

the Pediatric Emergency Messenger



NEWSLETTER OF THE
PEDIATRIC EMERGENCY MEDICINE COMMITTEE,
TENNESSEE CHAPTER, AMERICAN ACADEMY OF PEDIATRICS

Volume 4, Number 2

Fall/Winter 2004

2005 Pediatric Emergency Medicine Conference in Chattanooga

Please join us for the 4th annual collaborative statewide conference entitled "Advancing the Frontiers of Pediatric Emergency Care in Tennessee" to be hosted by T.C. Thompson Children's Hospital on September 23rd - 24th, 2005 at the

historic Read House in downtown Chattanooga. Mark your calendars now!

Learn about cutting edge pediatric acute care issues. Incorporating lectures, breakout sessions, and in-depth discussion, this course is

designed specifically for physicians, nurses, and emergency medical personnel – every member of the health care team responsible for pediatric patients.

Please call Anne Cowan at 423-778-6402 for more information.

New Development on the Rule of Six

There has been a new development in the JCAHO (Joint Commission on the Accreditation of Health Care Organizations) 2004 National Patient Safety Goal (NPSG) related to the "Rule of Six." The "Rule of Six" is a method of preparing medications for infusion in pediatric patients and has come under scrutiny by JCAHO because of safety issues in the calculation, preparation, and administration of drugs using this method. Rule 3b of the 2004 NPSG deals with improving the safety of high-alert medications and standardizing and limiting the number of drug concentrations available in any organization. Interpretations of the NPSG state that the "Rule of Six" should not be used for pediatric or neonatal care and a transition period for implementation prior to January 1, 2005 was enacted. This action prompted many pediatric practitioners to voice their concern to JCAHO and provide additional data related to the utilization of the "Rule of Six."

As a result of these discussions, the JCAHO has modified their position and an email from Kurt A. Patton, Executive Director, Accreditation Operations, JCAHO was distributed on November 6, 2004.

To quote Mr. Patton's email, "... we should modify our current position and schedule to eliminate the rule of 6 effective 1/1/2005. Instead the rule of 6 can continue to be used for 3 more years, providing the individual hospital submits an alternative to NPSG and that alternative is approved by JCAHO and the Sentinel Event Advisory Group. This 3 year transition period should enable the industry to smoothly and safely make the transition and insure that those organizations that still use the rule of 6 during this period do so with as much safety as possible. Operational details will be forthcoming on our website and in *Perspectives*."

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Do you have any pediatric emergency issues you would like to see addressed in this newsletter? We welcome your comments and suggestions. Please email the editor at: rmembersky@pol.net. Views expressed in the Pediatric Emergency Messenger are not necessarily endorsed by the Tennessee Chapter of the American Academy of Pediatrics. Reprint permission may be requested from the editor.

The Canadian C Spine Rule Versus NEXUS Low Risk Criteria

Commentaries Provided by the Pediatric Emergency Medicine Fellows and Faculty at Vanderbilt Children's Hospital

The Canadian C-spine Rule (CCR and figure 1 on page 3) and the National Emergency X-Radiography Utilization Study (NEXUS) Low Risk Criteria (NLC and figure 2 on page 3) are decision rules to guide the use of cervical-spine radiography in patients with trauma. This prospective cohort investigation done in nine Canadian emergency departments sought to compare the two decision rules in terms of clinical performance.

From May 1999-2002, 8283 alert and stable patients (GCS 15) aged 16 or greater with acute trauma to the head or neck were enrolled and had complete outcome assessments. In total, 162 cases of clinically important cervical-spine injuries were observed. The CCR was highly sensitive (99.4%) for clinically important cervical-spine injuries, identifying 161 of 162 cases with a negative predictive value (NPV) approaching 100%. Given the low prevalence of clinically important

continued on page 3 . . .

Communication Breakdown

A few weeks ago, I traveled to Boston to take in some fresh seafood and a couple of Red Sox games. Despite the fact that I was in a big city surrounded by people, it was an isolating experience in some respects. On hotel elevators, in restaurants, even in the right field bleachers at Fenway Park, people routinely engaged in loud, often overtly personal conversations on their cellular phones, unaware of those of us around them and our discomfort in being unwitting parties to their chatter. Often, the substance of the talk was merely hot air—"we just boarded the plane and are sitting on the runway," "can you see me here in section 304?," or "I've got to schedule a dental cleaning when I get home." It was as if the callers were merely filling time and insulating themselves from having to interact with others around them. On occasion, the discussions were downright rude. One fellow I had the misfortune to stand next to in line at the airport ticket counter described his prior evening and the physical attributes of his female companion in embarrassing detail. He was completely oblivious to the fact that there were women and families with children waiting in the same line.

In marked contrast, I recently joined some old college buddies for our annual golf pilgrimage to South Carolina. October is a great time to go, we find, because the area and the golf courses are not crowded, and given the way we play, this benefits everyone. Despite the fact that there were relatively few people around, I have seldom felt more humanly connected. My friends and I had face-to-face conversations about everything from our families to the coming election to whether Randy Sanders of the Tennessee Vols was a competent offensive coordinator. We had limited access to things like cell phones and e-mail, and just a lot of time to sit and chat. When we did go out for food or drink, the people we met were friendly, sincere, and engaging. All in all, it was a pleasant and satisfying time.

Back at work in the hospital environment, I have become acutely aware of the ways in which we "communicate" with each other. We e-mail, text-message, and speak on cell-phones or those annoying walkie-

talkies. Seldom anymore do we have face-to-face encounters. Hence, we have lost a great deal of the art of conversational exchange, the nuances that one can only glean from observing another's body language, facial expression, or vocal inflection. When we talk on cell phones in the middle of the shopping mall or while driving down the interstate, we "shut (ourselves) off," as noted by Robert V. Levine, Professor of Psychology at Cal State-Fresno, "from the here and the now." Not only is this sort of behavior insular, it borders on insolent. The one concept that is clearly communicated in this fashion is that those sharing the space around you have lesser worth than you and your all-important call. Tantamount to the privatization of public space, this behavior is a form of interpersonal arrogance and disrespect.

When we use e-mail, we should be cognizant that, by nature, an e-mail message is a one-way pronouncement. True, we have more control over the content and tenor of our e-mail, as we can edit messages, substitute words and ideas, and siphon emotion from them. This can be productive to an extent. For mass dissemination of information, such as a policy directive, e-mail is quite useful. But in the process of negotiating that policy or framing that information, e-mail lacks the immediacy and accountability that face-to-face meetings engender. Further, e-mail has the potential to be divisive. We can hide behind our e-mail messages, often typing things we would never dare say to someone directly. And while it may purport to share information, e-mail often does so with less-than-honorable intentions. Frequently, it is used merely as "CYA" documentation, with no intent to communicate at all. We can copy others on our messages, giving the often erroneous impression that our opinions are widely held, or shielding ourselves from pointed individual criticism by looping others into the exchange, even when they may not be rightfully involved in the discussion. Once written, e-mail belongs to the public domain, and people can copy, blind-copy, or forward your message to others without your knowledge, and out of context. Hence, the

emphatic and empathetic are filtered from e-mail, lest they come back to haunt the sender. As a result, a valuable component of communication is often lost.

Perhaps not intentionally, by being within reach 24/7 by e-mail and cell phone, we have exaggerated our own importance. Let's face it, there's something narcissistic about being available at any instant. Woody Allen spoofed this level of self-absorption in "Annie Hall," when his friend Rob (played by Tony Roberts) calls in to his office repeatedly to leave a series of phone numbers where he can be reached on a moment's notice, if necessary. But in being reachable we also have sacrificed a measure of our personal privacy. Since owning these technologies carries an implicit willingness to be contacted any time of the day or night, others simply no longer respect personal boundaries, feeling free to call us at home, in the supermarket, on the golf course, and at times that used to be reserved for family dinner or, heaven forbid, a good night's rest. We have saddled ourselves with a constant life stressor we may not even recognize. We feel we must stay "in the know" about everything, all the time, or we are less than human. Why didn't you call me?

When working in the emergency department, making ourselves immediately accessible to a wide variety of people and interests is part and parcel of the job. In somewhat parallel fashion, then, the pace and immediacy of the emergency department encounter makes it the paradigm of poor communication. We are pulled in a hundred directions at once and often look past the human being who is sitting in front of us, seeking our care. (Read that word again: care.) We have no prior relationship to our patients, no time to form one, limited access to information about them, and a mandate to quickly identify their one problem, fix it, and move on. All the time we are multi-tasking, triaging, juggling phone calls, charting, performing procedures, and teaching on 5-30 other patients, each of whom feels his or her concern is paramount. Simultaneously, we are at the beck and call of our patients, the nursing staff,

continued on page 3 . . .

Canadian C Spine Rule, continued from page 1

c-spine injuries in this data set, the NLC also had a very good NPV (99.4%), but the NLC failed to identify 15 of the 162 cases yielding a much lower sensitivity of 90.7%. In other words, approximately 1 in 10 clinically important c-spine injuries would have been missed using the NLC. Specificity for both criteria (45.1% for CCR and 36.8% for NLC) was poor largely reflecting the inclusive designs of both criteria so as to accept many false positives at the hope of minimizing any false negatives.

The authors conclude that the CCR is superior to the NLC with respect to sensitivity and specificity for cervical-spine injury among alert trauma patients in stable condition.

Communication Breakdown, continued from page 2

community physicians, consultants, and residents. What human being could communicate effectively in that paradigm? Is it any wonder that communication in the ED is so challenging?

Much of this potential for miscommunication is inherent to the ED milieu, and unavoidable. I don't have any immediate solutions up my sleeve. But I would make a plea to all of us (myself included) to slow the process down where we can, to realize why we are doing what we do in the first place, that we are all ultimately here for a similar purpose, all working hard, all subject to numerous simultaneous stressors at work (and away from work). Take a deep breath now and then, focus on the person in front of you, look them in the eye, shake their hand, and listen to their story. Talk with your colleagues face-to-face about issues and perceived problems. Humanize the process where you can. In the long run, you may find the heart and soul of medicine again.

Oh, and one more thing—turn off that computer and cell phone, and go have a beer with your old friends. Soon.

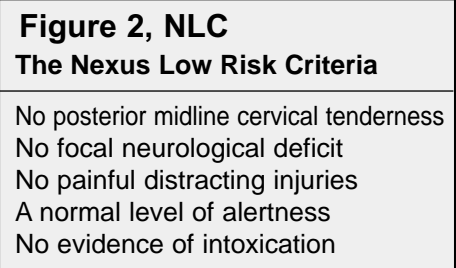
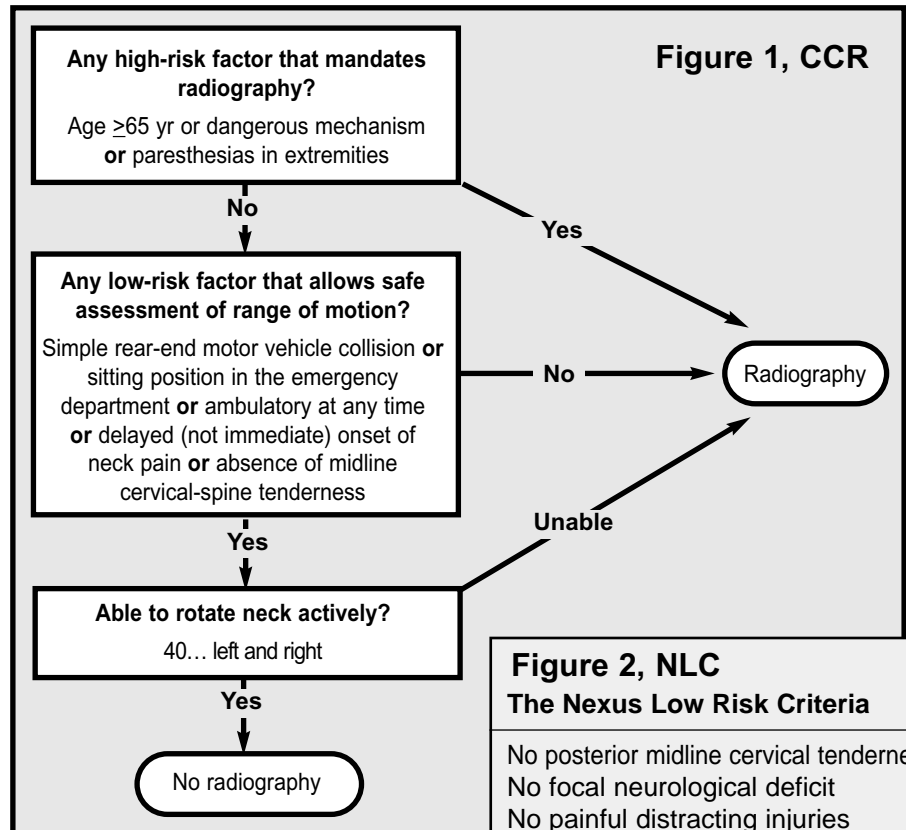
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(Stiell I, et al: N Engl J Med. 2003 Dec 25;349(26): 2510-8).

Commentary: The CCR did not enroll any children less than age 16 so as a whole it may be less useful for those of us in PEM than the NLC (whose validation study included a population ranging from less than 1 year to age 101). Of concern is that the sensitivity of the NLC in this study is much lower than previously reported. (A 99.6% sensitivity for clinically significant injuries was reported in the NLC validation study: Hoffman J et al: N Engl J Med. 2000 Jul 13;343(2):94-9). The authors point out that the differences may have arisen in part because the NLC validation study population included infants and children as well as patients with clouded consciousness and multiple trauma, whereas this study population only included those patients who met their explicit inclusion criteria. It is hard not to

think that the Canadian physicians' interpretation of some of the NLC criteria may have also differed from that of their U.S. colleagues resulting in a lowered observed sensitivity. The CCR is considerably more complex for the physician to remember, and the authors found a higher misinterpretation rate among physicians for the CCR. Finally, many physicians (as documented in this study) may feel uncomfortable evaluating range of motion as the CCR requires. This study nonetheless once again confirms the clinical acceptability of the CCR as a decision rule to guide the use of cervical-spine radiography in the older trauma patient. The distressed pre-verbal trauma patient, however, remains our greatest challenge.

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Fellows Corner: Steroids for Mild Croup

The Vanderbilt Children's Hospital Pediatric Emergency Medicine group met for journal club and discussed an article published in the September 23rd, 2004 edition of *The New England Journal of Medicine* entitled "A Randomized Trial of a Single Dose of Oral Dexamethasone for Mild Croup." This study asked a question of a practice many of us do "off-label" out of our own experiences and biases. Dexamethasone has been used for decades to treat children with croup who have stridor at rest or severe respiratory distress. However, its use in mild cases is controversial and formed the basis for this study.

In this study, Bjornson et al. conducted a double-blinded trial at four sites in Canada. A total of 720 patients with mild croup (Westley et al croup score of ≤ 2) were randomized to receive either a single dose of 0.6mg/kg of oral dexamethasone or placebo. The health care workers were blinded by the addition of cherry syrup to both the dexamethasone and placebo (water) by the pharmacy. The primary outcome was number of return visits for health

care within 7 days. Patients received phone calls at intervals throughout the next 7 days in which they were asked about symptoms, further visits to the doctor, perceived stress, lack of sleep, and work missed. All these factors were compared between the two groups.

The results showed a statistically significant difference between the controls and dexamethasone group in the number of return visits to their health care provider within 7 days (15.3% versus 7.3% respectively, $p < 0.001$). The proportion of patients with symptom resolution at 24 hours was also greater in the steroid group. Dexamethasone did not alter the course of illness with symptom resolution in most patients by day 3. There were no significant adverse events noted in either group. More notable were the intangible benefits of improvement of quality of life for the families of patients receiving dexamethasone. Patients in the treatment arm lost less sleep, their parents were more relaxed and missed less work, resulting in a significant financial impact far exceeding a dose of oral steroids.

In discussion of these results, many agreed that the reason for treating mild croup is to reduce the child's symptoms in order to alleviate stress in both the patient and his or her family. It was agreed that while a single dose of steroids is a relatively benign intervention, it should not be overlooked that there are populations presenting to the Pediatric Emergency Department in whom the risks would outweigh the benefits unless the symptoms merited such treatment.

While many generations of parents have weathered several sleepless nights standing in a steamy bathroom with their "crouper," it is appealing, both as a physician and a parent, to try to dampen the severity of even these mild cases. Perhaps physicians are easily swayed to the "do something" solution rather than reassurance, but this study leads us to believe that our actions are not without a scientific basis.

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