

Health Disparities in Chronic Obstructive Pulmonary Disease (COPD) Medical Visits and Mortality

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According to WHO's estimation, chronic obstructive pulmonary disease (COPD) will be the third major cause of death around the world in 2030. In Taiwan, the COPD prevalence rate was 16.2 per 100,000 populations and was the seventh cause of death. In order to identify the hotspot of COPD, we applied retrospective spatial-temporal scan statistics to elucidate the disease clusters. The databases of cause-of-death and medical visits were collected from Department of Health during 2000-2007. Due to the spatial heterogeneity of the population, the population at risk was estimated by the multi-layer multi-class dasymetric mapping. Geographically Weighted Regression was applied for adjusting the risk factors including the smoking rate, air pollution and socio-economic development index. The results pointed out that the high COPD mortality rates occurred in the mountainous townships of southern Taiwan. However, the medical visits of COPD were high in the northern Taiwan. The health disparity of COPD in Taiwan might occur and needs further investigation to identify the personal risk factors.