Sex Differences in Chronic Obstructive Pulmonary Disease and Lung Cancer Mortality Trends—United States, 1968-1999

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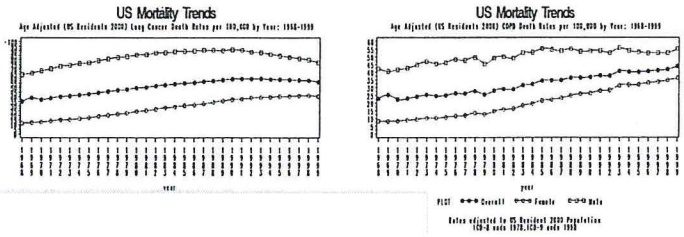
The uptake of cigarette smoking by United States women in the 1940s and 1950s has resulted in large increases in smoking related lung disease among women. To determine the magnitude of this increase, we compared the mortality trends for men and women in the United States from chronic obstructive pulmonary disease (COPD) and lung cancer for the years 1968-1999. We used the national mortality data files compiled by the National Center for Health Statistics and the 1968-1999 US census data to calculate age-adjusted (2000) mortality rates for COPD and lung cancer as the underlying cause of death. The overall mortality rate for COPD has steadily increased from 1968 to 1999 with female mortality rates increasing more rapidly than male mortality rates. Moreover, the COPD mortality rate among US women is approaching the COPD mortality rate among men. The female mortality rate for



mortality rate increasing by only 20%
lity rate between US women and men
ed in woman's health issues need to be
aware of these statistics and plan interventions for respiratory diseases in women.

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Predictors of Chronic Obstructive Pulmonary Disease among Office and School Workers

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RATIONALE: This study identified predictors of chronic obstructive pulmonary disease (COPD) in office and school workers, a subset of the population generally assumed to have a low prevalence of COPD and limited exposure to chemicals and dusts at work. METHODS: Logistic regression was used to develop a multivariate model for COPD using National Health and Nutrition Examination Survey (NHANES III) data on 2486 US office and school workers. COPD was defined as FEV1/FVC<70% and FEV1<80% predicted. RESULTS: The population prevalence of COPD among US office and school workers was estimated at 4.7% compared with 8.1% in other US workers. As expected, current smoking was a strong predictor of COPD. After adjusting for age, race, sex, and current smoking, workers with COPD had significantly ($p<0.2$) greater mean duration of employment, pack years, alcohol intake, body mass index (BMI), coffee consumption, dietary fat and cholesterol. Workers with COPD had lower mean serum selenium and energy use during exercise. In multivariate modeling, employment duration, cigarette smoking, age, race, BMI, alcohol, use of propane fuel at home, and serum antioxidant (selenium) were found to explain COPD. Home heating with propane fuel was associated with a 4.4-fold risk of COPD (95% CI 1.2-15.8) in these study subjects. Duration of employment as an office or school worker for 10 or more years (vs. < 10 years) was associated with a 1.8-fold (95% CI 1.0-3.3) excess risk of COPD. CONCLUSIONS: Multivariate modeling revealed several potential risk factors for COPD amenable to modification. The predictive model suggests that, after controlling for confounding factors, working as an office or school worker for 45 years is associated with a 2.2-fold excess risk of COPD.

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Women Bear an Increasing Burden of Obstructive Lung Disease

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Rationale: Asthma prevalence and health-care use is increasing in children and adults. Smoking has decreased. Has there been changes in the population burden of respiratory symptoms? Are there gender differences in the burden ?

Methods: Two repeated cross-sectional questionnaire surveys of the population aged 15-70, were conducted in the city of Oslo, Norway in 1972 and 1998. At both surveys, a random sample of n=20 000 subjects were sent a postal questionnaire. The following respiratory symptoms were considered: wheezing, attacks of breathlessness, cough and phlegm, dyspnea. Estimates were adjusted for smoking and pack years.

Results: The prevalence of having any respiratory symptom increased from 50.5% in 1972 to 60.7% in 1998/99. Nearly all individual symptoms increased in prevalence. There were large increases in symptom scores of episodes of cough and phlegm, asthmalike symptoms (wheezing and attacks of breathlessness) and dyspnea. The increase was larger in the young, especially among young women. Counting all symptoms, there was an increase in all age and gender groups, with a larger increase among women under the age of 45. In men aged 15-30, the mean number of symptoms for men increased from 1.35 to 1.93 ($p < 0.01$), and for women increased from 1.28 to 2.11 ($p < 0.01$) ($p < 0.01$ for the difference between men and women).

Conclusions: The population burden of symptoms of obstructive lung disease is increasing. Women bear an increasing portion of this burden.

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A High Prevalence of Mild Chronic Obstructive Pulmonary Disease in a Popu lation Sample

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Aim: The North-West Adelaide Health Study is a longitudinal study of risk facto for chronic disease to assess changes along a disease continuum from health, throug to death. Methods: Computer assisted telephone interview recruitment of participan from randomly selected households. Participants aged ≥18 years attended a clinic f assessment of biomedical factors. Information on demographics, diabetes, asthm chronic lung disease, alcohol and tobacco use was obtained from a self-complete questionnaire. COPD was defined by FEV1/FVC: (-0.18 x age) + 87.21 for Male (-0.19 x age) + 89.10 for Females. Severity was classified by FEV1% predicte (mild: ≥70 moderate:50-69, severe ≤ 49). Results: Clinic data was obtained on 252 participants: male 48.9%; mean age 44.3 years. The prevalence of COPD was 21.3 (n=533). Prevalence of mild, moderate and severe disease was 94.4%, 3.9% an 1.7% respectively. Of those with mild COPD 51.6% were aged 40 years and 40.4 were current smokers. COPD was significantly associated male gender, and no obese status with current smoking intermediate to high alcohol use and non-obes status. Current smoking, age and non-obese status were the best joint descriptor var ables in logistic regression analysis. Conclusions: There is a high prevalence of mil COPD in this population which was previously undiagnosed. A screening progra for the detection of COPD appears warranted to avert a high burden of COPD. Give the young age of those with mild COPD, targeted smoking cessation programs als seem warranted.

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Prevalence of Depression in COPD Patients

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AIM: To study the prevalence of depression in COPD patients and factors tha might be associated with depression.

METHOD: 50 patients with COPD were enrolled. The disease was quantifie based on the FEV1 values. Severe COPD was defined as with FEVI <35%. Patient were interviewed using geriatric depression scale (GDS) and depression was diag nosed if GDS >9, Severe depression was defined as GDS of 23±6, mild depressio 15±6. Number of patients carrying a clinical diagnosis of depression was als noted. Other factors identified included effort tolerance (ET), use of walker/wheel chair, home oxygen use.

RESULTS: 31/50(62%) patients had depression based on GDS scale. Non carried a clinical diagnosis of depression. Of this 31 patients with depression, ther were 18(58%) patients with moderate- severe COPD. 7/31(22%) were on home O2 17/31 (54.8%) patients had ET <1 block, 5/31(16%) patients were on wheel chai walker. Of the 19/50 (38%) non depressed patients, 16(84%) patients ha moderate-severe COPD, 5/19(26%) patients were on home 02, 4/19 (21%) ha ET<1 block, 4/19(21%) patients were on walker.

CONCLUTION: Depression is common in patients with COPD but was no clinically recognized. Severity of COPD, need for home O2 and ambulatory aid did not identify depressed patients. Poor effort tolerance (ET<1) did help identif patient with depression. Unless depression is routinely evaluated for in COPI patients using GDS scale; depression will continue to be under recognized i patients with COPD.

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A Cluster of Paradoxal Results in Chronic Obstructive Pulmonary Diseases

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We have previously reported and apparently paradoxal association betwee medical care related factors and an increased risk of hospitalization in COPI patients (Garcia-Aymerich J et al. Risk factors for hospitalization for a chroni obstructive pulmonary disease exacerbation. EFRAM study. Am J Respir Crit Car Med 2001;164(6):1002-7). Confounding by severity or indication is a plausibl explanation. Therefore we tested the confounding effect of severity related vari ables on these paradoxal associations. Re-hospitalizations of 346 COPD patient previously admitted in four tertiary hospitals in Barcelona, Spain, were retrospec tive followed-up over one year. Both medical related factors and severity variable were collected at the recruitment admission. Presence of confounding by severit was assessed by means of stratified analysis and Cox regression models using th first re-admission during the follow-up period as the dependent variable. FEV1 PO2 and previous admissions were associated to both medical care related factor and re-hospitalization during the follow-up. Long term oxygen therapy did chang from a crue odds ratio (OR) of 2.36 (95%IC:1.79-3.11) to an adjusted OR of 1.3 (0.95-2.00). A similar change was observed for the use of anticholinergics (fron 3.52(2.37-5.21) to 2.10 (1.32-3.36)). A similar pattern was found for all the ohe medical care related actors. The excess risk of COPD re-admission associated t medical related factors may be partially due to confounding by severity. Residua confounding may still account for part of the remaining associations. True effects o some pharmacological treatments can not be excluded.

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