



ABSTRACTS IN URGENT CARE

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■ SEAN M. McNEELEY, MD and GLENN HARNETT, 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 and Glenn Harnett, MD lead this effort.

Lessons from Recent Terrorist Attacks

Key point: *Investment, integration, standardization, and focus on translating military knowledge.*

Citation: Goralnick E, Van Trimont F, Carli P. Preparing for the next terrorism attack: lessons from Paris, Brussels, and Boston. *JAMA Surg.* 2017 Jan 25. [Epub ahead of print]

This viewpoint article in *JAMA Surgery* sheds light on the need for a more global concerted effort to gather and share lessons from recent terrorist attacks such as those that occurred in Nice, Paris, Orlando, and Istanbul. The authors propose that the valuable lessons learned by healthcare professionals in each of these attacks need to be captured and disseminated in a rapid, standardized, and academically rigorous after-action reporting system. They propose establishing a rapid-response team to investigate health systems' reactions to mass casualty events. This would be similar to the National Traffic Safety Board's Go Team, which promptly investigates civil aviation accidents. They also suggest that more education/training should be provided to the public regarding first aid for potentially exsanguinating injuries. For the urgent care provider, this is a reminder to con-

sider disaster planning and working with your local hospital. ■

Analysis of Early Death After Discharge from the ED

Key point: *Early death is higher in low-volume, lower ED admission rate, and lowest cost settings.*

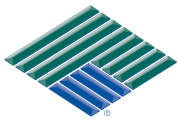
Citation: Obermeyer Z, Cohn B, Wilson M, et al. Early death after discharge from emergency departments: analysis of national U.S. insurance claims data. *BMJ.* 2017 Feb 1;356:j239.

This retrospective cohort study published in *BMJ* used Medicare claims data to study varying metrics in patients discharged from the ED with presumed non-life-threatening presentations who eventually died within 7 days of discharge. The leading causes of death were atherosclerotic heart disease, myocardial infarction, chronic obstructive pulmonary disease, pneumonia, congestive heart failure, and diabetes/hypertension complications. Narcotic overdose was eighth, usually following treatment for an injury or back pain. The authors report that there is a "clinical signature" of discharge diagnoses from EDs that is linked to short-term deaths, especially syndromic illnesses not involving pain (eg, altered mental status, dyspnea, malaise, and fatigue). When comparing hospital systems, they noted that hospitals with lower patient volumes, lower ED admission rates, and lowest costs had the *highest* rates of early death following ED discharge. The authors point out efforts to reduce admission rates from EDs need to reflect extreme care in patient selection to ensure those well-intentioned efforts do not put patients at risk. For the urgent care provider, this provides both a list of causes



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to consider and a warning about admission reduction. Further evaluation in the urgent care setting would be a useful study. ■

Could MRI Be Used in Diagnosing GCA?

Key point: MRI of scalp arteries could be used as the initial diagnostic procedure in GCA.

Citation: Rhéaume M, Rebello R, Pagnoux C, et al. High-resolution magnetic resonance imaging of scalp arteries for the diagnosis of giant cell arteritis: results of a prospective cohort study. *Arthritis Rheumatol.* 2017;69(1):161-168.

Giant cell arteritis (GCA) is a large vessel vasculitis usually affecting the temporal artery. It's incidence rate increases from 2.2 per 100,000 persons per year at ages 50-59 to 51.9 in patients older than age 80. Symptoms include new-onset headache, scalp tenderness, jaw claudication, and amaurosis fugax. Temporal artery biopsy has long been the gold standard of diagnosis, but it is obviously invasive and previous studies have shown sensitivity levels as low as 39%. This study compared the concordance between temporal artery biopsy vs scalp artery MRI in the diagnosis of GCA. The study showed that normal scalp artery MRI findings were highly predictive of normal temporal artery biopsy findings, with a negative predictive value of 98.2%. The results suggest that MRI could be used as the initial diagnostic procedure in GCA, with temporal artery biopsy being reserved for patients with abnormal MRI findings. For the urgent care provider, this is at least an option patients might want to know about, and a reminder to look for TA. ■

Re-evaluating Naproxen + Diazepam for Acute Low Back Pain

Key point: Diazepam was not found to be more effective for low back pain than placebo in this study.

Citation: Friedman BW, Irizarry E, Solorzano C, et al. Diazepam is no better than placebo when added to Naproxen for acute low back pain. *Ann Emerg Med.* 2017; Jan 19. [Epub ahead of print]

This randomized, double-blinded, comparative efficacy trial studied patients with acute, nontraumatic, nonradicular, low back pain. All patients received naproxen 500 mg BID prn for low back pain and were further randomized to receive either diazepam 5 mg, 1-2 Q12 hours prn or an identical-appearing placebo. Results showed conclusively that naproxen plus diazepam did not improve pain or functional outcomes compared with subjects receiving naproxen alone. The differences between the two groups achieved neither clinical or statistical significance. Urgent care clinicians should reconsider the use of diazepam for low back pain, as it does not appear to confer any benefit beyond that of placebo when added to naproxen. ■

“The time to think about how we can function as a group, whether through UCAOA or local health authorities, is now—before we have another emergency or outbreak”

Vancomycin vs Metronidazole in C Diff

Key point: *Vancomycin and metronidazole are equally effective, but mortality may differ.*

Citation: Stevens VW, Nelson RE, Schwab-Daugherty EM, et al. Comparative effectiveness of vancomycin and metronidazole for the prevention of recurrence and death in patients with *Clostridium difficile* infection. *JAMA Intern Med.* 2017; Feb 6. [Epub ahead of print]

This retrospective cohort study looks at treatment of laboratory-proven *Clostridium difficile* infection with metronidazole and vancomycin. The study reviewed 47,471 patients from a Veteran Affairs patient panel. Endpoints included recurrence of infection in 8 weeks' time or 30-day, all-cause mortality. Only 2,000 patients were treated with vancomycin. So, only 8,000 metronidazole patients were matched. The cohorts were also subdivided into mild/moderate and severe disease. Recurrence did not differ between the groups. All-cause mortality was significantly less among severe disease patients treated with vancomycin. For the urgent care provider, considering vancomycin for the severest of cases may make sense. ■

Is There an Advantage to High-Flow, Humidified Oxygen for Bronchiolitis?

Key point: *High-flow humidified oxygen does not hasten recovery.*

Citation: Kepreotes E, Whitehead B, Attia J, et al. High-flow warm humidified oxygen versus standard low-flow nasal cannula oxygen for moderate bronchiolitis (HFWHO RCT): an open, phase 4, randomised controlled trial. *Lancet.* 2017;289(10072):930-939.

According to the authors, bronchiolitis is the most common lung infection in infants. Recently, the use of high-flow humidified oxygen has become a popular therapy, but high-quality evidence for its benefit is not available. This study considered whether it would shorten time on oxygen. It was a randomized controlled trial set in Australia, and looked at 202 children <24 months of age and who had bronchiolitis. No difference was

found between the groups on time to wean off oxygen. For the acute care provider, when considering where to send a child needing hospitalization for bronchiolitis it appears high-flow humidified oxygen does not need to be considered. ■

Assessing the Rate of Acute Bacterial Meningitis in Infants

Key point: *Acute bacterial meningitis occurrence is low in infants with UTI.*

Citation: Wallace SS, Brown DN, Cruz AT. Prevalence of concomitant acute bacterial meningitis in neonates with febrile urinary tract infection: a retrospective cross-sectional study. *J Pediatr.* 2017; Feb 6. [Epub ahead of print]

This study looked at the rate of acute bacterial meningitis (ABM) in infants found to have urinary tract infections. This was a retrospective cross-sectional study that included 236 infants <30 days of age. ABM was defined as growth of pathogenic bacteria in cerebrospinal fluid (CSF) culture, and probable ABM if pleocytosis with ≥ 20 white blood cells was present in an antibiotic pretreated patient. No patient had ABM by culture, and only two (0.8%) had probable ABM. The authors concluded that ABM was low in patients with UTI, noting that these are the most common cause of fever in neonates. The authors speculate that as the collection of CSF already is variable, this may assist in this choice. For the urgent care provider, the biggest reminder is the importance of urine as a source of infection in young children, as well as general knowledge of what is being done with febrile infants today. ■

Examining Response to Previous Ebola Outbreaks

Key point: *Lots of analysis post Ebola, but action might be lacking.*

Citation: Moon S, Leigh J, Woskie L, et al. Post-Ebola reforms: ample analysis, inadequate action. *BMJ.* 2017;356:j280.

This article discusses analysis and suggested reforms in the wake of Ebola outbreaks. According to the authors, 11,000 deaths were directly attributed to the outbreak. Over 40 target examinations of the outbreak were performed. As a whole, these publications generally agree. Unfortunately, the suggested actions have not yet been taken. Some of these include compliance with WHO international health regulations, assuring trade and travel restrictions are justified, reporting outbreaks swiftly, and addressing issues with the WHO itself. Although these issues do not directly affect urgent care, the general categories and need for cooperation and good systems for response—as well as the knowledge that the most recent outbreak will not be the last—should make us think about how we can function as a group, whether through UCAOA or our local health authorities. This should be planned now before we have another emergency or outbreak. ■