. 690) and K8.1 (1452 vs. 740). HHV-8 DNA was present in blood more often in men with KS (35%) than men without KS (11%), and in oral fluid more often in men with KS (29%) than men without KS (22%). However, in multivariate analyses that controlled for KS status and accounted for within-patient correlation, high ORF65 antibody titers were inversely associated with the presence of HHV-8 DNA in blood (odds ratio (OR)=0.19; 95% confidence interval (CI), 0.07-0.53) and oral fluid (OR=0.18; 95% CI, 0.05-0.60), and high K8.1 antibody titers were also inversely associated with the presence of HHV-8 DNA in blood (OR=0.50; 95% CI, 0.16-1.58) and oral fluid (OR=0.45; 95% CI, 0.13-1.49). Thus, the common assumption that men with HHV-8 DNA also have high antibody titers appears to be an ecologic fallacy: high antibody titers and HHV-8 DNA are associated at the group level, but are inversely associated at the individual level.

199-S

DETECTION OF AN INFLUENZA EPIDEMIC USING AN ELECTRONIC MEDICAL RECORD-BASED BIOTERRORISM SURVEILLANCE SYSTEM DURING THE 2002 WINTER OLYMPICS. K. T. Hegmann, K. B. Hegmann, *A. M. Wendelboe, S. C. Alder, J. L. Lyon, G. L. White, and M. Magill (University of Utah, Salt Lake City, UT 84108).

Surveillance has traditionally, though inefficiently, relied upon paper records and phone calls from physicians. The 2002 Winter Olympics provided an opportunity to implement a bioterrorism surveillance system using an electronic medical record (EMR). This EMR allowed for daily updates of diagnoses. Statistical process control was used to monitor daily ICD-9 coded diagnoses across a clinic system ($\approx 100,000$) for syndromic patterns of disease consistent with bioterrorism or natural epidemics. An influenza epidemic was identified in January 2002. A significant proportion of cases (rapid test positive) were unexpectedly affected by nausea (16.6%), vomiting (17.9%) and diarrhea (4.9%) that may have resulted in additional cases with significant gastrointestinal symptoms remaining undiagnosed. Subsequent analyses of the prior influenza season found still higher prevalences of nausea (31.1%) and vomiting (24.4%) in those testing positive. Additionally, antiviral prescriptions were significantly greater in 2002 than 2001 (52.4% vs. 17.8%, $p < 0.05$), likely augmented in part by real-time feedback to clinicians. However, rapid testing of high probability cases decreased substantially in 2002 (Odds ratio = 0.35, 95% CI = 0.25, 0.50), suggesting greater reliance on clinical diagnosis. Improved outbreak surveillance in the future using such systems appears promising for both major events and routine communicable diseases.

198-S

MOTHER'S INFECTION STATUS AND H.PYLORI INCIDENCE IN A US-MEXICO BIRTH COHORT. *C Wang, KJ Goodman, RS Day, K O'Rourke, A Campos, and JM de la Rosa (University of Texas, Houston, TX, 77225).

The Pasitos Cohort Study follows children from El Paso, Texas and Juarez, Mexico to identify determinants of H.pylori infection. This analysis estimates the effect of the mother's H.pylori status on the child's H.pylori acquisition rate from birth through two years of age. We recruited pregnant women during 1998-2000 and used the HM-CAP enzyme immunoassay to detect H.pylori IgG antibodies upon enrollment. Children were followed at target ages of 6, 12, 18 and 24 months. To detect H.pylori infection in children, we used the ^{13}C -urea breath test corrected for body-size-dependent CO₂ production by Klein's method. We estimated incidence rate ratios (RR) and 95% confidence intervals (CI) using Cox regression. The analysis included 467 children, followed an average of 18 months. 282 children (60%) had seropositive mothers. The children's infection rate was 21%/year (125 first infections in 598 at-risk person-years). Adjusting for mothers' age and education, children of seropositive mothers and children of seronegative mothers had equal incidence rates [RR = 1.0 (95% CI, 0.71, 1.5)]. Further adjustment for number of siblings and household members, source of health care, breastfeeding duration, and antibiotic use slightly reduced the RR for mothers' positivity [0.91 (0.61, 1.4)]. Infection rates were around 40-50% lower in children whose mothers had 7-11 and 12+ years of school [adjusted RRs, 0.61 (0.38, 1.0) and 0.52 (0.29, 0.90), respectively], compared to those whose mothers had 0-6 years. In this cohort, mothers' seropositivity was not linked to increased H.pylori incidence rates in children, while children of more highly educated mothers had reduced incidence rates.

200

ARE OLDER DRIVERS AT HIGHER RISK OF INVOLVEMENT IN CRASHES RESULTING IN DEATHS OR NONFATAL INJURIES AMONG THEIR PASSENGERS OR OTHER ROAD USERS? *E.R. Braver and R.E. Trempe (Insurance Institute for Highway Safety, Arlington, VA 22201)

With increasing numbers of older drivers on the road, public concern has been expressed about the impact of older drivers on traffic safety. This study examined the question of driver age in relation to the risks of drivers and others sharing the road with them, including pedestrians, passengers in the same vehicle, and occupants of other vehicles. Using federal data on fatal and nonfatal crashes, injury rates per driver were calculated for different types of road users. In addition, using data supplied by nine insurers, insurance injury claims per insured vehicle-year were examined by driver age. This study confirms that younger drivers, including both teenagers and those in their 20s, are a substantially greater public health problem than older drivers with respect to crashes resulting in deaths and nonfatal injuries to themselves, their passengers, and other road users. One exception was the high rate of driver deaths among drivers 75 or older, who had risks higher than those of the youngest drivers. For fatal crashes, older drivers' major impact on road users other than themselves was an increase in death rates among passengers traveling with them; however, about 75 percent of their passengers are elderly and thus more vulnerable to injuries. For nonfatal crashes, the drivers aged 75+ had a rate ratio (RR) of 1.10 (95% confidence interval (CI) = 0.98, 1.24) for involvement in collisions resulting in injuries to occupants in other passenger vehicles compared with 30-59-year-old drivers. Also, the drivers aged 85+ had a RR of 1.8 (95% CI = 1.71, 1.89) for insurance injury claims in which they were deemed to be at fault. These findings suggest that the oldest drivers, a group with the lowest average annual mileage, are posing a risk to occupants of other vehicles, although this risk is far lower than that from young drivers.

7
6 24-03
SUPPLEMENT TO:

American Journal of

ISSN 0002-9262
Printed in the U.S.A.

EPIDEMIOLOGY

Volume 157

Number 11

June 1, 2003

Published for the Johns Hopkins
Bloomberg School of Public Health
by Oxford University Press
Sponsored by the Society for Epidemiologic Research

SER SER SER
SER SER SER
SER SER SER

Society for Epidemiologic Research

ABSTRACTS OF THE 36TH ANNUAL MEETING
ATLANTA, GEORGIA, JUNE 11-14, 2003