ABSTRACTS IN URGENT CARE

- Multitasking—A Receipt for Failure?
- Rethinking Concussion Management
- The Missing Link in Nonspecific Head, Back Pain
- Putting Infant Safety First
- Overtreatment of Asymptomatic Bacteriuria

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Practice of Urgent Care: The Illusion of Multitasking and the Cost of Interruptions

Key point: True multitasking is not possible. Rather, when we attempt to multitask, our brains are actually rapidly switching focus. Task-switching and interruptions negatively impact our ability to complete tasks accurately and effectively. Minimizing task-switching reduces the likelihood of cognitive errors and, consequently, adverse patient outcomes.

Citation: Skaugset LM, Farrell S, Carney M, et al. Can you multitask? Evidence and limitations of task switching and multitasking in emergency medicine. *Ann Emerg Med*. 2016;68(2): 189-195

As a younger physician, I ardently sought to multitask more efficiently, thinking it to be the most assured path to clinical expertise. In fact, I believed multitasking to be the only way to manage the multiple patients I was caring for simultaneously. Unfortunately, abundant studies on human cognition have demonstrated that our attention simply cannot be divided this way. Multitasking, while alluring in concept, is sadly not possible.

When we attempt to "multitask" we are actually rapidly *task-switching*. And it turns out, task-switching carries with it a heavy cost in terms of performance. Pausing a task leads to a dramatic increase in rates of error and likelihood of task incompletion. It naturally stands to reason, therefore, that we should strive to reduce the number of times we switch tasks.

However, in acute care, interruptions occur with alarming frequency. ED studies have demonstrated that clinicians are interrupted about once every 6 minutes. And while there have never been such studies performed in urgent care, rates of interruption in our clinical environment are likely comparable. And with increasing numbers of interruptions comes increasing risk for cognitive error.

The authors of this review article suggest that the insidious danger of interruptions must first be appreciated. We as urgent care clinicians need to divorce ourselves from the notion that multitasking is possible and acquiesce to its superhuman unattainability. Secondly, these authors recommend taking actions to minimize the quantity of interruptions, especially during critical tasks. There are some simple steps we can take ourselves to achieve this, such as turning off push notifications on our smartphones and diverting calls while engaged in procedures. However, more challengingly, we also need to change the behaviors of our staff to discourage unnecessary interruptions and work toward a culture in urgent care where interruptions are recognized for the patient safety hazards they create. ■

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A Gamechanger for Sport-Related Concussion

Key point: Light aerobic activity may allow adolescents with concussion to recover more quickly.

Citation: Leddy JJ, Haider MN, Ellis MJ, et al. Early subthreshold aerobic exercise for sport-related concussion: a randomized clinical trial. *JAMA Pediatr*. February 4, 2019. [Epub ahead of print]

Recommendations for the management of concussion in adolescents have long been a moving target. While there is no consensus across professional societies, recent guidelines have advised strict physical rest, especially for athletes, until entirely asymptomatic. However, there is also extensive observational data suggesting a role for physical activity in being helpful for

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the brain and preventing neurodegenerative disease.

With this backdrop, these investigators performed a randomized controlled trial of 103 adolescents who sustained a sports-related concussion in the prior 10 days. Participants were randomized to perform either gentle stretching or aerobic exercise (below the threshold to exacerbate concussion symptoms) for 20 minutes per day. Their symptoms were subsequently evaluated each day.

Remarkably, the patients in the aerobic exercise group recovered dramatically faster (13 vs 17 days). While this was a single RCT, the results are compelling and suggest that it may be reasonable to prescribe gentle aerobic exercise (below symptom threshold) to patients after sports-related concussion. Of course, this should also include a caveat that this must be non-contact physical activity. ■

Taking the Guesswork out of Concussion Recovery

Key point: Concussion recovery takes time, and is slower in adolescents than in younger children. These data can be helpful in setting realistic expectations for recovery and return to play.

Citation: Ledoux AA, Tang K, Yeates KO, et al. Natural progression of symptom change and recover from concussion in a pediatric population. *JAMA Pediatr*. November 5, 2018. [Epub ahead of print]

Concussion is a common diagnosis in urgent care, especially at this time of year. Thanks to the advent of clinical decision rules for pediatric head injury (eg, PECARN), we can clear the vast majority of head-injured children without imaging and discharge them directly from urgent care. In athletes particularly, however, the next obvious question after the diagnosis of concussion often is: *So, when will these symptoms go away?*

In a large, prospective, secondary analysis of a multicenter RCT, this group of Canadian researchers analyzed data on concussion symptom progression in over 2,700 children ranging from 5 to 18 years of age. They found that younger children (5-7 years) recovered significantly more quickly than older children (8-12 years) and adolescents (13-18 years), with approximately 75% of children <8 years fully recovered within 4 weeks. Children aged 8-18 years recovered more slowly, with most children requiring at least 2 weeks to even begin to notice symptom improvement. Adolescent females recovered most slowly, with many not fully recovered even by week 12.

While the pace of concussion recovery was quite variable, these data do allow urgent care providers to disabuse parents of the common, wishful thinking that their concussed teenager can safely play in next week's football game. Informing patients and caregivers that concussion recovery (especially in adolescents) is better measured in months than in weeks can help establish realistic expectations for recovery and return to play. ■

What Are We Missing when We Diagnose Nonspecific Headache and Back pain?

Key point: The vast majority of ED patients discharged with nonspecific back pain and headache will not go on to have serious short-term adverse outcomes. Among the few patients with headache or back pain who do have short-term adverse outcomes, thankfully most will have obvious risk factors.

Citation: Dubosh NM, Edlow JA, Goto T, et al. Missed serious neurologic conditions in emergency department patients discharged with nonspecific diagnoses of headache or back pain. *Ann Emerg Med*. February 20, 2019. [Epub ahead of print]

We assign benign diagnoses to the vast majority of patients presenting with acute back pain and headache. In the ED setting, and certainly even more so in the urgent care setting, patients with these complaints tend to undergo little, if any, diagnostic workup. Rather, clinicians generally rely on the patient's history and exam to exclude dangerous causes of headache and back pain. At the same time, however, multiple life-threatening conditions can present with these symptoms.

The investigators in this study sought to answer the question, how often are dangerous etiologies of back pain and headache missed by acute care providers on an index visit? They retrospectively analyzed a truly massive number of ED visits (over 1 million ED visits for each complaint) occurring in

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six different states from 2006 to 2012. They created a composite primary outcome of interest, which included a return visit with hospitalization for an issue related to their back pain or headache and/or diagnosis of a "serious neurological condition" or death within 30 days of ED visit.

Overall, the results were reassuring. A negative composite outcome occurred in only 0.5% of headache patients and 0.2% of back pain patients. The most common adverse outcomes were CVA/stroke in headache patients and spinal infection in back pain patients. Predictors of serious outcomes were not surprising and included advanced age, male gender, immunosuppression, HIV/AIDS, and comorbid malignancy.

An important limitation in this study when considering its generalizability for the urgent care setting is that it included only ED patients. These patients were likely sicker, which may suggest a lower risk for urgent care patients; however, ED clinicians often also have immediate access to advanced imaging, as well, which can provide more certainty in excluding dangerous conditions. Data on the exact use of imaging by ED providers to exclude serious pathologies were not included. ■

What Really Matters for Infant Safety

Key point: The majority of accidental deaths in infants occur due to suffocation in bed. Reminding new parents about the importance of laying infants on their backs, avoiding soft/loose bedding, and not allowing babies to sleep in adult beds can be lifesaving.

Citation: Erck Lambert AB, Parks SE, Cottengim C, et al. Sleep-related infant suffocation deaths attributable to soft bedding, overlay, and wedging. *Pediatrics*. 2016;174:84-90.

Parents of newborns worry about a lot—about rashes, spitting up, and, of course, the frequency, consistency, and color of their baby's stool. When distraught and sleep-deprived caregivers present with these concerns, they usually require nothing more than reassurance. However, the challenge in raising infants lies not only in avoiding excessive worry about the things that don't matter, but more importantly, in paying close attention to the few things that really do matter.

When it comes to preventing sudden unexplained infant death (SUID), nothing is more important than attention to a safe sleep environment. In fact, 82% of cases of SUID are attributable to suffocation while sleeping. The authors of this paper reviewed all cases of SUID in the CDC registry from 2011 to 2014. They found that the majority of suffocation deaths (69%) were caused by soft sheets and bedding, followed by accidental overlay/crushing by a parent (19%). Further examination revealed that most of the cases of suffocation were due to the child being in an adult bed, laying prone, and being accidentally overlaid by the mother.

New parents are basically all sleep-deprived and can easily fall asleep accidentally with their newborn in their bed. So, take a moment when discharging new parents and make sure that they are aware that, while that minor diaper rash won't kill them, an inappropriate sleeping position or environment actually could. ■

Stop Treating Asymptomatic Bacteriuria in Almost Everyone

Key point: The best and most recent evidence suggests that we should only be screening for and treating asymptomatic bacteriuria in pregnant patients.

Citation: Nicolle LE, Gupta K, Bradley SF, et al. Clinical practice guideline for the management of asymptomatic bacteriuria: 2019 update by the Infectious Diseases Society of America. *Clin Infect Dis*. March 21, 2019. [E-pub ahead of print]

Nearly 15 years have passed since the Infectious Disease Society of America's (IDSA) last update on guidelines for screening and treatment for asymptomatic bacteriuria. In that time span, rates of antibiotic resistance among urinary pathogens have increased substantially. Unsurprisingly, in response the IDSA has tightened their recommendations on who should be tested and treated for asymptomatic bacteriuria.

In summary, asymptomatic bacteriuria should only be tested for (and, if identified, treated) in pregnant women. It's really that simple. The authors recommend a treatment duration of 4 to 7 days in this population. Notably, they recommend against screening in infants, the elderly, and individuals with diabetes, chronic kidney disease, and immunosuppression. These recommendations, while easy to recall, importantly should only be applied to asymptomatic patients. ■

Tips on Twitter: Peds Pearls

- Up to 40% of toddler fractures (spiral tibial fractures) are not evident on initial radiographs. If they are painful/tender on the tibia and can't bear weight, put them in a long leg splint. Thanks Ilene Claudius and @mizspangler for sharing.
- If you are going to document two things on every pediatric fever case they should be vaccination status and a description of the reassuring behavior you are witnessing.

(Follow Dr. Russell on Twitter: @UCPracticeTips.)