



# ABSTRACTS IN URGENT CARE

- Dexamethasone May Be Worthwhile in Treating Adult Asthma
- Laundry Detergent Packets Cause More Serious Injuries Than Other Detergent Forms in Children
- High Schoolers Have More Symptoms from Football-Related Concussions Than Do Other Age Groups
- Should Children with Mild Gastroenteritis Be Allowed to Have Apple Juice?
- Just How High Is the Number of Inappropriate Antibiotic Prescriptions?
- Trimethoprim-Sulfamethoxazole Is as Good as Clindamycin for Uncomplicated Wounds
- Using Amoxicillin Challenges May Confirm Allergic Reactions to the Antibiotic
- Immunizing Mothers Against Influenza May Protect Their Babies

■ SEAN M. MCNEELEY, MD

Each month the Urgent Care College of Physicians (UCCOP) provides a handful of abstracts from or related to urgent care practices or practitioners. Sean M. McNeeley, MD, leads this effort.

## Dexamethasone May Be Worthwhile in Treating Adult Asthma

**Key point:** Dexamethasone is almost as good as prednisone in treating asthma in adults.

**Citation:** Rehrer MW, Liu B, Rodriguez M, et al. A randomized controlled noninferiority trial of single dose of oral dexamethasone versus 5 days of oral prednisone in acute adult asthma. *Ann Emerg Med.* 2016 April 22. doi: 10.1016/j.annemergmed.2016.03.017. [Epub ahead of print.]

In a randomized placebo-controlled trial in an urban emergency department in Oakland, California, a single 12-mg dose of dexamethasone followed by four placebo pills was compared with 5 days of 60 mg of prednisone per day. A total of 376 patients between the ages of 18 and 55 years were randomized to one of two groups: prednisone and placebo, or dexamethasone alone. The main outcome was relapse within 14 days. Relapse occurred in 12.1% of the dexamethasone group and in 9.8% of

the prednisone group. The researchers concluded that the difference was slightly significant and therefore they could not consider treatment with dexamethasone not inferior. Rates for hospitalizations and adverse effects were similar between groups. In the acute-care setting, the likely increased compliance when dexamethasone is prescribed may be worth the smaller difference in efficacy. ■

## Laundry Detergent Packets Cause More Serious Injuries Than Other Detergent Forms in Children

**Key point:** Laundry detergent packets may be the worst type of detergent exposure for children.

**Citation:** Davis MG, Casavant M, Spiller HA, et al. Pediatric exposures to laundry and dishwasher detergents in the United States: 2013–2014. *Pediatrics.* 2016;137:e20154529.

The study discussed here investigated pediatric exposures to laundry and dishwasher detergents, in both packet and non-packet forms. Information was obtained from the National Poison Data System in the United States for exposure from 2013 to 2014 in 62,254 children younger than 6 years. All types of exposures increased, but exposure to laundry detergent packets increased the most: 17% more than other types. Unfortunately, cases of exposure to laundry detergent packets also included



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the majority of serious injuries, including two deaths. Although the number of serious injuries was comparatively low, they still occurred particularly in connection with laundry packets. This is good information to pass along to parents and to keep in mind if children with potential exposure arrive at the urgent care center. ■

### High Schoolers Have More Symptoms from Football-Related Concussions Than Do Other Age Groups

*Key point: Recovery from concussions varies by age.*

*Citation: Kerr ZY, Zuckerman SL, Wasserman EB, et al. Concussion symptoms and return to play time in youth, high school, and college American football athletes. JAMA Pediatr. 2016 May 2. doi: 10.1001/jamapediatrics.2016.0073. [Epub ahead of print.]*

Data about concussion severity and return to play were collected from youth, high school, and college football teams in the United States. A total of 1429 concussions were reported. The greatest number symptoms per concussion were reported by high school athletes, followed by college athletes and then youth-team athletes. College students had more cognitive symptoms than the other groups of athletes. The rate of extended time off before return to play was 19.5% in high school students, 16.3% in youth-team athletes, and 7% in college athletes. Acute-care providers should note that high school athletes have the most symptoms and most frequently need an extended period off before return to play. These findings will be helpful in conversations at the time of initial diagnosis about potential duration of symptoms and duration of time off before return to play. Further study is obviously needed to clarify these findings. ■

### Should Children with Mild Gastroenteritis Be Allowed to Have Apple Juice?

*Key point: Is apple juice okay in mild gastroenteritis?*

*Citation: Freedman SB, Willan AR, Boutis K, Schuh S. Effect of dilute apple juice and preferred fluids vs electrolyte maintenance solution on treatment failure among children with mild gastroenteritis: a randomized clinical trial. JAMA. 2016;315:1966–1974.*

Although electrolyte solution is the rehydration liquid of choice in significant dehydration with more than mild gastroenteritis, the study in this report considered the options when dehydration and symptoms are mild. Researchers compared half-strength apple juice and standard rehydration fluid in a randomized, single-blind noninferiority study in a tertiary-care pediatric emergency department in Canada involving 647 patients. The end point was treatment failure, consisting of a

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need for intravenous fluids, hospitalization, an unscheduled visit to a physician’s office, or significant dehydration at a follow-up office visit. Ondansetron was given to those who vomited. There were fewer treatment failures among children receiving diluted apple juice. For the urgent care provider, this report provides some evidence that mild dehydration can be treated with diluted juice. Further studies would be helpful to confirm these results. ■

### Just How High Is the Number of Inappropriate Antibiotic Prescriptions?

*Key point: There is still work to do to decrease the number of inappropriate antibiotic prescriptions.*

*Citation: Fleming-Dutra KE, Hersh AL, Shapiro DJ, et al. Prevalence of inappropriate antibiotic prescriptions among US ambulatory care visits, 2010–2011. JAMA. 2016;315:1864–1873.*

The authors of this report note that the U.S. action plan for combating antibiotic resistance has set a goal of reducing inappropriate antibiotic prescription by 50% by 2020. However, the actual number of inappropriate antibiotic prescriptions is unknown, so the researchers attempted to determine it. Antibiotic prescription rates were estimated on the basis of data samples from approximately 185,000 patients. Although age and geographic regions were all calculated, the mean antibiotic prescription rate was 506 per 1000 patient-years. The top three diagnoses, as expected, were sinusitis, otitis media, and pharyngitis. The researchers applied generalized guidelines and other study-based prescription rates to these patients’ rates of antibiotic prescriptions. Appropriate rates for sinusitis were based on the lowest regional rate. For the urgent care provider, this study is a reminder that appropriate guidelines should be

followed when prescribing antibiotics. The reported estimate of the number of potentially inappropriate antibiotic prescriptions is quite high. However, the researchers used multiple assumptions to develop their estimate. A much better study would have involved reviewing the charts of a cross-section of patients and applying guidelines to determine rates of inappropriate antibiotic prescription. ■

### Trimethoprim-Sulfamethoxazole Is as Good as Clindamycin for Uncomplicated Wounds

*Key point: Clindamycin and trimethoprim-sulfamethoxazole performed equally well for treating uncomplicated wound infections.*

Citation: Talan DA, Lovecchio F, Abrahamian FM, et al. A randomized trial of clindamycin versus trimethoprim-sulfamethoxazole for uncomplicated wound infection. *Clin Infect Dis.* 2016;62:1501–1513.

In a randomized double-blind trial at four U.S. emergency departments, researchers compared the effectiveness of clindamycin and trimethoprim-sulfamethoxazole in treating uncomplicated wound infections. They compared results of empiric treatment of 500 patients older than 12 years at several intervals for 14 days and 6 weeks. Cure rates for the two drugs were very similar, at 92.1% for clindamycin and 91.9% for trimethoprim-sulfamethoxazole. There was a slight difference in recurrence rates, favoring clindamycin. Adverse events were similar for the two drugs. Urgent care providers may want to consider trimethoprim-sulfamethoxazole because it has a less-frequent dosing schedule that may result in better patient compliance and because the drug's efficacy appears to be equivalent to that of clindamycin. Infection recurrence is a concern, however, and should be taken into consideration by prescribers. ■

### Using Amoxicillin Challenges May Confirm Allergic Reactions to the Antibiotic

*Key point: An amoxicillin challenge helps differentiate allergic reactions to amoxicillin from other rashes.*

Citation: Mill C, Primeau MN, Medoff E, et al. Assessing the diagnostic properties of a graded oral provocation challenge for the diagnosis of immediate and nonimmediate reactions to amoxicillin in children. *JAMA Pediatr.* 2016;170:e160033.

Children treated with amoxicillin frequently develop rashes. Because pediatric rashes of other kinds are also common, differentiating allergic reaction from other rashes is difficult. Researchers at an allergy clinic in Canada attempted to see how helpful oral challenges with amoxicillin were in differentiating amoxicillin allergy from other rashes. A total of 880 patients participated in the study, taking oral amoxicillin in amounts at 10% and 90% of therapeutic dose. Positive allergy results were

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followed at 3 to 4 months with skin testing. An oral challenge was a better predictor of reaction than skin testing was; the oral challenge had a specificity of 100% and a negative predictive value of 89%. It is too early for urgent care providers to apply this information to clinical care, but these findings point to a first step in follow-up for children with a possible amoxicillin allergic rash. ■

### Immunizing Mothers Against Influenza May Protect Their Babies

*Key point: Influenza immunization in mothers may protect their infants after birth.*

Citation: Shakib JH, Korgenski K, Presson AP, et al. Influenza in infants born to women vaccinated during pregnancy. *Pediatrics.* 2016;137:e20152360.

Researchers compared infants born to mothers immunized against influenza and infants born to nonimmunized mothers regarding their risk for influenza and hospitalization. Overall, a very small percentage of pregnant women received the influenza immunization (10%, up from 2.2% before the H1N1 virus epidemic). Infants born to immunized women were 60% less likely to have influenza-like illness, 70% less likely to have positive test findings for influenza, and 81% less likely to be admitted to a hospital because of influenza. For the urgent care provider, this information is helpful particularly when discussing with pregnant women the risks and benefits of influenza immunization. ■