



ABSTRACTS IN URGENT CARE

- Acetaminophen Is Likely Not Causing More Asthma Symptoms Than Ibuprofen
- Lengthy Antibiotic Therapy May Not Be Needed for Pneumonia
- Live Attenuated Influenza Vaccine Does Not Confer a Herd Benefit
- Users of Asthma Inhalers Still Make the Same Errors That They Always Have
- Sometimes Anticoagulation Is Necessary for Isolated Thrombosis of the Calf
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- Spreading Respiratory Syncytial Virus Is Easier Than Commonly Believed

■ 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.

Acetaminophen Is Likely Not Causing More Asthma Symptoms Than Ibuprofen

Key point: No difference in asthma symptoms was found between children given acetaminophen and those given ibuprofen.

Citation: Sheehan WJ, Mauger DT, Paul IM, et al; NIH/NHLBI AsthmaNet. Acetaminophen versus ibuprofen in young children with mild persistent asthma. *N Engl J Med.* 2016;375:619–630.

Concerns have recently been noted regarding acetaminophen use and increased asthma exacerbations. This multicenter, prospective, randomized, double-blind parallel group study attempted to determine the validity of those concerns. Three hundred children whose age ranged from 12 to 59 months and who had mild persistent asthma were randomized into two groups: one taking ibuprofen and one taking acetaminophen. The end point studied was asthma exacerbation for which steroids by

any route were required. There was no difference in findings between these groups. Although the study was not large or representative of all children with asthma, it was well designed. The knowledge that acetaminophen is not likely causing more asthma symptoms should at the least comfort both urgent care providers and parents. Additional larger and more diverse studies would be helpful. ■

Lengthy Antibiotic Therapy May Not Be Needed for Pneumonia

Key point: Antibiotic therapy for 5 days may be appropriate for some patients with pneumonia.

Citation: Uranga A, España PP, Bilbao A, et al. Duration of antibiotic treatment in community-acquired pneumonia: a multicenter randomized clinical trial. *JAMA Intern Med.* 2016;176:1257–1265.

The optimal duration of antibiotic therapy for pneumonia has not been determined. This randomized, multicenter noninferiority study focused on the duration of treatment for 312 patients hospitalized in Spain for community-acquired pneumonia. The patients received either standard therapy or 5 days of antibiotics if they met guidelines for clinical stability provided by the Infectious Diseases Society of America and the American Thoracic Society. The intervention group did as well as the control



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“Concerns have recently been noted regarding acetaminophen use and increased asthma exacerbations. . . . Three hundred children whose age ranged from 12 to 59 months and who had mild persistent asthma were [studied]. . . . The knowledge that acetaminophen is not likely causing more asthma symptoms should at the least comfort both urgent care providers and parents.”

group at 10 and 30 days. Two issues with the study were enrollment of hospitalized patients only and giving a quinolone to 80% of patients. Otherwise, the study findings do support the guidelines and the need for shorter courses of antibiotics even for some patients with pneumonia. Shorter courses would help make patients' compliance more likely and would somewhat alleviate concerns about antibiotic resistance. ■

Live Attenuated Influenza Vaccine Does Not Confer a Herd Benefit

Key point: *There is no herd benefit from live attenuated influenza vaccine.*

Citation: Loeb M, Russell ML, Manning V, et al. Live attenuated versus inactivated influenza vaccine in Hutterite children: a cluster randomized blinded trial. *Ann Intern Med.* 2016 August 16. doi: 10.7326/M16-0513. [Epub ahead of print.]

The authors of this study note that children are a large source of influenza seen during the seasonal increase. They speculated that perhaps the live attenuated vaccine would cause more community immunity than the inactivated type. Most vaccine studies focus only on the direct effect of the vaccine, but this study went a step further. The authors performed a cluster randomized trial involving 4611 Hutterite children in 52 communities in Canada over 3 years. The children were between the ages of 36 months and 15 years. Approximately 75% received a vaccine. Influenza infection occurred at a rate of 5.3% in the group receiving the live attenuated vaccine and a rate of 5.2%

in the group receiving the inactivated vaccine. This is one more study with findings that urgent care providers can use to help families choose between types of vaccine. *Note:* When this column was written, the Centers for Disease Control and Prevention had recommended against giving the live vaccine during the 2016–2017 season because of efficacy concerns: <http://www.cdc.gov/mmwr/volumes/65/rr/rr6505a1.htm>. ■

Users of Asthma Inhalers Still Make the Same Errors That They Always Have

Key point: *Use errors by patients have continued since inhalers were created.*

Citation: Sanchis J, Gich I, Pedersen S; Aerosol Drug Management Improvement Team (ADMIT). Systematic review of errors in inhaler use: has patient technique improved over time? *Chest.* 2016;150:394–406.

This review of 144 papers analyzed findings from 40 years of inhaler studies. The most common errors patients make with metered dose inhalers include lack of coordination (45%), incorrect speed or depth of inhalation (44%), and no breath-hold after inhalation (46%). Errors with dry powder inhalers included incorrect preparation (29%), no full expiration before inhalation (46%), and no breath-hold after inhalation (37%). The researchers found no differences when comparing the first 20 years' worth of studies with the next 20 years' worth. Urgent care providers who keep these errors in mind can instruct patients in how to best use inhalers. However, in view of these findings, perhaps the inhaler industry should try a new approach. ■

Sometimes Anticoagulation Is Necessary for Isolated Thrombosis of the Calf

Key point: *In some cases, isolated calf thrombosis may need treatment.*

Citation: Utter GH, Dhillon TS, Salcedo ES, et al. Therapeutic anticoagulation for isolated calf deep vein thrombosis. *JAMA Surg.* 2016 September 21. doi: 10.1001/jamasurg.2016.1770. [Epub ahead of print.]

Although most agree with using anticoagulation for deep vein thrombosis (DVT), there is debate about using blood thinners for isolated calf thrombosis. The single-center retrospective cohort study reported here reviewed outcomes within 180 days for pulmonary embolism and proximal DVT in 243 patients receiving anticoagulation and 141 healthy participants. As expected, therapeutic anticoagulation reduced the risk of pulmonary embolism or more proximal DVT (odds ratio, 0.34) but increased the risk of bleeding (odds ratio, 4.35). This is good information for urgent care providers to discuss with patients who have isolated calf DVT. ■

The EDACS-ADP Is Helpful in Deciding Which Patients at Low Risk for Acute Coronary Syndrome Can Go Home

Key point: A protocol for ruling out chest pain quickly in patients at low risk for acute coronary syndrome is validated.

Citation: Flaws D, Than M, Scheuermeyer FX, et al. External validation of the emergency department assessment of chest pain score accelerated diagnostic pathway (EDACS-ADP). *Emerg Med J.* 2016;33:618–625.

This retrospective validation of the Emergency Department Assessment of Chest Pain Score and Accelerated Diagnostic Pathway was conducted to determine whether pathway scores can help health-care providers decide which patients at low risk for acute coronary syndrome (ACS) can safely be sent home. The authors reviewed data for 763 patients who presented to a hospital in Canada with potential ACS. The review classified 41.6% of the patients as being at low risk. The sensitivity and negative predictive value of the pathway were both 100% for a 30-day window after discharge. The pathway's parameters include age, sex, and symptoms and signs. Along with normal electrocardiographic findings and negative findings on assessment for troponin levels at 0 and 2 hours, this pathway made it possible for health-care providers to classify these patients as being at low risk. Although most of this information could be obtained at an urgent care center, the proper assessment location during the 2-hour wait is a concern. As accuracy of biomarker measurements improves, the wait time continues to decrease and may eventually be short enough for urgent care treatment. ■

U.S. Patients Take Antibiotics That Are Not Prescribed for Them

Key point: Nonprescription antibiotic use increases resistance and is prevalent.

Citation: Zoorob R, Grigoryan L, Nash S, Trautner BW. Non-prescription antimicrobial use in a primary care population in the United States. *Antimicrob Agents Chemother.* 2016;60:5527–5532.

Researchers studied nonprescribed use of antibiotics in the United States by surveying patients in waiting rooms at several primary-care locations between April and August 2015. Of those surveyed, 400 completed the questionnaire. Such use has already been studied in immigrants from Latin America. Antibiotics used included those left over from previous prescriptions and those brought in from other countries. Storage of antibiotics was highly correlated with nonprescribed use. Use of nonprescribed antibiotics was reported by 5% of respondents, with amoxicillin, azithromycin, and ciprofloxacin comprising the majority of medications taken. Intended self-treatments were

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for toothaches, sore throats, earaches, and urinary tract infections. Those who intended to use prescribed antibiotics and stored them were four times more likely than other respondents to have put such antibiotics to a nonprescribed use. These findings should serve as a reminder to urgent care providers to always instruct patients to finish taking the antibiotics that they are prescribed or else throw away any leftover medication. It is also important to discuss with patients the risks of nonprescribed use. ■

Spreading Respiratory Syncytial Virus Is Easier Than Commonly Believed

Key point: Respiratory syncytial virus may be more infectious than once thought.

Citation: Kulkarni H, Smith CM, Lee Ddo H, et al. Evidence of respiratory syncytial virus spread by aerosol. Time to revisit infection control strategies? *Am J Respir Crit Care Med.* 2016;194:308–316.

Respiratory syncytial virus (RSV) has traditionally been thought to spread by large respiratory droplets and by physical contact, such as contact with the hands of health-care providers and caretakers. This study looked at whether RSV is transferred by small aerosolized particles that would stay present much longer than expected. The authors set up machines to collect particles at 1 m, 5 m, and 10 m away from children hospitalized because of RSV. They found aerosolized particles at 1 m and at less than 5 m, and particles at both distances remained infectious to human cells in culture. This information, although hospital-based, likely has bearing on the acute-care setting: The distance involved in infectivity and the time before the area is clear of RSV particles are both longer than previously thought. More research in this area is needed to confirm these findings, because the total number of participants in the study was quite low. ■