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SHORT-TERM OUTCOMES FOLLOWING MALIGNANT BOWEL OBSTRUCTION. *S J Mooney, M Winner, D L Hershman, A I Neugut (Mailman School of Public Health, Columbia University, New York, NY)

Background: Malignant bowel obstruction (MBO) is a complication of late-stage abdominal cancer in which cancerous growth causes intestinal blockage. Few publications have addressed short-term outcomes such as discharge disposition after hospitalization for MBO or total days spent in hospital at the end of life. We hypothesized that surgical as compared to non-surgical therapy would be associated with more days in the hospital during the last months of life. Methods: We used the Surveillance, Epidemiology and End Results (SEER) and Medicare claims linked databases to select patients >65 yrs who died of primary invasive colon adenocarcinoma between 1/1/1992 and 12/31/05. We used Medicare claims to identify hospitalizations for bowel obstruction during the last six months of life, and to identify the use of surgical therapy. We used subsequent claims to assess short-term outcomes and Chi-squared and Mann-Whitney U tests to test statistical significance. Results: We identified 18728 colon cancer patients, of whom 1631 (8.7%) developed MBO. Among 370 treated surgically, 163 (44%) were discharged to home care, as compared to 671 of 1261 treated non-surgically (53%); this difference was statistically significant ($P = .002$). Surgical patients spent a median 17/48 days in the hospital between MBO and death, versus 10/34 days in the non-surgical group. The difference in median proportion of days spent in hospital between MBO and death was statistically significant ($P = 0.02$). Discussion: Surgical treatment of MBO in the setting of terminal cancer was associated with less frequent discharge to home care and more days spent in hospital in the last months of life; such outcomes should be reported in studies of palliative care for MBO.

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HEART RATE VARIABILITY AND INFLAMMATORY MARKERS IN URBAN POLICE OFFICERS. *A Mnatsakanova, C M Burchfiel, M L Kashon, S Li, L E Charles, D B Miller, J M Violanti, M E Andrew (NIOSH, Morgantown WV)

The aim of this cross-sectional study was to investigate associations of heart rate variability (HRV) with inflammatory markers among Buffalo, NY police officers. A total of 383 officers had complete data on HRV (high (HF) and low (LF) frequency power and heart rate) and inflammatory markers (C-reactive protein (CRP), interleukin 6 (IL-6), tumor necrosis factor- α (TNF α) and fibrinogen). Electrocardiographic (ECG) data were processed using consensus standards for analysis of HRV; 5 minutes of resting ECG data were analyzed. Inflammatory markers were measured after fasting 12 hours using standard techniques. Linear regression and analysis of variance and covariance were used to assess mean levels of inflammatory markers across tertiles of HRV components. Univariate analysis revealed that HF and LF measures were strongly and inversely correlated with CRP ($r = -0.21$, $P < 0.001$ and $r = -0.23$, $P < 0.001$, respectively). In multivariate models, this relationship was attenuated and no longer significant ($\beta = -0.09$, $P = 0.057$ and $\beta = -0.11$, $P = 0.066$, respectively). Mean levels of TNF α and fibrinogen decreased significantly with increasing tertiles of HF power ($P = 0.004$ and $P = 0.028$, respectively), but after multivariate adjustment for other risk factors results were attenuated ($P = 0.097$ and $P = 0.992$). Heart rate was positively and significantly associated with CRP and IL-6 across all models. Findings from this study were consistent with other studies where measures of vagal nerve activity, such as HF and LF power, were inversely related to inflammatory markers. Results suggest that cardiovascular risk factors account for some of the inverse association between HRV and inflammatory markers.

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COMPARISON OF BREAST AND CERVICAL CANCER SCREENING AMONG RURAL AND URBAN HISPANIC AND AMERICAN INDIAN WOMEN IN THE U.S. SOUTHWEST. *T Nuño, J K Gerald, R Harris, M Elena Martinez, A Estrada, F García (University of Arizona, Tucson, AZ)

Purpose: Rural Hispanic and American Indian (AI) women are at risk of non-participation in cancer screening programs. The purpose of this study was to compare breast and cervical cancer screening among Hispanic and AI women that reside in rural areas of the Southwest to their urban counterparts and to assess characteristics that influence screening. Methods: This study utilizes Behavioral Risk Factor Surveillance System (BRFSS) data from 2006 and 2008 for Arizona and New Mexico. The BRFSS is a federally funded telephone survey to collect data on risk factors contributing to the leading causes of death and chronic diseases. Results: Rural Hispanic and AI populations reported some differences in screening rates compared to their urban counterparts. Eighty three percent of rural Hispanic women had ever had a mammogram, compared to 86 percent of urban Hispanic women. Eighty one percent of rural AI women had ever had a mammogram, compared to 89% of urban AI women. Rural Hispanic women were less likely to have ever had a mammogram (OR = 0.8; 95% CI = 0.5-1.3) compared to urban Hispanic women. Rural AI women were less likely to have ever had a mammogram (OR = 0.5; 95% CI = 0.3-0.9) compared to urban AI women. Conclusion: Hispanic and AI women that reside in rural areas of the Southwest may have lower rates of breast and cervical cancer screening use compared to their urban counterparts. Special efforts are needed to identify ways to overcome barriers to breast and cervical cancer screening for rural Hispanic and AI women.

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DISPARITIES IN MULTIPLE RISK FACTORS FOR HEART DISEASE AND STROKE IN THE MISSISSIPPI DELTA. *V Mendy, V Short, L Smith, A Gamble (Mississippi State Department of Health, Jackson, MS)

Introduction: The prevalence of multiple risk factors (MRFs) for heart disease and stroke in Mississippi adults is among the highest in the nation. While national studies suggest prevalence differences by race and socioeconomic indicators, the prevalence and distribution of MRFs in the Mississippi Delta by sociodemographics is unknown. We examined MRFs for heart disease and stroke by race and socioeconomic status (SES) among Mississippi Delta adults. Methods: Self-reported Behavioral Risk Factor Surveillance System data (2007-2010; N = 7,886) for the Mississippi Delta were subjected to descriptive and multivariate logistic regression analyses. Hypertension, hyperlipidemia, diabetes, smoking, obesity and physical inactivity were assessed. MRFs were defined as having ≥ 2 of these factors. Differences in distribution of MRFs by race, age, sex, SES (income, education and employment) and healthcare coverage were examined. Results: Data indicate risk factor prevalence for obesity (68.0%), diabetes (12.0%), hypertension (36.6%), smoking (23.2%), hyperlipidemia (40.9%) and physical inactivity (33.3%). Over half (50.6%) reported MRFs. Adjusted odds ratios (AOR) indicate that race, sex and healthcare coverage were not significantly associated with MRFs. Less than a high school education (AOR 1.66, 95% CI 1.31-2.10), unemployment (AOR 1.25, 95% CI 1.05-1.49), household income less than \$10,000 (AOR 2.13 95% CI 1.53-2.97) and age 50-64 years (AOR 3.21, 95% CI 2.59-3.97) significantly predicted MRFs. Conclusion: Mississippi Delta adults have high prevalence of MRFs for heart disease and stroke. Having MRFs is significantly associated with low SES and age. Focusing public health efforts on specific groups may help decrease disparities in the Mississippi Delta.