

More Hospital COPD Deaths Seen in Rural Vets

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MINNEAPOLIS — Geographic isolation was associated with increased 30-day mortality in patients hospitalized for chronic obstructive pulmonary disease, according to the findings of a Veterans Health Administration study.

The results are consistent with those of studies that indicate rural location and hospital volume are associated with outcomes in patients hospitalized for cardiovascular-related illnesses, reported Dr. Thad Abrams of the University of Iowa, Iowa City.

"Hospital-level factors may be important drivers in the urban/rural outcome differences" seen for COPD patients, Dr. Abrams said. "Rural veterans were more

Hospital-level factors may be important drivers in the urban/rural outcome differences in COPD patients, with rural veterans likelier to be admitted with lower volume and higher mortality.

likely to be admitted to VHA hospitals with lower volume and higher mortality." Hospital volume and "rurality" were associated with 30-day mortality after adjusting for various other risk factors such as demographics, medical comorbidities, laboratory abnormalities at admission, and receipt of mechanical ventilation, he said.

Despite some of the study's limitations—particularly that the analysis does not account for veterans who were ultimately admitted to non-VHA hospitals—the findings suggest that residing in isolated rural regions "may serve as an independent risk factor for hospital mortality in COPD patients, and that the risk may be due to differences in hospital quality," Dr. Abrams said.

"While we did not specifically examine underlying factors for the risk of isolated rural veterans, it is possible that the increased risk reflects delayed access or broader social and cultural factors among those living in isolated rural areas," which will be analyzed in a future investigation, he said.

The study population included 26,938 consecutive patients with COPD admitted to 126 VHA hospitals in 2006-2008. Based on the Rural Urban Commuting Area classification scheme, about 10% of the patients were identified as residing in isolated rural areas, Dr. Abrams reported.

Patients were included in the analysis if they were admitted to one of the VHA hospitals with a primary diagnosis of COPD based on ICM-9-CM codes, Dr. Abrams said. Patients who were readmitted for COPD within 30 days of their initial admission were excluded from the analysis.

The only significant difference be-

tween patients living in urban, rural, and isolated rural areas was ethnicity, with nonwhite patients being significantly more likely to reside in urban areas, Dr. Abrams said. "Otherwise, patients' mean age, sex, and comorbidities were all relatively similar."

The impact of hospital-level factors on 30-day mortality also was examined. Hospitals with 32-250 COPD admissions during the study period were catego-

rized as low-volume centers. Those with 251-400 COPD admissions were medium-volume centers, and those with more than 400 COPD admissions were high-volume centers, Dr. Abrams said.

Hospital rurality was based on the percentage of rural and isolated rural patients admitted to each hospital. Low rurality was defined as 1%-15% of patients, medium as 16%-37%, and high as more than 37%.

The unadjusted 30-day mortality rate was 4.7% in low-volume hospitals and 3.7% in high-volume hospitals, Dr. Abrams reported. Also, mortality rose with hospital rurality, going from 3.5% in hospitals with a low percentage of rural admissions to 4.4% in hospitals with a high percentage.

Dr. Abrams disclosed no financial conflicts of interest with respect to his presentation. ■

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