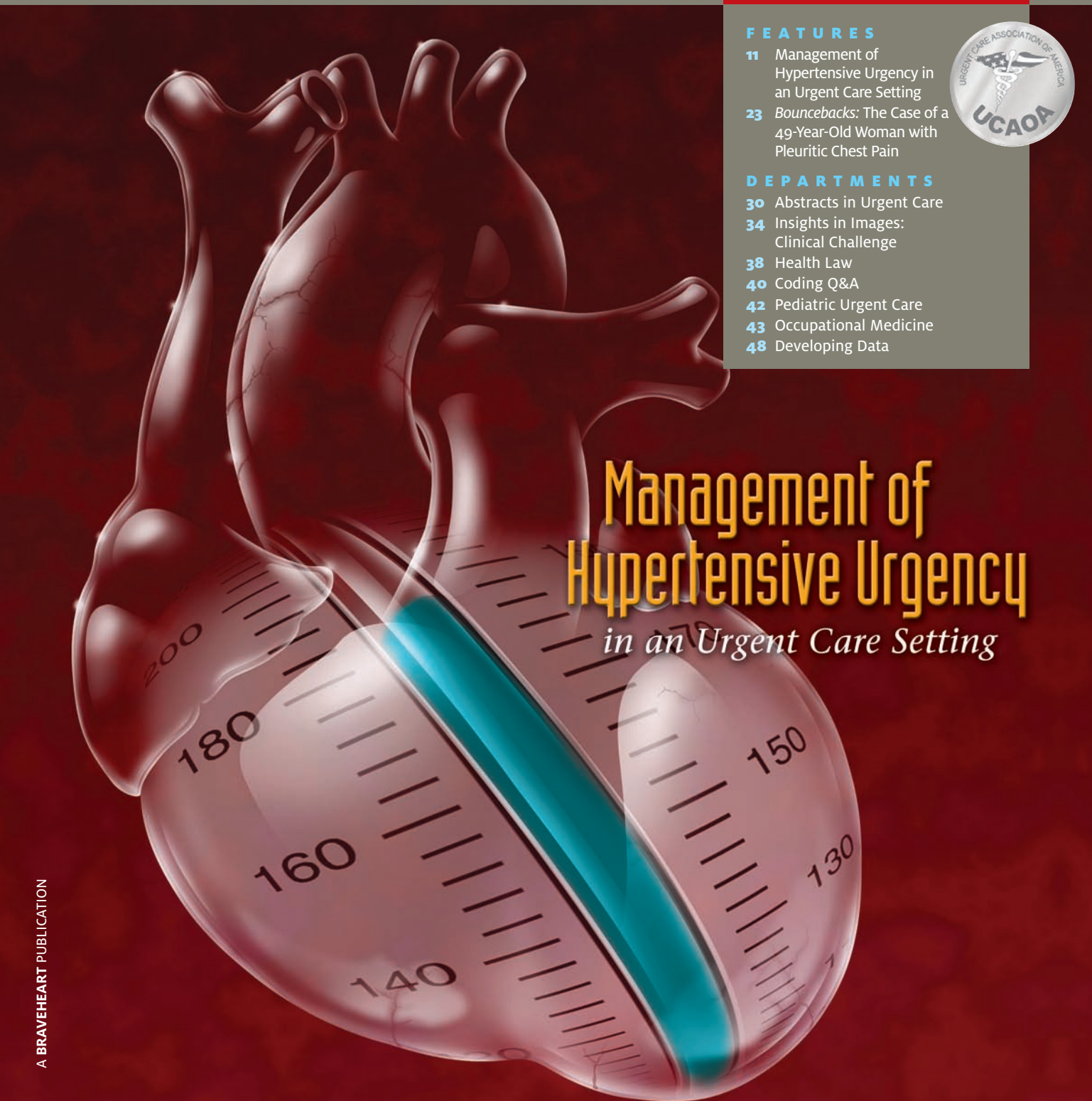
JUCM™
THE JOURNAL OF URGENT CARE MEDICINE®
APRIL 2009
VOLUME 3, NUMBER 7
www.jucm.com | The Official Publication of the **Urgent Care Association of America**

IN THIS ISSUE



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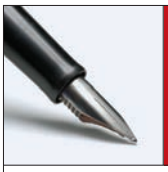


LETTER FROM THE EDITOR-IN-CHIEF

The Responsibility of Torch Bearing

It is a time-honored Olympic tradition: passing the torch around the world from one runner to another, until it reaches the Olympic venue and lights the Olympic flame that burns for the duration of the games.

It is a real privilege to carry the torch, and only a select few can be chosen for the honor. Each runner has a few simple tasks: run a few miles with the torch, try not to stumble, avoid the occasional protestor eager to ruin your three miles of glory, and keep the flame lit. These tasks end with the ultimate responsibility of an Olympic torch bearer: Pass the darn torch!

It wouldn't be quite as special if one guy, in all his glory, ran around the world by himself to light the flame. Everyone would get tired of seeing him, and he probably wouldn't make it around the globe in time for the games to begin.

The obvious lesson in all this: Leadership and representation work better when they are passed on. Leadership is a relay, not a solo sprint. When you have been given the privilege to carry the torch, you also carry an obligation to ensure it is passed on.

Passing the torch, however, is not without risk. There is much unknown, a period of uncertainty, perhaps even a change in course. This can generate a great deal of anxiety.

For organizations like UCAOA, managing successful leadership transition requires a refocusing of core values, a restatement of mission, and a recommitment to those the association serves. It is vitally important to effectively communicate the transition, and provide overlap through the initial phases. The UCAOA Board of Directors is deeply committed to effective leadership transition on behalf of its members. The governance process and transmission management are in place to ensure years of effective representation.

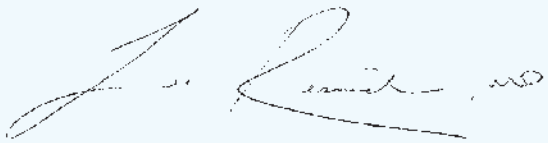
With that said, it is an honor to introduce to you UCAOA's President-Elect, Dr. Donald F. Dillahunty. Dr. Dillahunty is the chief executive officer/president of PrimaCare Medical Centers, which is headquartered in Dallas, TX and one of the largest urgent care providers in the Dallas metro area. Dr. Dillahunty is board certified in Family Practice, with an added qualification in Occupational Medicine. He is additionally certified as a Physician Executive by the Certifying Commission of Medical Management, and completed the medical mini-MBA program through the University of Texas at Arlington.

Don has served as a member of the UCAOA Board of Directors, and currently chairs the organization's Quality Committee. He brings substantial experience in organizational management and healthcare policy to UCAOA's leadership team, and will lend much-needed expertise to this critical phase of the organization's growth. Complex challenges lie ahead, and I am confident that Dr. Dillahunty is the perfect choice to be our guide.

"The interests of 'all' have superseded the interests of any one individual."

It has been a genuine privilege to serve as president of UCAOA over the last two years. I am extremely proud of the exceptional work this group has accomplished in such a short period of time. We have made tremendous strides in establishing and legitimizing urgent care medicine as a discipline and as an integral piece of the healthcare delivery fabric. I am confident that all of our achievements were made possible through a singular focus on the group. With an emphasis on representative governance, the interests of "all" have superseded the interests of any one individual. This approach has catapulted the organization to great heights and, hopefully, an eternal flame.

The official "passing of the torch" begins at UCAOA's April convention in Las Vegas. Please join us as we mark this important milestone in the organization's history. ■



Lee A. Resnick, MD
Editor-in-Chief
JUCM, The Journal of Urgent Care Medicine
President, UCAOA

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The Official Publication of the **Urgent Care Association of America**

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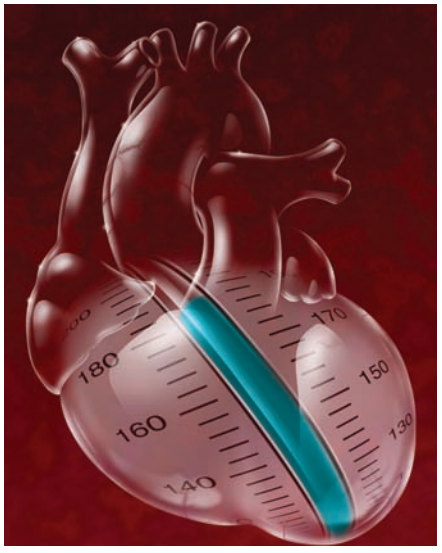
VOLUME 3, NUMBER 7



CLINICAL

11 Management of Hypertensive Urgency in an Urgent Care Setting

At what point should hypertension be considered an urgent or emergent condition? The urgent care clinician's task begins with making that decision and ends with plotting a measured course of action.

By Sanjeev Sharma, MD, Christy Anderson, PharmD, Poonam Sharma, MD, and Donald Frey, MD

BOUNCEBACKS

23 The Case of a 49-Year-Old Woman with Pleuritic Chest Pain

A patient presents and asks for a specific test, having been referred to you by another clinician. You don't think the test is necessary. What are your obligations—and risk?

By Jill C. Miller, MD and Michael B. Weinstock, MD

***In the next issue of* JUCM:** *Even the most clinically competent practitioner may overlook some common areas of risk inherent in the urgent care center. In the first of a two-part series, we will highlight opportunities to create a "safety culture" in your office.*

JUCM The Journal of Urgent Care Medicine *(www.jucm.com) is published through a partnership between Braveheart Publishing (www.braveheart-group.com) and the Urgent Care Association of America (www.ucaoa.org).*

BRAVEHEART PUBLISHING

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Mission Statement
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 healthcare marketplace. As the Official Publication of the Urgent Care Association of America, *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.

JUCM (ISSN 1938-002X) printed edition is published monthly except for August for $50.00 by Braveheart Group LLC, 2 Split Rock Road, Mahwah, NJ 07430. *JUCM* is pending periodical status at Mahwah Postal Annex, 46 Industrial Drive, Mahwah, NJ 07430 and additional mailing offices. POSTMASTER: Send address changes to Braveheart Group LLC, 2 Split Rock Road, Mahwah, NJ 07430.

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It may seem axiomatic in the urgent care arena, but the distinction between "urgent" and "emergent" can be great. Sometimes it's easy to distinguish between the two; the appearance of a 62-year-old woman who complains of pain in her chest, arm, and jaw and shortness of breath calls for emergent referral, while a 16-year-old boy who takes a fastball to the hand during a baseball game can certainly be evaluated, and probably treated, on site.

Other times, however, the lines are not so clearly drawn, such as when a patient with acute high blood pressure winds up in your urgent care center. Determining whether immediate treatment is indicated or if referral is a better option requires a firm grasp on the potential causes and consequences, as well as on appropriate and measured treatment options.

In Management of Hypertensive Urgency in an Urgent Care Setting (page 11), **Sanjeev Sharma, MD**, **Christy Anderson, PharmD**, **Poonam Sharma, MD**, and **Donald Frey, MD** review various classification systems and offer rationale for identifying true hypertensive urgency vs. hypertensive emergency, as well as an overview of treatment options.

All of the authors work at Creighton University Medical Center, where Dr. Sanjeev Sharma is assistant professor in the Department of Family Medicine, Dr. Anderson is assistant professor in the Department of Pharmacy, Dr. Poonam Sharma is assistant professor in the Department of Pathology, and Dr. Frey is associate professor and chair of the Department of Family Medicine.

Another possible dilemma arises when clinician and patient have different expectations for evaluation and treatment. Should you order a test just because the patient was told by another practitioner that it's necessary, even if you don't agree (and, if not, what are the potential consequences of sticking to your guns)? What is the best way to approach such disagreements?

The latest installment of *Bouncebacks* (The Case of a 49-Year-Old Woman with Pleuritic Chest Pain, page 23, by **Jill C. Miller, MD** and **Michael B. Weinstock, MD**) focuses on an actual case in which a physician had to wrestle with this thorny problem.

Dr. Miller practices at University Hospitals Chagrin Highlands Health Center and is a senior clinical instructor at Case Western Reserve University School of Medicine. Dr. Weinstock is a clinical assistant professor of emergency medicine at The Ohio State University College of Medicine and practices at Mt. Carmel St. Ann's Emergency Department in Columbus, OH. He is one of several authors whose work appears in this issue scheduled to present at the UCAOA Annual Convention in Las Vegas, April 20-23.

Another is **Emory Petrack, MD, FAAP, FACEP**. Starting with this issue (page 42), Dr. Petrack will contribute a quarterly column on how to make your existing practice more child-friendly. He is president of Petrack Consulting, Inc., and medical director of the Pediatric Emergency Department at Fairview Hospital in Cleveland, OH. In addition, he sits on the *JUCM* Advisory Board.

Also in this issue:

Nahum Kovalski, BSc, **MDCM** reviews abstracts of new articles that discuss the utility of the elbow extension test, the use of oral co-amoxiclav in pyelonephritis and dexamethasone for acute exudative pharyngitis.

John Shufeldt, MD, JD, MBA, FACEP, who will share his wisdom over the course of several sessions at the UCAOA convention this month, recommends precautions to take in order to avoid contracting an FTD (a financially transmitted disease) in your business dealings.

David Stern, MD, CPC answers several coding questions that relate to defining the "global period." Dr. Stern will host several sessions at the UCAOA convention, as well.

Frank Leone, MBA, MPH explains how identifying the personality type of a potential occupational medicine customer can help you tailor your approach. Mr. Leone will take part in the Integrating Occupational Medicine pre-convention program in Las Vegas.

If you have an idea for a feature article, let us know in an e-mail to Editor-in-Chief **Lee A. Resnick, MD**, at *editor@jucm.com*. If you find a topic of interest, chances are your colleagues will, too. ■

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Solving Our Identity Crisis as an Industry

LOU ELLEN HORWITZ, MA

At the risk of sounding existential, what *is* urgent care? Patients, payors, and the larger healthcare community are looking for an easy answer to that question, but there isn't one. UCAOA took three paragraphs to explain it on our website (and not definitively, at that) and provided a grant to a team of researchers to help identify "real" urgent care centers.

We have been struggling with this question for a long time, effectively unwilling or unable to come to a consensus and draw the line between what is an urgent care center and what is not.

Well, that stops today.

UCAOA is launching a new program to certify urgent care centers—to define the delivery of urgent care medicine.

A Certified Urgent Care (CUC) must meet certain criteria that establish *who* provides care and to whom, *what* services must be available, and *when* the facility must be open.

These criteria create a definition of urgent care that will be accessible to all stakeholders.

But why does our industry need this?

- Because of the countless phone calls we get from centers who have received "urgent care" criteria from payors, cobbled together from a variety of sources—some of them as unqualified as an anonymous posting on our own Forums (I am not making that up).
- Because patients cannot be asked to figure out whether "their" urgent care center offers this service or that one when they are ill or injured
- Because some facilities are using "urgent care" in their name when they are not remotely providing urgent care services.

Lou Ellen Horwitz is executive director of the Urgent Care Association of America. She may be contacted at *lhorwitz@ucaoa.org*.

Wait a minute though; what about UCAOA's partnership with the Joint Commission? Doesn't that do the same thing?

Actually, no—which was another impetus for this program.

"We have established a set of criteria that reflects our industry and will give all urgent care centers a distinction that is clear."

The Joint Commission does not define what kind of facility does or does not qualify to be accredited using the urgent care set of standards. The Joint Commission's programs set standards for *how* care should be provided, not specifically *what* care should be provided, nor when nor by whom. Accreditation serves an important purpose, but it is not to define urgent care. That is the job of the urgent care industry itself.

We are very appreciative of the work of our committees and board members, as well as UCAOA staff who have made this possible. As you might imagine, it was not a simple nor conflict-free process, but we have established a set of criteria that we believe reflects our industry and will give all urgent care centers a distinction that is clear (and desperately needed).

How can you see the criteria?

The certification program is 100% public and all criteria will be shared with everyone; this transparency is critical to our efforts to create a global understanding. You can see the criteria on the UCAOA website now (*www.ucaoa.org/certification*), and download the application package as soon as you are ready to apply.

We hope this program will give you an edge in marketing, a tool for negotiation, and a mark of distinction among facilities in your community. You certainly deserve it, and we are proud to provide it for you. ■

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	Lipid Panel Plus	ALT, AST, CHOL, CHOL/HDL*, GLU, HDL, LDL*, TRIG, VLDL*
	Liver Panel Plus	ALB, ALP, ALT, AMY, AST, GGT, TBIL, TP
	General Chemistry 6	ALT, AST, BUN, CRE, GGT, GLU
	General Chemistry 13	ALB, ALP, ALT, AMY, AST, BUN, Ca, CRE, GGT, GLU, TBIL, TP, UA
	Electrolyte Panel	Cl^-, K^+, Na^+, tCO_2
	Kidney Check	BUN, CRE
	Renal Function Panel	ALB, BUN, Ca, Cl^-, CRE, GLU, K^+, Na^+, PHOS, tCO_2
	MetLyte 8 Panel	BUN, CK, Cl^-, CRE, GLU, K^+, Na^+, tCO_2
	Hepatic Function Panel	ALB, ALP, ALT, AST, DBIL, TBIL, TP
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Management of Hypertensive Urgency *in an Urgent Care Setting*

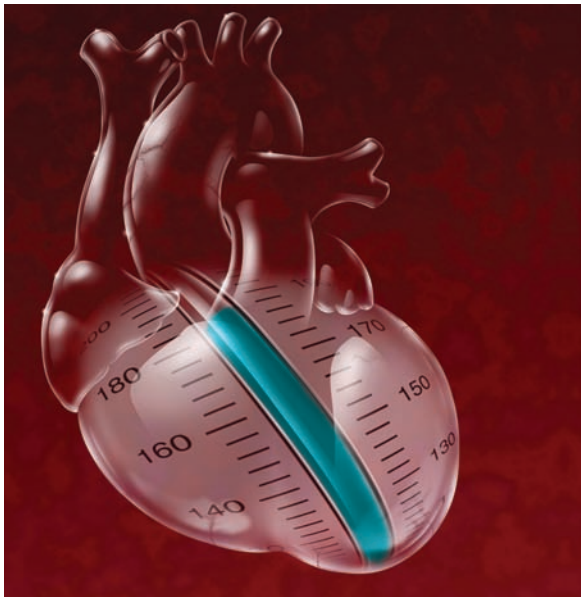
Urgent message: Effective management of patients presenting to urgent care with acute high blood pressure starts with differentiating between hypertensive *emergency* and hypertensive *urgency* and ends with appropriate treatment and counseling.

Sanjeev Sharma, MD, Christy Anderson, PharmD, Poonam Sharma, MD, and Donald Frey, MD

Introduction

Urgent care physicians routinely encounter patients with high blood pressure, but management—particularly for those patients with precarious elevations—remains controversial. Alternative options involve the use of various drug-therapy modalities in the urgent care setting with close observation, or initiation of oral medication and releasing the patient to home with specific instructions.

The consequences of inappropriate treatment can be disastrous, and include myocardial infarction, stroke, and death.



Classification of Hypertension

Hypertension can be classified in various ways. The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7) classifies hypertension as shown in **Table 1**. Four categories of blood pressures are described, the most significant being Stage 2, defined as pressures >160/100 mmHg. While the JNC 7 does not define a blood pressure limit for hypertensive urgency or emergency, the report classifies "severe elevation" in blood pressure as >180/120 mm HG.

The World Health Organization (WHO), International Society of Hypertension (IHS), and European Society of Hypertension (ESH) all classify hypertension as shown in **Table 2**. In this system, there are six blood pressure categories, with the highest being Stage 3 at >180/110 mmHg.

Historically, systolic blood pressure (SBP) >179 and diastolic blood pressure (DBP) >109 has broadly been considered to be a "hypertensive crisis."[1] These pressures are further sub-classified as either hypertensive emer-

MOXATAG is indicated for the treatment of tonsillitis and/or pharyngitis secondary to *Streptococcus pyogenes (S. pyogenes)* in adults and pediatric patients 12 years and older. MOXATAG should be used only to treat or prevent infections that are proven or strongly suspected to be caused by susceptible bacteria. The full 10-day course of therapy should be completed for effective treatment. Patients taking MOXATAG should not chew or crush tablet.

Important Safety Information

Use caution in patients with known serious hypersensitivity to amoxicillin or to other drugs in the same class or patients who have demonstrated anaphylactic reactions to beta-lactams. Serious and occasionally fatal hypersensitivity (anaphylactic) reactions have been reported in patients on penicillin therapy. If an allergic reaction occurs, MOXATAG should be discontinued and appropriate therapy instituted. *Clostridium difficile* Associated Diarrhea (CDAD) has been reported with nearly all antibacterial agents, including

Please see brief summary of Prescribing Information on next page.

References: 1. MOXATAG Prescribing Information. MiddleBrook Pharmaceuticals, Inc. 2008. **2.** Kardas P. Patient compliance with antibiotic treatment for respiratory tract infections. *J Antimicrob Chemother.* 2002;49(6):897-903. **3.** Sclar DA, Tartaglione TA, Fine MJ. Overview of issues related to medical compliance with implications for the outpatient management of infectious diseases. *Infect Agents Dis.* 1994;3(5):266-273.

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amoxicillin, and may range in severity from mild diarrhea to fatal colitis. If CDAD is suspected or confirmed, MOXATAG should be discontinued and appropriate therapy instituted. The possibility of superinfections with mycotic or bacterial pathogens should be kept in mind during therapy. If superinfections occur, MOXATAG should be discontinued and appropriate therapy instituted. The most common drug-related adverse reactions (incidence >1.0 %) are vulvovaginal mycotic infection, diarrhea, nausea, vomiting and headache.

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INDICATIONS AND USAGE

MOXATAG is a once-daily amoxicillin product indicated for the treatment of tonsillitis and/or pharyngitis secondary to *Streptococcus pyogenes (S. pyogenes)*, more commonly referred to as 'strep throat,' in adults and pediatric patients 12 years or older.

To reduce the development of drug-resistant bacteria and maintain the effectiveness of MOXATAG and other antibacterial drugs, MOXATAG should be used only to treat or prevent infections that are proven or strongly suspected to be caused by susceptible bacteria.

DOSAGE AND ADMINISTRATION

The recommended dose of MOXATAG is 775 mg once daily taken within 1 hour of finishing a meal for 10 days. MOXATAG should be taken approximately the same time every day. The full 10-day course of therapy should be completed for effective treatment of tonsillitis and/or pharyngitis secondary to *S. pyogenes.*

Do not chew or crush tablet.

CONTRAINDICATIONS

MOXATAG is contraindicated in patients with known serious hypersensitivity to amoxicillin or to other drugs in the same class or patients who have demonstrated anaphylactic reactions to beta-lactams.

WARNINGS AND PRECAUTIONS

Anaphylaxis and Hypersensitivity Reactions

Serious and occasionally fatal hypersensitivity (anaphylactic) reactions have been reported in patients on penicillin therapy. Although anaphylaxis is more frequent following parenteral therapy, it has occurred in patients on oral penicillins. These reactions are more likely to occur in individuals with a history of penicillin hypersensitivity and/or a history of sensitivity to multiple allergens. There have been reports of individuals with a history of penicillin hypersensitivity who have experienced severe reactions when treated with cephalosporins. Before initiating therapy with MOXATAG, careful inquiry should be made concerning previous hypersensitivity reactions to penicillins, cephalosporins, or other allergens. If an allergic reaction occurs, MOXATAG should be discontinued and appropriate therapy instituted.

***Clostridium difficile* Associated Diarrhea (CDAD)**

Clostridium difficile Associated Diarrhea (CDAD) has been reported with nearly all antibacterial agents, including amoxicillin, and may range in severity from mild diarrhea to fatal colitis. Treatment with antibacterial agents alters the normal flora of the colon leading to overgrowth of *C. difficile*.

CDAD must be considered in all patients who present with diarrhea following antibiotic use. Careful medical history is necessary since CDAD has been reported to occur over two months after the administration of antibacterial agents.

If CDAD is suspected or confirmed, ongoing antibiotic use not directed against *C. difficile* may need to be discontinued.

Superinfections

The possibility of superinfections with mycotic or bacterial pathogens should be kept in mind during therapy. If superinfections occur, amoxicillin should be discontinued and appropriate therapy instituted.

Mononucleosis Rash

A high percentage of patients with mononucleosis who receive ampicillin develop an erythematous skin rash. Thus, ampicillin-class antibiotics should not be administered to patients with mononucleosis.

Development of Drug-Resistant Bacteria

Prescribing amoxicillin in the absence of proven or strongly suspected bacterial infection or treating prophylactically is unlikely to provide benefit to the patient and increases the risk of the development of drug-resistant bacteria.

False-Positive Urinary Glucose Tests

High urine concentrations of ampicillin may result in false-positive reactions when testing for the presence of glucose in urine using Clinitest®, Benedict's Solution or Fehling's Solution. Since this effect may also occur with amoxicillin, it is recommended that glucose tests based on enzymatic glucose oxidase reactions (such as Clinistix®) be used.

ADVERSE REACTIONS

In a controlled Phase 3 trial, 302 adult and pediatric patients (≥12 years) were treated with MOXATAG 775 mg once-daily for 10 days. The most frequently reported adverse reactions (>1%) which were suspected or probably drug-related are vaginal yeast infection (2.0%), diarrhea (1.7%), nausea (1.3%) and headache (1.0%).

DRUG INTERACTIONS

Probenecid

Probenecid decreases the renal tubular secretion of amoxicillin. Concurrent use of MOXATAG and probenecid may result in increased and prolonged blood levels of amoxicillin.

Other Antibiotics

Chloramphenicol, macrolides, sulfonamides, and tetracyclines may interfere with the bacterial effects of penicillin. This has been demonstrated *in vitro*; however, the clinical significance of this interaction is not well documented.

Oral Contraceptives

As with other antibiotics, amoxicillin may affect the gut flora, leading to lower estrogen reabsorption and potentially resulting in reduced efficacy of combined oral estrogen/progesterone contraceptives.

USE IN SPECIFIC POPULATIONS

Pregnancy: Teratogenic Effects. Pregnancy Category B.

Reproduction studies have been performed in mice and rats at doses up to 2000 mg/kg (12.5 and 25 times the human dose in mg/m^2) and have revealed no evidence of impaired fertility or harm to the fetus due to amoxicillin. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Labor and Delivery

It is not known whether use of amoxicillin in humans during labor or delivery has immediate or delayed adverse effects on the fetus, prolongs the duration of labor, or increases the likelihood that forceps delivery or other obstetrical intervention or resuscitation of the newborn will be necessary.

Nursing Mothers

Penicillins have been shown to be excreted in human milk. Amoxicillin use by nursing mothers may lead to sensitization of infants. Caution should be exercised when amoxicillin is administered to a nursing woman.

Pediatric Use

The safety and effectiveness of MOXATAG in pediatric patients 12 years of age and older have been established based on results of a clinical trial that included adults and pediatric patients (12 years or older). The safety and effectiveness of MOXATAG in pediatric patients younger than 12 years has not been established.

Geriatric Use

This drug is known to be substantially excreted by the kidney, and the risk of adverse reactions to this drug may be greater in patients with impaired renal function. Because elderly patients are more likely to have decreased renal function, care should be taken in dose selection, and it may be useful to monitor renal function.

Renal Impairment

MOXATAG has not been studied in patients with renal impairment; however, a reduction of amoxicillin dose is generally recommended for patients with severe renal impairment. Therefore, MOXATAG is not recommended for use in patients with severe renal impairment (CrCl <30 mL/min) or patients on hemodialysis.

OVERDOSAGE

In case of overdose, discontinue medication, treat symptomatically, and institute supportive measures as required. If the overdose is very recent and there is no contraindication, an attempt at emesis or other means of removal of drug from the stomach may be performed.

Interstitial nephritis resulting in oliguric renal failure has been reported in a small number of patients after overdosage with amoxicillin.

Crystalluria, in some cases leading to renal failure, has also been reported after amoxicillin overdosage in adult and pediatric patients.

Renal impairment appears to be reversible with cessation of drug administration. High blood levels may occur more readily in patients with impaired renal function because of decreased renal clearance of amoxicillin.

For additional information about overdose treatment, call a poison control center (1-800-222-1222).

HOW SUPPLIED/STORAGE AND HANDLING

MOXATAG tablets for oral administration are provided as blue film-coated, oval-shaped tablets that contain 775 mg of amoxicillin. The tablets are printed with "MB-111" on one side in black edible ink. MOXATAG is packaged in bottles as follows:

Presentation	NDC Code
Bottles of 30	11042-142-03

Storage

Store at 25º C (77º F); excursions permitted to 15–30º C (59–86º F) [See USP Controlled Room Temperature.]

MiddleBrook PHARMACEUTICALS®
Germantown, Maryland 20876 USA

U.S. Patents 6,544,555; 6,669,948; 6,723,341

Issue Date 02/2009
910-0209-0075

gency or hypertensive urgency.

Hypertensive emergency exists if there are signs of acute end-organ damage such as encephalopathy, myocardial infarction, unstable angina, pulmonary edema, eclampsia, stroke, head trauma, life-threatening arterial bleeding, and aortic dissection. As there is no absolute pressure measurement to define hypertensive emergency, it is identified by the physical signs of acute end-organ damage. Consequently, patients with a low baseline pressure can present with "normal" or mildly elevated pressure and be considered to have a true hypertensive emergency.

Patients with markedly elevated blood pressure but who lack these signs are determined to be in *hypertensive urgency*.[1] Some clinicians classify hypertensive urgency as "elevated blood pressure (diastolic pressure usually >120 mm Hg) that is not associated with new or progressive end-organ damage".[2]

Table 1: JNC-7 Classification of Hypertension

Category	SBP/DBP (mm Hg)
Optimal	<120/80
Prehypertensive	121–139 /80–89
Stage 1 hypertension	140–159/ 90–99
Stage 2 hypertension	>160/>100

Table 2: WHO, ISH, & ESH Classification of Hypertension

Category	SBP/DBP (mm Hg)
Optimal	<120/80
Normal	120-129/80-84
High normal	130-139/85-89
Stage 1 hypertension	140–159/90–99
Stage 2 hypertension	160-179/100-109
Stage 3 hypertension	>180/110

In hypertensive urgency, there is a risk of imminent end-organ damage, but such damage has not yet occurred. Particularly susceptible patients often have pre-existing conditions, e.g., renal insufficiency, congestive heart failure, coronary artery disease, CNS disorders, or retinal changes.

One to two percent of all hypertensive patients may present with hypertensive emergency or crisis at some point of their lives.[1]

Other terminologies used in these instances include:

- *Acute hypertensive episode*, which is defined as:
  - Stage 3 hypertension
  - systolic pressure 180 mmHg
  - *and* diastolic pressure 110 mmHg

with no signs or symptoms of evolving or impending target-organ damage.

- *Transient hypertension*, which is the presence of high blood pressure in association with other conditions such as anxiety, alcohol-withdrawal, sudden medication cessation, and toxic levels of some substances. In this case, treatment is aimed at the underlying cause.
- *White-coat hypertension*, or anxiety-related high blood pressure readings seen only in a physician's office, with otherwise normal blood pressure. This is a surprisingly common finding, especially in newly diagnosed hypertensive individuals. They actually exhibit normal pressures in their regular environment.

The goal in hypertensive *emergency* is to rapidly and carefully control the blood pressure to prevent fatal and irreversible end-organ damage. Action is usually taken in minutes up to a few hours as per the clinical situation, and intravenous medicines are usually employed. The aim may not be to reduce the blood pressure into the normal range in certain clinical scenarios such as stroke.

In hypertensive *urgency*, blood pressure can be controlled safely over period of hours or days in the outpatient setting.

Etiology

The etiology of hypertensive urgency is not well understood. Most such patients have pre-existent hypertension,[3] and non-adherence with antihypertensive medications near the time of the episode is seen in about 50% of them.[4] Illicit drug usage is also reported to be a risk factor for the development of hypertensive emergency.[5] Other causes of both urgency and emergency are shown in **Table 3**.

Pathophysiology

During the hypertensive episode, there is an abrupt increase in the systemic vascular resistance due to humoral vasoconstriction. This may be the triggering event.[6]

Increased blood pressure causes endothelial damage by increasing the endothelial permeability and local activation of the clotting cascade (platelet and fibrin deposition), resulting in fibrinoid necrosis and intimal proliferation. The endothelium is then unable to compensate or auto-regulate for changes in blood pressure. A vicious cycle ensues with further increases in resistance and endothelial damage.

High blood pressure also increases the stretch on the vessel wall which activates the renin-angiotensin system. This plays an important part in severely elevated blood pressures.

The combined process of endothelial damage, loss of auto-regulation, activated renin-angiotensin system, decrease in vasodilators (nitric oxide, prostacycline), and sustained blood pressure elevation can lead to tissue ischemia and end-organ damage. Major organ systems involved include the central nervous, cardiovascular, renal, and gravid uterus.[7, 8]

Table 3: Etiologic Causes of Hypertensive Urgency/Emergency

Essential Hypertension	
Renal	• Renal artery stenosis • Glomerulonephritis
Vascular	• Vasculitis – hemolytic-uremic syndrome – thrombotic thrombocytopenia purpura
Pregnancy-related	• Preeclampsia • Eclampsia
Pharmacologic	• Sympathomimetics • Clonidine withdrawal • Beta-blocker withdrawal • Cocaine • Amphetamines
Endocrine	• Cushing's syndrome • Conn's syndrome • Pheochromocytoma • Renin-secreting adenomas • Thyrotoxicosis
Neurologic	• Central nervous system trauma • Intracranial mass
Autoimmune	• Scleroderma renal crisis

Single-organ involvement is found in approximately 83% of patients presenting with hypertensive emergencies. Dual-organ involvement is found in 14% of cases, and multi-organ involvement (>3 organ systems) is found in approximately 3% of patients presenting with a hypertensive emergency.[9]

Clinical Presentation

A proper history and physical examination help a physician to differentiate between hypertensive urgency and emergency. A focused history should be taken to rule out end-organ damage, the signs and symptoms of which are shown in **Table 4**.

The history should include any previous history of high blood pressure, antihypertensive medications used and adherence to medication regimens, over-the-counter and illicit drug use (cocaine, amphetamines, decongestants, stimulants, oral contraceptives, and NSAIDs), and the presence of previous end-organ damage (e.g. renal, cardiac, or cerebrovascular).

Common symptoms related to hypertensive emergencies are chest pain (27%), dyspnea (22%), and neurologic deficits (21%).[10] Non-specific symptoms like a headache may be present in hypertensive urgency.

The physical exam should begin with measuring the blood pressure in both arms, using an appropriately sized cuff. Smaller cuffs can falsely elevate blood pressure readings in obese patients, and vice versa. The physical exam should also include a supine and standing blood pressure, as well as a measurement in the neck to assess for signs of elevated jugular venous pressure.

Next, pulses should be assessed in all extremities, and auscultation performed on the lungs (for signs of pulmonary edema), the renal arteries (for bruits), and the heart (for murmurs or gallops).

A focused neurologic and fundoscopic assessment should be done to rule out a cerebrovascular accident. Lateralizing signs are uncommon in hypertensive encephalopathy and are more suggestive of a stroke. Other studies which may be employed to help rule out a hypertensive emergency include electrocardiogram, chest x-ray, urinalysis, complete blood count, evaluation of electrolytes, and serum tests for renal function.

In a patient with severely elevated blood pressure, symptoms suggestive of acute end-organ damage confirm the diagnosis of hypertensive emergency, and the treatment plan should include immediate transfer to the

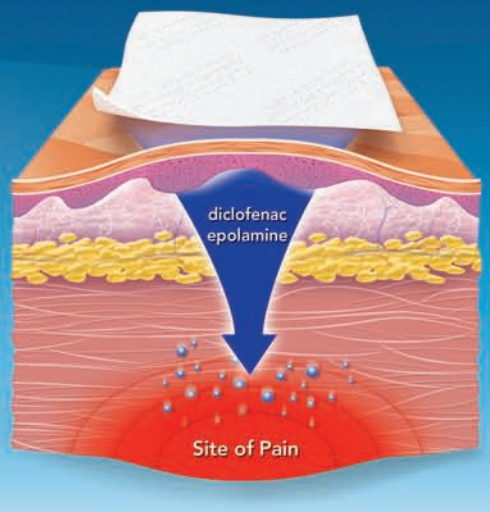
FOR THE TOPICAL TREATMENT OF ACUTE PAIN DUE TO MINOR STRAINS, SPRAINS, AND CONTUSIONS

NSAID POWER

that targets the site of acute pain

FLECTOR® Patch

- A unique way of delivering the proven efficacy of diclofenac in a patch that provides minimal systemic exposure[1,2]
- Diclofenac is a nonsteroidal anti-inflammatory drug[2]



- Dispensed in boxes of 30 patches
- 2 weeks of therapy = 1 box
- 1 month of therapy = 2 boxes

FLECTOR® Patch is indicated for the topical treatment of acute pain due to minor strains, sprains, and contusions.

Carefully consider the potential benefits and risks of FLECTOR® Patch and other treatment options before deciding to use FLECTOR® Patch. Use the lowest effective dose for the shortest duration consistent with individual patient treatment goals.

Important Safety Information

Cardiovascular (CV) risk

- **NSAIDs may cause an increased risk of serious CV thrombotic events, myocardial infarction, and stroke, which can be fatal. This risk may increase with duration of use. Patients with CV disease or risk factors for CV disease may be at greater risk**
- **FLECTOR® Patch is contraindicated for the treatment of perioperative pain in the setting of coronary artery bypass graft (CABG) surgery**

Gastrointestinal (GI) risk

- **NSAIDs cause an increased risk of serious GI adverse events at any time during use and without warning symptoms including bleeding, ulceration, and perforation of the stomach or intestines, which can be fatal. Elderly patients are at greater risk for serious GI events**

FLECTOR® Patch is contraindicated in patients with known hypersensitivity to diclofenac. FLECTOR® Patch should not be given to patients who have experienced asthma, urticaria, or allergic-type reactions after taking aspirin or other NSAIDs. Severe, rarely fatal, anaphylactic-like reactions to NSAIDs have been reported in such patients.

FLECTOR® Patch should not be applied to non-intact or damaged skin resulting from any etiology, e.g., exudative dermatitis, eczema, infected lesion, burns or wounds.

NSAIDs, including FLECTOR® Patch, can lead to new onset or worsening of hypertension, contributing to increased incidence of CV events. Fluid retention and edema have been observed in some patients taking NSAIDs. Use with caution in patients with hypertension, fluid retention or heart failure.

A patient with symptoms and/or signs of liver dysfunction, or with a history of an abnormal liver test, should be monitored for a more severe hepatic reaction and therapy stopped. Anemia is sometimes seen in patients receiving NSAIDs and platelet inhibition has been shown to prolong bleeding times.

Long-term administration of NSAIDs has resulted in renal papillary necrosis and other renal injury. Renal toxicity has also been seen in patients in whom renal prostaglandins have a compensatory role in maintaining renal perfusion. FLECTOR® Patch is not recommended in patients with advanced renal disease.

NSAIDs, including FLECTOR® Patch, can cause serious skin adverse events without warning such as exfoliative dermatitis, Stevens-Johnson Syndrome (SJS), and toxic epidermal necrolysis (TEN), which can be fatal. Patients should be informed about the signs and symptoms of serious skin manifestations and use of the drug should be discontinued at the first appearance of skin rash or any other sign of hypersensitivity.

Overall, the most common adverse events associated with FLECTOR® Patch were skin reactions (pruritus, dermatitis, burning, etc.) at the site of treatment and gastrointestinal disorders (nausea, dysgeusia, dyspepsia, etc.) and nervous system disorders (headache, paresthesia, somnolence, etc.).

In late pregnancy, as with other NSAIDs, FLECTOR® Patch should be avoided because it may cause premature closure of the ductus arteriosus. FLECTOR® Patch is in Pregnancy Category C. Safety and effectiveness in pediatric patients have not been established.

Please see Brief Summary of full Prescribing Information, including boxed warning, on adjacent page.

For more information, please visit www.FlectorPatch.com or www.KingPharm.com.

References: 1. Data on file. King Pharmaceuticals®, Inc. **2.** Flector Patch [package insert]. Piscataway, NJ: Alpharma Pharmaceuticals LLC; 2008.

King Pharmaceuticals

FLE5904 01/2009

Flector® patch
(diclofenac epolamine topical patch) 1.3%
Targeted NSAID Power

Flector® Patch (diclofenac epolamine topical patch) 1.3%

Brief Summary **Rx only**

Cardiovascular Risk: • NSAIDs may cause an increased risk of serious cardiovascular thrombotic events, myocardial infarction, and stroke, which can be fatal. This risk may increase with duration of use. Patients with cardiovascular disease or risk factors for cardiovascular disease may be at greater risk (See **WARNINGS** and Full Prescribing Information, **CLINICAL TRIALS**). • Flector® Patch is contraindicated for the treatment of peri-operative pain in the setting of coronary artery bypass graft (CABG) surgery (see **WARNINGS**).

Gastrointestinal Risk: • NSAIDs cause an increased risk of serious gastrointestinal adverse events including bleeding, ulceration, and perforation of the stomach or intestines, which can be fatal. These events can occur at any time during use and without warning symptoms. Elderly patients are at greater risk for serious gastrointestinal events (See **WARNINGS**).

INDICATION AND USAGE: Carefully consider the potential benefits and risks of Flector® Patch and other treatment options before deciding to use Flector® Patch. Use the lowest effective dose for the shortest duration consistent with individual patient treatment goals (see **WARNINGS**).

Flector® Patch is indicated for the topical treatment of acute pain due to minor strains, sprains, and contusions.

CONTRAINDICATIONS: Flector® Patch is contraindicated in patients with known hypersensitivity to diclofenac.

Flector® Patch should not be given to patients who have experienced asthma, urticaria, or allergic-type reactions after taking aspirin or other NSAIDs. Severe, rarely fatal, anaphylactic-like reactions to NSAIDs have been reported in such patients (see **WARNINGS - Anaphylactoid Reactions**, and **PRECAUTIONS - Preexisting Asthma**).

Flector® Patch is contraindicated for the treatment of peri-operative pain in the setting of coronary artery bypass graft (CABG) surgery (see **WARNINGS**).

Flector® Patch should not be applied to non-intact or damaged skin resulting from any etiology e.g. exudative dermatitis, eczema, infected lesion, burns or wounds.

WARNINGS: CARDIOVASCULAR EFFECTS: Cardiovascular Thrombotic Events: Clinical trials of several COX-2 selective and nonselective NSAIDs of up to three years duration have shown an increased risk of serious cardiovascular (CV) thrombotic events, myocardial infarction, and stroke, which can be fatal. All NSAIDs, both COX-2 selective and nonselective, may have a similar risk. Patients with known CV disease or risk factors for CV disease may be at greater risk. To minimize the potential risk for an adverse CV event in patients treated with an NSAID, the lowest effective dose should be used for the shortest duration possible. Physicians and patients should remain alert for the development of such events, even in the absence of previous CV symptoms. Patients should be informed about the signs and/or symptoms of serious CV events and the steps to take if they occur.

There is no consistent evidence that concurrent use of aspirin mitigates the increased risk of serious CV thrombotic events associated with NSAID use. The concurrent use of aspirin and an NSAID does increase the risk of serious GI events (see **GI WARNINGS**). Two large, controlled, clinical trials of a COX-2 selective NSAID for the treatment of pain in the first 10-14 days following CABG surgery found an increased incidence of myocardial infarction and stroke (see **CONTRAINDICATIONS**).

Hypertension: NSAIDs, including Flector® Patch, can lead to onset of new hypertension or worsening of preexisting hypertension, either of which may contribute to the increased incidence of CV events. Patients taking thiazides or loop diuretics may have impaired response to these therapies when taking NSAIDs. NSAIDs, including Flector® Patch, should be used with caution in patients with hypertension. Blood pressure (BP) should be monitored closely during the initiation of NSAID treatment and throughout the course of therapy.

Congestive Heart Failure and Edema: Fluid retention and edema have been observed in some patients taking NSAIDs. Flector® Patch should be used with caution in patients with fluid retention or heart failure.

Gastrointestinal Effects- Risk of Ulceration, Bleeding, and Perforation: NSAIDs, including Flector® Patch, can cause serious gastrointestinal (GI) adverse events including inflammation, bleeding, ulceration, and perforation of the stomach, small intestine, or large intestine, which can be fatal. These serious adverse events can occur at any time, with or without warning symptoms, in patients treated with NSAIDs. Only one in five patients, who develop a serious upper GI adverse event on NSAID therapy, is symptomatic. Upper GI ulcers, gross bleeding, or perforation caused by NSAIDs occur in approximately 1% of patients treated for 3-6 months, and in about 2-4% of patients treated for one year. These trends continue with longer duration of use, increasing the likelihood of developing a serious GI event at some time during the course of therapy. However, even short-term therapy is not without risk.

NSAIDs should be prescribed with extreme caution in those with a prior history of ulcer disease or gastrointestinal bleeding. Patients with a *prior history of peptic ulcer disease and/or gastrointestinal bleeding* who use NSAIDs have a greater than 10-fold increased risk for developing a GI bleed compared to patients with neither of these risk factors. Other factors that increase the risk for GI bleeding in patients treated with NSAIDs include concomitant use of oral corticosteroids or anticoagulants, longer duration of NSAID therapy, smoking, use of alcohol, older age, and poor general health status. Most spontaneous reports of fatal GI events are in elderly or debilitated patients and therefore, special care should be taken in treating this population.

To minimize the potential risk for an adverse GI event in patients treated with an NSAID, the lowest effective dose should be used for the shortest possible duration. Patients and physicians should remain alert for signs and symptoms of GI ulceration and bleeding during NSAID therapy and promptly initiate additional evaluation and treatment if a serious GI adverse event is suspected. This should include discontinuation of the NSAID until a serious GI adverse event is ruled out. For high risk patients, alternate therapies that do not involve NSAIDs should be considered.

Renal Effects: Long-term administration of NSAIDs has resulted in renal papillary necrosis and other renal injury. Renal toxicity has also been seen in patients in whom renal prostaglandins have a compensatory role in the maintenance of renal perfusion. In these patients, administration of a nonsteroidal anti-inflammatory drug may cause a dose-dependent reduction in prostaglandin formation and, secondarily, in renal blood flow, which may precipitate overt renal decompensation. Patients at greatest risk of this reaction are those with impaired renal function, heart failure, liver dysfunction, those taking diuretics and ACE inhibitors, and the elderly. Discontinuation of NSAID therapy is usually followed by recovery to the pretreatment state.

Advanced Renal Disease: No information is available from controlled clinical studies regarding the use of Flector® Patch in patients with advanced renal disease. Therefore, treatment with Flector® Patch is not recommended in these patients with advanced renal disease. If Flector® Patch therapy is initiated, close monitoring of the patient's renal function is advisable.

Anaphylactoid Reactions: As with other NSAIDs, anaphylactoid reactions may occur in patients without known prior exposure to Flector® Patch. Flector® Patch should not be given to patients with the aspirin triad. This symptom complex typically occurs in asthmatic patients who experience rhinitis with or without nasal polyps, or who exhibit severe, potentially fatal bronchospasm after taking aspirin or other NSAIDs (see **CONTRAINDICATIONS** and **PRECAUTIONS - Preexisting Asthma**). Emergency help should be sought in cases where an anaphylactoid reaction occurs.

Skin Reactions: NSAIDs, including Flector® Patch, can cause serious skin adverse events such as exfoliative dermatitis, Stevens-Johnson Syndrome (SJS), and toxic epidermal necrolysis (TEN), which can be fatal. These serious events may occur without warning. Patients should be informed about the signs and symptoms of serious skin manifestations and use of the drug should be discontinued at the first appearance of skin rash or any other sign of hypersensitivity.

Pregnancy: In late pregnancy, as with other NSAIDs, Flector® Patch should be avoided because it may cause premature closure of the ductus arteriosus.

PRECAUTIONS: General: Flector® Patch cannot be expected to substitute for corticosteroids or to treat corticosteroid insufficiency. Abrupt discontinuation of corticosteroids may lead to disease exacerbation. Patients on prolonged corticosteroid therapy should have their therapy tapered slowly if a decision is made to discontinue corticosteroids.

The pharmacological activity of Flector® Patch in reducing inflammation may diminish the utility of these diagnostic signs in detecting complications of presumed noninfectious, painful conditions.

Hepatic Effects: Borderline elevations of one or more liver tests may occur in up to 15% of patients taking NSAIDs including Flector® Patch. These laboratory abnormalities may progress, may remain unchanged, or may be transient with continuing therapy. Notable elevations of ALT or AST (approximately three or more times the upper limit of normal) have been reported in approximately 1% of patients in clinical trials with NSAIDs. In addition, rare cases of severe hepatic reactions, including jaundice and fatal fulminant hepatitis, liver necrosis and hepatic failure, some of them with fatal outcomes have been reported.

A patient with symptoms and/or signs suggesting liver dysfunction, or in whom an abnormal liver test has occurred, should be evaluated for evidence of the development of a more severe hepatic reaction while on therapy with Flector® Patch. If clinical signs and symptoms consistent with liver disease develop, or if systemic manifestations occur (e.g. eosinophilia, rash, etc.), Flector® Patch should be discontinued.

Hematological Effects: Anemia is sometimes seen in patients receiving NSAIDs. This may be due to fluid retention, occult or gross GI blood loss, or an incompletely described effect upon erythropoiesis. Patients on long-term treatment with NSAIDs, including Flector® Patch, should have their hemoglobin or hematocrit checked if they exhibit any signs or symptoms of anemia.

NSAIDs inhibit platelet aggregation and have been shown to prolong bleeding time in some patients. Unlike aspirin, their effect on platelet function is quantitatively less, of shorter duration, and reversible. Patients receiving Flector® Patch who may be adversely affected by alterations in platelet function, such as those with coagulation disorders or patients receiving anticoagulants, should be carefully monitored.

Preexisting Asthma: Patients with asthma may have aspirin-sensitive asthma. The use of aspirin in patients with aspirin-sensitive asthma has been associated with severe bronchospasm which can be fatal. Since cross reactivity, including bronchospasm, between aspirin and other nonsteroidal anti-inflammatory drugs has been reported in such aspirin-sensitive patients, Flector® Patch should not be administered to patients with this form of aspirin sensitivity and should be used with caution in patients with preexisting asthma.

Eye Exposure: Contact of Flector® Patch with eyes and mucosa, although not studied, should be avoided. If eye contact occurs, immediately wash out the eye with water or saline. Consult a physician if irritation persists for more than an hour.

Accidental Exposure in Children: Even a used Flector® Patch contains a large amount of diclofenac epolamine (as much as 170 mg). The potential therefore exists for a small child or pet to suffer serious adverse effects from chewing or ingesting a new or used Flector® Patch. It is important for patients to store and dispose of Flector® Patch out of the reach of children and pets.

Information for Patients: Patients should be informed of the following information before initiating therapy with an NSAID and periodically during the course of ongoing therapy. Patients should also be encouraged to read the NSAID Medication Guide that accompanies each prescription dispensed.

1. Flector® Patch, like other NSAIDs, may cause serious CV side effects, such as MI or stroke, which may result in hospitalization and even death. Although serious CV events can occur without warning symptoms, patients should be alert for the signs and symptoms of chest pain, shortness of breath, weakness, slurring of speech, and should ask for medical advice when observing any indicative sign or symptoms. Patients should be apprised of the importance of this follow-up (see **WARNINGS, Cardiovascular Effects**). **2.** Flector® Patch, like other NSAIDs, may cause GI discomfort and, rarely, serious GI side effects, such as ulcers and bleeding, which may result in hospitalization and even death. Although serious GI tract ulcerations and bleeding can occur without warning symptoms, patients should be alert for the signs and symptoms of ulcerations and bleeding, and should ask for medical advice when observing any indicative sign or symptoms including epigastric pain, dyspepsia, melena, and hematemesis. Patients should be apprised of the importance of this follow-up (see **WARNINGS, Gastrointestinal Effects: Risk of Ulceration, Bleeding, and Perforation**). **3.** Flector® Patch, like other NSAIDs, may cause serious skin side effects such as exfoliative dermatitis, SJS, and TEN, which may result in hospitalizations and even death. Although serious skin reactions may occur without warning, patients should be alert for the signs and symptoms of skin rash and blisters, fever, or other signs of hypersensitivity such as itching, and should ask for medical advice when observing any indicative signs or symptoms. Patients should be advised to stop the drug immediately if they develop any type of rash and contact their physicians as soon as possible. **4.** Patients should be instructed to promptly report signs or symptoms of unexplained weight gain or edema to their physicians (see **WARNINGS, Cardiovascular Effects**). **5.** Patients should be informed of the warning signs and symptoms of hepatotoxicity (e.g. nausea, fatigue, lethargy, pruritus, jaundice, right upper quadrant tenderness, and "flu-like" symptoms). If these occur, patients should be instructed to stop therapy and seek immediate medical therapy. **6.** Patients should be informed of the signs of an anaphylactoid reaction (e.g. difficulty breathing, swelling of the face or throat). If these occur, patients should be instructed to seek immediate emergency help (see **WARNINGS**). **7.** In late pregnancy, as with other NSAIDs, Flector® Patch should be avoided because it may cause premature closure of the ductus arteriosus. **8.** Patients should be advised not to use Flector® Patch if they have an aspirin-sensitive asthma. Flector® Patch, like other NSAIDs, could cause severe and even fatal bronchospasm in these patients (see **PRECAUTIONS, Preexisting asthma**). Patients should discontinue use of Flector® Patch and should immediately seek emergency help if they experience wheezing or shortness of breath. **9.** Patients should be informed that Flector® Patch should be used only on intact skin. **10.** Patients should be advised to avoid contact of Flector® Patch with eyes and mucosa. Patients should be instructed that if eye contact occurs, they should immediately wash out the eye with water or saline, and consult a physician if irritation persists for more than an hour. **11.** Patients and caregivers should be instructed to wash their hands after applying, handling or removing the patch. **12.** Patients should be informed that, if Flector® Patch begins to peel off, the edges of the patch may be taped down. **13.** Patients should be instructed not to wear Flector® Patch during bathing or showering. Bathing should take place in between scheduled patch removal and application (see Full Prescribing Information, **DOSAGE AND ADMINISTRATION**). **14.** Patients should be advised to store Flector® Patch and to discard used patches out of the reach of children and pets. If a child or pet accidentally ingests Flector® Patch, medical help should be sought immediately (see **PRECAUTIONS, Accidental Exposure in Children**).

Laboratory Tests: Because serious GI tract ulcerations and bleeding can occur without warning symptoms, physicians should monitor for signs or symptoms of GI bleeding. Patients on long-term treatment with NSAIDs, should have their CBC and a chemistry profile checked periodically. If clinical signs and symptoms consistent with liver or renal disease develop, systemic manifestations occur (e.g. eosinophilia, rash, etc.) or if abnormal liver tests persist or worsen, Flector® Patch should be discontinued.

Drug Interactions: ***ACE-inhibitors:*** Reports suggest that NSAIDs may diminish the antihypertensive effect of ACE-inhibitors. This interaction should be given consideration in patients taking NSAIDs concomitantly with ACE-inhibitors.

Aspirin: When Flector® Patch is administered with aspirin, the binding of diclofenac to protein is reduced, although the clearance of free diclofenac is not altered. The clinical significance of this interaction is not known; however, as with other NSAIDs, concomitant administration of diclofenac and aspirin is not generally recommended because of the potential of increased adverse effects.

Diuretics: Clinical studies, as well as post marketing observations, have shown that Flector® Patch may reduce the natriuretic effect-of furosemide and thiazides in some patients. This response has been attributed to inhibition of renal prostaglandin synthesis. During concomitant therapy with NSAIDs, the patient should be observed closely for signs of renal failure (see **WARNINGS, Renal Effects**), as well as to assure diuretic efficacy.

Lithium: NSAIDs have produced an elevation of plasma lithium levels and a reduction in renal lithium clearance. The mean minimum lithium concentration increased 15% and the renal clearance was decreased by approximately 20%. These effects have been attributed to inhibition of renal prostaglandin synthesis by the NSAID. Thus, when NSAIDs and lithium are administered concurrently, subjects should be observed carefully for signs of lithium toxicity.

Methotrexate: NSAIDs have been reported to competitively inhibit methotrexate accumulation in rabbit kidney slices. This may indicate that they could enhance the toxicity of methotrexate. Caution should be used when NSAIDs are administered concomitantly with methotrexate.

Warfarin: The effects of warfarin and NSAIDs on GI bleeding are synergistic, such that users of both drugs together have a risk of serious GI bleeding higher than users of either drug alone.

Carcinogenesis, Mutagenesis, Impairment of Fertility: ***Carcinogenesis:*** Long-term studies in animals have not been performed to evaluate the carcinogenic potential of either diclofenac epolamine or Flector® Patch.

Mutagenesis: Diclofenac epolamine is not mutagenic in *Salmonella Typhimurium* strains, nor does it induce an increase in metabolic aberrations in cultured human lymphocytes, or the frequency of micronucleated cells in the bone marrow micronucleus test performed in rats.

Impairment of Fertility: Male and female Sprague Dawley rats were administered 1, 3, or 6 mg/kg/day diclofenac epolamine via oral gavage (males treated for 60 days prior to conception and during mating period, females treated for 14 days prior to mating through day 19 of gestation). Diclofenac epolamine treatment with 6 mg/kg/day resulted in increased early resorptions and postimplantation losses; however, no effects on the mating and fertility indices were found. The 6 mg/kg/day dose corresponds to 3-times the maximum recommended daily exposure in humans based on a body surface area comparison.

Pregnancy: ***Teratogenic Effects. Pregnancy Category C.:*** Pregnant Sprague Dawley rats were administered 1, 3, or 6 mg/kg diclofenac epolamine via oral gavage daily from gestation days 6-15. Maternal toxicity, embryotoxicity, and increased incidence of skeletal anomalies were noted with 6 mg/kg/day diclofenac epolamine, which corresponds to 3-times the maximum recommended daily exposure in humans based on a body surface area comparison. Pregnant New Zealand White rabbits were administered 1, 3, or 6 mg/kg diclofenac epolamine via oral gavage daily from gestation days 6-18. No maternal toxicity was noted; however, embryotoxicity was evident at 6 mg/kg/day group which corresponds to 6.5-times the maximum recommended daily exposure in humans based on a body surface area comparison.

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

Nonteratogenic Effects: Because of the known effects of nonsteroidal anti-inflammatory drugs on the fetal cardiovascular system (closure of ductus arteriosus), use during pregnancy (particularly late pregnancy) should be avoided.

Male rats were orally administered diclofenac epolamine (1, 3, 6 mg/kg) for 60 days prior to mating and throughout the mating period, and females were given the same doses 14 days prior to mating and through mating, gestation, and lactation. Embryotoxicity was observed at 6 mg/kg diclofenac epolamine (3-times the maximum recommended daily exposure in humans based on a body surface area comparison), and was manifested as an increase in early resorptions, post-implantation losses, and a decrease in live fetuses. The number of live born and total born were also reduced as was F1 postnatal survival, but the physical and behavioral development of surviving F1 pups in all groups was the same as the deionized water control, nor was reproductive performance adversely affected despite a slight treatment-related reduction in body weight.

Labor and Delivery: In rat studies with NSAIDs, as with other drugs known to inhibit prostaglandin synthesis, an increased incidence of dystocia, delayed parturition, and decreased pup survival occurred. The effects of Flector® Patch on labor and delivery in pregnant women are unknown.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human-milk and because of the potential for serious adverse reactions in nursing infants from Flector® Patch, a decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.

Pediatric Use: Safety and effectiveness in pediatric patients have not been established.

Geriatric Use: Clinical studies of Flector® Patch 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.

Diclofenac, as with any NSAID, is known to be substantially excreted by the kidney, and the risk of toxic reactions to Flector® Patch may be greater in patients with impaired renal function. Because elderly patients are more likely to have decreased renal function, care should be taken when using Flector® Patch in the elderly, and it may be useful to monitor renal function.

ADVERSE REACTIONS: In controlled trials during the premarketing development of Flector® Patch, approximately 600 patients with minor sprains, strains, and contusions have been treated with Flector® Patch for up to two weeks.

Adverse Events Leading to Discontinuation of Treatment: In the controlled trials, 3% of patients in both the Flector® Patch and placebo patch groups discontinued treatment due to an adverse event. The most common adverse events leading to discontinuation were application site reactions, occurring in 2% of both the Flector® Patch and placebo patch groups. Application site reactions leading to dropout included pruritus, dermatitis, and burning.

Common Adverse Events: Localized Reactions: Overall, the most common adverse events associated with Flector® Patch treatment were skin reactions at the site of treatment.

Table 1 lists all adverse events, regardless of causality, occurring in ≥ 1% of patients in controlled trials of Flector® Patch. A majority of patients treated with Flector® Patch had adverse events with a maximum intensity of "mild" or "moderate."

Table 1. Common Adverse Events (by body system and preferred term) in ≥1% of Patients treated with Flector® Patch or Placebo Patch[1]

	Diclofenac N=572		Placebo N=564	
	N	Percent	N	Percent
Application Site Conditions	64	11	70	12
Pruritus	31	5	44	8
Dermatitis	9	2	3	<1
Burning	2	<1	8	1
Other[2]	22	4	15	3
Gastrointestinal Disorders	49	9	33	6
Nausea	17	3	11	2
Dysgeusia	10	2	3	<1
Dyspepsia	7	1	8	1
Other[3]	15	3	11	2
Nervous System Disorders	13	2	18	3
Headache	7	1	10	2
Paresthesia	6	1	8	1
Somnolence	4	1	6	1
Other[4]	4	1	3	<1

[1] The table lists adverse events occurring in placebo-treated patients because the placebo-patch was comprised of the same ingredients as Flector® Patch except for diclofenac. Adverse events in the placebo group may therefore reflect effects of the non-active ingredients. [2] Includes: application site dryness, irritation, erythema, atrophy, discoloration, hyperhidriosis, and vesicles. [3] Includes: gastritis, vomiting, diarrhea, constipation, upper abdominal pain, and dry mouth. [4] Includes: hypoaesthesia, dizziness, and hyperkinesias.

Foreign labeling describes that dermal allergic reactions may occur with Flector® Patch treatment. Additionally, the treated area may become irritated or develop itching, erythema, edema, vesicles, or abnormal sensation.

DRUG ABUSE AND DEPENDENCE: Controlled Substance Class: Flector® Patch is not a controlled substance.

Physical and Psychological Dependence: Diclofenac, the active ingredient in Flector® Patch, is an NSAID that does not lead to physical or psychological dependence.

OVERDOSAGE: There is limited experience with overdose of Flector® Patch. In clinical studies, the maximum single dose administered was one Flector® Patch containing 180 mg of diclofenac epolamine. There were no serious adverse events.

Should systemic side effects occur due to incorrect use or accidental overdose of this product, the general measures recommended for intoxication with non-steroidal anti-inflammatory drugs should be taken.

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Table 4: Signs and Symptoms of End-organ damage

End-organ damage	Signs and symptoms
Hypertensive encephalopathy	• Signs of cerebral edema – insidious onset headaches – nausea – vomiting – altered mental status – confusion – drowsiness – seizures – occasional focal deficits – coma • Retinal hemorrhage or exudates • Signs of acute renal failure – oliguria – hematuria – proteinuria
Intracranial hemorrhage/stroke syndrome	• May occur with routine physical activity, especially during intense emotional activity or exertion • Headache and vomiting may lead to decrease level of consciousness • Typically, there is gradual progressive worsening of symptoms and increasing neurologic deficits, depending upon site of bleed
Acute left ventricular failure with pulmonary edema	• Cough, dyspnea and fatigue rapidly becoming severe • Chest discomfort or pain may be apparent • Tachypnea, tachycardia, S3 and/or S4 sounds, crackles at the pulmonary bases can be present • Signs of concomitant right-sided failure, including jugular venous distension and pedal edema, may be present
Acute coronary syndrome	• Typical or atypical chest pain (atypical chest pain especially in diabetic patients and inpatients with known cardiac or non-cardiac atherosclerotic disease)
Acute myocardial infarction (AMI)	• Typical or atypical chest pain • Electrocardiogram changes consistent with AMI
Dissecting aortic aneurysm	• Abrupt onset of thoracic or abdominal pain • Mediastinal or aortic widening on chest x-ray • Absence of proximal extremity or carotid pulse • Blood pressure difference of more than 20 mmHg between the right and left arm
Worsening renal failure	• Azotemia • Proteinuria • Oliguria • Hematuria
Eclampsia	• Pregnant patient with nausea, vomiting, or seizures

hospital for further management.

Patients with hypertensive urgency, on the other hand, can be treated in the urgent care setting.

Treatment

The goal of treatment in hypertensive urgency is to slowly reduce the blood pressure over a period of 24 hours using oral antihypertensive agents. This is usually done on an outpatient basis unless patient follow-up is unpredictable.

As non-adherence is the major cause of hypertensive urgencies, restarting the previously established regimen is usually sufficient. Treatment may be restarted with a lower dose and gradually increased as tolerated over a period of several days.

The mean arterial blood pressure should not be reduced by more than 25% in the first 24 hours.[10] Rapid or excessive reductions in blood pressure can have deleterious effects, including hypotension. This is more commonly seen in high-risk patients like the elderly, or patients with severe peripheral vascular disease, or severe atherosclerotic, cardiac, or intracranial disease.[10]

We should stress the importance of lowering blood pressure gradually to acceptable measurements; there is no evidence suggesting that immediately decreasing blood pressure to levels below "normal" reduces risk in the hypertensive patient.

Close follow-up, usually within 24 hours, is recommended. If there are severe comorbid conditions or safety issues at home, the patient can be observed in an inpatient setting for a day. A reduction in blood pressure to 160/110 mmHg is all that is required in the first 24 hours.

Essential information for oral antihypertensive agents commonly used for the treatment of hypertensive urgency is provided in **Table 5**.

Nifedipine is a dihydropyridine-derived calcium channel blocker that has

Table 5: Oral Antihypertensive Medications used in Hypertensive Urgency

Medication	Classification	Onset/Duration of action	Adverse effects	Dosing schedule	Special considerations
Clonidine	Centrally acting α-2-adrenergic agonist	Onset: 30–60 minutes Duration: 6–8 hours	• Dry mouth • Drowsiness • Constipation • Bradycardia • Orthostatic • Hypotension • Rebound • Hypertension with abrupt discontinuation	0.1 to 0.2 mg; additional doses of 0.1 mg given every hour until diastolic is <115 mmHg or a maximum dose of 0.7 mg has been given	• Safe for elderly or renal failure patients • Beta-blockers may worsen withdrawal symptoms • Contraindicated with sinus bradycardia, sick sinus syndrome, 1st-degree heart block or obtundation
Captopril	Angiotensin-converting enzyme (ACE) inhibitor	Onset: 15–30 minutes Duration: 4-6 hours	Skin rash, cough, taste alterations, hyperkalemia, angioedema, renal failure (in patients with bilateral renal artery stenosis)	25 mg; may be repeated every 30 minutes as needed	• Captopril is the shortest-acting ACE-inhibitor • Blood pressure will not decrease significantly if no response is observed within 30 to 60 minutes
Losartan	Angiotensin II-receptor (ARB) antagonist	Peak: 1-3 hours	Generally well-tolerated with incidence of adverse effects similar to placebo	50 mg; higher doses have not been found to produce more significant blood pressure reductions	Extensive first-pass metabolism may cause bioavailability to double in patients with hepatic impairment
Nicardipine (regular release)	2nd-generation dihydropyridine calcium channel blocker	Onset: 0.5-2 hours Duration: 8 hours	Hypotension, heart palpitations, reflex tachycardia, headache, flushing, dizziness	30 mg	• Extensive first-pass metabolism • Do not use in acute heart failure or coronary ischemia
Labetolol	Nonselective α-1, β-adrenergic receptor blocker	Onset: 20 min–2 hours Duration: dose dependent	• Nausea • Vomiting • Dizziness • Heart block • Headache • Fatigue • Broncho-constriction	200-400 mg; repeat every 3 hours as needed	Do not uses in patients with • heart failure • asthma/COPD • bradycardia • 1st-degree heart block

been used extensively in the past for the treatment of hypertensive urgency. However, nifedipine has never been approved by the FDA for short-term use in hypertension. More recently, the risks of serious adverse reactions like severe hypotension, acute coronary events and ischemic stroke have led the U.S. National Heart, Lung, and Blood Institute to issue a warning that this agent should not be used in the treatment of hypertension, angina, and myocardial infarction.

Conclusion

Initial recognition of an absence of end-organ damage is crucial in differentiating hypertensive urgency from hypertensive emergency, and establishing a treatment plan. Judicious use of oral antihypertensive agents in the outpatient clinical setting can safely lower blood pressure over a period of several days, leading to improved outcomes. ■

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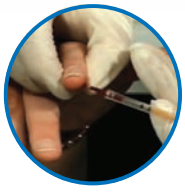

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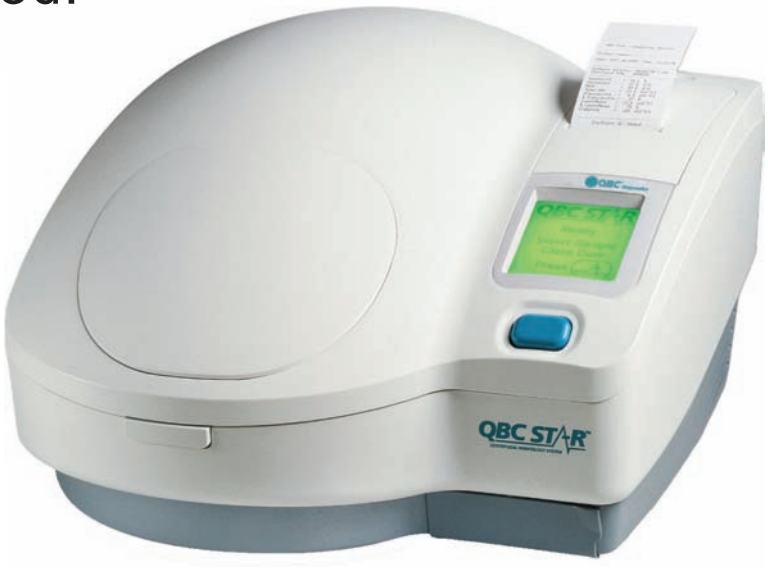

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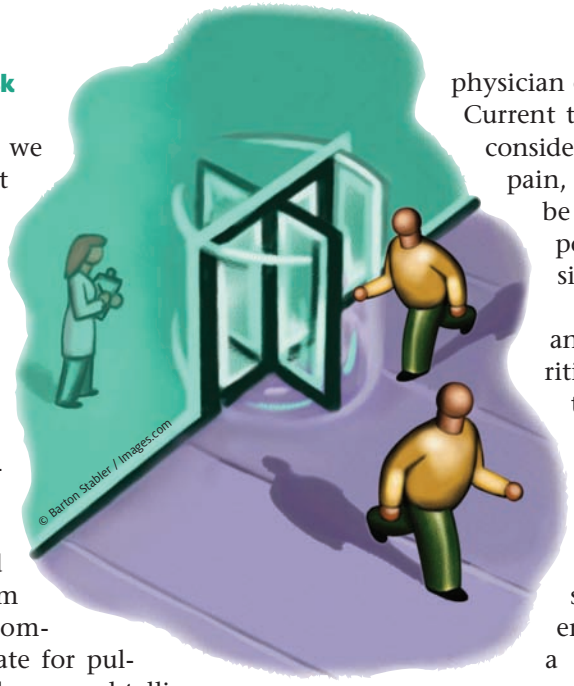
The Case of a 49-Year-Old Woman with Pleuritic Chest Pain

In Bouncebacks, *which appears semimonthly in* JUCM, *we provide the documentation of an actual patient encounter, discuss patient safety and risk management principles, and then reveal the patient's "bounceback" diagnosis.*

Cases are adapted from the book Bouncebacks! Emergency Department Cases: ED Returns *(2006, Anadem Publishing,* www.anadem.com*; also available at* www.amazon.com *and* www.acep.org*) by Michael B. Weinstock and Ryan Longstreth. The book includes 30 case presentations with risk management commentary by Gregory L. Henry, past president of The American College of Emergency Physicians, and discussions by other nationally recognized experts.*

Jill C. Miller, MD and Michael B. Weinstock, MD



Approaching Differences in Risk Tolerance (Part 2 of 2)

In our last *Bouncebacks* article, we explored the difficulties that arise when the patient and doctor disagree on treatment through the case of a 28-year-old pregnant patient who left against medical advice (*JUCM*, February 2009).

In the second part of this series, we present a case which explores differences in expectations between a patient and the physicians.

The patient and her husband received different advice from two physicians, the first recommending a CT scan to evaluate for pulmonary embolism (PE), and the second telling her the test was not necessary.

Traditionally, medical schools have taught that a diagnostic test needs to be administered whenever the physician considers the diagnosis of PE. Current thinking is that PE should be considered in every patient with chest pain, but often this diagnosis can be clinically excluded without potentially harmful and expensive testing.

Our patient initially went to an urgent care center for pleuritic chest pain and was referred to the ED for a CT scan. Though she had a history of deep vein thrombosis (DVT), the ED physician thought the exam findings were most consistent with a muscular strain, as her pain started several hours after falling out of a hammock, was worse with movement, and there was point tenderness. Additionally, the patient was a diabetic with only one kidney, increasing the risk of contrast nephropathy.

This was not a patient to be "cookbooked!"

The ED physician felt that the risks of the CT exceeded the benefits and so did not order the test, to the consternation of the patient and her husband.

This begs several questions:

- Is a physician ever obligated to order a test?
- Is the decision to order a test sometimes influenced by patient expectations or fear of a patient complaint (or, should it be)?
- Is there a legal risk from over-testing?
- Are physician practice patterns changed by fear of litigation, and can this change result in harm to the patient?
- What is the best way to approach the patient when disagreement exists, even after extensive discussion of risks and benefits?

In this article, we will discuss approaches to these questions and suggest management techniques. Additionally, we will briefly review the diagnosis of PE and present a unique way to reliably exclude the diagnosis in low-risk patients using history and exam alone.

Initial Visit

(Note: The following is the actual documentation of the providers, including punctuation and spelling errors.)

CHIEF COMPLAINT: Rib pain

VITAL SIGNS

Time	Temp (F)	Rt.	Pulse	Resp
12:15	97.3	O	68	16
13:58	78			18

Syst	Diast	Pos.	O2 Sat O2%	Pain Sc
115	67	S		8
110	68	S	98%	8

HISTORY OF PRESENT ILLNESS:

71 year old female presents with right sided chest pain which is sharp and worse with movement. Her pain began two days ago which was one day after she fell out of a hammock. Her pain is worse when she moves her body and takes a deep breath. She did go to an urgent care who did a chest x-ray which was read as normal and sent her to be evaluated for a blood clot. The patient does have a history of DVT which occurred 24 years ago after a Cesarean section and she did take Coumadin and heparin for six weeks and has not had a problem since that time. She denies any further risk factors for blood clots such as pain or swelling of the lower extremities, prolonged immobilization, long plane or car trips recently or trauma requiring the use of any casts or splints of the lower extremities. No history of recent surgery, hemoptysis, cancer, or hormone therapy.

PAST MEDICAL HISTORY/TRIAGE:

Triage nurse: Patient states that she fell out of a hammock Thursday. Patient states that since she has had right rib pain and was unable to sleep last night because of pain. "Patient unable to breath deep." Patient sent in by Urgent Care, presents with chest films.

PMHx: Meningits, Ulcer disease, Diverticulitis, diabetes, Remote DVT after surgery
PSHx: TAH, Tubal Ligation, Back Surgery, C-Section, Appendectomy, Cholesectomy, Bladder Suspension, Right Nephrectomy,
Med Allergies: Dilaudid
Medications: None
Social History: Smoker
Family History: Negative for heart disease

EXAM (shortened):

General: Well-appearing, well nourished; A&O X 3, in no apparent distress. Significant pain evidenced by facial wincing when she sits up for lung auscultation.
Resp: Normal chest excursion with respiration, breath sounds clear and equal bilaterally, no wheeze, rhonchi or rales.
Card: RRR no m/r/g
Chest: very severe right sided chest pain with palpation of right chest under the breast which is point tender.
Abc: Non-distended, Non-tender, soft without rigidity, rebound or guarding. No pulsatile mass
Extremities: Pulses are 2 plus and equal times 4 extremities, no peripheral edema or calf tenderness

ORDERS:

Percocet 10mg po

RADIOLOGY:

Chest x-ray: Normal

PROGRESS NOTES:

I did have a long discussion with the patient and her husband as she was sent here to be evaluated for pulmonary embolism. I did obtain additional history in that she did fall about 3 feet out of a hammock onto her right side 3 days ago onto hard ground. She has pain when she moves and also when she breathes which

would be consistent with a muscular strain. She does have risk factor for PE as she did have DVT 24 years ago. We did discuss getting a cat scan of her chest and the risks of having this test with contrast in her particular situation with only one kidney and a history of diabetes. I explained to her that I thought the risks were greater than the benefits. I did tell her we cannot exclude a pulmonary embolism 100% based on exam alone, but it seems unlikely given her history. She will return if her symptoms worsen or do not improve. I spoke with the PCP to ensure follow up who agrees with plan of care and will see patient as an outpatient.

DIAGNOSIS:
Chest Pain—musculoskeletal

DISPOSITION:
Rx for Percocet and instructions for chest wall pain. F/u with PCP in 2-3 days. Record FAX'ed to PCP

Discussion Point 1: Managing Patient Expectations

Every patient comes to the physician with an agenda. Some agendas are clear and communicated directly, like "Why am I coughing?", and some are hidden, such as when the patient is actually thinking, "I am really scared this is cancer."

Some are known to the patient and *intentionally* hidden ("I have had panic attacks in the past but *really* think this is a heart attack") and some are not so conscious, such as secondary gain of being sick or pain from narcotic withdrawal attributed by the patient to "my migraines."

The art of medicine involves localizing a patient's concern and addressing it during the visit; however, the patient's known or hidden agenda should not drive the medical decision making.

In the case presented here, our patient's agenda was clear; the urgent care physician had a concern for pulmonary embolism, a life-threatening disorder, and sent the patient to the ED for a CT scan.

Though the stakes are raised when a patient is concerned about a specific disease, be it pneumonia or anthrax, we need to provide the best medical advice possible and to, first, do no harm. Just as a surgeon is never forced to operate, we are not forced to order tests or administer medications we feel may harm the patient.

It is the successful physician who can address a patient's realistic fears without falling into the trap of practicing defensive medicine or altering the diagnostic or therapeutic approach to preempt a patient complaint or poor comments on a customer satisfaction survey.

We practice in a time where the paternalistic approach to medicine is out of favor. Most clinicians prefer to engage their patients as partners and to include them in the decisions of their medical care. In lieu of this relationship, the physician is still ultimately responsible for a safe and successful medical visit.

If we think of patients as partners or clients who hire us as medical consultants, we can offer our best advice and lay out the options to approach the specific issue.

We have specific training in issues usually not considered by the average patient, including pretest probability and risk/benefit ratio, but should try to explain these concepts to our patients when they request a test that would not be in their best interest. We are hired to give advice, but are not required to let our patients dictate the final medical testing or treatment. An adult of sound mind and body is always at liberty to refuse our

Table 1. Modified Wells Criteria for PE

Criteria	Points
Clinical signs of DVT	3.0
An alternate diagnosis is less likely than PE	3.0
Heart rate >100 beats per minute	1.5
Immobilization or surgery in past 4 weeks	1.5
Previous DVT or PE	1.5
Hemoptysis	1.0
Malignancy (being treated, treated in past 6 months, or palliative)	1.0
Traditional Clinical Probability Assessment	
0-1 points	Low probability of PE
2-6 points	Moderate probability
>6 points	High probability
Simplified Clinical Probability	
PE likely	>4 points
PE unlikely	≤4 points

advice and seek another opinion, as demonstrated in the first article in this series.

Our patient did have some risk of PE, as she had a history of DVT, and it was reasonable for her to be referred from the urgent care if the physician had any doubt as to the cause of her chest pain. The patient was understandably concerned; she had been told she may have a life-threatening condition and it was incumbent on the emergency room physician to address her concerns and fears.

This does not mean an imaging study was required. She needed to have the pretest probability estimated, as a decision for diagnostic imaging would need to be interpreted in this light.

This is the essence of what it means to be a physician.

Anyone can randomly order tests, but physicians are specifically trained to think in terms of probabilities and risk vs. benefits; it is our job to understand that any intervention carries an inherent risk and to communicate this information to patients in language they can understand.

Though our patient had a history of DVT, placing her at higher risk of PE, her pain had a defined mechanism, was worse with movement, and reproducible with palpation, suggesting a musculoskeletal etiology.

The ED physician determined that because she had a low pretest probability and also was at a higher risk for contrast nephropathy due to her diabetes and one kidney, the risk of the test outweighed the benefit and she needed no further work-up. This raises an interesting question: Is the emergency room physician held to a higher standard if he misses a diagnosis in a patient who presents to be specifically ruled out for that particular condition?

Discussion Point 2: Defensive Medicine

Defensive medicine is a tremendous financial burden on the medical system; cost estimates range from $100 billion to $126 billion per year. Between 7% and 11% of all healthcare dollars are spent on defensive medicine, a practice so prevalent that over 90% of physicians have admitted ordering inappropriate tests, and over 50% admit unnecessarily ordering invasive surgical procedures such as biopsies.

On the other hand, it is so devastating just to be named in a lawsuit that many physicians report that they just don't care about the extra cost to society.

Nothing in medicine is certain. In our profession, we are obliged to address this uncertainty

and make decisions while weighing the risks and benefits of testing vs. misdiagnosis.

In this case, our emergency room physician did just that and felt that her low pretest probability and risk of contrast nephropathy with one kidney and diabetes did not merit the test. He also felt that the risk of a false positive test could further harm her, as this would commit her to lifelong warfarin therapy given her previous history of DVT.

Table 2. PERC Rule Criteria

- ☐ Age <50
- ☐ Heart rate <100
- ☐ Oxyhemoglobin saturation ≥95%
- ☐ No hemoptysis
- ☐ No estrogen use
- ☐ No prior DVT or PE
- ☐ No unilateral leg swelling
- ☐ No surgery or trauma requiring hospitalization within the past 4 weeks

For a clinician to lose a negligence cases, it must be proven that a care standard was breached. He is no more liable because the patient came in with a particular concern than he would be if she didn't mention the diagnosis by name. Clearly, he had a competent thought process that many physicians would share.

Communication is the key to avoiding the vast majority of suits. Anger, not injury, is the most frequent precipitating factor to claims. Treating our patients with patience and respect can greatly improve patient satisfaction, improve patient's clinical response to treatment, and decrease the risk of being named in a malpractice suit.

Visit 2: Next Day

The patient's husband is not satisfied that there are now two physicians with differing opinions and calls the hospital administration, who calls the ED director; it is decided to bring the patient back to have the contrast enhanced CT scan done at no charge. The study

was negative and the patient was again discharged to home with a final diagnosis of chest wall contusion, with advice to follow up with her primary care physician.

Discussion Point 3: Evaluation for Pulmonary Embolism

Pulmonary embolism is the third-most common cardiovascular cause of death (after ischemic heart disease and stroke), with up to 11% dying within the first hour of symptoms. There is a mortality rate of approximately 30% without treatment.

Unfortunately, clinical clues are often nonspecific and the symptoms and signs are often absent. Classically, a patient may complain of a sudden onset of dyspnea, calf or thigh pain or swelling, apprehension, cough and pleuritic chest pain.

The physical exam may reveal tachypnea, tachycardia, rales, fever, lower extremity edema, hypotension, cyanosis, heart gallop, friction rub, a loud P2, diaphoresis, and phlebitis; *often, however, it is normal.*

Because the stakes of misdiagnosis are so high and the presentations so varied and often nonspecific, certain prediction rules have been established to determine which patients are more likely to have a pulmonary embolus. It is essential to think in terms of pretest probability when evaluating for PE because no test is perfect, and false negatives and positives are common.

One such guideline to assess probability of PE is the Modified Wells Criteria (**Table 1**).

Recently described by Dr. Jeff Kline, director of research in the Department of Emergency Medicine at Carolinas Medical Center and one of the world's authorities on PEs is the Pulmonary Embolism Rule-Out Criteria (PERC) rule. This set of simple questions was developed by Dr. Kline (and validated in four different academic centers) to deal with a complex problem; many physicians are so paralyzed by fear of misdiagnosis and litigation that they are testing too many patients for PE.

The PERC Rule is simple and easy to apply; if the physician feels there is a low likelihood of PE (clinical gestalt that there is <15% chance of PE), he or she can evaluate for the presence or absence of eight specific criteria (**Table 2**). If none of these criteria is present, the patient has <2% risk of PE and no further testing is indicated.

In other words, PE can be excluded without further diagnostic testing if the patient meets *all* PERC

criteria *and* there is a low clinical suspicion—i.e., <15% chance of PE clinically.

(Note: The PERC rule would have been positive for more than one criterion in our patient so could not have been used to clinically exclude PE.)

Summary

Clearly, numerous factors—including her husband's dissatisfaction with the visit, the small risk that the ED physician was wrong, and the hospital administration's desire to please—were present in the decision to bring the patient back for chest imaging. There may have even been some additional defensive medicine practiced by the initial urgent care physician who sent the patient to the ED.

Could there have been legal implications if the patient had gone into irreversible renal failure and ended up on dialysis after the CT study? Thankfully for the patient and the physician who ordered the test, we will never find out.

Part of our profession requires us to focus a patient's fear and balance that with the risk of testing while respecting the patient's agenda—staying healthy and being reassured that they are well. The data are clear that physicians who are "test happy" are no less likely to be sued, and that patient satisfaction is most dependent on an open, honest exchange as opposed to a prescription for antibiotics, an x-ray, or CT scan.

Patients who feel that their doctor hears them and understands their concerns are most likely to have a successful visit and outcome. ■

Resources and Suggested Reading

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On the Elbow Extension Test, Oral Co-amoxiclav for Pyelonephritis, Dexamethasone, and Acute Migraine

■ NAHUM KOVALSKI, BSc, MDCM

Each month, Dr. Nahum Kovalski reviews a handful of abstracts from, or relevant to, urgent care practices and practitioners. For the full reports, go to the source cited under each title.

Should the Elbow Extension Test Be Used to Rule Out Bony Injury?

Key point: Full elbow extension had a negative predictive value for fracture of 98.4% in adults and 95.8% in children.

Citation: Appelboam A, Reuben AD, Benger JR, et al. Elbow extension test to rule out elbow fracture: Multicentre, prospective validation and observational study of diagnostic accuracy in adults and children. *BMJ*. 2008;337:a2428.

The objective of this study was to determine whether full elbow extension as assessed by the elbow extension test can be used in routine clinical practice to rule out bony injury in patients presenting with elbow injury.

This was a multicenter, prospective, interventional validation study in secondary care, covering five emergency departments in southwest England.

Of 1,740 eligible participants, 602 patients were able to fully extend their elbow; 17 of these patients had a fracture. Two adult patients with olecranon fractures needed a change in treatment. In the 1,138 patients *without* full elbow extension, 521 fractures were identified.

The elbow extension test can be used in routine practice to inform clinical decision making. Patients who cannot fully extend their elbow after injury should be referred for radiography. For those able to fully extend their elbow, radiography can be deferred if the practitioner is confident that an olecranon fracture is not present. ■

Nahum Kovalski is an urgent care practitioner and assistant medical director/CIO at Terem Immediate Medical Care in Jerusalem, Israel.

Oral Co-amoxiclav, Alone or in Combination for Pyelonephritis in Children

Key point: Treatment with oral antibiotics is as effective as parenteral then oral treatment in the management of the first episode of clinical pyelonephritis in children.

Citation: Montini G, Toffolo A, Zucchetta P, et al. Antibiotic treatment for pyelonephritis in children: Multicentre randomised controlled non-inferiority trial. *BMJ*. 2007;335:386.

This was a multicenter, randomized controlled, open-label, parallel group, non-inferiority trial, carried out in 28 pediatric units in northeast Italy. Participants were 502 children aged 1 month to <7 years with clinical pyelonephritis. Interventions tested were oral co-amoxiclav (50 mg/kg/day in three doses for 10 days) or parenteral ceftriaxone (50 mg/kg/day in a single parenteral dose) for three days, followed by oral co-amoxiclav (50 mg/kg/day in three divided doses for seven days).

Intention-to-treat analysis showed no significant differences between oral (n=244) and parenteral (n=258) treatment, both in the

- primary outcome: scarring scintigraphy at 12 months 27/197 (13.7%) vs. 36/203 (17.7%)
- secondary outcomes:
  - time to defervescence 36.9 hours (SD 19.7) vs. 34.3 hours
  - white cell count 9.8x109/l vs. 9.5x109/l

– percentage with sterile urine 185/186 vs. 203/204. ■

Effectiveness of IM Dexamethasone for Acute Exudative Pharyngitis

Key point: *Sore throat in patients with acute exudative pharyngitis is greatly reduced by an 8 mg single dose of intramuscular dexamethasone accompanied by antibiotic.*

Citation: Tasar A, Yanturali S, Topacoglu H, et al. Clinical efficacy of dexamethasone for acute exudative pharyngitis. *J Emerg Med*. 2008;35(4):363-367.

The objective of this study was to investigate whether treatment with single-dose dexamethasone can provide relief of symptoms in acute exudative pharyngitis.

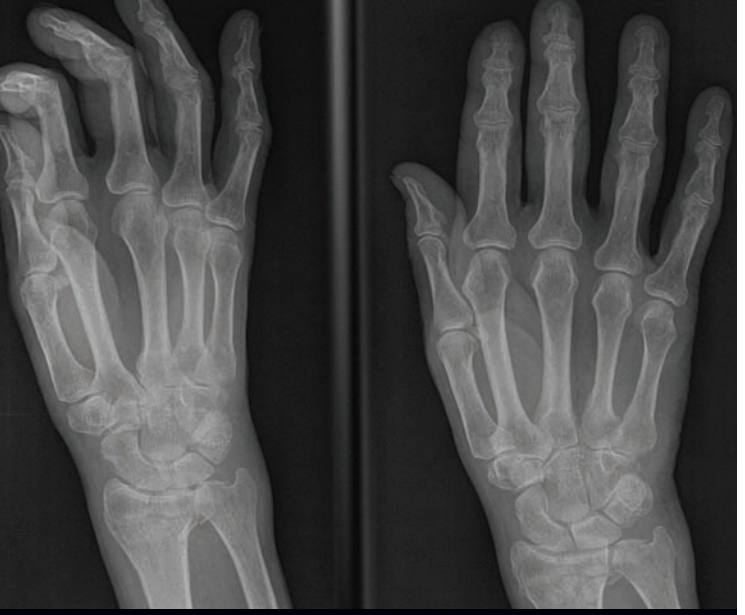
A prospective, randomized, double-blinded, placebo-controlled clinical trial was undertaken over a three-month period in a university-based emergency eepartment. The study included all consecutive patients between 18 and 65 years of age presenting with acute exudative pharyngitis, sore throat, odynophagia, or a combination, and with more than two Centor criteria.

Each patient was treated empirically with azithromycin and acetaminophen for three days. The effects of placebo were compared with those of a fixed single dose (8 mg) of intramuscular injection of dexamethasone.

Time to perceived onset of pain relief was 8.06 ± 4.86 h in steroid-treated patients, as opposed to 19.90 ± 9.39 h in the control group (p=0.000). The interval required to become pain-free was 28.97 ± 12.00 h in the dexamethasone group, vs. 53.74 ± 16.23 h in the placebo group.

No significant difference was observed in vital signs between the regimens.

Sore throat and odynophagia in patients with acute exudative pharyngitis may respond better to treatment with an 8 mg single dose of intramuscular dexamethasone accompanied by an antibiotic regimen than to antibiotics alone. ■



Share Your Insights

At its core, ***JUCM***, *The Journal of Urgent Care Medicine* is a forum for the exchange of ideas and a vehicle to expand on the core competencies of urgent care medicine.

Nothing supports this goal more than **Insights in Images**, where urgent care practitioners can share the details of actual cases, as well as their expertise in resolving those cases. After all, in the words of UCAOA Executive Director Lou Ellen Horwitz, everyday clinical practice is where "the rubber meets the road."

Physicians, physician assistants, and nurse practitioners are invited to submit cases, including x-rays, EKGs, or photographic displays relating to an interesting case encountered in the urgent care environment. Submissions should follow the format presented on the preceding pages.

If you have an interesting case to share, please e-mail the relevant images and clinical information to *editor@jucm.com*. We will credit all whose submissions are accepted for publication.

JUCM
THE JOURNAL OF URGENT CARE MEDICINE

ABSTRACTS IN URGENT CARE

New Class of Drugs for Acute Migraine

Key point: *Telcagepant, a calcitonin gene-related peptide antagonist, is as effective as zolmitriptan, with fewer adverse effects.*

Citations: Ho TW, Ferrari MD, Dodick DW. Efficacy and tolerability of MK-0974 (telcagepant), a new oral antagonist of calcitonin gene-related peptide receptor, compared with zolmitriptan for acute migraine: A randomised, placebo-controlled, parallel-treatment trial. *Lancet*. 2008;372:2115-2123. Edvinsson L. CGRP-receptor antagonism in migraine treatment. *Lancet*. 2008;372:2089-2090.

Migraine headache is commonly treated with triptans (serotonin-receptor antagonists), but—because these agents are associated with side effects, such as chest discomfort, dizziness, and throat tightness—they are poorly tolerated by some patients and contraindicated in those with cardiovascular disease.

Telcagepant is a new calcitonin gene-related peptide antagonist that lacks the vasoconstrictor effects of triptans.

In a randomized, controlled, double-blind, parallel-treatment trial funded by the maker of telcagepant, 1,380 adult patients (mean age, 42; 85% female) with acute migraine received one of four oral treatments: telcagepant (160 mg or 300 mg), zolmitriptan (5 mg), or placebo. The study was conducted at 81 outpatient primary care and headache centers in Europe and the U.S.

"An editorialist suggests the efficacy of telcagepant 'marks a new era in migraine therapy.'"

Patients were excluded if they had cardiovascular disease or uncontrolled hypertension or had used selective serotonin reuptake inhibitors, monoamine oxidase inhibitors, or propranolol within one month before the screening visit. Patients recorded headache pain severity as none, mild, moderate, or severe, and presence or absence of phonophobia, photophobia, and nausea at baseline; every 30 minutes for 3 hours; and at 4, 6, 8, and 24 hours.

Telcagepant 300 mg and zolmitriptan 5 mg were similarly effective, and both were superior to telcagepant 150 mg and placebo for pain relief; pain freedom; and absence of phonophobia, photophobia, and nausea. No deaths and only one serious adverse event (in a placebo recipient) were reported. Adverse events were significantly more common in the zolmitriptan group than in the other three groups.

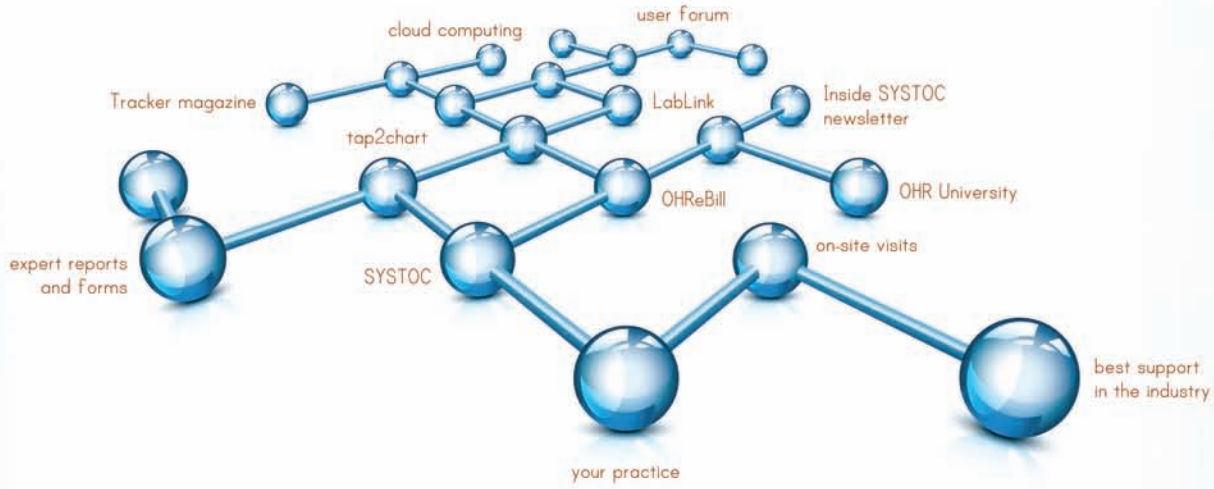
An editorialist suggests that the proof of efficacy of telcagepant—the first of a new class of drugs—"marks a new era in migraine therapy."

Published in *J Watch Emerg Med*, January 16, 2009—Kristi L. Koenig, MD, FACEP. ■

in
uncertain times

TRUST

is critical



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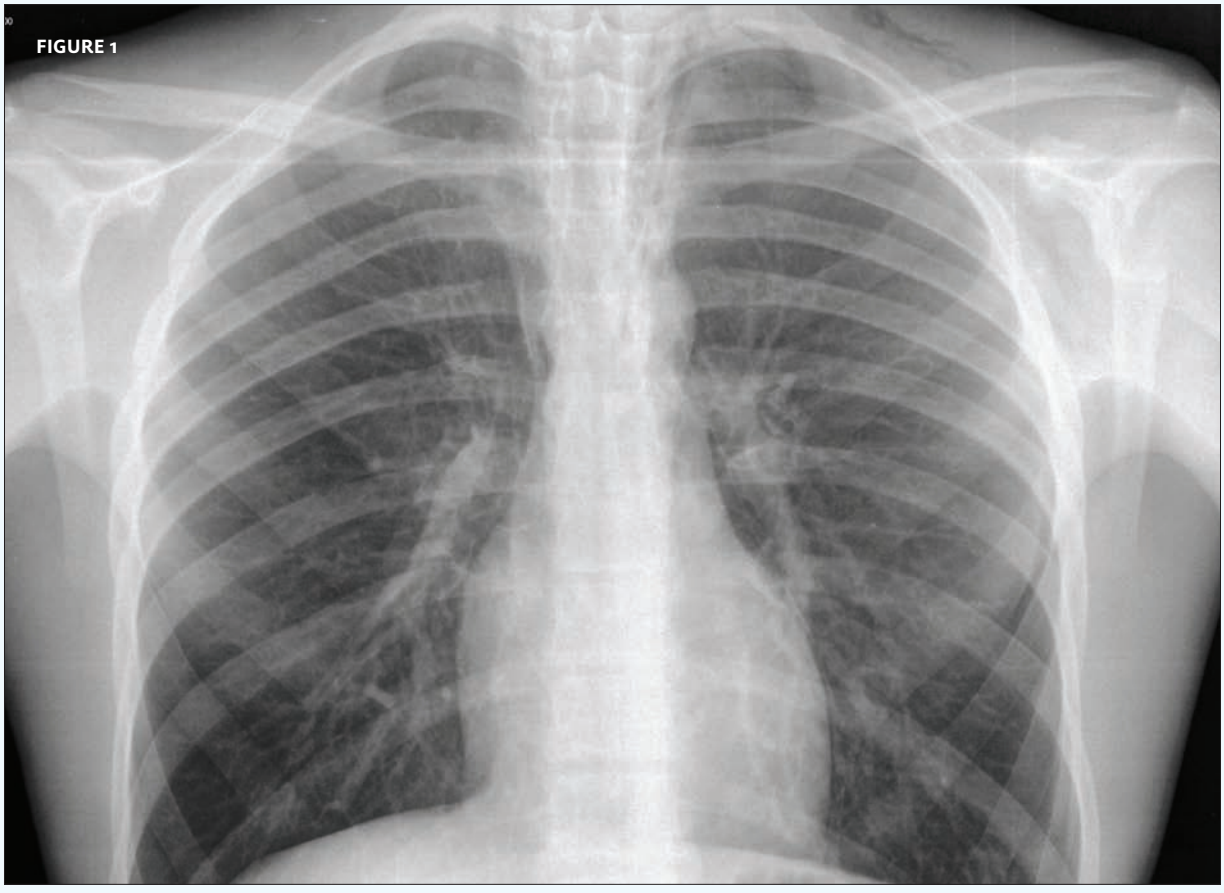
INSIGHTS IN IMAGES

CLINICAL CHALLENGE

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.

If you would like to submit a case for consideration, please e-mail the relevant materials and presenting information to *editor@jucm.com*.

FIGURE 1



The patient is a 17-year-old male who presents with a complaint of throat pain. He reports a history of colitis, for which he was treated with mesalamine and prednisone, 20 mg/day.

On exam, you discover that he is also experiencing pressure over his chest. Blood pressure is 97/60, pulse is 93 and SAT is 97%. He is afebrile. You find no abnormalities except for crepitations over his left shoulder soft tissue.

View the x-ray taken (**Figure 1**) and consider what your diagnosis and next steps would be. Resolution of the case is described on the next page.

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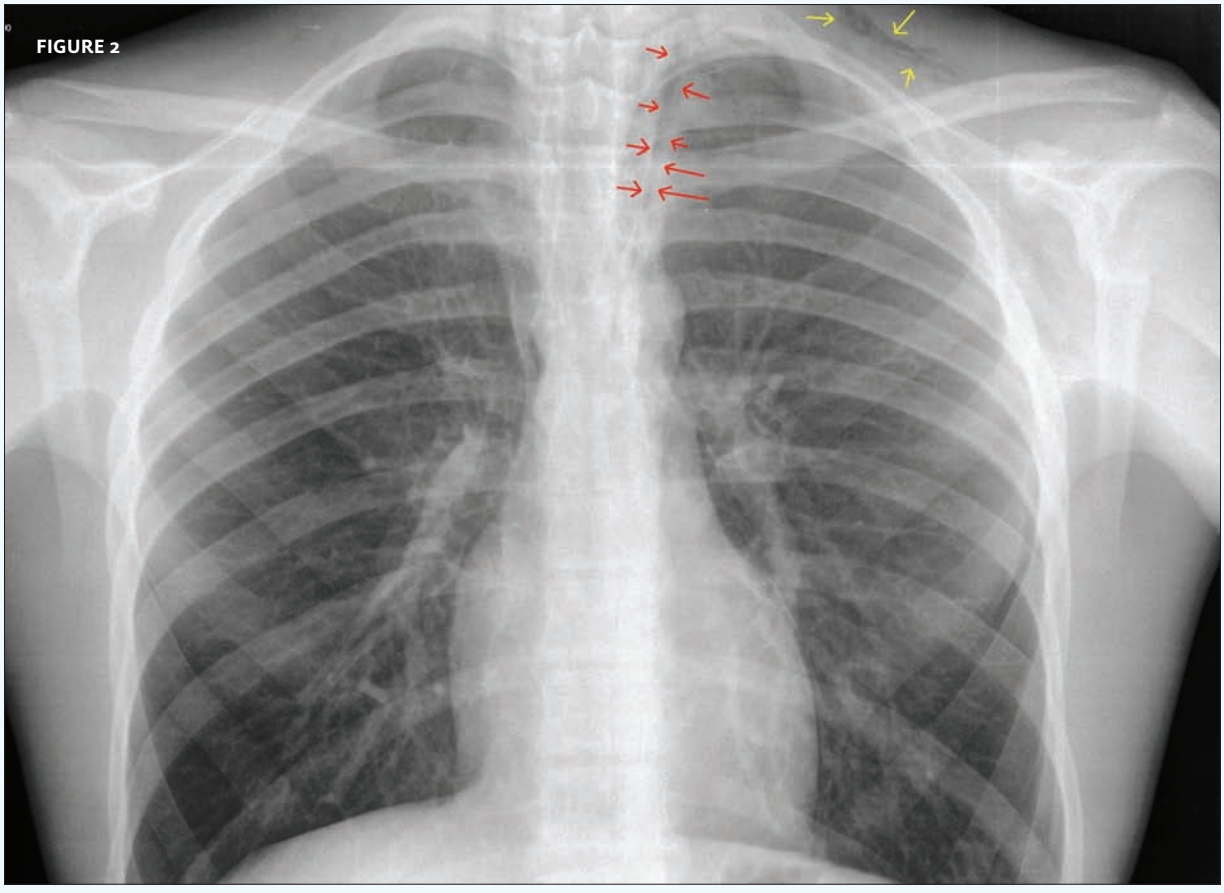
FIGURE 2

This is an interesting case.

An x-ray of his chest noted subcutaneous air over his left shoulder (as marked by the yellow arrows). On review with our radiologist, it was also noted that there was a medical pneumothorax (red arrows).

The patient was sent to the ED, given the unusual history and findings. He was observed and discharged the following day.

It is important to note that spontaneous subcutaneous emphysema, pneumothorax and/or pneumomediastinum in the presence of active ulcerative colitis is likely caused by migration of retroperitoneal gas. This should alert the provider to the probability of intestinal perforation. Emergent consultation is indicated.[1]

Reference

1. Cohen ME. Pneumomediastinum during relapse of ulcerative colitis. *Am J Gastroenterol*. 1997;92(12):2306-2307.

Acknowledgment: Case presented by Nahum Kovalski, BSc, MDCM, TEREM Immediate Medical Care, Jerusalem, Israel.

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Safety First When Consummating Relationships with Vendors

JOHN SHUFELDT, MD, JD, MBA, FACEP

One of my favorite *Seinfeld* exchanges is this prickly dialogue between George and his fiancée, Susan, regarding his disdain for (and challenge with) condoms:

GEORGE: Oh, no, no...condoms are for single men. The day that we got engaged, I said goodbye to the condom forever.
SUSAN: Just once...for the make-up sex.
GEORGE: Make-up sex? You have to have that right after the fight, we're way past that.
SUSAN: Come on, just once?
GEORGE: No, no...I hate the condom.
SUSAN: Why?
GEORGE: I can never get the package open in time.
SUSAN: Well, you just tear it open.
GEORGE: It's not that easy. It's like "Beat The Clock", there's a lot of pressure there.
SUSAN: Come on, George, just tear it open.
GEORGE: I'm trying, dammit.
SUSAN: Tear it.
GEORGE: I tried to tear it from the side, you can't get a good grip here. You gotta do it like a bag of chips.
SUSAN: Here give it to me.
GEORGE: Would you wait a second? Just wait?
SUSAN: Give it to me. Come on. Come on!
GEORGE: (Tosses the condom aside): It's too late.

Unfortunately, in business, it takes much more than a condom to protect you from the dreaded "FTD." That's right, you read it correctly, "FTD"—a financially transmitted disease.

In addition, sadly, if parts of your supply chain are in distress, particularly in an economic downturn, your business could experience significant "shrinkage." How, then, do you apply a "business condom" and what signs do you look for to know if your business partners are at risk for having an FTD?

John Shufeldt is the founder of the Shufeldt Law Firm, as well as the chief executive officer of NextCare, Inc., and sits on the Editorial Board of *JUCM*. He may be contacted at *JJS@shufeldtlaw.com*.

Signs, Symptoms, and Protection

A business can insulate itself from the travails of its supply chain vendors in a number of different ways.

Before signing an insurance plan contract, read the fine print. For example, many health plan contracts force you to continue seeing their patients for a period of time, even if the insurance company stops paying on a timely basis.

Signs of an FTD: A high rate of providers discontinuing their contracts with the insurer. Ask for reasons clinicians have dropped the plan. Most states have a Department of Insurance where a consumer or vendor can inquire about the health plan's financial strength.

Wearing the condom: Insist on timely payment for clean claims and understand what the plan defines as a clean claim. In addition, understand the plan's grievance process and ask to speak with providers who have been through it.

Whatever you do, don't allow the plan's poor management to become your headache, or, worse, your downfall. Patient volume is great but only if you are getting recompensed in a timely manner for the care you provide.

Supply vendors are a critical cog in a well-managed urgent care center. Providers and patients expect the supplies you use in the clinic to be top quality, easily accessible and, at worst, "just in time."

Signs of an FTD: Poor stability, lack of market presence, and responsiveness. The time to evaluate this is before you become dependant on supply vendors. Run a process whereby you supply a number of potential vendors with your supply list and ask them to bid on your business. Inquire about discounts available once you hit certain volume thresholds, as well as the possibility of joining any group purchasing plans.

Continued on page 44.

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CODING Q&A

Modifiers for E/M Codes During Global Periods

DAVID STERN, MD, CPC

Q. What is the official definition of "global period" as it applies to procedures in the urgent care center? When can we code an E/M in addition to the procedure?

A. The actual definition of the global period differs slightly when it is defined by the AMA (CPT) and when it is defined by CMS (Medicaid/Medicare).

CPT codes are published and copyrighted by the AMA. According to CPT as it applies to services rendered in urgent care centers (i.e., this definition is slight abbreviated to fit the urgent care situation), the services included in the global period for a "surgical package" include:

- the surgical procedure
- local infiltration, metacarpal/metatarsal/digital block or topical anesthesia
- immediate postoperative care, including procedure note documentation, patient instructions, and discussions with the family and/or other physicians
- typical follow-up care during the global period.

CPT states that "typical postoperative follow-up care" includes only that care which is usually a part of the surgical service. Complications, exacerbations, recurrence, or the presence of other diseases or injuries requiring additional services are not included in the "surgical package" and should be coded in addition to the code for the procedure.

CPT does not define specific (0-, 10-, or 90-day) global surgical periods, so theoretically this period can extend for the duration of the "typical" postoperative follow-up care to be completed. Thus, CPT leaves the theoretical postoperative period as open-ended.

Section 4821 of the *Medicare Carriers Manual* (available online at *cms.hhs.gov/manuals/14_car/3b4820.asp#_1_2*) provides a definition of Medicare's global surgical package.

CMS has designated a 0-, 10- or 90-day global period for every CPT code. The specific global period for every CPT code is available online at *cms.hhs.gov/physicians/mpfsapp/ stepo.asp*. CMS has given a slightly different definition of the global surgical period. Medicare includes:

1. intraoperative services that are a usual and necessary part of a surgical procedure
2. all additional medical or surgical services required of the physician during the postoperative period
3. evaluation and treatment of complications, as long as those complications do not require additional trips to the operating room
4. follow-up visits during the postoperative period of the surgery that are related to recovery from the surgery
5. postsurgical pain management
6. certain supplies
7. miscellaneous services (e.g., dressing changes; local incision care; removal of operative packs; removal of cutaneous sutures and staples, lines, wires, tubes, drains, casts and splints...).

In summary, there are two important distinctions bet-ween the definitions given by CPT and CMS for the global package:

- **Complications.** Unlike CPT, Medicare includes in the surgical package treatment of complications that do not require additional trips to the operating room. Note: many payors other than Medicare do not take this restrictive view and will pay for evaluation and treatment of complications to the procedure, even if these complications occur during the defined global period for the procedure.
- **Defined periods.** Unlike CPT, the postoperative part of Medicare's global period is not open-ended. Medicare assigns postoperative global periods of 90 days to major procedures and either 0 or 10 days to minor procedures. Services that occur beyond the Medicare postoperative global period, even if related to the procedure, are separately reportable.

David E. Stern, MD, CPC is a certified professional coder. He is a partner in Physicians Immediate Care, operating 12 urgent care centers in Oklahoma and Illinois. Stern serves on the Board of Directors of the Urgent Care Association of America and speaks frequently at urgent care conferences. He is CEO of Practice Velocity (*www.practicevelocity.com*), providing urgent care software solutions to more than 500 urgent care centers. He welcomes your questions about coding in urgent care.

The specific global period for every CPT code is available for download at *cms.hhs.gov/physicians/ mpfsapp/stepo.asp*.

As a practical matter, almost all payors recognize the global period designations as specified by CMS. ■

Q. A consultant has instructed us to never code an E/M code on the same day as a procedure. Our consultant states that the E/M on the day of surgery is bundled into the reimbursement for the procedure code. What is your opinion?

A. Your consultant is correct that the CPT code for most procedures does include an E/M code on the same day as the procedure. In the urgent care situation, however, the physician's evaluation and management is actually a "decision for surgery," i.e., the patient presents with an acute problem, such as a fracture, laceration, or abscess, and the physician needs to perform a full evaluation of the patient's condition and determine what procedure (if any) is appropriate.

This so-called decision for surgery is not part of the global surgical package, so a separate E/M code should be coded.

When the decision for surgery occurs more than one day before the day of the procedure, you can typically report the E/M code without any modifier, since the global surgical package does *not* include preoperative services that occur more than one day before the date of the procedure. In this case, you would not code another E/M on the day of the procedure.

In the typical urgent care context, the decision to perform a procedure and the procedure itself both take place on the same date during the same patient visit.

For example, a patient presents with a laceration. After taking a full patient history and relevant physical exam, the physician performs a laceration repair.

If the physician documents a significant and separately identifiable evaluation and management in the patient chart, then the E/M service should be reported with modifier -25 ("*Significant, separately identifiable E/M service by the same physician on the same day of the procedure or other service*") in addition to the code for the procedure itself.

Note: If the global surgical package for the procedure is defined by CMS as major surgery with a 90-day global period, then most payors will deny an E/M with modifier -25 appended. Instead, most payors require modifier -57 ("decision for surgery") to be appended to the E/M. ■

A Rationale for Making Your Practice More Child-friendly

Emory Petrack, MD, FAAP, FACEP

When speaking with physicians and urgent care owners about services for children and families, the question sometime arises, "Why focus on pediatric care?"

The short answer: Because it's the right thing to do in terms of both patient care and building your business.

I do not advocate turning your general urgent care center into a pediatric urgent care center, although such centers do exist. I do, however, advocate creating a new focus on pediatric needs that enables you to view your center—waiting room, treatment rooms, equipment, training and medicines—through the eyes of children and families.

There are advantages to operating a child-friendly urgent care center. It is also important to bear in mind that there are differences between treating children and treating adults.

Based on experience in my own practice and in my consulting work with other urgent care providers, I estimate that pediatric patients typically account for anywhere from 20% to 40% of visits to urgent care. As providers and often (as in my case) as parents, we should care passionately about providing great clinical care for this important segment.

That passion can pay great dividends not only from a clinical perspective, but also from a business perspective.

Given that a significant proportion of urgent care visits are for pediatric care, focusing on this population aids in market differentiation, creates a competitive advantage in your geographic area, and enables an increase in pediatric market share. As your center offers both real and perceived improvements in customer experiences, patient satisfaction increases. And as your facility becomes better known among parents and families as "the place to go" for excellence in pediatric care, you are better able to attract and retain outstanding, dedicated staff.

Clinically, it is admittedly obvious that you can provide better care to children when your facility is equipped to do so.

For example, child-sized masks work better on asthmatic children than do adult-sized masks; smaller blood pressure cuffs provide more accurate measurements in tiny arms.

Similarly, performing minor procedures on minor patients is easier with the right tools (e.g., applying an analgesic patch before IV placement, or a gel before suturing).

In addition, keeping up to date with pediatric standards of care can enhance the quality of care while simultaneously reducing medical–legal risk.

As noted, a small number of urgent care centers already provide services exclusively for children. Other facilities are now turning attention to enhancing their level of pediatric care to leverage their market share.

I believe that enhancing the experience for children can lead to increased adult volume, as parents tend to remember the exceptional experiences you provided their children. I recall one mother saying to me after an urgent care encounter, "I really didn't expect such a great experience for my daughter. I may be back later with *my* mother!"

Quite simply, improved care for our younger patients makes sense and gives you a huge opportunity to grow your business.

In a recent column (*JUCM*, January 2009), Editor-in-Chief Lee Resnick, MD pointed out that 25 million to 75 million potential urgent care visits per year are "out there." Even if only 10% of such visits entailed caring for children, the bottom line is that millions of children could (and many would argue *should*) receive urgent care—some of those potentially in *your* facility.

We owe it to children and their families, and to ourselves, to take full advantage of this unique opportunity to serve our community.

Future columns in this quarterly series will offer concrete suggestions on how to tailor your approach and make your facility shine when treating younger patients. ■

Emory Petrack is president of Petrack Consulting, Inc. (*www.petrackconsulting.com*), based in Shaker Heights, OH and medical director of the Pediatric Emergency Department at Fairview Hospital in Cleveland. He also sits on the Editorial Board of *JUCM*. Dr. Petrack may be contacted at *epetrack@petrackconsulting.com*.

Effective Occupational Health Sales Through Personality Profiling

FRANK H. LEONE, MBA, MPH

The ability to "read" and connect with prospects is a vitally important trait for an effective sales professional. Yet this is not always easy, for the salesperson is dealing with a multitude of personality types, many of which are markedly different than his or her own.

Personality profiling is a technique in which one can "type" a prospect into one of four common personality styles and alter a sales presentation to suit the prospect's style and buying motives. The technique has been around for quite some time and is described in various ways. In general, the four personality types can be described as follows:

Domineering (or "High D") personality is assertive, controlling, impatient, and a no-nonsense type A individual. Think of New York Yankees boss George Steinbrenner or Alexander "I'm in charge here" Haig.

Influential ("High I") types are warm, creative, enthusiastic, visionary, and personable. High I personalities are often disorganized and/or behind schedule but invariably upbeat. Think of your typical talk show host, such as Johnny Carson or Jay Leno.

Steady ("High S") personalities tend to be precise, thorough, prudent, and task-oriented. They tend to be slow to decide and carefully weigh every option. They are not overly communicative. Head over to your finance department and you are likely to see a room full of "High S" individuals.

Compliant ("High C") types are also highly analytical but are more idealistic and prone to group processes. They have time for everyone and prefer to avoid confrontations. Think of the quintessential team player.

Three things are necessary in order to effectively employ personality profiling:

Frank Leone is president and CEO of RYAN Associates and executive director of the National Association of Occupational Health Professionals. Mr. Leone is the author of numerous sales and marketing texts and periodicals, and has considerable experience training medical professionals on sales and marketing techniques. E-mail him at *fleone@naohp.com*.

The Personality Matrix

Domineering (D)		**Influential (I)**	
High D	**Low D**	**High I**	**Low I**
driving	meek	charismatic	probing
aggressive	non-demanding	gregarious	analytical
assertive	unassuming	persuasive	logical
competitive	modest	participative	reflective
High S	**Low S**	**High C**	**Low C**
Self-controlled	dynamic	perfectionist	fearless
Accomodating	intense	precise	free-spirited
Kind	energetic	thorough	independent
Patient	active	systematic	unconventional
Steady (S)		**Compliant (C)**	

Source: Personality Profiling, Jack Mohler Associates, 1976.

1. Know both your own personality type (D, I, S, or C) and the degree to which you fall into that quadrant (i.e., are you a "High I" or just a "Moderate I"?). In addition, you should determine what variance there might be between your self-image and how the public is likely to see you.
2. Train yourself to quickly assess in which quadrant your sales prospect is likely to fall. Signals as obvious as the neatness of one's office, intensity of their oral communication, and voice volume are often strong clues.
3. Be prepared to address each prospect differently, depending on your perception of their personality type. For example:
   - **High D prospects:** With "Domineering" prospects, be well organized and get right to the point. Ask a lot of questions to determine the prospect's needs and "hot buttons." Reflect their personality by being brief, to the point, and extremely benefit oriented.

Emphasize your program's potential impact to the bottom line.

- **High I prospects:** With "Influential" prospects, you want to be lively, forward thinking and visionary, and more relationship oriented. Emphasize the value of a true provider–employer relationship between the prospect's company and your program.
- **High S prospects:** With "Steady" prospects, you should be patient, thorough, and methodical. Ask a lot of questions and gather considerable data. Emphasize the logical value of a comprehensive approach to occupational health and safety.
- **High C prospects:** With "Compliant" prospects, you need to be patient, as they tend to be analytical and cautious. Emphasize a step-by-step approach to health and safety and the availability of outcome data. It is a good idea to get to know the typical High C prospect personally. Determine who else from their company should be involved in reviewing your proposal, as High C individuals prefer a consensus driven review.

Personality profiling will help you enhance communication with the prospect.

Assess Your Personality Style

Getting a handle on your prevailing personality type will help you understand the degree to which you fit the profile for that type and how consistent your private image is with your public image. If you are interested in taking the self-administered personality test, please send an e-mail to *info@naohp.com* and we will respond with an electronic copy of the test. Have your friends, coworkers and family take the personality profile assessment, as well. By identifying the personality profile of those you know, you will undoubtedly be better prepared to intuitively gauge the personality type of most prospects shortly after meeting them.

In sum, personality profiling is a fun way to gain a competitive edge. Reading your sales prospects will increase the likelihood of connecting with them early on. You do not have to artificially assume a different persona in order to be effective. Rather, mastery of personality profiling will help you utilize the most appropriate tools to enhance communication with the prospect and increase the likelihood of a successful sales call. ■

Wearing the condom: Insist that they maintain an agreed-upon inventory of the items critical to your center's success. In addition, use financial penalties for the percentage of your items on back order and for late deliveries of your critical items.

If you are forced to turn a patient with a laceration away because your supplier was out of a suture kit or wound glue, that vendor should be willing to pay for the loss of revenue associated with that patient being sent elsewhere.

Billing companies are another (and perhaps the most important) cog in a center's cash flow cycle. I have witnessed and, sadly, experienced billing companies ruining busy urgent care centers time and again by not processing claims in a timely manner, by not following up on claims, and by only collecting on the "low hanging fruit."

Signs of an FTD: Unacceptably high number of days for them to send out a claim. If the number of days increases, your day's sales outstanding (DSOs) will go up and your cash flow will suffer.

Look at the number of denied claims and how long it takes them to reprocess that denied claim. If you start to witness a revolving door of client account reps, it is time to pull out!

Wearing the Condom: Before contracting, evaluate the stability of your billing company by insisting that they disclose their financials on a monthly or at least quarterly basis. Ask to see their clearing house contract and inquire about their payment terms with the clearing house and whether or not they are current.

Negotiate certain performance metrics in your contract, with penalties if they are not met and rewards if they are exceeded.

Finally, negotiate an out clause which is automatically triggered in the event of default without cure for failure to hit agreed-upon or promised metrics.

Other vendors to be concerned with are those with whom your ability to offer care to your patients is dependant upon their ability to fulfill their obligations to the center. For example:

- IT vendors
- Internet connectivity providers
- Prepackaged pharmacy vendors
- Staffing agencies
- Provider recruiters
- Radiology over-vendors
- Landlords

These are challenging times to own a business. One small mistake, one contract clause overlooked, can start a business down the slippery slope toward failure. And, as George discovered, once the life blood (cash) stops flowing to your business, it is simply a matter of time before shrinkage ("Like a frightened turtle!") sets in. ■

Career Opportunities

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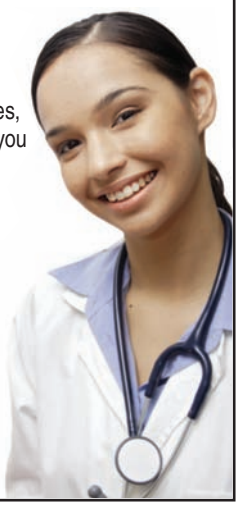

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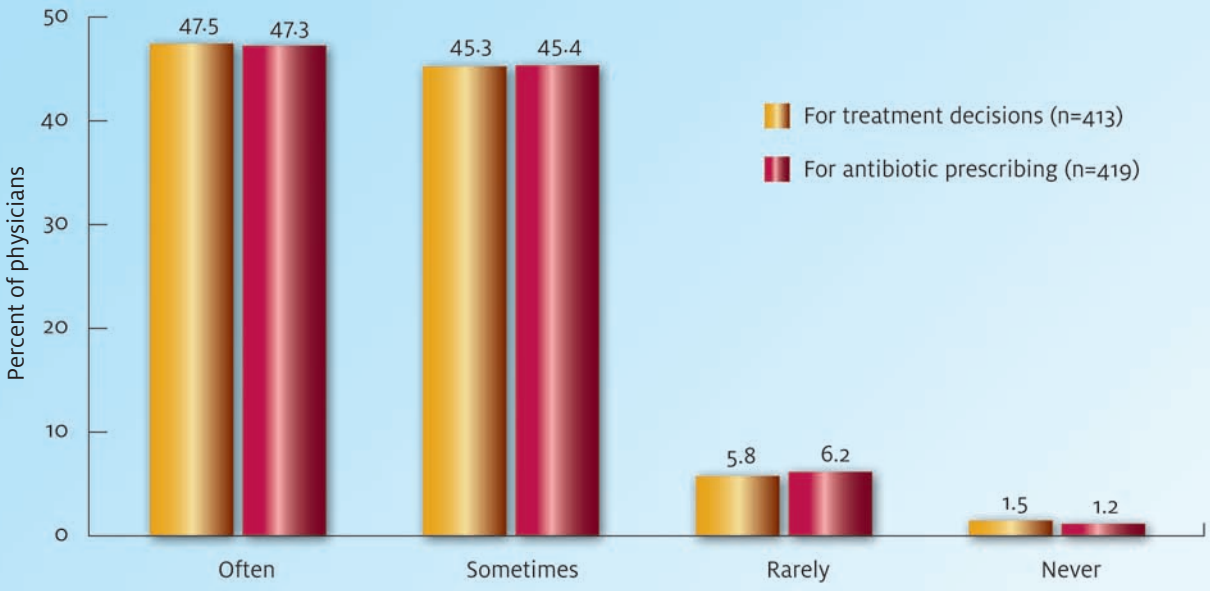
DEVELOPING DATA

In early 2008, UCAOA revamped its annual survey in conjunction with researchers at Massachusetts General Hospital and Harvard University with the goal of assuring that the UCAOA Benchmarking Committee's efforts produced a scientifically valid report.

Over the coming months in Developing Data, *JUCM* will present some of the findings from this landmark survey, to which 436 urgent care centers responded.

In this issue: What percentage of urgent care physicians rely on clinical guidelines for treatment decisions? And how does that compare with their reliance on clinical guidelines when prescribing antibiotics?

URGENT CARE PHYSICIANS WHO USE CLINICAL GUIDELINES



Clearly, the data show there is very little difference between the influence of clinical guidelines on overall treatment decisions and their influence on antibiotic prescribing. As urgent care matures and benchmarking data come to reflect a longer period of time, it will be interesting to see whether trends in antibiotic resistance change commonly accepted recommendations, and whether clinicians respond with more or less compliance.

Acknowledgment: Data submitted by Robin M. Weinick, PhD, then assistant professor, Harvard Medical School and senior scientist, Institute for Health Policy, Massachusetts General Hospital. Dr. Weinick is also a member of the *JUCM* Advisory Board. Financial support for this study was provided by UCAOA.

If you are aware of new data that you've found useful in your practice, let us know via e-mail to *editor@jucm.com*. We'll share your discovery with your colleagues in an upcoming issue of *JUCM*.

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