



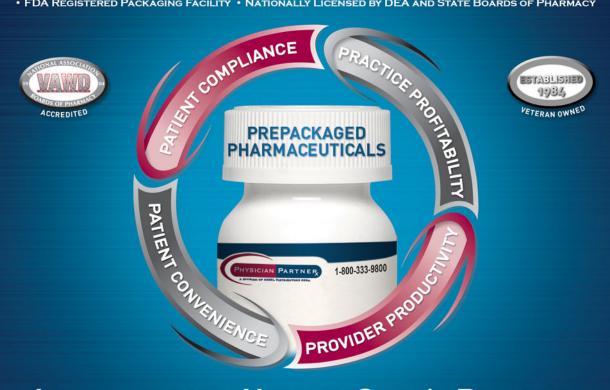
THE JOURNAL OF URGENT CARE MEDICINE®

Official Publication of the **UCAOA** www.jucm.com Also in this issue 22 Case Report **Chronic Exertional Compartment Syndrome** Language Interpretation Services in the **Urgent Care Center** Strategies for Avoiding Drug —

Orug Interactions A BRAVEHEART PUBLICATION in Urgent Care

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LETTER FROM THE EDITOR-IN-CHIEF

"You Can't Always Get What You Want..." "...but You Get What You Need!"



ove, politics and drugs were the subjects of Mick Jagger's self-reflection in the 1960s rock anthem, "You Can't Always Get What You Want." Since then, the song's chorus has been reproduced and re-purposed into everything from parenting advice to sociology lec-

tures. Mick's personal struggles with drugs and other temptations are referenced frequently as the artistic purpose of the song, and while he may not have intended greater ideological meaning, I do not hesitate to declare that the lyrics have had a lasting impression on society and its struggles with selfishness and greed. Parallels can be drawn to all aspects of life in a modern, democratic world. We are only now beginning to appreciate the inherent cost of freedom in a diverse and global world, let alone in healthcare.

Clinical medicine was, for most of its history, a "technocracy": A professional elite that "ruled" by virtue of being the most knowledgeable and skilled. "Laws" of clinical practice were fairly clear and patients deferred decision-making to the "house of medicine" and its physician representatives. I needn't tell anyone reading this editorial how times have changed. Medicine has been transformed into a practice entirely driven by the agendas of interest groups far more powerful and numerous than the "house of medicine." Physicians, on the other hand, have been rendered nearly impotent. Governmental agencies representing the perceived "interests" of patients have rolled out more regulations in healthcare than for nearly any other industry at a cost of hundreds of billions of dollars each year.

As I noted in a previous column, there has been no study to date that has examined whether we have obtained an ounce of quality or cost savings from these efforts. It is undeniable, however, that there have been considerable hard and soft costs that have been paid for mostly by well-meaning physicians. And if that wasn't enough, professional independence and authority has been further hijacked by other powerful private interests like insurance companies, lawyers, hospitals, and drug and device companies.

And now, for the most powerful and potentially dangerous interest group of them all: Our patients (cringe). There is no greater folly than to call out our patients as contributing to the ills of medicine, but let's face it, in a democratic society, it is the desires of the people that ultimately drive the political and corporate agenda. More

than ever, our patients have insatiable and unrealistic desires...err...demands that render the physician almost paralyzed in practice. Doctors spend an increasing amount of time negotiating with patients...what medications to prescribe, what tests to do, what procedures to perform. While a wonderful ideal in theory, the concept of shared decision-making is, perhaps, the most unrealistic expectation of medicine today.

Here's why:

The process of medical decision-making is the most revered part of clinical medicine. It is the convergence of the physician's fund of knowledge with the clinical presentation, patient history, epidemiology, pre-test probability, and evaluation of risk and benefit. In other words, medical decision-making is, perhaps, too complex to be truly "shared." What you get instead is a jumbled and distracted process where nobody wins. After all, how can you have "shared" decision-making with a patient "partner" who has no appetite for uncertainty and, understandably, cannot think objectively about his or her problem?

The American desire to control one's own destiny and the decisions that impact them is powerful indeed. We view authority over these decisions with great skepticism. As it pertains to our healthcare, we want our antibiotics and our MRIs when we want them, we want our knee arthroscopies regardless of proof, and we want it all without any risk of complication. We want it now and, unfortunately, we don't care if our "wants" are directly contributing to a broken system on the verge of collapse that cannot provide effective or efficient healthcare to its people. This is the system we want. Well, you can't always get what you want, America. If only we could get what we need!

Hail the Technocracy! ■

Jan Zamika, 200

Lee A. Resnick, MD Editor-in-Chief

JUCM, The Journal of Urgent Care Medicine



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March 2013

VOLUME 7, NUMBER 6



CLINICAL

9 Strategies for Avoiding Drug-Drug Interactions in Urgent Care

With the increasing number of drugs on the market, patients are more and more likely to be taking multiple medications. Urgent care providers need to be alert for potential interactions when changing or adding to a patient's drug therapy.

Maya Heck, MS1, and John Shufeldt, MD, JD, MBA, FACEP

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Matthew Speer and John Shufeldt, MD, JD, MBA, FACEP

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Alan A. Ayers, MBA, MAcc



IN THE NEXT ISSUE OF JUCM

According to one study, 91% of parents suffer from "fever phobia"—the erroneous belief that fever alone could hurt their child. It's not surprising, then, that fever is one of the most common chief complaints in pediatric patients presenting at urgent care centers. In the vast majority of these cases, the source of the fever will be discovered on physical exam or the explanation will be a self-limited viral illness. The challenge for urgent care providers is to identify the pediatric patient with fever who is at high risk of a serious bacterial infection (SBI) such as urinary tract infection, pneumonia, bacteremia, or meningitis. Next month's cover story offers recommendations for an age-based approach to laboratory testing that is rigorous yet ensures prompt identification of the "not well" pediatric patient with fever and appropriate evaluation of the "well" pediatric patient to rule out any possible SBIs.

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JUCM The Journal of Urgent Care Medicine supports the evolution of urgent care medicine by creating content that addresses both the clinical practice of urgent care medicine and the practice management challenges of keeping pace with an ever-changing health-care marketplace. As the Official Publication of the Urgent Care Association of America and the Urgent Care College of Physicians, JUCM seeks to provide a forum for the exchange of ideas and to expand on the core competencies of urgent care medicine as they apply to physicians, physician assistants, and nurse practitioners.

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JUCM CONTRIBUTORS

with use of multiple drug therapies becoming more common and patients' medication lists growing longer, the number cases of drug-





drug interactions seen by urgent care providers is increasing. Nineteen percent of all hospitals injuries are caused by adverse drug events, most of which involve common medications and many of which are drug-drug interactions. This month's cover story, by Maya Heck, MD, and John Shufeldt, MD, JD, MBA, FACEP, reviews the risk factors for drug interactions with warfarin, antibiotics, oral contraceptives, statins, and selective serotonin reuptake inhibitors. It's not possible for an urgent care provider to remember all potential drug interactions but it is crucial to maintain a high level of suspicion when making changes or additions to a patient's medications, and to thoroughly review existing medications when prescribing something new.

Ms. Heck is a first year medical student at Oregon Health & Sciences University in Portland, Oregon. Dr. Shufeldt is principal of Shufeldt Consulting and sits on the Editorial Board of *JUCM*.





Millions of people worldwide run as a form of exercise and training for competitive events from 5K races to ultramarathons is no longer unusual.

Half of regular runners find themselves injured each year and many such complaints are a result of overexertion or overuse. In this month's case report, Matthew Speer and John Shufeldt, MD, JD, MBA, FACEP, underscore the importance of prompt and thorough evaluation of even the most physically fit, young patient who presents with complaints associated with running. Those "shin splints" may be chronic exertional compartment syndrome (CECS) caused by repetitive microtrauma. Without appropriate treatment, CECS can cause complications that would put an abrupt end to a patient's running career.

Mr. Speer is a second year pre-med student at Arizona State University. Dr. Shufeldt is principal of Shufeldt Consulting and sits on the Editorial Board of *JUCM*.

Offering medical interpretation services is a requirement for

urgent care centers that treat patients whose health care is covered by federally funded programs or who are hearing- or vision-impaired. Several methods of reliable medical interpreta-



tion are available, each of which can affect the quality of the patient experience and clinical outcomes. As Alan A. Ayers, MBA, MAcc, describes in this month's practice management article, some types of medical interpretation are quicker, whereas as others are more accurate, and still others are more expensive. How to choose? The author counsels taking into consideration the frequency or likelihood of non-English-speaking patients, the diversity of languages presenting, and the language skills and training of providers and staff.

Mr. Ayers is Associate Editor, Practice Management, *JUCM*, Content Advisor, Urgent Care Association of America, and Vice President, Concentra Urgent Care.

Also in this issue:

John Shufeldt, MD, JD, MBA, FACEP, discusses employee theft. The key message here is to not let blind loyalty lull you into a false sense of security.

Nahum Kovalski, BSc, MDCM, reviews new abstracts on literature germane to the urgent care clinician, including studies of statins in prevention of urinary tract infection, pediatric appendicitis, and panic disorder and atrial fibrillation.

In Coding Q&A, **David Stern, MD, CPC**, discusses modifier -25 and urgent care codes.

Our Developing Data end piece this month looks at incentives to urgent care providers other than salary and benefits.

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JUCM, The Journal of Urgent Care Medicine encourages you to submit articles in support of our goal to provide practical, up-to-date clinical and practice management information to our readers—the nation's urgent care clinicians. Articles submitted for publication in **JUCM** should provide practical advice, dealing with clinical and practice management problems commonly encountered in day-to-day practice.

Manuscripts on clinical or practice management topics should be 2,600–3,200 words in length, plus tables, figures, pictures, and references. Articles that are longer than this will, in most cases, need to be cut during editing.

We prefer submissions by e-mail, sent as Word file attachments (with tables created in Word, in multicolumn format) to editor@jucm.com. The first page should include the title of the article, author names in the order they are to appear, and the name, address, and contact information (mailing address, phone, fax, e-mail) for each author.

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FROM THE CHIEF EXECUTIVE OFFICER

Meet the Candidates for the **UCAOA Board Elections**

P. JOANNE RAY

CAOA board elections are just around the corner, taking place at the National Urgent Care Convention this spring in Orlando! What an exciting list of candidates, all extremely qualified to represent our industry on the upcoming board. There are four open seats to be filled — be sure to get to know the candidates and vote at the convention!



Alan A. Ayers, MBA, MAcc Vice President of Market Development Concentra Urgent Care Carrollton, TX



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Clinical

Strategies for Avoiding **Drug-Drug Interactions** in Urgent Care

Urgent message: With the increasing number of drugs on the market, patients are more and more likely to be taking multiple medications. Urgent care providers need to be alert for potential interactions when changing or adding to a patient's drug therapy.

MAYA HECK, MS1, and JOHN SHUFELDT, MD, JD, MBA, FACEP

Consider This Patient Scenario:

28-year-old woman who says she is a traveling nurse currently on an assignment at a nearby hospital pres- \prod ents to an urgent care clinic with a complaint of frequency, urgency and burning on urination. She is going on a ski trip and wants to ensure that she clears up what she believes is a urinary tract infection (UTI) before leaving on vacation. The patient denies vomiting but complains of intermittent nausea. She denies flank pain, vaginal discharge, and the possibility of pregnancy. Interestingly, the woman does tell the provider that she was on birth control pills (BCPs) but developed a blood clot in her thigh and then a pulmonary embolism (PE) after flying cross country. She has been on warfarin for the past 3 months and her last International Normalized Ratio (INR) (yesterday) was 2.4. Also noteworthy is that the woman has had a significant reaction to penicillin-based antibiotics in the past.

The urgent care provider orders a urinalysis (UA) and urine chorionic gonadotrophin (UCG) test. On examination, the patient's vital signs are as follows:

Maya Heck is a first year medical student at Oregon Health & Sciences University in Portland, Oregon. John Shufeldt is principal of Shufeldt Consulting and sits on the Editorial Board of JUCM.



BP 120/72 P 88 R 16

T 39.2

Pain Scale 4/10.

PRESCRIBE SKLICE (IVERMECTIN) LOTION, 0.5%

FOR THE TOPICAL TREATMENT OF HEAD LICE^{1,2}

INDICATED FOR CHILDREN 6 MONTHS OF AGE AND OLDER²

- No Contraindications
- Sklice Lotion should be used in the context of an overall lice management program

IMPORTANT SAFETY INFORMATION FOR SKLICE LOTION

• The most common adverse reactions (incidence <1%) were conjunctivitis, ocular hyperemia, eye irritation, dandruff, dry skin, and skin burning sensation

PROVEN EFFECTIVE IN TWO CLINICAL TRIALS^{2,a}

- One tube. One time.
 - Patients received a single 10-minute treatment and were instructed not to nit comb
 - 14 days after treatment, no live lice were observed in 76.1% (54/71) and 71.4% (50/70) of patients

PRODUCT APPLICATION²

- 10-minute treatment
- Up to 1 tube of product
- No nit combing required
 - However, a fine-tooth comb or special nit comb may be used to remove dead lice and nits

CHOOSE TO PRESCRIBE. CHOOSE SKLICE LOTION.

Sklice
(ivermectin)
Lotion, 0.5%

For topical use on the scalp hair and scalp only

For single use. Discard the tube after use.

Warning:
Keep out of reach of children, Use in children should be under the direct supervision of an adult. Do not swallow.

Avoid eye contact.

Rx ONLY
Net wf
4 oz. (117 g)

AVAILABLE AT RETAIL
PHARMACIES NATIONWIDE

INDICATION

Sklice Lotion is a pediculicide indicated for the topical treatment of head lice infestations in patients 6 months of age and older.

ADJUNCTIVE MEASURES

Sklice Lotion should be used in the context of an overall lice management program:

- Wash (in hot water) or dry-clean all recently worn clothing, hats, used bedding and towels
- Wash personal care items such as combs, brushes and hair clips in hot water

A fine-tooth comb or special nit comb may be used to remove dead lice and nits.

IMPORTANT SAFFTY INFORMATION FOR SKI ICF LOTION

In order to prevent accidental ingestion, Sklice Lotion should only be administered to pediatric patients under the direct supervision of an adult.

The most common adverse reactions (incidence <1%) were conjunctivitis, ocular hyperemia, eye irritation, dandruff, dry skin, and skin burning sensation.

Please see brief summary of full Prescribing Information on following page.

For more information, please visit www.Sklice.com/HCP.

^a Two randomized, double-blind, vehicle-controlled trials in patients 6 months of age and older with head lice infestations. The primary endpoint was assessed as the proportion of patients who were free of live lice at day 2 and through day 8 to the final evaluation 14 (+2) days following a single application.²

Sklice Lotion is manufactured by DPT Laboratories Ltd. and distributed by Sanofi Pasteur Inc.

References: 1. US Food and Drug Administration. Sklice Lotion approval letter, February 7, 2012. http://www.accessdata.fda.gov/drugsatfda_docs/appletter/2012/202736s000ltr.pdf. Accessed January 9, 2013. 2. Sklice Lotion [Prescribing Information]. Swiftwater, PA: Sanofi Pasteur Inc.; 2012.





SKLICE® Rx Only

(ivermectin) Lotion, 0.5% for topical use

Brief Summary of Prescribing Information

1 INDICATIONS AND USAGE

1.1 Indication

SKLICE® Lotion is indicated for the topical treatment of head lice infestations in patients 6 months of age and older.

1.2 Adjunctive Measures

SKLICE Lotion should be used in the context of an overall lice management program:

- Wash (in hot water) or dry-clean all recently worn clothing, hats, used bedding and towels.
- Wash personal care items such as combs, brushes and hair clips in hot water.
- A fine-tooth comb or special nit comb may be used to remove dead lice and nits.

2 DOSAGE AND ADMINISTRATION

For topical use only. SKLICE Lotion is not for oral, ophthalmic, or intravaginal use.

Apply SKLICE Lotion to dry hair in an amount sufficient (up to 1 tube) to thoroughly coat the hair and scalp. Leave SKLICE Lotion on the hair and scalp for 10 minutes, and then rinse off with water.

The tube is intended for single use; discard any unused portion. Avoid contact with eyes.

4 CONTRAINDICATIONS

None.

5 WARNINGS AND PRECAUTIONS

5.1 Ingestion in Pediatric Patients

In order to prevent ingestion, SKLICE Lotion should only be administered to pediatric patients under the direct supervision of an adult.

6 ADVERSE REACTIONS

6.1 Clinical Trials Experience

Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in clinical practice.

The data described below reflect exposure to a single 10 minute treatment of SKLICE Lotion in 379 patients, ages 6 months and older, in placebocontrolled trials. Of these subjects, 47 subjects were age 6 months to 4 years, 179 subjects were age 4 to 12 years, 56 subjects were age 12 to 16 years and 97 subjects were age 16 or older. Adverse reactions, reported in less than 1% of subjects treated with SKLICE Lotion, include conjunctivitis, ocular hyperemia, eye irritation, dandruff, dry skin, and skin burning sensation.

8 USE IN SPECIFIC POPULATIONS

8.1 Pregnancy

Pregnancy Category C

There are no adequate and well-controlled studies with SKLICE Lotion in pregnant women. SKLICE Lotion should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

No comparisons of animal exposure with human exposure are provided due to the low systemic exposure noted in the clinical pharmacokinetic study [see Clinical Pharmacology (12.3) in the full prescribing information]. Human Data

There are published reports of oral ivermectin use during human pregnancy. In an open label study, 397 women in their second trimester of pregnancy were treated with ivermectin tablets and albendazole at the labeled dose rate for soil-transmitted helminths and compared with a pregnant, non-treated population. No differences in pregnancy outcomes were observed between treated and untreated populations.

Animal Data

Systemic embryofetal development studies were conducted in mice, rats and rabbits. Oral doses of 0.1, 0.2, 0.4, 0.8, and 1.6 mg/kg/day ivermectin

were administered during the period of organogenesis (gestational days 6–15) to pregnant female mice. Maternal death occurred at 0.4 mg/kg/day and above. Cleft palate occurred in the fetuses from the 0.4, 0.8, and 1.6 mg/kg/day groups. Exencephaly was seen in the fetuses from the 0.8 mg/kg group. Oral doses of 2.5, 5, and 10 mg/kg/day ivermectin were administered during the period of organogenesis (gestational days 6–17) to pregnant female rats. Maternal death and pre-implantation loss occurred at 10 mg/kg/day. Cleft palate and wavy ribs were seen in fetuses from the 10 mg/kg/day group. Oral doses of 1.5, 3, and 6 mg/kg/day ivermectin were administered during the period of organogenesis (gestational days 6–18) to pregnant female rabbits. Maternal toxicity and abortion occurred at 6 mg/kg/day. Cleft palate and clubbed forepaws occurred in the fetuses from the 3 and 6 mg/kg groups. These teratogenic effects were found only at or near doses that were maternally toxic to the pregnant female. Therefore, ivermectin does not appear to be selectively fetotoxic to the developing fetus.

8.3 Nursing Mothers

Following oral administration, ivermectin is excreted in human milk in low concentrations. This has not been evaluated following topical administration. Caution should be exercised when SKLICE Lotion is administered to a nursing woman.

8.4 Pediatric Use

The safety and effectiveness of SKLICE Lotion have been established for pediatric patients 6 months of age and older [see Clinical Pharmacology (12.3) in the full prescribing information and Clinical Studies (14) in the full prescribing information].

The safety of SKLICE Lotion has not been established in pediatric patients below the age of 6 months. SKLICE Lotion is not recommended in pediatric patients under 6 months of age because of the potential increased systemic absorption due to a high ratio of skin surface area to body mass and the potential for an immature skin barrier and risk of ivermectin toxicity.

8.5 Geriatric Use

Clinical studies of SKLICE Lotion did not include sufficient numbers of subjects aged 65 and over to determine whether they respond differently from younger subjects. Other reported clinical experience has not identified differences in responses between the elderly and younger patients.

10 OVERDOSAGE

In accidental or significant exposure to unknown quantities of veterinary formulations of ivermectin in humans, either by ingestion, inhalation, injection, or exposure to body surfaces, the following adverse effects have been reported most frequently: rash, edema, headache, dizziness, asthenia, nausea, vomiting, and diarrhea. Other adverse effects that have been reported include: seizure, ataxia, dyspnea, abdominal pain, paresthesia, urticaria, and contact dermatitis.

In case of accidental poisoning, supportive therapy, if indicated, should include parenteral fluids and electrolytes, respiratory support (oxygen and mechanical ventilation if necessary) and pressor agents if clinically significant hypotension is present. Induction of emesis and/or gastric lavage as soon as possible, followed by purgatives and other routine anti-poison measures, may be indicated if needed to prevent absorption of ingested material.

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129685

U.S. Patent No. 6,103,248 and other patents pending.

IVE-BPLR-SA-FEB12 Revised: February 2012

	Concomitant Drug	Potential Effect	Recommendations
Warfarin	Azithromycin, ciprofloxacin (Cipro), clarithromycin (Biaxin), erythromycin, metronidazole (Flagyl) and TMP-SMX (Bactrim, Septra)	Increased effect of warfarin	Select alternative antibiotic
	Acetaminophen	Increased bleeding, increased INR	Use lowest possible acetaminophen dosage and closely monitor INR
	Acetylsalicylic acid (aspirin)	Increased bleeding, increased INR	Limit aspirin dosage to 100 mg/ day and closely monitor INR
	NSAID	Increased bleeding, increased INR	Avoid concomitant use if possible; if unavoidable, use a cyclooxygenase-2 inhibitor and closely monitor INR
Fluoroquinolone	Divalent/trivalent cation	Decreased absorption of fluoroquinolone	Space administration by 2 to 4 hours
	Theophylline	Increase in theophylline serum concentration	
Oral Contraceptives	Rifampin	Decreased effectiveness of OC	Recommend alternative method of contraceptive
	Carbamazepine, Felbamate, Oxcarbazepine, etc	Decreased effectiveness of OC	Choose alternative AED
Statins	Warfarin	Increased effect of warfarin	Monitor INR
	Gemfibrozil	Possible rhabdomyolisis	Avoid if possible
	Erythromycin, clarithromycin	Increased levels of simvastatin and lovastatin	Avoid if possible
Fluoxetine	Clozapine, lithium and olanzapine	Increased levels of concomitant drugs	
Citalopram	Monoamine oxidase inhibitors	Serotonin syndrome	
Paroxetine	Warfarin	Increased bleeding	Avoid if possible

INR = International Normalized Ratio; NSAID = nonsteroidal anti-inflammatory drug; OC = oral contraceptive; TMP-SMX = trimethoprim sulfamethoxazo *Adapted from http://www.aafp.org/afp/2000/0315/p1745.html

The woman's exam is unremarkable, other than some slight suprapubic tenderness. Her urine dipstick comes back with 4+ leukocytes and is nitrite positive and her UCG is negative.

She is appropriately diagnosed with a UTI. Noting the patient's allergy to penicillin, the provider prescribes trimethoprim and sulfamethoxazole (TMP-SMX) and pyridium and discharges the patient home.

A few days later, sadly, the patient was flown into a trauma center in Denver unresponsive after a seemingly minor head injury, which occurred during a snowboarding accident while she was wearing a helmet. On admission, the woman's Glasgow Coma Scale score was 3 and her INR was 8.2. Computed tomography scan revealed a massive epidural hematoma causing herniation. Her family removed her from life support after donating her organs.

The Rise of Drug-Drug Interactions

In 2012, the FDA approved 35 new medications ¹, and interactions between medications have been increasingly reported. ² As patients' medication lists become longer and the use of multiple drug therapies becomes more frequent, it is increasingly important for the provider to consider drug interactions and question the safety of drug regimens. Among other risk factors, the frequency of drug-drug interactions increases most significantly with the number of medications in use. Adverse drug events, including drug-drug interactions, account for 19% of all hospital injuries³ and most involve commonly-used medications. By underscoring the potential for drug interactions with warfarin, as illustrated by the patient scenario above, this article highlights the importance of recognizing drug-drug interactions and considering the factors that increase their risk.

Drug Interactions with Warfarin

Warfarin is the anticoagulant most widely prescribed in North America⁴ and interactions leading to over-anticoagulation, under-coagulation, or increased bleeding are well described for an increasingly large number of drugs taken concomitantly. Warfarin and other vitamin K antagonists (acenocoumarol, phenprocoumon, fluindione) are prescribed as oral anticoagulants for thrombosis prophylaxis in many clinical settings. This class of drugs act by inhibiting the synthesis of vitamin K, a vitamin necessary for activation of coagulation factors. Warfarin is known to have a narrow therapeutic range and dose response and resultant INR vary greatly between individuals. Especially notable are the interactions between warfarin and antibiotics, acetaminophen, aspirin, and nonsteroidal anti-inflammatory drugs (NSAIDs) (**Table 1**).

For urgent care providers, obtaining a thorough history is the best way to prevent poor outcomes due to unforeseen drug-drug interactions. It is important to review medication lists and consider possible drug-drug interactions before prescribing new medications to patients using warfarin.

Antibiotics

By reducing vitamin K levels in the gut flora, antibiotics can heighten the effects produced by warfarin, leading to over-anticoagulation.⁵ Another mechanism recognized for increased bleeding with warfarin is inhibition of its metabolism. Drugs that have been found to inhibit warfarin metabolism include azithromycin, ciprofloxacin (Cipro), clarithromycin (Biaxin), erythromycin, metronidazole (Flagyl) and TMP-SMX (Bactrim, Septra).²

Upon its release in 1993, azithromycin was originally believed to be free of interaction with warfarin. However, in 2009, the FDA revised its label on the package insert to read, "Although, in a study of 22 healthy men, a 5-day course of azithromycin did not affect the prothrombin time from a subsequently administered dose of warfarin, spontaneous post-marketing reports suggest that concomitant administration of azithromycin may potentiate the effects of oral anticoagulants. Prothrombin times should be carefully monitored while patients are receiving azithromycin and oral anticoagulants concomitantly."

In a population-based cohort study of patients using acenocoumarol or phenprocoumon, several antibiotics strongly increased the risk of over-anticoagulation; 351 of the 1,124 patients in the cohort developed an INR of $6.0.^7$ In the study, TMP-SMX was associated with the

greatest risk of over-anticoagulation.⁷ Given these findings, urgent care providers should select an alternative antibiotic that has not been implicated in over-anticoagulation for patients who are taking warfarin.

Acetaminophen

Acetaminophen is the most frequently ingested medication in the United States and it has been recognized as another cause of over-anticoagulation. In one study, high doses of acetaminophen (9100 mg/week or just 3 extrastrength tablets per day) were found to be associated with a 10-fold increased risk of having an INR > $6.0.^8$ In a case report, acetaminophen was found to enhance the effect of warfarin but the elevation may only be apparent after a few days of acetaminophen therapy.

Nonsteroidal Anti-Inflammatory Drugs

Concomitant use of NSAIDs and warfarin increases risk of bleeding and should be avoided. However, in a study assessing rates of hospitalization for gastrointestinal bleeding, the selective cyclooxygenase-2 (COX-2) inhibitors celecoxib (Celebrex) and rofecoxib (Vioxx) were preferable to nonselective NSAIDs in patients who required NSAIDs.¹⁰ COX-2 inhibitors have reduced antiplatelet properties compared with nonselective NSAIDs.

Also noteworthy is that the particular need to avoid use of nonselective NSAIDs in patients who are at increased risk of NSAID gastropathy. Factors including age > 65, history of peptic ulcer disease, exposure to systemic steroid therapy, heavy smoking, or high usage of NSAIDs are red flags for heightened risk of gastropathy.²

Counseling patients about the risks of bleeding associated with concomitant therapy with warfarin and NSAIDs and close monitoring of INR values are important to minimize risk of bleeding.

Monitoring INR Values

According to *UpToDate*, the guidelines for returning INR values to the patient's normal range are as follows:

- INR <5.0 without bleeding: If the INR is above normal range but less than 5.0 with no significant bleeding, it is recommended that the next dosage of warfarin be omitted or the maintenance dose be reduced.¹¹
- INR 5.0-9.0 without bleeding: If there is no significant bleeding, there is approximately a 1% risk of a major hemorrhage occurring in the next 30 days. Two of the options for reducing INR values are:
 - a. Stopping warfarin temporarily.
 - b. Stopping warfarin temporarily and adding a dose

of 1 to 2.5 mg of oral vitamin K. This is a faster approach to correct excessive anticoagulation.¹¹

- INR >9.0 without bleeding: If there is no significant bleeding with these INR values, warfarin should be omitted and 2.5 to 5 mg of oral vitamin K should be administered. INR values should be closely monitored for 24 to 48 hours and vitamin K treatment should be repeated as necessary.¹¹
- Elevated INR with minimal bleeding: Although there are no precise guidelines for this situation, the decision is based upon clinical judgment, INR level, and current extent/risk of worsening of the bleeding. Providers may choose to follow treatment plans for INR >9.0 without bleeding, or opt for more emergent care depending on the severity of the case.¹¹

Drug Interactions with Antibiotics

Fluoroquinolones

Antibiotics can interact with other drugs via multiple mechanisms; this article highlights significant interactions involving the fluoroquinolone class of antibiotics. Agents containing divalent cations and trivalent cations can reduce absorption of fluoroquinolones through creation of insoluble complexes in the gut, which results in failure of treatment. Cations are present in many medications and over-the-counter products, and it has been found that absorption of fluoroquinolones is reduced by 60% to 70% when they are taken concomitant with products containing divalent or trivalent cations.²

The divalent cation calcium is present in Caltrate, Citracal, Os-Cal, PhosLo, Titralac, and Tums, whereas the divalent cation magnesium is found in Almora, Citrate of Magnesia, Mag-Ox 400, Milk of Magnesia, Slow-Mag, and Uro-Mag. Aluminum and ferrous sulfate are trivalent cations that can be found in Alu-Cap, AlternaGel, Amphojel, Basalje and Feosol, Fergon, Niferex, Nu-Iron, and Slow Fe, respectively.²

Ciprofloxacin, enoxacin, lomefloxacin, norfloxacin, and ofloxacin are affected by divalent and trivalent cations found in antacids. Sucralfate, containing the trivalent cation aluminum, has been found to inhibit

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absorption of several quinolones, including ciprofloxacin and norfloxacin. 12

It is important to advise patients to stop taking products containing divalent or trivalent cations until their fluoroquinolone therapy has ceased.² It has been shown that inhibition of absorption can be avoided by administering the antibiotic at least 2 hours before or 6 hours after the cation.¹²

Theophylline

Quinolones inhibit metabolism of theophylline, which results in an increase in theophylline serum concentrations and subsequent reactions, leading to tachycardia, nausea, and seizures. ¹² Quinolone antibiotics exhibit a wide range of inhibition: Enoxacin can result in a 65% reduction of theophylline clearance whereas ciprofloxacin inhibits by about 30%. Norfloxacin, ofloxacin, and lomefloxacin have been found to produce only a minimal effect. ¹²

Patients with the upper normal limits of theophylline serum concentrations are more likely to develop these types of effects.¹² This is an important factor to consider when determining whether the addition of a quinolone is advisable. Note: It can take 2 to 3 days after the combination of quinolone and theophylline for the effects to become pronounced, therefore, patients should be monitored for signs and symptoms of toxicity.

Drug Interactions with Oral Contraceptives

Antibiotics

Clinical studies have not been demonstrative of a consistent effect of antibiotics on the decreased effectiveness of oral contraceptives (OCs), and concomitant use is debatable. Given the low frequency of this drug-drug interaction, it is difficult to differentiate a pregnancy due to the antibiotic from the expected failure rate.² Rifampin can impair the effectiveness of OCs because of its ability to increase activity of hepatic enzymes, which are involved in estrogen metabolism.² Concomitant use of rifampin and OCs can lead to breakthrough bleeding and potentially an increased risk of pregnancy.

Although pharmacokinetic studies of other antibiotics such as tetracycline and penicillin derivatives have not shown any systematic interactions with OCs, individual patients have been found to have decreased plasma concentrations of ethinyl estradiol. It is theorized that any interaction between OCs and antibiotics may involve ethinyl estradiol.

An analysis of 167 articles on drug interactions between antibiotics and OCs resulting in contraceptive failure found that approximately 20% of women reporting to family planning or abortion clinics were taking antibiotics and OCs concomitantly. However, a retrospective study of 365 patients who were co-administered OCs and an antibiotic showed only a small but insignificant increase in risk of pregnancy. ²

According to the American College of Obstetricians and Gynecologists Committee Opinion on medical eligibility criteria for contraceptive use, there is no restriction on use of OCs with broad spectrum antibiotics, antifiungals, or antiparasitics. However, with regards to rifampicin or rifabutin therapy, the risk of pregnancy was found to outweigh the advantages of using OCs as a birth control method.¹⁴

Take home point: Concomitant use of broad spectrum antibiotics and OCs is considered to be a safe practice. However, urgent care providers may want to encourage patients on OCs to use back-up contraception during rifampicin therapy.

Antiepileptic Drugs

Prescription of OCs to women with epilepsy is fairly common, despite the knowledge that concomitant use may reduce the pill's efficacy. ¹⁵ Antiepileptic drugs (AEDs) that have been shown to induce metabolism of the steroidal components of the pill include carbamazepine, felbamate, oxcarbazepine, lamotrigine, phenobarbital, phenytoin, primidone, and topiramate.

However, the magnitude of interaction depends on the dosage of the AED. For example, topiramate does not affect serum norethisterone and ethinyl estradiol levels at dosages up to 100 mg per day but decreases serum norethisterone consistently at higher doses. Likewise, carbamazepine 600 mg per day reduces serum levels by 50%. Gabapentin, levetiracetam, pregabalin, tiagabine, valproate, vigabatrin, and zonisamide have not been reported to interact with steroid OCs. 15

Take home point: the best way to avoid complications with this drug-drug interaction is to choose an AED that is not known to interact with OCs.

Drug Interactions With 'Statins'

Statins are effective in treatment of hypercholesterolemia because of their ability to reduce low-density lipoprotein cholesterol levels. However, there are many drugs that create adverse reactions when taken concomitant with statins; generally, the risk of drug-drug interactions is dose-dependent. Because of the likelihood that patients receiving statin therapy are elderly and may be on multiple other drugs for comorbid conditions such as heart disease or

hypertension, it is especially important to be aware of statindrug interactions in these situations.

Drugs that raise statin concentrations in the blood and can increase risk of adverse interactions such as myopathy include immunosuppressant drugs, macrolides, fibrates, protease inhibitors, azole antifungals, warfarin, and digoxin.¹⁶ For example, one study reported myopathy incidence of 2%, 5% and 28% in patients receiving lovastatin therapy with niacin, gemfibrozil and cyclosporine plus gemfibrozil, respectively. 16 It is important to be aware of CYP3A4 inhibitors when considering co-administration; a systematic review of statin safety including data from 20 randomized controlled trials showed that 60% of cases of rhabdomyolysis in patients receiving simvastatin, lovastatin or atorvastatin involved co-administration of CYP3A4 inhibitors, and 19% involved co-administration of fibrates. 16

General Interactions

Verapamil and diltiazem have been shown to increase

simvastatin plasma concentration up to fourfold, and diltiazem was also found to have the same effect with concomitant lovastatin therapy. 16 Statin drug-drug interactions with warfarin are well documented, and an elevated INR is a concern with warfarin and various statins (fluvastatin, lovastatin, and simvastatin). Antibiotics that are CYP3A4 inhibitors, such as erythromycin and clarithromycin, have been reported to increase plasma concentration of simvastatin and lovastatin. Conversely, the antibiotic rifampicin has been demonstrated to decrease plasma levels of statins including atorvastatin, simvastatin, pravastatin, and fluvastatin.¹⁶ Azole antifungal drugs, such as itraconazole and etoconazole, have been shown to increase the availability of atorvastatin, simvastatin, lovastatin, and rosuvastatin.¹⁶

Fibrates

Of special importance is the recognition of fibratestatin interactions. Gemfibrozil has been shown to interact with atorvastatin, simvastatin, lovastatin, pravastatin, and rosuvastatin. However, bezafibrate,

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TABLE 2. Antibiotic Choices for Patients on Warfarin		
Presentation	Recommendations	
Community Acquired Pneumonia	Cefuroxime axetil (Ceftin) 250-500 mg twice daily Ceftriaxone (500 mg twice daily) *	
Urinary Tract Infection	 Nitrofurantoin 100 mg orally twice daily for 5 days Fosfomycin trometamol 3 g orally in single dose Cefaclor 250 mg every 8 hours (as capsules or oral suspension) 	
Otitis Media	Cefaclor 250 mg every 8 hours (as capsules or oral suspension)	
Pharyngitis	Clindamycin 7 mg/kg orally three times daily (300 mg maximum dose) for 10 days	
Bacterial Vaginosis	Clindamycin cream 2% one full applicator (5 g) intravaginally once daily for 7 days	
Cellulitis	Clindamycin 300-450 mg orally 3 times daily Linezolid 600 mg orally twice daily (pediatric dose 10 mg/kg orally every 8 hours, maximum 600 mg/dose)	

^{*}The elevation of INR due to concomitant warfarin therapy and Ceftriaxone treatment has only been documented in a single case study in 2011¹⁸; frequent INR monitoring is recommended.

clofibrate and fenofibrate have also been implicated in cases of rhabdomyolysis when combined with statins. Because of the well-documented dangerous interactions with fibrate, statin-fibrate combination therapy should be reserved for patients with severe hyperlipidemia. In addition, it is also important to consider other factors, such as age, gender, diabetes, and hypothyroidism that may make a patient more susceptible to statin-induced myopathy.

Drug-drug interactions with statins are extensive, and only a few examples have been highlighted in this review. Take care in co-administering statins with the drugs mentioned above: immunosuppressant drugs, macrolides, fibrates, protease inhibitors, azole antifungals, warfarin, and digoxin.

Interactions With the 'New Generation' of SSRIs

Drug interactions with tricyclic antidepressants (TCAs) and monoamine oxidase inhibitors (MAOIs) have been well documented. Since the advent of selective serotonin reuptake inhibitors (SSRIs), newer classes of antidepressants have been widely adopted due to their relative safety compared with previous antidepressants. Even though SSRIs are reportedly safer than the "first generation" of antidepressants, drug-drug interactions are still an issue because of metabolism by the cytochrome 450 system in the liver. The concomitant use of SSRIs and drugs that are also metabolized by this system can lead to increased serum levels of these drugs. This article will highlight the recently documented interactions with the "new generation" of SSRIs, including fluoxetine, citalopram, and paroxetine.

Fluoxetine

Fluoxetine (FLU) has a long half-life (1-4 days) and, for that reason, it has a high risk of interacting with other drugs. Plasma levels can be significant even weeks after discontinuation of FLU therapy, so care should be taken with administration of any new drug to a patient taking FLU. Increased plasma levels of clozapine, lithium, and olanzapine have been observed with co-administration. In addition, FLU increases the half-life of diazepam. FLU has also shown to be an inhibitor of MAO enzymes, therefore, care should be taken when considering co-administration with MAOIs.¹⁷

Citalopram

Citalopram is used to treat symptoms of major depression and it is also being evaluated in treatment of some anxiety disorders. Concomitant use of antifungal medications and erythromycin can increase levels of citalopram. In addition, administration of citalopram with MAOIs can cause serotonin syndrome, characterized by at least three of the following symptoms: diarrhea, fever, sweating, mood or behavior changes, overactive reflexes, fast heart rate, restlessness, shivering or shaking.¹⁷

Paroxetine

Paroxetine is probably the most selective SSRI, relatively safe regarding cardiovascular effects, and is often used in elderly patients. About 95% of absorbed paroxetine is bound to plasma proteins, making interactions with other bound drugs such as clozapine and oral anticoagulants likely. Trials have shown an increase in bleeding after prolonged co-administration of paroxetine and warfarin.¹⁷

Important factors to consider when reviewing the medication list include the patient's age, the dosage of medications, and his/her usage of antibiotics.

The prevalence of multiple chronic medical conditions requiring many different therapeutic protocols increases with old age, amplifying the chance of adverse drug-drug interactions.

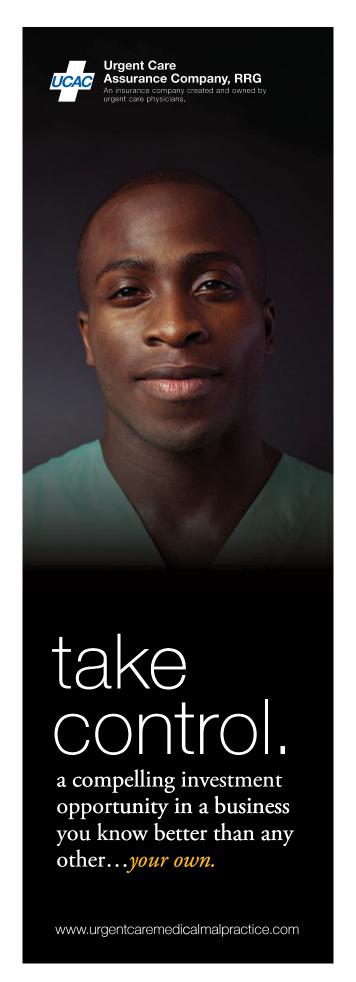
Patient History

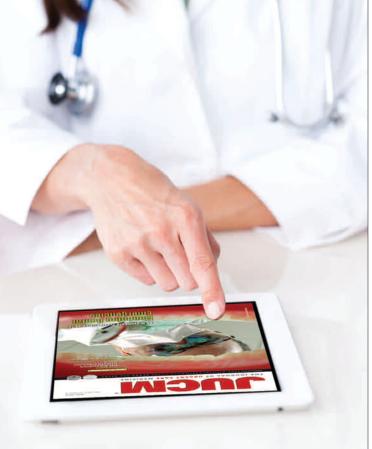
A detailed history is the most effective way to prevent drug-drug interactions. Often, in the urgent care setting, it is difficult to obtain the entirety of a patient's medical record. A thorough history can help prevent gaps in the medical record. Important factors to consider when reviewing the medication list include the patient's age, the dosage of medications, and his/her usage of antibiotics. Although the urgent care provider in the patient scenario above appropriately prescribed an antibiotic other than penicillin because of the patient's allergy, he did not recognize the interactions between warfarin and antibiotics. It is just as important to be aware of potential drug-drug interactions to avoid preventable complications. Table 2 suggests alternative antibiotics for common urgent care presentations in patients on warfarin therapy.

Age is an important factor to consider in prevention of drug-drug interactions. Factors including frailty, memory loss, and use of many medications all contribute to the increased incidence of drug-related issues in older individuals. 19 The prevalence of multiple chronic medical conditions requiring many different therapeutic protocols increases with old age, amplifying the chance of adverse drug-drug interactions.

Dosage

Adverse drug events, including dangerous drug-drug interactions, are commonly dose-related. To prevent dosage-related drug interactions, it is important as a provider to be aware of a number of factors that con-





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tribute to drug maintenance, including a patient's nutritional status, degree of compliance, hepatic and renal function, and potential genetic factors contributing to the individual's response to a particular drug.²⁰

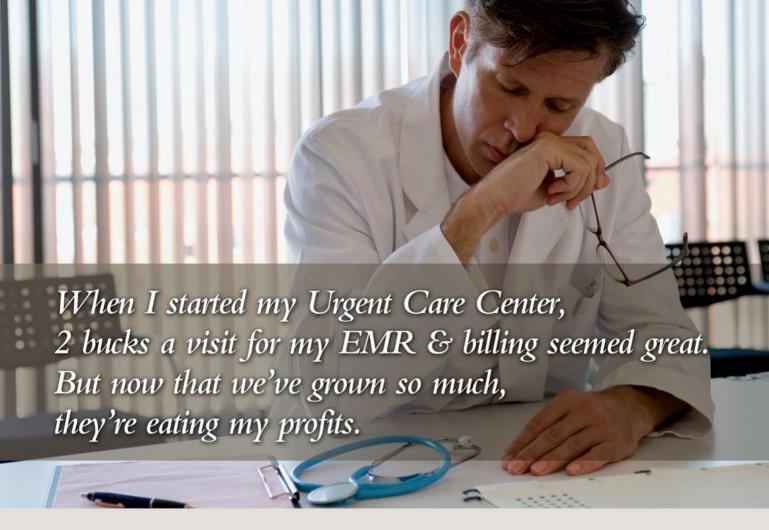
Conclusion

With the increasing number of drugs on the market and the prevalence of lengthy medication lists, it is unrealistic to expect an urgent care provider to remember all potential drug interactions. However, it is necessary to maintain a high level of suspicion when making changes or additions to a patient's medications. Care must be taken to thoroughly review existing medications—both conventional and nonconventional—when prescribing a new medication. Extra precautions should be taken when treating elderly patients who may be on multiple drug therapies.

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Case Report

Chronic Exertional Compartment Syndrome

Urgent message: Runners who train too much too soon risk serious injury. Prompt and thorough evaluation is necessary to spot CECS masquerading as "shin splints."

MATTHEW SPEER and JOHN SHUFELDT, MD, JD, MBA, FACEP

Overview

unning is one of the world's most popular exercises, with millions across the globe participating and training for events from 5K races to ultramarathons of over 100 miles. Despite the fact that more than 10 million people run over 100 days per year, more than half of regular runners find themselves injured each year. Moreover, many such injuries result from overexertion or overuse.

Chronic exertional compartment syndrome (CECS), which often masquerades as shin splints, is one example of a running-related injury that results from repetitive microtrauma. Because endurance athletes typically avoid any sort of treatment that involves rest, immediate recognition of CECS is of utmost importance to avoid further complications. As illustrated by the case presented here, conducting a proper examination with attention to both history and symptoms will ensure an accurate diagnosis and proper treatment.

Case Presentation

A 19-year-old male long-distance runner presents with sharp, cramping pain in the anterior compartment of his lower right leg that gradually intensifies during physical exertion, similar to that associated with medial tibial stress syndrome (shin splints). He reports that

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the pain generally subsides within approximately 25 to 30 minutes after he ceases physical activity. The discomfort is associated with some paresthesia and numbness bilaterally down the anterior compartment of each leg (Figure 1).

The patient has been seen twice in the urgent care setting with the same symptoms, which were diagnosed both times as shin splits. The treatment recommended

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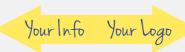
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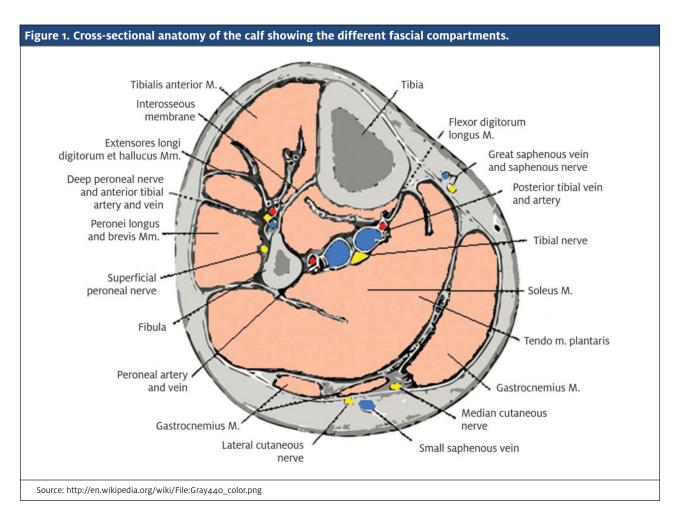
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was scaling down the patient's weekly mileage, icing the affected area, and taking ibuprofen or acetaminophen daily until the swelling and pain subsided. The patient reports that the pain and other symptoms have persisted and now linger longer after each run.

Labs/Imaging

Measurement of compartment pressure with the Stryker Intra-compartmental Pressure Monitor is actually quite easy despite the fact that it is considered beyond the scope of many urgent care centers. In this case, measurement of compartment pressure in the patient's lower leg was necessary to make a definitive diagnosis because his history and physical examination suggested CECS. Such measurements can be done at an urgent care center or an emergency department or be performed by an orthopedist.

Measurements taken with and without exercise are considered to be the gold standard for diagnosis of CECS. Proposed by Pedowitz et al, the criteria for confirmation of CECS in the leg are as follows:

- A pre-exercise/rest pressure 15 mm Hg or higher
- A 1-minute post-exercise pressure 30 mm Hg or higher
- A 5-minute post-exercise pressure 20 mm Hg or higher

Although Pedowitz suggests that only one of the above criteria are necessary to confirm a CECS diagnosis, it should be noted that the confidence level increases with the number of criteria met. The following equipment is necessary to accurately measure the pressure in a given compartment:

- Stryker Intra-Compartmental Pressure Monitor System
- Syringe, pre-filled with saline
- Side-port needle
- Diaphragm chamber
- Arterial line transducer system

- Intracompartment needle
- High-pressure tubing
- Pressure transducer with cable
- Pressure monitor/module
- Sterile saline
- Variable-height transducer stand
- Two 3-way stopcocks
- Syringe, 20 mL

Measurement Technique

The technique used for measuring compartment pressure varies greatly depending on the compartment being tested. For purposes of this case study, we will describe the technique for measuring pressures in the anterior compartment of the lower leg. In all cases, however, the following should be observed:

- The compartment to be measured (the anterior compartment of the lower leg, in this case) should be at the same level as the heart;
- The patient and the corresponding compartment should be positioned such that the needle is introduced perpendicularly into the compartment; and
- The skin at the site of insertion should be properly prepared as for any sterile procedure and local anesthesia should be administered.

Anterior Compartment Technique

With the patient supine, palpate the anterior border of the tibia at the level of the junction of the proximal and middle thirds of the lower leg. Identify the needle entry point 1-cm lateral to the anterior border of the tibia. Orient the needle so that it is perpendicular to the skin and insert it to a depth of 1 to 3 cm. The most common error with both the Stryker monitor set and the arterial line transducer system is depressing the syringe plunger too quickly. This may give a transient falsely elevated reading. Another source of error with either system is obstruction of the needle with a plug of tissue if the syringe plunger is pulled back.

Results

Compartment measurements of the patient's left leg produced the following results:

- A pre-exercise/rest pressure of 18 mm Hg
- A 1-minute post-exercise pressure of 35 mm Hg
- A 5-minute post-exercise pressure of 24 mm Hg

Alternatively, the pressures in the patient's right leg were as follows:

■ A pre-exercise/rest pressure of 21 mm Hg

Figure 2. Healing of the fasciotomy by both primary and secondary intention



- A 1-minute post-exercise pressure of 41 mm Hg
- A 5-minute post-exercise pressure of 32 mm Hg

Diagnosis and Treatment

Because this patient met all three pressure criteria, his was a classic presentation of bilateral CECS. Referral was made to an orthopedic surgeon for scheduling of an elective fasciotomy.

A few key factors underscored the differential diagnosis. A tibial stress fracture or shin splints initially could be ruled out because the patient's pain ceased approximately 25 to 30 minutes after physical exertion. Focal tenderness is typical of tendinopathy, which can be seen by testing various muscle groups at rest. A bone scan and magnetic resonance imaging would help to rule out a stress fracture, stress reaction, and any possible nerve entrapment.

Discussion

Once CECS is diagnosed, the treatment most likely to

return a patient to his or her former level of physical fitness is surgery. Fasciotomy (**Figure 2**) typically is necessary to allow the muscle to expand more within the compartment, which facilitates regulated flow of oxygen-rich blood throughout the lower leg. The procedure can be performed in one of a four ways: (1) open fasciotomy with 1 or

In patients who present with symptoms of CECS, proper diagnosis requires measurement of compartment pressures both before and during exercise.

2 incisions; (2), minimally invasive subcutaneous fasciotomy through 1 or 2 incisions; (3), partial fasciectomy; or (3) subcutaneous endoscopic fasciotomy, which can be done with and or without use of balloon dissectors.

An open fasciotomy involves 1 to 2 large incisions through which fascial tissue is cut. Minimally invasive subcutaneous fasciotomy involves incision of fascia blindly via small skin incision(s). A portion of the fascia is removed in fasciotomy with partial faciectomy. In subcutaneous endoscopic fasciotomy, use of a balloon dissector creates an optical cavity through which the fascia can be visualized and space in which to perform dissection with endoscopic equipment.

Although surgery is the most effective treatment for CECS, cessation of the inciting physical activity would also lead to lessening or disappearance of a patient's symptoms. Because this condition typically occurs in endurance athletes, however, patients are unlikely to be willing to completely forgo their former level of activity. That, coupled with the fact that any nonsurgical treatment or rehabilitation would fail to truly alleviate any muscle ischemia as a result of reduced blood flow, gives weight to surgical intervention as treatment of choice.

Summary

Chronic exertional compartment syndrome is an exercise-induced neuromuscular condition characterized by pain due to repetitive microtrauma, typically in the lower legs (although it can also been found in the forearms). Stereotypically seen in young endurance athletes, CECS often masquerades as shin splints and is chronically misdiagnosed in urgent care centers and emergency departments.

In patients who present with symptoms of CECS, proper diagnosis requires measurement of compartment pressures both before and during exercise. If these measurements confirm the diagnosis, a patient should be referred to an orthopedic surgeon for a fasciotomy.

The alternative is cessation of the inciting activity.

Abrupt changes in a training regimen often lead to injuries such as CECS. When increasing training volume or training intensity, patients should be counseled to gradually increase the volume or intensity (typically a 10% increase per week is advised). Limiting weekly volume to

approximately 40 miles will reduce the number of injuries. Moreover, it is advisable to run no more than 4 or 5 days per week, with one long run (13+ miles) taking place only once every 14 days.

If the patient described here had continued his training regimen on the assumption that he was suffering shin splints, a vicious cycle of worsening tissue perfusion could have resulted in the loss of one or both lower legs, thus forcing an abrupt end to his running career.

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Case Reports are one of *JUCM's* most popular features. Case Reports are short, didactic case studies of 1,000-1,500 words. They are easy to write and *JUCM* readers love them. If you've had some interesting cases lately, please write one up for us. Send it to Judith Orvos, ELS, *JUCM's* editor, at *jorvos@jucm.com*.





In each issue, JUCM will challenge your diagnostic acumen with a glimpse of x-rays, electrocardiograms, and photographs of dermatologic conditions that real urgent care patients have presented with.

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The patient, a 30-year-year-old male, presented after a blow to his left foot and could not bear weight on it.

View the image taken (Figure 1) and consider what your diagnosis would be.

Resolution of the case is described on the next page.

INSIGHTS IN IMAGES: CLINICAL CHALLENGE

THE RESOLUTION



Diagnosis: The x-ray reveals fractures of the 2nd, 3rd, and 4th metatarsals (arrows). A cast splint and follow up with an orthopedist are appropriate for this patient.

Acknowledgement: Case presented by Nahum Kovalski, BSc, MDCM, Terem Emergency Medical Centers, Jerusalem, Israel.

Practice Management

Language Interpretation Services in the Urgent Care Center

Urgent message: Cultivating trust requires good communication and if a language barrier stands between patient and provider, not only are clinical outcomes jeopardized, but the urgent care operation can be subject to legal liability.

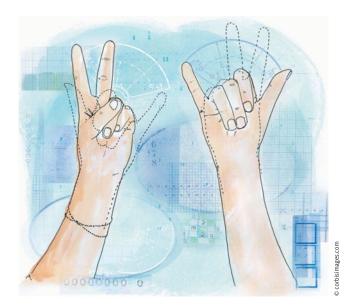
ALAN A. AYERS, MBA, MACC

he demographics of the United States are rapidly changing. Today a language other than English is spoken in 55 million households, 67% of which speak Spanish, and an estimated 19% of Americans have Limited English Proficiency (LEP).^{1,2} In places like Southern California, over 200 languages are spoken and nationally, 1 in every 10 business transactions occurs in a language other than English.³ Over 1.2 million immigrants, both documented and undocumented, move into the United States each year, and children born to immigrants account for over 70% of population increases.⁴ Considering the proliferation of non-English speakers who require healthcare in the United States, it should come as no surprise that the availability of medical interpretation services is required by law.⁵

Legal Considerations for Urgent Care Operators

While medical interpretation services have been shown to enhance patient compliance and follow-up while significantly reducing chances for misdiagnosis, two federal regulations affect how urgent care centers treat patients with limited English proficiency or who have

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hearing or sight difficulties:

- Title VI of the Civil Rights Act; and
- Title III of the Americans with Disabilities Act (ADA). If an urgent care center receives any funds from Medicare, Medicaid, Tricare or any other federal health program, Title VI of the Civil Rights Act of 1964 requires that center to provide "equal access to treatment" in a way that is "meaningfully understood by patients"—

both of which have been defined as including accommodation for limited English proficiency as well as for physical impairment.

Executive Order 13166, issued by President Clinton in 2000, stipulates, "Any health facility that receives federal monies must provide competent interpreter services for all limited English proficient patients. In case of refusal to provide this service, federal monies can be denied the facility."

In 2000, then President Bill Clinton emphasized the importance of "meaningful understanding" in medical settings when his Executive Order 13166 expanded the protections of Title VI to people with limited ability to understand English. In 2002, the Department of Health and Human Services (HHS) followed up with its own guidance regarding "meaningful access" that considers it discriminatory to deny services in a healthcare setting to beneficiaries of federal health care programs. "Effective communication is critical for necessary health and human services," said HHS, and "in many cases, LEP individuals form a substantial portion of those encountered in federally assisted programs."

Further, according to Title III of the ADA,8 "no individual shall be discriminated against on the basis of disability in the full and equal enjoyment of the goods, services, facilities, privileges, advantages, or accommodations...and that discrimination includes a failure to make reasonable modifications in policies, practices, or procedures when such modifications are necessary to afford such goods, services, facilities, privileges, advantages, or accommodations to individuals with disabilities, unless the entity can demonstrate that making such modification would fundamentally alter the nature of such goods, services, facilities, privileges, advantages, or accommodations." The definition of public accommodation specifically includes the "professional office of a health care professional," 42 U.S.C. §12181(7)(F).9 Under the ADA, urgent care centers must provide equal access to their services and one must assume that includes patient communication.

Steps to Offering Medical Interpretation Services

Urgent care operators have several options for meeting the requirement to communicate with patients in a way they understand. If a center sees a large number of patients speaking the same non-English language, the most convenient and perhaps most cost-effective is to use the center's staff to translate. This requires hiring bilingual receptionists, technicians and medical assistants but even better are bilingual nurses and doctors who can

treat patients without using a mediator. According to the International Medical Interpreters Association (IMIA), bilingual staff are an *investment* in the patient experience with "language discordant" patients 61 percent more likely to rate their providers as "fair" or "poor" compared with language-concordant patients." ¹⁰

However, bilingual clinicians are often difficult to find and a full-time medical interpreter can earn \$40,000 or more per year—a heavy expense burden, even if also supporting the center as a receptionist or medical assistant. And what happens when, say, a clinic in South Florida that employs providers and staff who are fluent in Spanish encounters a French-, Portuguese-, or Russian-speaking patient, which is common in Miami?

Because the interpreter will be speaking back and forth between two communicators, the most important skill is to have fluency in both languages.

As a substitute for bilingual providers and staff, most large cities have companies that can provide on-site face-to-face medical interpretation services in any number of languages. A trained medical interpreter is someone who has been formally educated in medical interpretation and is not only sensitive to cultural nuances but also educated in medical terminology. More often than not, medical interpreters are native speakers. The advantages of an in-person, experienced medical interpreter include patient satisfaction, assurance that truthful information is being conveyed, better understanding on behalf of both the patient and caregiver, decreased costs of diagnostic testing, and fewer preventable medical errors.¹¹

Sign language interpreters help their clients a bit differently than do spoken language interpreters. They have fluency in both English and American Sign Language (ASL), which has its own grammar. ASL is composed of signing, finger spelling, and specific body language. People with hearing difficulties may read speakers lips. Interpreters help lip-readers use oral interpretation, which is mouthing the words carefully and distinctly so that the person who is lip reading can understand more easily. They may use "cued speech" - hand shapes near their mouth to give lip readers more information. They can also use body language and facial expressions to communicate. For patients who are both sight- and hearing-impaired, the interpreter will use "tactical signing"—signing into the patient's hand so that he/she can feel the communication. 12

When an On-Site Interpreter Isn't Possible

While the advantages of using "professional interpreters" cannot be disputed, the on-demand nature of

urgent care and ebbs and flows in walk-in volume make it impractical to have an interpreter physically present. And when family members and other non-professionals (such as community activists or church representatives who arrive with the patient) are relied upon, there can be an inherent lack of familiarity with medical terminology, word substitution or editing, or emotions added by the interpreter, which contribute to confusion, miscommunication, and medical mistakes. 13 Introducing non-professionals to the patient encounter can also jeopardize patient privacy.

Depending on an urgent care center's location, it may see limited English proficiency patients several times a day, once or twice a week, or once or twice a year. The frequency with which a center encounters the need for medical translation plays a large role in determining which translation options balance demand, cost, and efficacy.

Given the impossibility of having bilingual staff to meet every need that could arise at an urgent care center, the most practical methods of interpretation are flash cards containing common signs, telephonic, and video services.

First off, research casts doubt on the efficacy of flash cards for medical interpretation purposes. The odds of miscommunication using flash cards are high because pointing to images lacks the specificity of spoken language and can convey any number of meanings. Based on studies that trained interpreters are 70% less likely to err than untrained interpreters, 14 the most effective solution is the use of technology to "bring" a trained interpreter into the clinic.

Telephonic medical interpretation has been the fastest growing, and according to the IMIA, 15 this method was touted for use in facilities that dealt with many languages, had infrequent need for translation services, or that were located in outlying areas. Because encounters can be conducted in an exam room with the clinician, patient and a speakerphone—telephonic translation preserves patient confidentiality. Service providers are available 24 hours a day, 7 days a week, and support almost every language and dialect.

Telephone interpretation can be useful with patients who speak uncommon languages or in emergencies when an in-person interpreter cannot be arranged. But the telephone interpreter cannot monitor and evaluate the patient's body language and facial expressions. Communication is more than words; patients lack medical lexicon so consider someone pointing to a body part to indicate where their pain originates or how it travels. 16 Using Internet technology, telephonic interpretation can be coupled with a video feed, providing both words and gestures to the interpreter. Allowing for visual cues not only improves the accuracy of translation, but it can accommodate communication for the deaf and hearing-impaired patients because sign language is easily communicated via video connection.

For most urgent care centers, a subscription to a telephonic or video medical interpretation service is a low cost way to ensure compliance and preparedness, should a non-English-speaking or hearing-impaired patient show up and require services.

Conclusion

Urgent care centers are required to offer interpretation for patients who are using federally funded programs to pay for health care services as well as those who are hearing- or vision-impaired. To identify the best interpretation method for your center, consider the frequency or likelihood of non-English-speaking patients, the diversity of languages presenting, and the language skills and training of providers and staff. ■

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HEALTH LAW

Et tu, Brute?

JOHN SHUFELDT, MD, JD, MBA, FACEP

n the past, when I have broached the topic of employee theft with urgent care owners, their typical, somewhat indignant, response is, "My employees would never do that!" I really like this answer because I really value loyalty – more than anything. In the film *Ides of March*, campaign manager Paul Zara (Philip Seymour Hoffman) proclaims: "I value loyalty over everything." Of course, he completely gets screwed (by his former employee) at the end of the movie but at least he can look himself in the mirror every morning — so he has that going for him, which is nice!

Here's the rub. If no employees would ever do this why is one out of three business failures in the United States the direct result of employee theft?1 Truth be told, this has happened to me – twice. Both times the perpetrators were discovered and ultimately fired. The first time we recovered the money (\$70,000); the second time was a much smaller amount and we did not recover the money. Both of the employees went to work for competitors—and the second one sued us.

One trait common to medical providers is that we think people are honest and will generally do the right thing and, that no one (particularly a trusted member of the team) would knowingly steal or be disloyal to us. Yet it happens all the time. Here are some steps that will help you prevent employee theft:

Make the Right Hire

Check references. "Had I known" should not be coming out of your mouth when you find out that your employee has been dishonest. Ask around about a prospective employee-and not just the people someone has listed as references. Urgent care medicine is a small community and chances are, someone you know will know the prospective employee and give you a straight answer. In addition, if the job requires handling money, get the potential employee's permission in writing to check his/her credit report.2 I am not sure you can draw any linear



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One rule of thumb is to separate cash collection functions from payment and deposit functions.

conclusions but desperate times sometimes lead to desperate measures. In the same vein, doing a criminal background check and verifying employment history is absolutely integral.

Trust your gut. Applicants who "trash talk" a previous boss, leave with little or no notice or state that previous co-workers did not like them because of (fill in the blank) should be a red flag. One caution: If an applicant discloses some personal information to you about a potential disability, marital status, pregnancy, religion, etc. you cannot refuse to hire him/her for that reason. Be careful. I know of situations in which prospective employees have related something on purpose just so that if they weren't hired they could claim it was due to the issue they disclosed.

Keep notes during the hiring process. This way, if it goes "south" you will have something to fall back on to stimulate your memory. Occasionally, applicants will pad their resume or make grandiose statements about their past. (I recently had an applicant tell me she had a ride in an F-35, which I found interesting since a two seat F-35 has never been made. Wait, could she have meant an F-350 Ford? I better check my notes! Whew, she said "fly."). Needless to say, she was not hired.

Institute a probationary period. A 90-day probationary period is always a good way to "test drive" an employee for a period of time and it allows the employee to "test drive" you and the company. Another option is to make the initial hire as a consultant with payment as a 1099 independent contractor. If no red flags appear, the consultant can be hired as a full-time employee.

An Ounce of Prevention

There are a number of procedures and internal controls you can institute to make it more difficult for an employee to steal or

HEALTH

embezzle from the practice. One rule of thumb is to separate cash collection functions from payment and deposit functions. (This is what caught me in the first episode). In addition, have the bank statements mailed directly to you at a different address. If something does not seem correct, start researching it. Here are some additional internal control procedures:

Check bank statements. As discussed above, check them yourself and see where the funds are going. Look for odd patterns, vendors who don't seem to have a role in health care, and unexplained fluctuations in deposits.

Monitor work hours and vacation time. One pattern I have witnessed is staying late, coming in on weekends, and irregular work hours to help hide embezzlement. If you see someone "working hard" you are less likely to suspect him/her. However, this is typically when the embezzlement is taking place. In addition, require employees to use their vacation days. That gives you some time to check their work. Rotating roles occasionally is a great way for employees to learn other aspects of the business. It keeps them on their toes and gives them perspective on the entire organization. It also allows others to review their counterpart's work. If an employee is reluctant to have others review his/her work, that's a red flag.

Discuss insurance that covers employee theft and embezzlement with your agent. *In addition, you can use the* insurance carrier as the reason. why you need to have all the other mechanisms in place.

Know all parts of the business. Learning all aspects of the business is incredibly useful. This does not mean you have to be an expert on everything. It simply means you have to have more than a superficial understanding of the duties and processes. Knowing every role makes you nearly impervious to having the wool pulled over your eyes. In addition, it also sends a message to the employees that you not only understand their role, but are able to check their work product and competence.

Manage cashflow. We already discussed having bank statements mailed to your home. You should also be making deposits on a daily basis. This process includes keeping a deposit

Make sure that your employees know that you have a zero tolerance policy regarding embezzlement and theft.

ledger or log containing detailed information on the amount, the check number, patient receipts, etc.

Buy insurance. Discuss insurance that covers employee theft and embezzlement with your agent. In addition, you can use the insurance carrier as the reason why you need to have all the other mechanisms in place.

Adopt a zero tolerance policy. Make sure that your employees know that you have a zero tolerance policy regarding embezzlement and theft. Follow through with this policy by prosecuting any employee who steals. I made this mistake twice. I should have prosecuted both of the employees who embezzled funds. Don't threaten prosecution; don't promise not to prosecute if they return the money—that is extortion. In most states the court will require that the defendant pay restitution to the victim so you will get your money back.

Red Flags

- 1. Missing accounting records or gaps.
- 2. Discrepancies between deposits, receipts and bank
- 3. Large petty cash funds that are not reconciled at the end of every shift.
- 4. Patient complaints about payment posting. "I paid a \$50 co-pay but only received credit for \$30."
- 5. Missing documents, invoices, receipts, etc.
- 6. Overdue notices from creditors, vendors, etc.
- 7. Employees insisting on doing a certain task or not wanting their work reviewed.
- 8. Lack of separation of duties.
- 9. Coming into the office late or not taking vacation days.
- 10. Forming "too close" relationships with accounting employees

As a leader, loyalty is a very admirable trait. However, do not let blind loyalty lull you into a false sense of security when dealing with disloyal and dishonest employees. Put policies and procedures in place so that you never have an, "et tu Brute" moment.

- 1. U.S. Chamber of Commerce
- 2. The Fair Credit Reporting Act requires this.



ABSTRACTS IN URGENT CARE

- Statins and UTI
- Teens and muscularity
- FDA reports on energy drinks
- NAHUM KOVALSKI, BSc, MDCM

- Pediatric appendicitis
- Panic disorder and atrial fibrillation

ach 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.

Statins for Prevention of UTIs?

Key point: Statin use was significantly associated with reduced risk of urinary tract infections overall and for a second episode, but not for a first episode.

Citation: Pouwels KB, Visser ST, Hak E. Effect of pravastatin and fosinopril on recurrent urinary tract infections. J Antimicrob Chemother. 2012 Oct 30; doi 10.1093/jac/dks419 [e-pub ahead of print].

Recurrent urinary tract infections (UTIs) are common, especially among women. Recent research has suggested that invasion of bladder epithelial cells by uropathogenic Escherichia coli — and persistence of these bacteria in quiescent intracellular reservoirs — may underlie such recurrence. Statins have been found to interfere with the bacterial invasion of cells, providing a rationale for studying the clinical effect of statins on recurrent UTIs.

To this end, researchers in the Netherlands linked data from PREVEND IT (a randomized trial to examine whether use of pravastatin, fosinopril, or both might prevent cardiovascular and renal disease in nonhypertensive, nonhypercholesterolemic adults with microalbuminuria) with a large prescription database. Of the 864 trial participants who were randomized to a study medication, 655 were eligible for the UTI analyses; average follow-up was 3.8 years. Prescription of an antibiotic typically administered for UTI treatment (nitrofurantoin, trimethoprim, a sulfonamide) was considered a surrogate for infection.



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In intent-to-treat analyses, pravastatin was associated with reduced risk for UTIs both overall (relative risk, compared with placebo, 0.43; 95% confidence interval, 0.21-0.88) and for a second episode, but not for a first one. The risk for a primary UTI was increased with fosinopril. UTI rates with combination therapy (pravastatin plus fosinopril) did not differ significantly from those with placebo. Prescription rates for commonly prescribed drugs, and for other antibiotics used to treat UTIs, were similar among groups.

Published in *J Watch Infect Dis.* November 14, 2012 — Thomas Gluck, MD.

Muscularity (and Behaviors Promoting It) Popular with Adolescents

Key point: For all the talk about pediatric obesity, there are those who are seeking to increase muscularity and keep their weight down. Doctors NEED to learn about exercise and nutrition in order to guide these patients as well. And simply telling these kids that "steroids are bad" will not be very effective. Citations: Eisenberg ME, Wall M, Neumark-Sztainer D. Muscle-enhancing behaviors among adolescent girls and boys. Pediatrics. November 19, 2012. doi: 10.1542/peds.2012-0095 and http://www.nytimes.com/2012/11/19/health/teenage-boysworried-about-body-image-take-risks.html?_r=o.

Patients may ask about a *Pediatrics* study, covered on the front page of The New York Times, finding that more than 5% of adolescents use steroids to enhance muscle development. Researchers surveyed nearly 2800 students at 20 urban middle and high schools about "muscle-enhancing behaviors," including changed eating habits, exercise, protein powders, and steroids and other substances.

The authors say that these behaviors are more frequent than

ABSTRACTS URGENT CARE

had been thought — especially among boys — and they advise clinicians to discuss them with their patients in an attempt to avoid compulsive behaviors and future problems over time.

FDA Posts Adverse Event Reports Related to **Energy Drinks**

Key point: 18 fatalities have been linked to the highly caffeinated energy drinks.

Citation: http://www.fda.gov/Food/NewsEvents/ucm328536.htm.

The FDA publicly released the adverse event reports for four energy drinks — 5-Hour Energy, Monster Energy, Rockstar Energy, and Red Bull. Thus far, 18 fatalities have been linked to the highly caffeinated energy drinks (5 to Monster Energy, 13 to 5-Hour).

Some of the symptoms mentioned in the reports include increased heart rate, fatigue, vomiting, loss of consciousness, and cardiac and respiratory arrest. A federal report also found that an energy drink was listed as a possible cause for over 13,000 emergency room visits in 2009, The New York Times reports.

The FDA says that important information may be missing from the adverse event reports, making it "difficult ... to fully evaluate" whether the energy drinks caused the injuries reported. Nevertheless, the agency advises consumers to consult a healthcare provider before using the products.

Pediatric Appendicitis: Ultrasound Sensitivity Increases with Symptom Duration

Key point: Ultrasound sensitivity increased from 81% in patients with symptom duration <12 hours to 96% in those with symptom duration 48 to 71 hours.

Citation: Bachur RG, Dayan PS, Bajaj L, Macias CG, et al. The effect of abdominal pain duration on the accuracy of diagnostic imaging for pediatric appendicitis. Ann Emerg Med. 2012;60(5):582-590.e3.

Investigators assessed the diagnostic performance of computed tomography (CT) and ultrasound in relation to symptom duration in children (age range, 3 to 18 years) with suspected appendicitis. This secondary analysis of a prospective study of patients who presented to one of nine pediatric emergency departments included only patients with abdominal pain for <72 hours. Symptom duration was categorized as <12 hours, 13 to 24 hours, 25 to 36 hours, 37 to 48 hours, or 49 to 71 hours.

Of 1810 patients, 67% underwent CT, and 46% underwent ultrasound. Overall, 680 patients (38%) had pathology-confirmed appendicitis, and of these patients, 174 (26%) had perforated appendicitis. The sensitivity of CT for diagnosing appendicitis did not differ significantly by symptom duration: 98% for <12 hours and 96% for 49 to 71 hours. However, the sensitivity of ultrasound increased significantly with symptom duration: 81% for <12 hours versus 96% for 49 to 71 hours. Specificity did not differ significantly by duration for either modality, ranging from 90% to 96% for CT and 80% to 86% for ultrasound. The risk of perforation significantly increased with symptom duration, and in the subset of patients with perforated appendicitis, diagnostic sensitivity increased significantly with symptom duration with ultrasound but not CT.

For children with suspected uncomplicated (that is, nonperforated) appendicitis and <36 hours of pain, the authors recommend not relying on a negative ultrasound. Although CT is a second study option, the authors advocate for reevaluation with ultrasound after a period of observation to avoid unnecessary radiation exposure. Alternatively, they suggest postponing the initial ultrasound until sufficient time (>24 hours) has passed to increase its sensitivity.

Published in J Watch Emerg Med. November 16, 2012 — Katherine Bakes, MD.

Panic Disorder and Vulnerability to Later **Atrial Fibrillation**

Key point: Panic disorder is NOT just "hysteria" and should be respected as a risk factor for other serious conditions.

Citation: Cheng Y-F, Leu H-B, Su C-C, Huang C-C, et al. Association between panic disorder and risk of atrial fibrillation: A nationwide study. Psychosom Med. October 29, 2012. Doi: 10.1097/PSY.obo13e18273393a.

Although panic disorder has been associated with increased risks for myocardial infarction, whether panic disorder might also specifically increase the risk for atrial fibrillation (AF) has not previously been studied. Using a Taiwanese national insurance database, investigators compared 3888 patients receiving baseline diagnoses of panic disorder with 38,880 control individuals, balanced according to known risk factors (such as age, sex, and histories of diabetes, hypertension, and hyperlipidemia). Participants with preexisting arrhythmia were excluded.

Relative to controls, those with initial panic disorder had elevated baseline rates of chronic obstructive pulmonary disease (COPD) and depression. Participants were tracked for up to 7 years for the subsequent development of AF (diagnosed by cardiologists). At follow-up, 406 participants (0.94% of entire population) had developed AF (panic disorder group, 1.2%; nonpanic group, 0.9%). After adjustment for risk factors and comorbidities, initial panic disorder was independently associated with increased risk for developing new AF (hazard ratio, 1.73), as were age, male sex, hypertension, and histories of coronary disease history, congestive heart failure, and valvular heart disease (but not COPD or depression).

Published in J Watch Psych. November 9, 2012 — Joel Yager, MD.



CODING Q&A

Modifier -25 and Urgent Care Codes

DAVID STERN, MD, CPC

Can a patient be billed for an E/M code and an ultrasound procedure such as 93970, "Duplex scan of extremity veins including responses to compression and other maneuvers; complete bilateral study" during the same visit when both the scan and the E/M visit were performed by the same provider?

If during an office visit it is determined that the ultrasound procedure needs to be performed on the same day as the visit, you may code an E/M in addition to the procedure. You would append modifier -25 to the E/M code.

CPT guidelines do state, however, that if only a hand-held or other Doppler device is used and a hard copy of the results is not produced, then the CPT code for the noninvasive vascular procedure may not be used, because the procedure is deemed to be included in the E/M service.

However, during an outpatient visit, if the provider determines that the patient needs the ultrasound procedure performed but the patient is scheduled for the procedure on a different day, you would not bill an additional office visit on the day the patient returns for the procedure.

Be sure to check Local Coverage Determination (LDC) rules with state licensing authorities, and with each payor, because some entities have limitations on who can perform or bill for noninvasive vascular diagnostic studies. For example, the provider or setting for these procedures may be limited to:

- physicians who are competent in diagnostic vascular studies:
- physicians who are under general supervision by physicians who are credentialed in vascular technology;
- technicians who are certified in vascular technology; or
- facilities with a laboratory accredited in vascular technology.



David E. Stern is a certified professional coder. He is a partner in Physicians Immediate Care, operating 18 clinics in Illinois, Oklahoma, and Nebraska. Dr. Stern was a Director on the founding Board of UCAOA and has received the Lifetime Membership Award of UCAOA. He serves as CEO of Practice Velocity (www.practicevelocity.com). providing software solutions to over 750 urgent care centers in 48 states. He welcomes your questions about urgent care in general and about coding issues in particular.

If during a well child exam a pediatrician discovered the patient had eczema and prescribed treatment, is the treatment of the eczema significant enough to warrant using a modifier -25?

Modifier -25, "Significant, separately identifiable evalua-• tion and management service by the same physician or other qualified health care professional on the same day of the procedure or other service" is reserved for E/M codes (i.e., in urgent care, CPT codes 99201-99215) so you would not append it to the well child/preventive service code.

If billing an E/M code, you would not use modifier -25 unless another appropriate billable "procedure or service," such as a wound repair or a foreign body removal, was performed.

As an employee of a family practice/pediatrics center, I have been asked to add S9088 when a patient comes in on the same day without a scheduled appointment. We are not licensed as an urgent care clinic, but we do see patients who come in without an appointment. Our hours of operation are 8:30 a.m. to 5:00 p.m. Monday through Friday only. Can we use urgent care codes for the patients we treat who do not have an appointment?

If you are referring to HCPCS code S9088, "Services pro-• vided in an urgent care center," you should not use this code in a physician office setting because it is specifically reserved for use by urgent care centers.

However, there are a few codes that you might be able to consider using in an office situation. CPT code 99058, "Service(s) provided on an emergency basis in the office, which disrupts other scheduled office services, in addition to basic service," could be used for someone who did not have a scheduled appointment but was in need of an emergency service and had to be taken back to an exam or procedure room immediately for treatment.

In that instance, you would bill CPT code 99058 in addition to the appropriate E/M code as well as codes for any other procedures performed. However, for urgent care centers, CPT Assistant has made a controversial statement that this code is not appropriate for clinics that typically see patients on a walkin basis.

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For more information contact: Kay Kernaghan, PHS PO Box 26666, Albuquerque, NM 87125 kkernagh@phs.org

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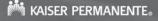


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URGENT CARE

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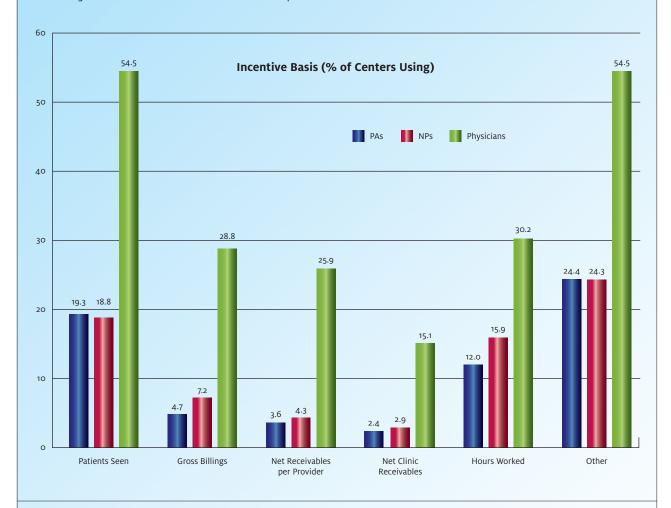
hese data from the 2012 Urgent Care Industry Benchmarking Study are based on a sample of 1,732 urgent care centers; 95.2% of the respondents were UCAOA members. Among other criteria, the study was limited to centers that have a licensed provider onsite at all times; have two or more exam rooms; typically are open 7 days/week, 4 hours/day, at least 3,000 hours/year; and treat patients of all ages (unless specifically a pediatric urgent care).

In this issue: What Incentives Are Urgent Care Providers Receiving?

OTHER INCENTIVE STRUCTURES FOR PROVIDERS

In addition to salary and general benefits, 45% of centers incentivize their physicians with bonuses based on productivity and other measures shown below, the most frequent being patients seen by the provider. Only 25.2% of centers offer incentives to their physician assistants and nurse practitioners (n = 83).

Note: categories do not add to 100% as some centers provide more than one.



Acknowledgement: The 2012 Urgent Care Industry Benchmarking Study was funded by the Urgent Care Association of America and administered by Anderson, Niebuhr and Associates, Inc. The full report can be purchased at www.ucaoa.org/benchmarking.



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