



## ABSTRACTS IN URGENT CARE

- Lower Parameters for Treating Hypertension
- Maintaining Good Antibiotic Stewardship
- New Infection Guidelines from AAP
- Faster CLIA-Waived CBC Test
- New Data on Migraine Medications
- Acetaminophen and Ibuprofen for Extremity Pain
- Resistant *Neisseria Gonorrhoeae*
- From AHA: New CPR Guidelines

■ GLENN HARNETT, MD

Each month the College of Urgent Care Medicine (CUCM) provides a handful of abstracts from or related to urgent care practices or practitioners. Glenn Harnett, MD leads this effort.

### Revisiting Parameters for Treating Hypertension

*Key point: New guidelines have lower thresholds for diagnosis and treatment of hypertension.*

Citation: Whelton PK, Carey RM, Aronow WS, et al. 2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. *Hypertension*. [Epub ahead of print November 13, 2017]

The 2017 American College of Cardiology/American Heart Association (ACC/AHA) guidelines provide guidance for the prevention, detection, evaluation, and management of hypertension in adults. Recommendations include a lower threshold for the diagnosis of hypertension based on office blood pressure readings. Hypertension is now defined as a blood pressure  $\geq 130$  mmHg systolic or  $\geq 80$  mmHg diastolic; the treated blood pressure goal should be  $<130$ / $<80$  mmHg. The guidelines recommend pharmacologic therapy for all diagnosed hypertensive patients who have higher cardiovascular risk, and also for lower-risk patients who have a blood pressure  $\geq 140$  mmHg systolic or  $\geq 90$  mmHg diastolic. ■



**Glenn Harnett, MD** is principal of the No Resistance Consulting Group in Mountain Brook, AL; a board member of the College of Urgent Care Medicine and the Urgent Care Foundation; and sits on the *JUCM* editorial board.

### Follow-Up: Curbing Inappropriate Antibiotic Use Long-Term

*Key Point: Interventions to reduce inappropriate antibiotic prescribing likely need to be applied long-term to maintain effect.*

Citation: Linder JA, Meeker D, Fox CR, et al. Effects of behavioral interventions on inappropriate antibiotic prescribing in primary care 12 months after stopping interventions. *JAMA*. 2017;318(14):1391-1392.

This study, published in *JAMA*, showed that stopping prescriber behavioral interventions aimed at reducing inappropriate antibiotic prescribing may cause a rebound in prescribing rates. This was a follow-up study to a prior randomized trial where two behavioral interventions, “accountable justification” and “peer comparison,” were associated with reductions in inappropriate antibiotic prescribing in adults with acute respiratory infections. The accountable justification intervention required clinicians to write a justification for prescribing antibiotics when prompted by their electronic health record. In the peer comparison intervention, clinicians received emails that ranked their inappropriate prescribing rate against their peers’ rates. In this follow-up study, the researchers measured the inappropriate prescribing rates in the 12 months after the interventions were stopped. The inappropriate prescribing rate increased from 6.1% to 10.2% in the accountable justification group, which was comparable to a control group who did not receive any behavioral interventions. The inappropriate prescribing rate increased from 4.8% to 6.3% in the peer-comparison group over the same 12-month period. The peer-comparison group still had better prescribing rates than the control group. This research suggests that these interventions may need to be applied long term to maintain their effectiveness. ■

### New AAP Recommendations on Pediatric Infection Control

**Key point:** *New guidelines on infection control in outpatient pediatric settings published by the American Academy of Pediatrics.*  
**Citation:** Sadoughi S, Sofair A. New guidance posted on infection control in pediatric ambulatory settings. *NEJM J Watch*. Available at: <https://www.jwatch.org/fw113456/2017/10/23/new-guidance-posted-infection-control-pediatric>. Accessed January 11, 2018.

The American Academy of Pediatrics has updated its recommendations on infection control and prevention for pediatric ambulatory medical settings. This update provides new guidelines on infection control in pediatric ambulatory settings. Changes to the previous guidelines include a strong recommendation that all healthcare providers should receive an influenza vaccination annually. Specific recommendations for patients with cystic fibrosis include providing a mask for these patients when in common areas, as well as making sure they do not share common waiting areas with other patients. These patients may remove their masks when in a treatment room, although clinicians should follow contact precautions. Whenever transferring patients to the emergency department or hospital, information about the patient's diagnosis and isolation should be communicated. Other infection control measures include placing signs that promote cough etiquette in patient areas and waiting rooms. In addition, it is wise to avoid having plush animals in the waiting area, since these toys may harbor infectious bacteria or viruses. ■

### Faster Results for CLIA-Waived CBC Tests

**Key point:** *FDA approves the first CLIA-waived complete blood count (CBC) device for use in outpatient settings.*  
**Citation:** Brooks M. FDA approves new CLIA-waived CBC test for faster results. *Medscape*. Available at: <https://www.medscape.com/viewarticle/888165>. Accessed January 11, 2018.

Traditionally, outpatient medical offices had to be certified as a moderately complex laboratory to perform CBC testing onsite or send CBC blood samples to off-site laboratories, often requiring a delay of  $\geq 24$  hours to receive results. A new device reduces the number of hematology parameters to 12 (still including a complete blood count and differential). This new CLIA-waived, point-of-care device may provide more facilities, such as urgent care centers, the ability to perform this testing at the bedside. This device may give more urgent care clinicians the ability to access CBC results in real time and make more timely and informed medical decisions. ■

### Prochlorperazine + Diphenhydramine vs IV Hydromorphone for Migraine

**Key point:** *A new study reveals that prochlorperazine is superior*

*to hydromorphone for pain relief in patients with migraine headaches.*

**Citation:** Friedman BW, Irizarry E, Solorzano C, et al. Randomized study of IV prochlorperazine plus diphenhydramine vs IV hydromorphone for migraine. *Neurology*. 2017;14(89):2075-2082.

This randomized control trial published in *Neurology* compared 1 mg of IV hydromorphone with 10 mg IV prochlorperazine + 25 mg of diphenhydramine (to prevent akathisia) in patients with acute migraine headaches. Results revealed that the prochlorperazine/diphenhydramine combination was effective in pain relief for 60% of patients, compared with only 31% of patients who had pain relief with hydromorphone. The results were so profound that the data monitoring committee halted the trial early after only enrolling 127 patients. Researchers concluded that IV hydromorphone is substantially less effective than IV prochlorperazine for the treatment of acute migraine in the ED and should not be used as first-line therapy. ■

### Nonopioids Over Opioids in Acute Extremity Pain

**Key point:** *Acetaminophen and ibuprofen are superior to opioids for acute extremity pain.*

**Citation:** Chang AK, Bijur PE, Esses D, et al. Effect of a single dose of oral opioid and nonopioid analgesics on acute extremity pain in the emergency department: a randomized clinical trial. *JAMA*. 2017;318(17):1661-1667.

This randomized, controlled trial published in the *New England Journal of Medicine* compared the analgesic effect of ibuprofen plus acetaminophen vs oxycodone or codeine plus acetaminophen. It enrolled 411 patients, randomized to four different regimens:

- ibuprofen 400 mg plus acetaminophen 1 g
- oxycodone 5 mg plus acetaminophen 325 mg
- hydrocodone 5 mg plus acetaminophen 300 mg
- codeine 30 mg plus acetaminophen 300 mg

The mean pain score before treatment was 8.7 (on an 11-point scale). There were no statistical differences among treatment groups 2 hours after treatment. These results suggest that urgent care providers may be able to avoid prescribing opioids for acute extremity pain by recommending acetaminophen and ibuprofen. ■

### Resistant *Neisseria gonorrhoeae* in North America

**Key point:** *Ceftriaxone-resistant *Neisseria gonorrhoeae* has arrived in North America.*

**Citation:** Lefebvre B, Martin I, Demczuk W, et al. Ceftriaxone-resistant *Neisseria gonorrhoeae*, Canada 2017. *Emerg Infect Dis*. 2018;24(2). [Epub ahead of print]

Multidrug-resistant *Neisseria gonorrhoeae* has become more

prevalent throughout the world, but has not been identified in North America—until now, in Canada. Clinicians there isolated this pathogen via culture in a 23-year-old female with genital gonorrhea. The patient reported that she had a sexual partner who had unprotected sex during a trip to China and Thailand. Sensitivity results revealed the pathogen to be resistant to ceftriaxone, ciprofloxacin, and tetracycline but susceptible to azithromycin. Urgent care clinicians should consider performing a culture in cases where a gonorrhea infection may have been acquired in Asia or, like in this case, when the patient had a sexual contact with someone who had unprotected intercourse in Asia. ■

**AHA: Compressions Over Respirations with CPR**

*Key point: New American Heart Association (AHA) guidelines for CPR focus on compressions more than respirations.*

*Citation: Kleinman ME, Goldberger ZD, Rea T, et al. An update to the American Heart Association Guidelines for*

**Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. *Circulation.* 2018;137(1):e7-e13.**

The AHA has updated its CPR recommendations in order to improve outcomes during out-of-hospital cardiac arrest. The new guidelines place renewed emphasis on the importance of effective compressions and when to give ventilations during CPR. In bystander-witnessed cardiac arrest, instructions are to apply compression-only CPR. All bystanders should provide chest compressions. Bystanders who are trained, willing, and able should give two rescue breaths after each cycle of 30 compressions. EMS providers should perform CPR with rescue breaths (30:2) or continuous chest compressions with positive pressure ventilations until a supraglottic device or endotracheal tube is established. When a tracheal tube is in place, positive pressure ventilations should be provided without pausing compressions. Of special note, ventilation is always recommended for children, though compressions should not be withheld if bystanders are unable or unwilling to perform rescue breaths. ■



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