



## On Sports Concussions, Meningitis Boosters, CPR Guidelines, and Infant/Pediatric Medications and Dosing

■ 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.

### Position Statement on Sports Concussions

**Key point:** Sports are second only to motor vehicle accidents as the leading cause of traumatic brain injury among 15- to 24-year-olds. Citation: AAN Sports Neurology Section, Practice Committee, and Board of Directors. Position statement on sports concussion. October 2010 (AAN Policy 2010-36).

Concussion is a common consequence of trauma to the head in contact sports, estimated by the Centers for Disease Control and Prevention to occur 3 million times in the United States each year. Among people aged 15 to 24 years, sports are now second only to motor vehicle accidents as the leading cause of traumatic brain injury.

While the majority of concussions are self-limited injuries, catastrophic results can occur and the long-term effects of multiple concussions are unknown.

Members of the American Academy of Neurology (AAN), which advocates for policy measures that promote high-quality, safe care of individuals participating in contact sports, specialize in treating disorders of the brain and nervous system. Some members have particular interest and experience caring for athletes and are best qualified to develop and disseminate guidelines for managing athletes with sports-related concussion.



Nahum Kovalski is an urgent care practitioner and assistant medical director/CIO at Terem Emergency Medical Centers in Jerusalem, Israel. He also sits on the JUCM Editorial Board.



Based on the clinical experience of these experts, the AAN supports the implementation of policy that supports the following recommendations:

1. Any athlete who is suspected to have suffered a concussion should be removed from participation until he or she is evaluated by a physician with training in the evaluation and management of sports concussions.
2. No athlete should be allowed to participate in sports if he or she is still experiencing symptoms from a concussion.
3. Following a concussion, a neurologist or physician with proper training should be consulted prior to clearing the athlete for return to participation.
4. A certified athletic trainer should be present at all sport-

ing events, including practices, where athletes are at risk for concussion.

- Education efforts should be maximized to improve the understanding of concussion by all athletes, parents, and coaches. ■

### ACIP Recommends Meningitis Booster for Teens, Pertussis Booster for Adults

**Key point:** *The CDC's Advisory Committee on Immunization Practices has recommended that teens receive an additional shot of the meningitis vaccine at age 16 and that those between 11 and 64 receive a pertussis booster.*

**Citation:** ACIP recommends meningitis booster for teens, pertussis booster for adults. *Physician's First Watch*. October 28, 2010. Available at: <http://firstwatch.jwatch.org/cgi/content/full/2010/1028/1>.

The meningitis vaccine, which was thought to have been effective for 10 years, is only effective for five years. In a close vote, the ACIP recommended giving the additional shot, rather than moving the age at first vaccination to 14 or 15 from the currently recommended age of 11 or 12.

The committee also recommended that people aged 11 to 64—as well as people >65-years-old who are regularly around infants—receive a booster vaccine for diphtheria, tetanus, and pertussis because of an outbreak of nearly 6,300 pertussis cases in California.

Pertussis is also on the rise elsewhere in the nation. Previously, older adults were not in the target group for vaccination. ■

### Revised Guidelines: Cardiopulmonary Resuscitation and Emergency Cardiovascular Care

**Key point:** *Compressions are key and respirations not even recommended for standers-by.*

**Citation:** Field JM, Hazinski MF, Sayre MR, et al. Part 1: Executive summary: 2010 American Heart Association guidelines for cardiopulmonary resuscitation and emergency cardiovascular care. *Circulation*. 2010;122(18 Suppl 3):S640-656.

The American Heart Association has updated its 2005 guidelines on cardiopulmonary resuscitation and emergency cardiac care. For CPR, the guidelines newly emphasize chest compressions because of their importance for survival.

Among the changes, published in *Circulation*:

- The order of CPR is now C-A-B (compressions, airway, breathing) instead of A-B-C for everyone except newborns. The first cycle should include 30 compressions before rescue breaths.
- “Look, listen, and feel” is no longer recommended.
- Compressions for adults should be  $\geq 2$  inches (instead of up to) and performed at a rate of  $\geq 100$  per minute.

- Untrained bystanders should perform compression-only CPR (previous guidelines did not address untrained bystanders separately).
- Emergency cardiac treatments that are no longer recommended include:
  - routine atropine for pulseless electrical activity/asystole
  - cricoid pressure (with CPR)
  - airway suctioning for all newborns (exception for those with obvious obstruction).
- New sections address post-arrest care, care for children with cardiac arrest and specific congenital heart defects, and follow-up for children or young adults with sudden, unexplained cardiac death.
- The major change in CPR is the order of recommended maneuvers, from A-B-C to C-A-B. Consequently, “Look, listen, and feel” for breathing before beginning chest compressions has been removed from the algorithm.
- Controversy remains about delaying defibrillation to administer CPR. In early studies, survival improved when patients in cardiac arrest longer than five minutes received CPR before defibrillation. However, subsequent randomized trials showed no benefit of pre-shock CPR. In practice, compressions are generally administered before a shock because of the time required to locate, retrieve, and set up an AED.
- Transcutaneous pacing for bradycardia has not proven to be as beneficial as was hoped, and the new guidelines circumscribe its use. Atropine remains the first-line therapy for bradycardia.
- Adenosine is now considered reasonable for diagnosis and treatment of wide-complex tachycardias that are regular and monomorphic.
- Pharmacologic therapy for cardiac arrest has been de-emphasized. In retrospective studies and randomized trials, epinephrine, vasopressin, and amiodarone all failed to improve survival to hospital discharge when administered in the field. Focus on chest compressions and prompt defibrillation.
- Hypothermia should now be induced in most patients who are comatose after cardiac arrest.

[Published in *J Watch Cardiol*, December 1, 2010—Mark S. Link, MD.] ■

### Adverse Events from Cough and Cold Medications After a Market Withdrawal of Products Labeled for Infants

**Key point:** *Adverse effects from cough and cold medication related adverse events involving children <2 years of age were less than one-half of those in the pre-withdrawal period.*

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league, or a soon-to-open clinic. It is a modern way to spread information and is a welcome adjunct to email blasts and advertising.

### Facebook

Granted, as mentioned previously, Facebook is more of a personal networking site, but its sheer numbers of subscribers (more than 500 million active users worldwide, according to its own data) make it attractive.

You can use Facebook in various ways, as well, in that you can create a business page and use it for just about anything, including interesting photos, videos, event invitations, games and contests, discussion chains and sub-pages for selected subgroups of your client universe. Further, you can and should connect on a personal level with many of your clinic's contact base; the more your clients consider you a friend the more likely they are to refer you to other companies and offer strong recommendations.

### Mobile Device Marketing

Moving out another step out into the solar system, we find the new world of mobile device marketing. This is the world of apps and text messages, and a new avenue to clinic brand awareness.

In the near future, apps are likely to be available on almost any topic, thus providing mobile-device users with immediate access to any specialized information they deem valuable or essential.

Healthcare apps could range, for example, from a detailed medical dictionary to a summary of work-related conditions. Some insurance companies have even come up with apps to help users locate the nearest urgent care center.

Although it may seem onerous, using text messages to transmit information to your constituents is almost certain to get bigger and bigger. Remember, a nuisance can become a thing of joy if the information being transmitted is of value to its recipients.

It seems that virtually everyone these days has a multi-functional mobile device basically attached to their body. Never before in marketing has there been such a direct track to the consumer.

In summary, two core messages emerge from the networking frontier:

1. Take full advantage of those you know to facilitate up-beat, reassuring connections with new prospects.
  2. Touch your prospects more often, and make each touch briefer and ever more valuable to its recipients.
- In short, network and connect. ■

Citation: Shehab N, Schaefer MK, Kegler SR, et al. *Pediatrics*. 2010;126(6):1100-1107. Epub 2010 Nov 22.

A voluntary market withdrawal of orally administered, over-the-counter, infant cough and cold medications (CCMs) was announced in October 2007. The goal of this study was to assess CCM-related adverse events (AEs) among children after the withdrawal.

Emergency department visits for CCM-related AEs among children <12 years of age were identified from a nationally representative, stratified, probability sample of 63 U.S. EDs for the 14 months before and after announcement of withdrawal.

After withdrawal, the number and proportion of estimated ED visits for CCM-related AEs involving children <2 years of age were less than one-half of those in the pre-withdrawal period difference, whereas the overall number of estimated ED visits for CCM-related AEs for children <12 years of age remained unchanged. During both periods, two-thirds of estimated ED visits involved unsupervised ingestions (i.e., children finding and ingesting medications).

Further reductions will likely require 1) packaging improvements to reduce harm from unsupervised ingestions and 2) continued education about avoiding CCM use for young children. ■

### Evaluation of Consistency in Dosing Directions and Measuring Devices for Pediatric Nonprescription Liquid Medications

**Key point:** Most pediatric OTC liquid meds have problematic dosing directions.

Citation: Yin HS, Wolf MS, Dryer BP, et al. Evaluation of consistency in dosing directions and measuring devices for pediatric nonprescription liquid medications. *JAMA*. 2010;Nov 30. [Epub ahead of print.]

Researchers examined dosing instructions for 200 top-selling pediatric liquid medicines (analgesic, cough/cold, allergy, or gastrointestinal) in 2009. Among the findings:

- One fourth of medicines did not include standardized measuring devices.
- Of those that included such devices, nearly all (99%) had inconsistencies between the label's instructions and the accompanying device. For example, a dose given on the instructions might be missing from the device.
- Most directions were missing definitions for abbreviations listed (e.g., TBSP=tablespoon)
- Six percent of products used nonstandard units of measurement such as drams or cubic centimeters.

The authors note that such problematic labeling is a "root cause of consumer confusion with a high potential to lead to unintentional misuse of products." ■