Hospitalizations With Secondary Asthma Rising

BY DAMIAN McNAMARA
Miami Bureau

Asthma is more often a secondary reason for hospitalization than a principal cause in the United States, and the rate of secondary diagnoses is increasing, according to a report.

From 1997 to 2005, adult hospital stays specifically for asthma remained stable, but the number of secondary asthma diagnoses more than doubled, according to "Hospital Stays Related to Asthma for Adults, 2005," a statistical brief released by the Agency for Healthcare Research and Quality (AHRQ).

Between 2000 and 2005, hospitalizations for asthma increased 18%, from 247,200 to 290,600. However, the number of hospital stays where asthma was secondary rose from 753,800 to 1,609,200, an increase of 113%.

Pneumonia led the list of primary diagnoses for hospital stays with a secondary asthma coding in 2005, accounting for 123,100 or nearly 7.6% of these stays, Chaya T. Merril and colleagues at the AHRQ's Healthcare Cost and Utilization Project (HCUP) reported.

Heart failure and nonspecific chest pain were the next most common principal diagnoses, collectively accounting for 121,100 hospital stays or 7.5% with a secondary asthma diagnosis. Osteoarthritis (specifically, degenerative joint disease) and mood disorders (depression and bipolar disorder) were each noted in 53,000 (3.3%) of the hospital stays.

Patients aged 65 years and older had more than three times the rate of asthma-related hospitalizations, compared with younger patients. The hospitalization rate per 1,000 population for a primary asthma diagnosis was 0.7 for patients aged 18-44 years, 1.6 for patients aged 45-64, and 2.5 for those aged 65 and older.

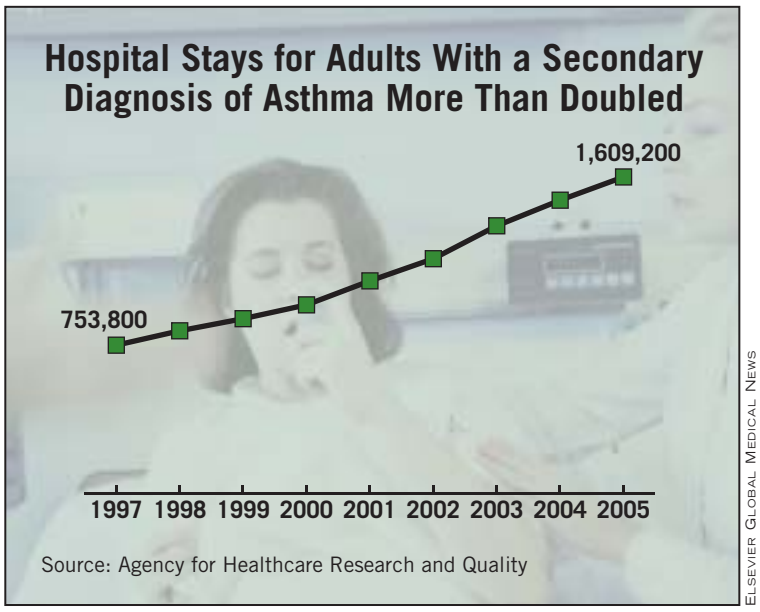
Rates also were higher among women—about 2.5 times greater than stays for men. Women had a 1.8 per 1,000 population primary asthma hospitalization rate, compared with 0.7 among men.

Of the 1.9 million asthma-related adult hospital stays in 2005, asthma was a principal diagnosis for 15% and a secondary diagnosis for the other 85%. Mean length of stay was 4.1 days for the primary asthma group and 4.9 days for the secondary group.

Data came from the 2005 Nationwide Inpatient Sample, similar nationally representative samples from 1997 to 2004, and supplemental sources. The database includes all patients regardless of insurance type or uninsured status who were admitted to short-term, nonfederal hospitals. Obstetric and gynecologic facilities; ear, nose, and throat hospitals; and orthopedic, cancer, public, and academic medical hospitals are included.

Of the primary asthma inpatient stays, 74% were admissions through an emergency department, compared with 51% of the secondary diagnosis stays. Of the more than 30 million hospital stays in 2005 with no mention of asthma, 48% were emergency department admissions.

Asthma hospitalization rates were higher in poorer areas of the United States, compared with richer regions. Adults living in a zip code with a median annual income below $36,000 had a 63% higher rate of asthma-related hospital stays, compared with those residing in a zip code with a higher median income. Medicare and Medicaid were billed for about 60% of asthma-related stays, according to the report.



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After accounting for differences in length of stay, hospitalizations principally for asthma cost an average $1,400 per day, or about $400 less than the estimated $1,800 per day for hospital stays with secondary asthma. Aggregate costs were about $1.6 billion for primary asthma admissions in 2005, compared with $14.4 billion for secondary asthma stays.

Researchers found little variation in hospitalizations by region. After adjusting for regional population differences, they found approximately two principal asthma stays per 1,000 population in the Northeast, Midwest, and South. The rate was lower in the West at 1.4 stays per 1,000 population.

The AHRQ is scheduled to release a second report on pediatric asthma-related hospital stays in August 2008. ■

The full report is available at www.hcup-us.ahrq.gov/reports/statbriefs/sb54.pdf.

Asthma Outcomes Worse in Children With Influenza

BY ROBERT FINN
San Francisco Bureau

HONOLULU — Influenza testing should be considered in children hospitalized for asthma because children with both conditions have almost five times the chance of intubation or death, compared with asthmatic children without a comorbid condition, according to a study of over 600,000 children.

Adolescence, race, male gender, Medicaid status, and lack of insurance were other risk factors that predicted an adverse outcome, Dr. Alan S. Weller and Dr. Kitaw Demissie of the Robert Wood Johnson Medical School, New Brunswick, N.J., wrote in a poster presentation at the annual meeting of the Pediatric Academic Societies.

The study involved a nationally representative sample of 641,354 children, aged 2-17 years, who were included in the National Hospital Discharge Survey for 2001-2005. All were hospitalized primarily for asthma.

Of the 2,505 children with influenza in that group, 2% had an adverse outcome (intubation or death) with an adjusted odds ratio of 4.79 in the multivariate analysis, which corrected for age, race, gender, insurance, region, and comorbid conditions. Other significant predictors of adverse outcomes were age between 12 and 17 years, compared with 2-4 years (OR, 3.37), male gender (OR, 1.47), black race (OR, 1.31), and other race (OR, 1.34).

Children with private insurance had a significantly lower risk of adverse outcomes. Compared with privately insured children, the odds ratio for children with Medicaid was 2.29, the odds ratio for children with HMO/PPO insurance was 1.39, and the odds ratio for uninsured children was 1.42.

Children in the Western region of the United States fared worst (OR, 5.07), compared with those in the South. Compared with those in the South, the odds ratio for children in the Northeast was 1.89, and for those in the Midwest it was 1.22.

Influenza was the only comorbid condition that predicted adverse outcome. Sinusitis and upper respiratory infections predicted significantly better outcomes, compared with children who had no comorbid conditions. Children with sinusitis had a 63% lower chance of an adverse outcome, and those with upper respiratory infections had an 88% lower chance of an adverse outcome.

The investigators concluded that further studies would be required to characterize the role of these predictors and to formulate appropriate interventions for those in high-risk groups.

Dr. Weller disclosed no conflicts of interest related to this study. ■

Obstructive Sleep Apnea Tied to Need for Inpatient Acute Care

BY HEIDI SPLETE
Senior Writer

BALTIMORE — Obstructive sleep apnea is associated with significant morbidity among hospital inpatients, based on a review of about 60,000 hospitalized patients at a single facility during a 2-year period.

"Our goal was to characterize the frequency with which OSA patients needed acute care," said Dr. Lisa Wolfe of the division of pulmonary medicine at Northwestern University, Chicago. She presented the results at the annual meeting of the Associated Professional Sleep Societies.

Increased morbidity has been linked with OSA in outpatients, but the impact of OSA on inpatients has not been well studied, Dr. Wolfe said. The Joint Commission has asked the medical community to comment on how to curb postoperative complications in patients with OSA, she noted.

Dr. Wolfe and her colleagues reviewed data on all patients hospitalized at Northwestern Memorial Hospital, Chicago, from September 2005 to May 2007. Acute care management was defined as rapid response team calls, code calls, or unplanned transfers to the intensive care unit. OSA was identified based on medical records.

Overall, 56 of 1,377 patients with OSA required action from a rapid response team, compared with 800 of 59,030 patients without OSA (4.1% vs. 1.4%). Significantly more patients with OSA required code calls, compared with patients without OSA (2.9% vs. 1.7%). On average, one patient with OSA underwent acute care management every 4.5 days.

"We know that OSA is a predictor for other health problems," Dr. Wolfe said.

The study was limited by its use of medical records and by a lack of data on continuous positive airway pressure (CPAP) therapy, but the findings support results from previous studies and emphasize the need for enhanced monitoring of hospitalized patients with OSA to reduce their use of acute care resources, she noted.

The topic of OSA as a marker of increased mortality in hospitalized patients attracted national attention in the wake of a study conducted at the Mayo Clinic in Rochester, Minn., in 2001, Dr. Wolfe said. In that study, which included patients who had undergone surgeries for hip or knee replacements, patients with OSA were significantly more likely to have complications, compared with control patients without OSA. The complications often were serious and led to longer hospital stays.

Further studies are needed to explore ways to ensure patient safety and to assess the implications of improved monitoring strategies for hospitalized patients with OSA, Dr. Wolfe added. She reported that she had no financial conflicts to disclose. ■