On ED Visits, Corticosteroids and COPD, Intranasal Steroids in Allergic Rhinitis, Intussusception in Children Under 5, Urinary Antigen Testing, and Emergency Contraception

■ NAHUM KOVALSKI, BSc, MDCM

Each month, Dr. Nahum Kovalski reviews a handful of abstracts from, or relevant to, urgent care practices and practitioners. For the full reports, go to the source cited under each title.

Emergency Department Visits on the Rise

Key point: ED use in the U.S. is up dramatically; these stats are before the recent economic downturn.

Citation: Tang N, Stein J, Hsia RY, et al. Trends and characteristics of U.S. emergency department visits, 1997-2007. *JAMA*. 2010;304(6):664-670.

U.S. emergency departments provide access to care to all persons, regardless of ability to pay. Researchers used data from the National Hospital Ambulatory Medical Care Survey to examine trends in U.S. ED visits for subgroups by insurance status from 1997 through 2007.

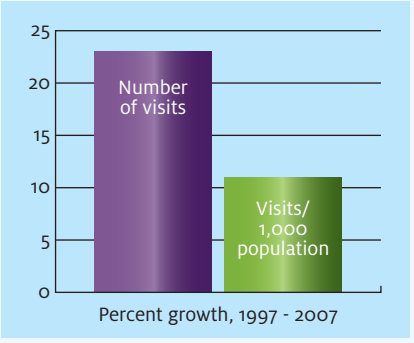
The total annual number of visits increased from 95 million to 117 million; the 23% increase was nearly twice that anticipated from population growth. The ED visit rate increased nearly 11% from 353 to 391 per 1,000 population.

Adults with Medicaid accounted for most of the increase. Adults with private insurance, Medicare, or no insurance had no significant changes in ED visit rates.

The number of EDs that met the CDC definition for safety-net EDs (>30% of total visits by patients with Medicaid, >30% of visits by patients with no insurance, or >40% of visits by patients with Medicaid or no insurance) increased from 1,770 in 2,000 to 2,489 in 2007 (41% increase).

Nahum Kovalski is an urgent care practitioner and assistant medical director/CIO at Terem Emergency Medical Centers in Jerusalem, Israel.

The disproportionate increase in visits by patients with Medicaid between 1997 and 2007 might reflect a 35% increase in the number of adult Medicaid enrollees during that period and reduced access to primary and specialist care for Medicaid patients.



The number of EDs decreased by 5% during the study period, and the study ended before the 2008–2009 recession, when an additional 5.8 million Americans became uninsured and an additional 3.9 million enrolled in Medicaid. Finally, the study did not include nursing home residents, prisoners, patients in mental health care facilities, and undocumented or homeless persons—groups that are frequent visitors to EDs.

As such, it is likely that the situation will grow worse. These findings portend substantive tribulations for our EDs in the U.S.

[Published in *J Watch Emerg Med*, June 16, 2010—Cornelius W. Van Niel, MD.] ■

Effect of Dose and Route of Administration on Risk of Treatment Failure with Corticosteroids in Exacerbation of COPD

Key point: In non-critically ill patients with acute COPD exacerbations, there is no difference between low-dose oral steroids and

high-dose intravenous steroids.

Citation: Lindenauer PK, Pekow PS, Lahti MC, et al. Association of corticosteroid dose and route of administration with risk of treatment failure in acute exacerbation of chronic obstructive pulmonary disease. *JAMA*. 2010;303(23):2409-2410.

Systemic corticosteroids are beneficial for patients hospitalized with acute exacerbation of chronic obstructive pulmonary disease (COPD); however, optimal dose and route of administration are uncertain.

A pharmacoepidemiological cohort study was conducted at 414 U.S. hospitals, involving patients admitted with acute exacerbation of COPD in 2006 and 2007 to a non-intensive care setting and who received systemic corticosteroids during the first two hospital days.

Of 79,985 patients, 92% were initially treated with intravenous steroids, whereas 8% received oral treatment; 1.4% of the intravenously and 1.0% of the orally treated patients died during hospitalization, whereas 10.9% of the intravenously and 10.3% of the orally treated patients experienced the composite outcome.

After multivariable adjustment, including the propensity for oral treatment, the risk of treatment failure among patients treated orally was not worse than for those treated intravenously. In a propensity-matched analysis, the risk of treatment failure was significantly lower among orally treated patients, as was length of stay and cost.

Using an adaptation of the instrumental variable approach, increased rate of treatment with oral steroids was not associated with a change in the risk of treatment failure. A total of 1,356 (22%) patients initially treated with oral steroids were switched to intravenous therapy later in the hospitalization. ■

Intranasal Steroids for Ocular Symptoms in Allergic Rhinitis

Key point: In a randomized trial, intranasal steroids relieved both nasal and ocular symptoms.

Citation: Mometasone furoate nasal spray reduces the ocular symptoms of seasonal allergic rhinitis. Prenner BM, Lanier BQ, Benstein DI, et al. *J Allergy Clin Immunol*. 2010;125(6):1247-1253.

Because intranasal steroids are the most effective medications for allergic rhinitis symptoms (especially congestion), guidelines recommend them as first-line agents for moderate-to-severe disease.

As many as 85% of patients with seasonal allergic rhinitis also have ocular symptoms. For these patients, many clinicians prescribe oral antihistamines or ocular products rather than (or in addition to) intranasal steroids.

In an industry-sponsored randomized trial, 429 patients with seasonal allergic rhinitis received once-daily mometasone furoate nasal spray (200 µg) or placebo spray for 15 days. Compared with the placebo group, the mometasone group exhibited statistically and clinically significant improvement in both nasal and ocular symptoms.

Based on this and previous studies, intranasal steroids are superior to oral antihistamines for alleviating nasal symptoms and are equal for relieving ocular symptoms. The mechanism is unclear, but could involve a naso-ocular reflex pathway and appears to be a class effect. Adding an oral antihistamine to an intranasal steroid does not consistently confer greater benefits.

For patients with moderate-to-severe seasonal allergic rhinitis with ocular symptoms, intranasal steroids are appropriate as monotherapy. If ocular symptoms are not controlled, addition of an ocular antihistamine or mast cell stabilizer is warranted.

With respect to cataracts and glaucoma, safety data for intranasal steroids have been consistently reassuring.

[Published in *J Watch General Med*, June 10, 2010—David J. Amrol, MD.] ■

After Bacterial Enteritis: Beware Intussusception

Key point: Risk for intussusception increases after bacterial gastrointestinal infection in children younger than 5 years.

Citation: Nylund CM, Denson LA, Noel JM. Bacterial enteritis as a risk factor for childhood intussusception: A retrospective cohort study. *J Pediatr*. 2010;156(5):761-765.

Some studies suggest an association between intussusception and gastrointestinal infections, and case reports suggest an association between intussusception and various intestinal pathogens. Investigators used a military treatment facility database to retrospectively evaluate the risk for intussusception following bacterial enteritis in more than 387,000 children (age range: birth to 5 years) from 2002 to 2005.

Diagnosis-related group codes were used to identify children who had intussusception and were infected with *Salmonella*, *Shigella*, *Escherichia coli*, *Yersinia enterocolitica*, and *Campylobacter.*

Researchers identified 293 cases of intussusception and 1,412 cases of bacterial enteritis. Intussusception followed bacterial enteritis within six months in 37 cases.

Risks for intussusception following enteritis were also significantly increased when analyses were stratified by age (<1 year and 1 to 5 years) and by type of infecting organisms. Intussusception occurred throughout the six months after enteritis, but risk was highest during the first month.

This large retrospective cohort study confirms that bacterial enteritis is associated with an increased risk for intussusce-

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tion. The presumed mechanism is bacterial enteritis leading to bowel lymphoid hyperplasia as a pathologic lead point for intussusception.

The absolute risk for intussusception after bacterial enteritis in this study (about 3%) is clearly higher than the background annual incidence of <0.1%.

Pediatricians should alert parents of children with bacterial enteritis to be vigilant for signs and symptoms of intussusception—a life-threatening condition—in the weeks and months following infection.

[Published in *J Watch Pediatr Adolesc Med*, June 16, 2010—Cornelius W. Van Niel, MD.] ■

Urinary Antigen Testing for Community-Acquired Pneumonia

Key point: Urinary pneumococcal antigen testing should be incorporated into the standard approaches for guiding treatment in community-acquired pneumonia.

Citation: Sordé R, Falcó V, Lowak M, et al. *Arch Intern Med*. 2010 Sep 27. [Epub ahead of print.]

Researchers studied some 500 cases of community-acquired pneumonia, establishing definite or probable *S pneumoniae* infection by culture or Gram stain in about one third of the subjects. The urinary antigen test was found to have a sensitivity of about 70% in detecting *S pneumoniae*, a specificity of about 95%, and a positive predictive value of about 90%.

The authors conclude that the test "should be incorporated into clinical guidelines at the same level as classic microbiological studies because it can supplement, but not replace, their results."

Ulipristal Acetate (ella) Approved for Prescription Emergency Contraception

Key point: The single tablet is intended for use within 120 hours (five days) after failure of standard contraception or after unprotected intercourse.

Citation: FDA approves ella tablets for prescription emergency contraception. Available at: *http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm222428.htm*.

The FDA has approved a new emergency contraceptive drug, ulipristal acetate (ella), a progesterone agonist/antagonist that works mainly by inhibiting or delaying ovulation.

The single tablet is intended for use within 120 hours (five days) after failure of standard contraception or after unprotected intercourse. It is available only by prescription.

In two trials leading to the approval, the most common adverse effects were headache, nausea, abdominal pain, dysmenorrhea, fatigue, and dizziness. ■

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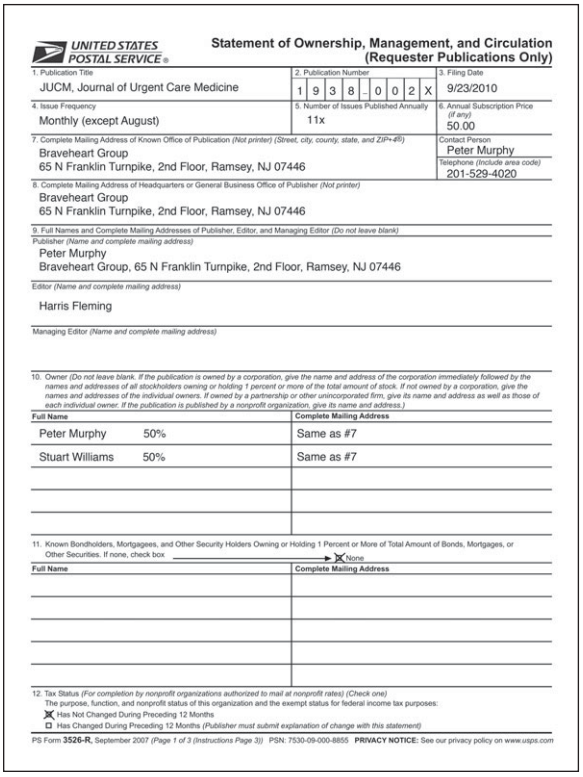

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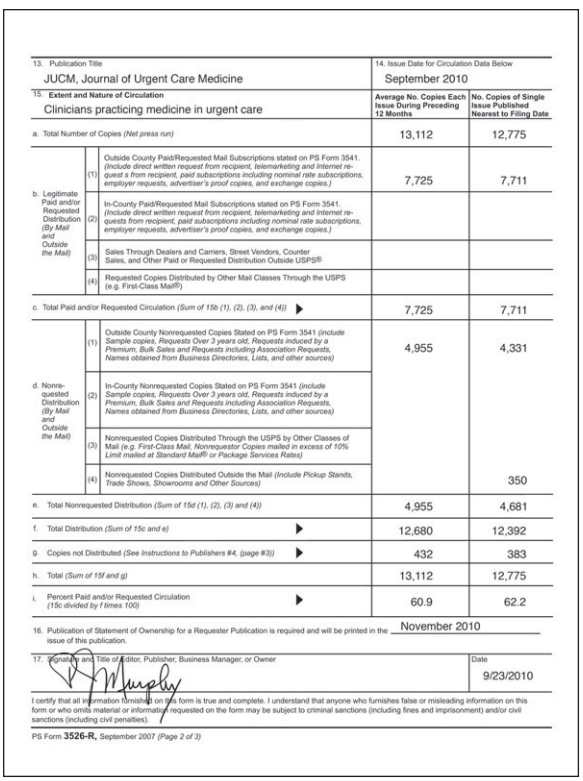

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