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Urgent Care Association of America



THE JOOKNAL OF ORGENT CARE MEDICINE

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he Official Publication of the UCAOA and UCCOP

Also in this issue

- 19 Practice Management Expert Perspectives on Telemedicine in Urgent Care
- 26 Case Report Acute Rheumatic Fever

Part 2 Evaluation of Headaches in Urgent Care: Emergent Headaches

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LETTER FROM THE EDITOR-IN-CHIEF

Are we all 'criminals'?



how of hands...how many of you consider yourselves "compliant" with the array of regulations, laws and so-called "guidelines" you work under? Most of the time? Some of the time? Never? Now, let me pose the question a different way: How

many of you think you can always, or even most of the time, remain in compliance and have a successful practice? Or, consider the question presented this way: How many of you think you can be compliant to the "letter of the law" and simply get through a typical day in practice?

Will all of you confessing the inevitable please blow the whistle on yourselves and report to the nearest OIG (Office of the Inspector General) office for fingerprinting? Yes, that means you...ALL of you!

Perhaps I am the first to propose that we are ALL "criminals," but if so, then I am the only honest one of the lot. But wait, I'm not finished exposing our injustices. Not only am I suggesting that we are noncompliant, I am quite confident that we are NEVER fully compliant. Why, you ask? Because it is humanly impossible to comply with every regulation and every law, for every patient, every day. What's more, even attempting to do so would compromise patient care so profoundly that we may as well pass the stethoscope to Watson, the IBM supercomputer. Maybe "he" could do a better job.

Let's follow a typical encounter in an urgent care center to illustrate:

Mrs D., a 44-year-old new patient to the practice, presents with acute abdominal pain in the right lower quadrant. Dr. Sam Quentin performs a focused evaluation, which reveals nothing alarming. He orders some lab tests and performs a pelvic exam, obtaining cultures for sexually transmitted disease. The entirety of the visit lasts about 2 hours and consumes significant resources. It has put Dr. Sam Quentin behind and patient wait times are growing. He aptly recognizes that he must get paid for his efforts and bills a 99204. He simply doesn't have time to count all the elements in his H&P, but certainly feels that the case is worthy of the higher code. Dr. Sam Quentin quickly works through the next four patients with simple upper respiratory complaints, giving verbal orders between rooms. He uses a pre-populated template to assist with documenting these encounters quickly. He bills a 99203 for each of these visits. He completes the day with 25 visits (felt like 50), yet despite his

efforts, revenue trails expenses for the shift.

Several patients left the office that day due to wait times and he realizes that he will have to approach the shift differently if he hopes to make any money. He ponders how he can see more patients and generate more revenue while remaining compliant with the myriad of OIG, HHS, CMS and AMA "rules," documenting clearly to mitigate risk of a lawsuit, checking his PQRS requirements, counting all the elements in history and physical, asking a bunch of worthless review of systems questions, adding up the "points" for labs, EKGs and x-rays, and managingnthe follow-ups and referrals. I am sure I am missing something...oh yeah, and getting good patient satisfaction scores, and ummm...what's that called..."taking care of patients"?

Unfortunately, despite their most genuine effort that day, Dr. Sam Quentin and his staff were noncompliant with at least five statutes and regulations.

Dr. Quentin has few palatable options here. He could go faster, and spend less time with patients, increasing risk and decreasing patient satisfaction, but then he will need to bill lower codes to remain compliant. He could spend more time on the simple cases and document more completely, but that would take time away from the patient with abdominal pain, the one case that day that really needed him. He could require ALL patient care conversations to occur behind closed doors, an admirable, albeit entirely unrealistic goal. We all know that he will fail despite his best intentions. In fact, to stay in business and provide a reasonable level of care, Dr. Quentin cuts corners where he can, embellishes when he needs to, and speaks too freely when he must...like any of us brave enough to admit it. But, does this make Sam a cheater, a defrauder and a criminal? The uncomfortable truth is, Sam Quentin is in all of us, and all of us could be in San Quentin.



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



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VOLUME 8, NUMBER 10



CLINICAL

8 Evaluation of Headaches in Urgent Care Part 2: Non-Emergent Headaches

Headaches are challenging chief complaints and being able to identify and differentiate among the non-emergent types of headaches will help with medical decision making and patient care.

Jacqualine Dancy, PA-C, MPAS

PRACTICE MANAGEMENT



19 Expert Perspectives on Telemedicine in Urgent Care

Telemedicine—or "at-home" medicine—affords unique business opportunities to urgent care providers who can overcome barriers to adoption such as reimbursement.

Alan A. Ayers, MBA, MAcc, Ralph Derrickson, Karen Mathura, RN, JD, CPHRM, Katherine (Kit) Sandstrom, FNP, and John Shufeldt, MD, JD, MBA, FACEP

CASE REPORT

26 Acute Rheumatic Fever

Patients with seemingly unusual conditions do present to urgent care, underscoring the need to always take a thorough history for all "red flag" symptoms.

Lee A. Resnick, MD, FAAFP



IN THE NEXT ISSUE OF JUCM

Next month's cover story is the first in a multipart series on joint and soft-tissue injection and aspiration. Such therapy is becoming more common in urgent care practice for patients with select musculoskeletal complaints. To be well equipped to deliver rescue therapy for these patients, urgent care providers need a thorough understanding of injection and aspiration procedures and associated risks and this series is designed to help establish that foundation.

DEPARTMENTS

- 7 From the UCAOA CEO
 29 Abstracts in Urgent Care
 31 Insights in Images
 33 Health Law
 35 Coding Q&A
- 40 Developing Data

CLASSIFIEDS

38 Career Opportunities

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

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JUCM CONTRIBUTORS

his month's cover story, by Jacqualine Dancy, PA-C, MPAS, provides an expert overview of the signs and symptoms of non-emergent headaches. These presentations, which are com-



mon but challenging in urgent care, have overlying components because they share involvement of the trigeminal nerve. The article concludes our two-part series on headaches and is designed to help urgent care providers identify and differentiate between key clinical features of conditions such as cluster, migraine, and tension headaches and make appropriate treatment decisions for patients with these diagnoses.

Jacqualine Dancy, PA-C, MPAS, is Lead Physician Assistant at MedStop Urgent Car Center in San Luis Obispo, CA.



Editor-in-Chief Lee A. Resnick, MD, FAAFP, offers urgent care providers a refresher on the red flags and diagnostic criteria for a seemingly unusual but serious condition in this month's

case report. The patient was an 18-year-old male who presented with fever, sore throat, and body aches. A rapid strep test was positive but the man's complaint of "chest pain" prompted further investigation, which revealed a different diagnosis: acute rheumatic fever.

Lee A. Resnick, MD, FAAFP, is Chief Medical and Operating Officer, WellStreet Urgent Care; President, Institute of Urgent Care Medicine; and Assistant Clinical Professor, Case Western Reserve University, Department of Family Medicine.

This month's practice management article is our second roundtable—on telemedicine in urgent care. Led by moderator Alan A. Ayers, MBA, MAcc, experts Ralph Derrickson, Karen Mathura, RN, JD, CPHRM, Katherine (Kit) Sandstrom, FNP,

To Submit an Article to JUCM

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

Manuscripts on clinical or practice management topics should be 2,600–3,200 words in length, plus tables, figures, pictures, and references. Articles that are longer than this will, in most cases, need to be cut during editing. The information you provide should be of practical use to our readers, who have come to practice in an urgent care setting from a variety of clinical backgrounds. Your article should take their perspective into account by considering several key issues, such as: What immediate management is indicated? What labs or diagnostics are required? and John Shufeldt, MD, JD, FACEP, discuss telemedicine business models, telemedicine as a direct-to-consumer delivery channel, business opportunities and barriers to adoption of telemedicine in urgent care.

Alan A. Ayers, MBA, MAcc, is on De Board of Directors Urgent Care



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Also in this issue:

In Health Law this month, **John Shufeldt, MD, JD, MBA, FACEP**, discusses what urgent care providers need to know about audiotaping or videotaping of patient encounters.

Sean M. McNeeley, MD, and The Urgent Care College of Physicians review new abstracts on literature germane to the urgent care clinician, including studies of a clinical prediction rule for ureteral stones, tetracaine for corneal abrasions, and a new algorithm for DVT.

In Coding Q&A, **David Stern, MD, CPC**, discusses E/M codes for sinusitis and pharyngitis.

Our Developing Data end piece this month looks at the top 15 CPT codes used by urgent care centers.

What are the next steps; with whom should the patient follow up? Who should be admitted or referred to the emergency room? Imagine yourself in the reader's shoes and ensure your article includes the answers to questions you'd be asking.

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

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For more details about the program, to receive an informational packet, or to apply as an early adopter and get your center started toward this unique recognition, visit ucaoa.org.





Prioritize spending face-to-face time with colleagues!

P. JOANNE RAY

CAOA has heard your feedback, once again, and we have created a face-to-face meeting with new content, more time and opportunities to network with colleagues and exhibitors. At the Urgent Care Fall Conference, you will also have the option of attending sessions across multiple tracks and topics versus focusing on a single-topic class

for the 2½-day meeting. Registration opened July 1st and discounted fees continue through July 24th — so act now!

The Fall Conference is second only to the UCAOA Spring Convention in drawing together the largest group of multidisciplinary professionals for dedicated urgent care-specific continuing education.

From October 9 to 11, the Hyatt Regency in Denver, CO will be the host for more new content and new faculty than ever before. You can choose those courses most relevant to your needs between four "open" tracks and one dedicated clinical hands-on boot camp track amounting to a total of 44 sessions. The courses are reflective of your suggestions and feedback.

Consider this event as a solution center of techniques, strategies, products, and services. The topics addressed are directly driven by your requests and feedback.

- Identify solutions to your struggles with recruitment, retention, and contracting with the right providers or the need to evaluate possible terminations.
- Get the right answers from a renewed series of clinic startup courses to those focused on positioning your centers from growth and developing scalable, repeatable processes, to valuation of your existing centers.
- Refresh your promotional approach and learn how to leverage digital, social, and mobile marketing and create



P. Joanne Ray is chief executive officer of the Urgent Care Association of America. She may be contacted at *jray@ucaoa.org*.

partnerships with primary care, specialists and hospitals to position yourself well within your communities.

- Explore ways to expand your services and focus your outreach on "weekend warrior," injuries, splinting and casting, joint injections, and advanced suturing.
- Hear from a panel of experts about how to select a new EMR or improve the efficiency of the one you already have.
- Review relevant clinical case studies and discuss specific problem-solving-based education and share experiences and knowledge from urgent care leaders across the country and providers and managers from every model of urgent care.
- Learn about how to become certified to offer DOT physicals.
- Schedule one-on-one meetings with exhibitors for dedicated discussions and in-person product demonstrations.

Why should you prioritize time for you and your team to attend the conference? As an example, the clinical boot camp alone could provide training for your staff that would enable expansion of your services to include new suturing, joint injections, and splinting and casting procedures. Implementing these into your cadre of services will easily pay for your attendance in just a few patients! As one attendee last year remarked, "We spend our days focused on hours of patient care and center management. All too often, we fall into the habit of interacting with only our immediate center colleagues. These meetings offer my team the potential to gain insights from multidisciplinary attendees supporting team-based care. Even finding out from others that our problems are not unique is valuable."

The UCAOA Urgent Care Fall Conference offers you the most effective, varied, and focused urgent care-specific learning and networking opportunities you can find in a 2½-day conference. Visit http://events.ucaoa.org/Fall2014 or call the UCAOA office at 877-MYUCAOA (877-698-2262) for more details and to register today!



Clinical

Evaluation of Headaches in Urgent Care Part 2: Non-Emergent Headaches

Urgent message: Headaches are challenging chief complaints and being able to identify and differentiate among the non-emergent types of headaches will help with medical decision making and patient care.

JACQUALINE DANCY, PA-C, MPAS

n the conclusion of a two-part series, this article focuses on non-emergent headaches. For the purpose of this article, non-emergent headaches are classified as those that are not life-threatening and pose little to no risk of permanent functional disability.

Most non-emergent headaches discussed in this article have one root commonality: trigeminal nerve involvement. The trigeminal nerve (CN V) is the largest of the cranial nerves. The trigeminal nerve has 3 branches: the ophthalmic (V1), maxillary (V2) and the mandibular (V3). The trigeminal nerve is a direct link to the brain and as such, can cause the cascade of pain sensation that results in various headaches. Given that trigeminal nerve pain is present in many headache syndromes, the symptoms and signs of, and treatments for these headaches have overlying components.

Cluster Headache

Cluster Headaches affect less than 1% of the population. There is a significant male predominance, with a male:female ratio of 4:1.¹ The etiology is thought to be a stimulation of the trigeminal-autonomic reflex and new research suggests a familial component.² Cluster headache is arguably one of the most severe pain syndromes and suicide attempts have been reported among



patients in whom the condition has gone undiagnosed or who have not been successfully treated for it .³

Patients with cluster headaches most often present with severe unilateral orbital pain. These headaches are often grouped attacks leading to the name origin, *cluster* headache. The headache may radiate around the orbit, including the frontal and temporal areas, and patients describe it as constant and stabbing and accompanied by autonomic phenomena. The autonomic signs are

Jacqualine Dancy is Lead Physician Assistant at MedStop Urgent Care Center in San Luis Obispo, CA.

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- The most commonly reported treatment related adverse reactions in AOM patients with tympanostomy tubes: ear discomfort (3.0%), ear pain (2.3%), ear residue (0.5%), irritability (0.5%) and taste perversion (0.5%)²

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Dosage and Administration: The recommended dosage is four drops of CIPRODEX® Otic suspension into the affected ear twice daily for seven days.

IMPORTANT SAFETY INFORMATION

Contraindications: CIPRODEX[®] Otic is contraindicated in patients with a history of hypersensitivity to ciprofloxacin, to other quinolones, or to any of the components in this medication. Use of this product is contraindicated in viral infections of the external canal including herpes simplex infections.

Warnings: FOR TOPICAL OTIC USE ONLY; NOT FOR INJECTION. This product is not approved for ophthalmic use. CIPRODEX® Otic should be discontinued at the first appearance of a skin rash or any other sign of hypersensitivity. Serious and occasionally fatal hypersensitivity (anaphylactic) reactions, some following the first dose, have been reported in patients receiving systemic quinolones.

Precautions: Use of this product may result in overgrowth of non-susceptible organisms, including yeast and fungi. If the infection is not improved after one week of treatment, cultures should be obtained to guide further treatment. The systemic administration of quinolones, including ciprofloxacin at doses much higher than given or absorbed by the otic route, has led to lesions or erosions of the cartilage in weight-bearing joints and other signs of arthropathy in immature animals of various species.

Adverse Reactions: The most commonly reported treatment-related adverse reactions in AOM patients with tympanostomy tubes: ear discomfort (3.0%), ear pain (2.3%), ear residue (0.5%), irritability (0.5%) and taste perversion (0.5%). The most commonly reported treatment-related adverse reactions in clinical trials in AOE patients: ear pruritus (1.5%), ear debris (0.6%), superimposed ear infection (0.6%), ear congestion (0.4%), ear pain (0.4%) and erythema (0.4%).

For additional information about CIPRODEX® Otic, please refer to the accompanying Brief Summary of full prescribing information on adjacent page.

References: 1. IMS Health, IMS National Prescription Audit, 2007 to March 2014, USC 62320 OTIC ANTNFCT W/ GLUCOCORT. 2. CIPRODEX® Otic package insert. 3. Formulary data provided by Pinsonault Associates, LLC, PathfinderRx, March 2014.







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Acute Otitis Externa in pediatric (age 6 months and older), adult and elderly patients due to Staphylococcus aureus and Pseudomonas aeruginosa

CONTRAINDICATIONS

CIPRODEX® Otic is contraindicated in patients with a history of hypersensitivity to ciprofloxacin, to other quinolones, or to any of the components in this medication. Use of this product is contraindicated in viral infections of the external canal including herpes simplex infections

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PRECAUTIONS

General: As with other antibacterial preparations, use of this product may result in overgrowth of nonsusceptible organisms, including yeast and fungi. If the infection is not improved after one week of treatment, cultures should be obtained to guide further treatment. If otorrhea persists after a full course of therapy, or if two or more episodes of otorrhea occur within six months, further evaluation is recommended to exclude an underlying condition such as cholesteatoma, foreign body, or a tumor.

The systemic administration of quinolones, including ciprofloxacin at doses much higher than given or absorbed by the otic route, has led to lesions or erosions of the cartilage in weight-bearing joints and other signs of arthropathy in immature animals of various species.

Guinea pigs dosed in the middle ear with CIPRODEX® Otic for one month exhibited no drug-related structural or functional changes of the cochlear hair cells and no lesions in the ossides. CIPRODEX® Otic was also shown to lack dermal sensitizing potential in the guinea pig when tested according to the method of Buehler.

No signs of local irritation were found when ${\rm CIPRODEX}^{\otimes}$ Otic was applied topically in the rabbit eye.

Information for Patients: For otic use only. (This product is not approved for use in the eye.) Warm the bottle in your hand for one to two minutes prior to use and shake well immediately before using. Avoid contaminating the tip with material from the ear, fingers, or other sources. Protect from light: If rash or allergic reaction occurs, discontinue use immediately and contact your physician. It is very important to use the ear drops for as long as the doctor has instructed, even if the symptoms improve. Discard unused portion after therapy is completed.

Acute Otitis Media in pediatric patients with tympanostomy tubes: Prior to administration of CIPRODEX® Otic in patients (6 months and older) with acute otitis media through tympanostomy tubes, the suspension should be warmed by holding the bottle in the hand for one or two minutes to avoid dizziness which may result from the instillation of a cold suspension. The patient should lie with the affected ear upward, and then the drops should be instilled. The tragus should then be pumped 5 times by pushing inward to facilitate penetration of the drops into the middle ear. This position should be maintained for 60 seconds. Repeat, if necessary, for the opposite ear (see dosage and administration).

Acute Otitis Externa: Prior to administration of CIPRODEX® Otic in patients with acute otitis externa, the suspension should be warmed by holding the bottle in the hand for one or two minutes to avoid dizziness which may result from the instillation of a cold suspension. The patient should lie with the affected ear upward, and then the drops should be instilled. This position should be maintained for 60 seconds to facilitate penetration of the drops into the ear canal. Repeat, if necessary, for the opposite ear (see dosage and administration).

Drug Interactions: Specific drug interaction studies have not been conducted with CIPRODEX® Otic.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Longterm carcinogenicity studies in mice and rats have been completed for ciprofloxacin. After daily oral doses of 750 mg/ kg (mice) and 250 mg/ kg (rats) were administered for up to 2 years, there was no evidence that ciprofloxacin had any carcinogenic or tumorigenic effects in these species. No long term studies of CIPRODEX® Otic have been performed to evaluate

carcinogenic potential.

Eight *in vitro* mutagenicity tests have been conducted with ciprofloxacin, and the test results are listed below:

Salmonella/Microsome Test (Negative),

E. coli DNA Repair Assay (Negative),

Mouse Lymphoma Cell Forward Mutation Assay (Positive),

Chinese Hamster V79 Cell HGPRT Test (Negative),

Syrian Hamster Embryo Cell Transformation Assay (Negative),

Saccharomyces cerevisiae Point Mutation Assay (Negative), Saccharomyces cerevisiae Mitotic Crossover and Gene Conversion Assay

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(Negative),

Rat Hepatocyte DNA Repair Assay (Positive). Thus, 2 of the 8 tests were positive, but results of the following 3 in vivo test systems gave negative results: Rat Hepatocyte DNA Repair Assay, Micronucleus Test (Mice),

Dominant Lethal Test (Mice).

Fertility studies performed in rats at oral doses of ciprofloxacin up to 100 mg/kg/day revealed no evidence of impairment. This would be over 100 times the maximum recommended clinical dose of ototopical ciprofloxacin based upon body surface area, assuming total absorption of ciprofloxacin from the ear of a patient treated with CIPRODEX® Otic twice per day according to label directions.

Long term studies have not been performed to evaluate the carcinogenic potential of topical otic dexamethasone. Dexamethasone has been tested for in vitro and in vivo genotoxic potential and shown to be positive in the following assays: chromosomal aberrations, sister-chromatid exchange in human lymphocytes and micronuclei and sister-chromatid exchanges in mouse bone marrow. However, the Ames/Salmonella assay, both with and without S9 mix, did not show any increase in His+ revertants.

The effect of dexamethasone on fertility has not been investigated following topical otic application. However, the lowest toxic dose of dexamethasone identified following topical dermal application was 1.802 mg/kg in a 26-week study in male rats and resulted in changes to the testes, epididymis, sperm duct, prostate, seminal vessicle, Cowper's gland and accessory glands. The relevance of this study for short term topical otic use is unknown.

Pregnancy: Teratogenic Effects; Pregnancy Category C.

Reproduction studies have been performed in rats and mice using oral doses of up to 100 mg/kg and IV doses up to 30 mg/kg and have revealed no evidence of harm to the fetus as a result of ciprofloxacin. In rabbits, ciprofloxacin (30 and 100 mg/kg orally) produced gastrointestinal disturbances resulting in maternal weight loss and an increased incidence of abortion, but no teratogenicity was observed at either dose. After intravenous administration of doses up to 20 mg/kg, no maternal toxicity was poduced in the rabbit, and no embryotoxicity or teratogenicity was observed.

Corticosteroids are generally teratogenic in laboratory animals when administered systemically at relatively low dosage levels. The more potent corticosteroids have been shown to be teratogenic after dermal application in laboratory animals.

Animal reproduction studies have not been conducted with CIPRODEX® Otic. No adequate and well controlled studies have been performed in pregnant women. Gaution should be exercised when CIPRODEX® Otic is used by a pregnant woman.

Nursing Mothers: Ciprofloxacin and corticosteroids, as a class, appear in milk following oral administration. Dexamethasone in breast milk could suppress growth, interfere with endogenous corticosteroid production, or cause other untoward effects. It is not known whether topical otic administration of ciprofloxacin or dexamethasone could result in sufficient systemic absorption to produce detectable quantities in human milk. Because of the potential for unwanted effects in nursing infants, 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: The safety and efficacy of CIPRODEX® Otic have been established in pediatric patients 6 months and older (937 patients) in adequate and well-controlled clinical trials. Although no data are available on patients less than age 6 months, there are no known safety concerns or differences in the disease process in this population that would preclude use of this product (see dosage and administration). No clinically relevant changes in hearing function were observed in 69 pediatric patients (age 4 to 12 years) treated with CIPRODEX® Otic and tested for audiometric parameters.

ADVERSE REACTIONS In Phases II and III clinical trials, a total of 937 patients were treated with CIPRODEX® Otic. This included 400 patients with acute otitis media with tympanostomy tubes and 537 patients with acute otitis externa. The reported treatment-related adverse events are listed below:

Acute Otitis Media in pediatric patients with tympanostomy tubes: The following treatment-related adverse events occurred in 0.5% or more of the patients with non-intact tympanic membranes.

Adverse Event	Incidence (N=400)
Ear discomfort	3.0%
Ear pain	2.3%
Ear precipitate (residue)	0.5%
Irritability	0.5%
Taste perversion	0.5%

The following treatment-related adverse events were each reported in a single patient: tympanostomy tube blockage; ear pruritus; tinnitus; oral moniliasis; crying; dizziness; and erythema.

Acute Otitis Externa: The following treatment-related adverse events occurred in 0.4% or more of the patients with intact tympanic membranes.

Adverse Event	Incidence (N=537)
Ear pruritus	1.5%
Ear debris	0.6%
Superimposed ear infection	0.6%
Ear congestion	0.4%
Ear pain	0.4%
Erythema	0.4%

The following treatment-related adverse events were each reported in a single patient: ear discomfort; decreased hearing; and ear disorder (tingling).

DOSAGE AND ADMINISTRATION

CIRPODEX[®] OTIC SHOULD BE SHAKEN WELL IMMEDIATELY BEFORE USE.

Acute Otitis Media in pediatric patients with tympanostomy tubes: The recommended dosage regimen for the treatment of acute otitis media in pediatric patients (age 6 months and older) through tympanostomy tubes is: Four drops (0.14 mL, 0.42 mg ciprofloxacin, 0.14 mg dexamethasone) instilled into the affected ear twice daily for seven days. The suspension should be warmed by holding the bottle in the hand for one or two minutes to avoid dizziness, which may result from the instillation of a cold suspension. The patient should lie with the affected ear upward, and then the drops should be instilled. The tragus should then be pumped 5 times by pushing inward to facilitate penetration of the drops into the middle ear. This position should be maintained for 60 seconds. Repeat, if necessary, for the opposite ear. Discard unused portion after therapy is completed.

Acute Otitis Externa: The recommended dosage regimen for the treatment of acute otitis externa is: For patients (age 6 months and older): Four drops (0.14 mL, 0.42 mg ciprofloxacin, 0.14 mg dexamethasone) instilled into the affected ear twice daily for seven days. The suspension should be warmed by holding the bottle in the hand for one or two minutes to avoid dizziness, which may result from the instillation of a cold suspension. The patient should lie with the affected ear upward, and then the drops should be instilled. This position should be maintained for 60 seconds to facilitate penetration of the drops into the ear canal. Repeat, if necessary, for the opposite ear. Discard unused portion after therapy is completed.

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Table 1. NSAIDs Recommended as Treatment to Abort Migraine

- Ibuprofen 400 mg.
- Naproxen 250 mg to 500 mg.
- Diclofenac 50 mg to 100 mg.
- Diclofenac epolamine 65 mg.
- Tolfenamic acid 200 mg.
- Indomethacin 50 mg suppository (Most beneficial in patients with significant nausea or vomiting.)
- Ketorolac 7 mg to 15 mg IM injection.

IM = intramuscular; IV = intravenous; NSAID = nonsteroidal anti-inflammatory drug

ipsilateral to the pain and may include ptosis, meiosis, lacrimation, conjunctival injection, rhinorrhea, and nasal congestion.^{4,5} Cluster headaches usually last 15 to 180 minutes and can reoccur up to 8 times per day and daily for several weeks, then remit.⁵ Chronic cluster headaches, which are less common, lack sustained remission periods.

Cluster headaches are exclusively a clinical diagnosis, but if a patient has atypical symptoms or abnormal neurological findings, neuroimaging is recommended.

First-line treatment options for cluster headache include oxygen and triptans, with consideration for use of octreotide, intranasal lidocaine, and oral ergotamine in those who do not respond.

Pure oxygen administered at a flow rate of 10 to 15 L/min for 15 minutes via nonrebreathing facial mask with the patient in the upright position is considered safe and effective and was abortive in 78% of cases of cluster headache in one study.⁶ Begin with 10 L/min and increase to a maximum of 15 L/min if the lower dose is ineffective. Caution with overuse of oxygen is recommended because it can increase the attack frequency when used repeatedly in some patients.⁶ Caution should be taken when giving pure oxygen to patients with severe chronic obstructive pulmonary disease because it may cause severe hypercapnia and CO₂ narcosis.⁶

If oxygen therapy is ineffective, sumatriptan and zolmitriptan are effective for acute treatment of cluster headaches. Intramuscular (IM) injection is preferable to intranasal and oral administration because of the quicker onset. Unpleasant effects include non-ischemic chest pain and distal paresthesia. The triptans should be avoided in patients with known ischemic cardiovascular disease (CVD) and initial doses should be given under medical provider observation to patients with CVD risk factors without known disease.⁷

For patients whose cluster headaches do not respond to or who cannot tolerate the above measures, other therapies to consider are octreotide, intranasal lidocaine, and oral ergotamine.

Octreotide is a somatostatin analog that has been shown to be superior to placebo in achieving symptom improvement to pain-free status when given in a single 100-mcg dose. The most common side effect is minor gastrointestinal upset.⁸

The effective dose of intranasal lidocaine is 20 to 60 mg given with the patient's head in 45-degree extension and rotated toward the symptomatic side by 30 to 40 degrees. Headache improvement can be achieved within 10 minutes, but complete relief is rare.² Intranasal use of lidocaine generally lacks systemic side effects.²

Ergotamine has been used to treat cluster headaches since the 1940s, but it lacks efficacy in modern studies and must be initiated very early in the attack.⁹ The dose is 2 mg sublingual, which can be repeated every 30 minutes to a maximum of 6 mg per day and 10 mg per week.² The most common side effects include gastrointestinal upset, weakness in the legs, and numbness in finger and toes.

Measures for prevention of cluster headache include the use of verapamil, which should be initiated at the onset of a cluster episode, given that recurrence over weeks to months is common. The starting dose is 240 mg daily divided in 3 doses. It may be necessary to increase the dose to a maximum of 960 mg daily.¹⁰ When cluster headache periods last less than 2 months, administration of glucocorticoid medication is recommended as a preventative therapy alone. The dosage is 60 mg to 100 mg once daily for 5 days, tapered to a dose of 10 mg daily during the cluster period.¹⁰

Surgical interventions for cluster headache, including occipital nerve stimulation, hypothalamic deep brain stimulation and nerve sectioning, are still investigational and should be considered with caution.^{11,12}

Migraine Headaches

Migraine headaches are estimated to affect about 12% of the general population with a threefold female predominance.¹³ The pathophysiology was once believed to relate to vasodilatation of vessels, but that theory has not stood the test of time and science has brought an alternative explanation. Migraine headaches are now understood to be caused by neuronal and glial depolarization spreading across the cerebral cortex, which is believed to trigger aura, stimulate the trigeminal nerve, and alter the blood-brain permeability. The result is inflammatory changes to the pain-sensitive meninges.^{14,15}

Migraine headaches are recurrent and typically follow a series of events over hours to days. The typical series of events starts with a prodrome, followed by aura, headache, and the postdrome.

Up to 60% of patients with migraine headaches report experiencing prodromal symptoms 24 to 48 hours before the migraine. These symptoms may include euphoria, depression, irritability, food cravings, constipation, neck stiffness, and increased yawning.¹⁶

Approximately 25% of migraineurs experience a focal neurological symptom, often before the headache, but sometimes at the same time as the headache. Auras can include visual, sensory, verbal, or motor disturbances.¹⁷ Visual auras are most common and often include vision loss (scotoma) lateral to the fixation point, which expands within 60 minutes to involve a quadrant or hemifield of vision. At the edges of the expanding visual disturbance will be zigzagging lines with a shimmering quality.¹⁸ The second most common aura is sensory disturbance. Patients often describe tingling that progresses to numbness and is unilateral, affecting the face (sometimes including the tongue) and/or limbs. The gradual progression from tingling to numbness is characteristic of migraine aura and not typical of ischemic events.¹⁸ Visual disturbances differ between migraines and simple or complex partial seizures. In seizures the visual disturbance has a rapid time course of 1 – 3 minutes, are small colored circular patterns mostly at the temporal hemifield – flashing lights, zigzag and non-circular patterns are rare in seizures.19

The migraine headache itself is typically unilateral and has a throbbing quality, often worsened with movement or Valsalva maneuvers such as sneezing, coughing and straining. Nausea with or without emesis is common and many migraineurs complain about photophobia and/or phonophobia. Some sufferers experience vertigo, cutaneous allodynia (increased skin sensitivity) or osmophobia (increased sensitivity to smells).²⁰

Once the throbbing pain ceases, many migraineurs report a postdrome that includes brief mild pain with sudden head movements and many will feel exhausted and drained.

Diagnostics studies are rarely indicated of migraine headaches and the diagnosis is clinical. New onset of migraines is rare after age 60 years and an alternate etiology should be considered. Neuroimaging is recom-

Table 2. Common Triptans and Routes ofAdministration

- Sumatriptan: 25 mg, 50 mg, 100 mg oral; 5 mg, 20 mg intranasal; 4 mg, 6 mg subcutaneous
- Rizatriptan: 5 mg or 10 mg oral tablet or an oral dissolving tablet
- Zolmitriptan: 2.5-mg or 5-mg oral tablet or oral dissolving tablets and 5-mg intranasal spray
- Eletriptan: 20-mg or 40-mg oral tablet
- Naratriptan: 1-mg and 2.5-mg oral tablet
- Almotriptan 6.25-mg and 12.5-mg oral tablet

mended for patients who have focal neurological findings or who do not meet the diagnostic criteria for migraine headache.

Avoiding migraine triggers is the first step in migraine treatment and patients should be encouraged to record a headache diary to pinpoint triggers and to recognize the early symptoms of their headache. Despite diligent efforts to avoid triggers, however, many patients require medication intervention when acute migraine occurs.

It is important to recognize that oral agents may be ineffective during a migraine because of migraine-associated gastric stasis and should be avoided if a patient has significant nausea or vomiting.²¹

All the drugs recommended for migraine are most effective when taken early in the headache cycle and clinicians need to educate patients to take their medication at the first sign of a headache.

Non-steroidal anti-inflammatory drugs (NSAIDs) are the treatment of choice for aborting a migraine headache already underway. Some patients will respond to acetaminophen alone. The recommended dose of 1000 mg is highly effective for treatment of pain and will reduce pain levels in patients with mild-to-moderate symptoms 20% of the time.⁹ Acetaminophen can be combined with NSAIDs. NSAIDs studied for migraine headache and their recommended dosage are listed in **Table 1**.^{17,22-25}

Numerous articles exist in the literature documenting each NSAID's efficacy; however, it is the class of medication rather than the specific brand that is effective. Caution is advised when prescribing NSAIDs because of the many adverse effects associated with these drugs that are dose-, frequency- and duration-dependent. Evidence exists to indicate that ibuprofen dosed at 400 mg is as effective in pain control as higher doses (600 mg and 800 mg) with fewer side effects and complications.²⁵ it is important that patients consume a snack with

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NSAID use to decrease gastric irritation. In patients with a history of gastrointestinal bleed or at higher risk for GI bleeds, consider using a proton pump inhibitor with NSAIDs. While H2 blockers with NSAIDS reduce dyspepsia, they do not prevent adverse GI complications.²⁶

Appropriate patient selection for NSAID use is necessary. Clinicians need to balance risk versus benefit, particularly in patients with a history of bleeding disorders, gastrointestinal bleeds/peptic ulcer disease, anticoagulant therapy, gastric bypass surgery, and NSAID-related rebound headaches.

All triptans work by inhibiting the release of vasoactive peptides, promoting vasoconstriction, and blocking pain pathways to the brainstem. The commonly available triptans and routes of administration are listed in **Table 2**.

The highest likelihood of consistent success is found with rizatriptan 10 mg, eletriptan 80 mg, and almotriptan 12.5 mg.²⁷

One report suggests that IM injection of sumatriptan is more effective, followed by intranasal spray compared to pills. Adverse events, however, follow the same curve, with the highest incidence of side effects associated with injections and lowest incidence of side effects associated with oral routes.²⁸ The same likely is true of all triptans because they all have a similar mechanism of action.

The side effects most common with triptans are flushing/aresthesias/warm sensation of skin, dizziness, weakness, chest pressure or heaviness and injection site pain. Most of the side effects are temporary and resolve within 30 minutes.

Caution is advised when administering triptans to patients with cardiac problems. Acute myocardial infarction and sudden cardiac death have been reported with triptans, likely due to coronary artery constriction.⁷

To address nausea and vomiting in patients with migraine headaches, prokinetic/antiemetic medications can be prescribed. Metoclopramide (prokinetic; 10mg IV) helps with gastric emptying, thus reducing nausea and vomiting. Prochlorperazine (antiemetic; 10mg IV or IM) can be effective as monotherapy in some patients with migraine.²⁹ Diphenhydramine (12.5 – 20 mg IV) with metoclopramide and prochlorperazine are recommended to prevent akathisia and other dystonic reactions.³⁰

While there is no evidence-based literature studying the effectiveness of ondansetron to treat nausea and vomiting associated with migraine headache, clinical experience supports it as a viable option.³¹ Given that gastroparesis is common with migraine headaches, using the oral-dissolving-tablet (ODT) formula is the best option. The benefit of ondansetron is that it does not cause sedation. Caution is advised in patients with known or suspected long QT syndrome because this medication has been shown to cause QT prolongation. Another disadvantage to this medication is that a common reaction is headache.

High-flow oxygen (10–15 L/min with nonrebreathing mask for 15 min) has been shown to be an effective treatment for migraine, tension and cluster headaches alike.³² As detailed in the cluster headache section, caution should be employed when using it in patients with a history of COPD.

Because migraine headaches, like many non-emergent headaches, have nerve-related etiologies (e.g., trigeminal or occipital) regional scalp anesthesia (occipital or ophthalmic nerve block) can be used to provide relief. Common anesthetics used include lidocaine (short-acting) and/or bupivacaine (long-acting).³³

Clinical trials are being conducted on use of propofol for acute treatment of migraine headache.²⁴ One comparison of propofol to dexamethasone for acute treatment of migraine headache found that propofol was more effective with quicker headache resolution and no significant side effects.³⁴

The FDA has approved the first medical device to treat migraine headache, which is available by prescription only. Called the Cerena Transcranial Magnetic Stimulator, it is indicated for migraine with aura headache. Using both hands, the patient holds the device to the back of his or her head and presses a button, which releases a pulse of magnetic energy that stimulates the occipital cortex to stop or reduce the pain.³⁵ The FDA reports that this device was effective in treating migraine pain in 38% (compared 17% in the control group) of people in a study of 113 participants. This devise does not help with associated symptoms of migraine (photophobia, phonophobia or nausea/vomiting). The most common adverse reaction is dizziness and should not be used in patients with seizure disorder and is contraindicated in patients with metal in their head, neck or upper body that are attracted by a magnet.

Tension-type headache

Tension-type headache (TTH) is one of the most common reasons the general population uses over-thecounter (OTC) analgesics. Given the mild and temporary nature of this type of headache, few patients seek medical care and, as such, self-diagnose and treat with OTC medication.

NON-EMERGENT HEADACHES

The pathophysiology of TTH is not well established; however, is thought to be caused by activation of myofascial nociceptors. Reported precipitating factors include stress and mental tension.³⁶

The symptoms of TTH are described as a headache of mild-tomoderate intensity that is bilateral, non-throbbing, and without other features. Patients often use terms such as "dull," "pressure." and "band-like" to describe their symptoms. Tenderness at the pericranial muscles and other myofascial trigger points of the head, neck, and shoulders is common. The neurological exam with TTH is normal.

The 3 main subtypes of TTH are infrequent episodic (<1 per month), frequent episodic TTH (1–14 days per month) and chronic TTH (>15 days per month). TTH is slightly more prevalent in women than in men and incidence peaks in the fourth decade of life.³⁷

No diagnostic tests are necessary or recommended for TTH. The diagnosis is clinically based.

Treatment for TTH is with OTC NSAIDs. For patients with mild to moderate symptoms, a single dose of ibuprofen (200 mg to 400 mg), naproxen sodium (220 mg to 550 mg) or aspirin (650 mg to 1000 mg) can be given. For adults, the maximum dose in 24 hours is ibuprofen 2400 mg, naproxen sodium 1375 mg, and aspirin 4 g. If NSAIDs are contraindicated, acetaminophen 1000 mg is recommended. It can also be used as an adjunct to an NSAID. The maximum dose of acetaminophen in 24 hours for adults is 3250 mg.³⁹

For patients whose headache fails to respond to simple NSAID/acetaminophen therapy, adding caffeine (65 mg) may provide relief.³⁹ A single IM injection of ketorolac (7.5 mg to 15 mg) should be considered for patients who present to an urgent care clinic with acute TTH and have moderate to severe pain.⁴⁰

Patients should be counseled to avoid frequent use of OTC analgesics because of the risk of overuse headache (discussed below) and of gastrointestinal complications.

For patients with refractory TTH, tricyclic antidepressants (amitriptyline) and anticonvulsants (topiramate) can be considered in refractory cases, although data are sparse and caution is warranted, given the side-effect profile of these classes of medications.^{41,42}

As detailed in the migraine section, high-flow oxygen therapy may be beneficial for TTH and has little risk in patients with no history of pulmonary disease. Scalp anesthesia should be considered in patients who present to an urgent care center with acute pain that has failed to respond to OTC analgesia and a nervous (trigeminal and/or occipital) or muscular component is suspected.³³

In general, use of narcotic analgesia and muscle relaxers is not recommended. These medications have not been proven effective for treatment of TTH and their use poses concerns for habituation and adverse side effects.

Nonpharmacologic treatment options that may be helpful for some patients with TTH include heat, ice, massage, rest, EMG biofeedback, and stress management. Data are limited on these methods and one modality cannot be recommended over another.

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Medication Overuse Headache

Estimates indicate that approximately 1% of the population suffer from medication overuse headache (MOH), also known as analgesic rebound headache, drug-induced headache. MOH can be challenging because often a patient has been self-treating an underlying headache disorder, frequently migraine or tension-type.^{43,44}

The pathophysiology of MOH is likely facilitated by trigeminal pain. Chronic exposure to triptans or other analgesics is thought to cause a downregulation of sero-tonin receptors, inhibiting central pathways and translating to permanent head pain because of impairment of antinociceptive activity.⁴⁵

The clinical features of MOH vary among patients. Because the underlying headache disorder is often migraine or TTH, patients will often describe features of these specific headaches. The key point is eliciting a history of frequent and excessive use of acute symptomatic medication.

MOH is more predominant in women than in men (as with migraine and TTH) and is often associated with substance dependency, anxiety, and psychological drug dependency.^{43,46}

Medications associated with the highest risk of MOH are opioids, butalbital-containing combination analgesics and aspirin/acetaminophen/caffeine combinations.^{47,48} Triptans and ergotamine represent a modest risk of MOH, whereas NSAIDs are the lowest risk.⁴⁹

The treatment for MOH is discontinuation of use of the causative medication. Withdrawal symptoms may include increased headache, nausea, vomiting, anxiety, nervousness, and sleep disturbances.⁵⁰ The withdrawal period usually lasts 2 to 10 days.⁵⁰

Strategies for discontinuation of the medication fall into 2 categories.⁴⁵ With barbiturates, opioids, or benzodiazepines, the pace of withdrawal depends on the amount and frequency of use. For patients who use barbiturates or benzodiazepams in high doses or frequently, tapering the dose over a 2- to 4-week period is recommended. When discontinuing opioid use, consider using a once-weekly transdermal clonidine patch (0.1 to 0.2 mg/24) for 1 to 2 weeks to reduce withdrawal symptoms. For patients discontinuing butalbital, a phenobarbital taper is recommended for seizure precaution at 30 mg twice daily for 2 weeks followed by 15 mg twice daily for 2 weeks. Consider bridging therapy with NSAID treatment, and address the underlying cause of MOH, and explore preventative medication and lifestyle modalities.

For medications other than those previously discussed, abrupt discontinuation should be bridged with NSAIDs or prednisone.⁵⁰ The underlying etiology of the MOH should be established and preventative measures explored.

Conclusion

Headache is a common chief complaint encountered in urgent care medicine. Evaluation of patients with this complaint can be overwhelming for even the most experienced practitioner.

The more concerning constellation of symptoms are: sudden onset (thunderclap) of severe intensity, new and different headache, papilledema and any abnormal neurological signs and warrant an emergent workup. Less concerning features include headaches that are of more than 10 weeks duration, are recurrent without change, without focal neurological findings and follow patterns consistent with cluster, migraine, tension-type and medication overuse headaches.

Understanding the key features that are specific to each type of headache disorder will, it is hoped, help urgent care providers make appropriate diagnostic and treatment decisions.

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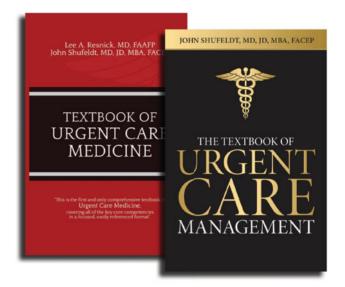
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Practice Management

Expert Perspectives on Telemedicine in Urgent Care

Urgent message: Telemedicine—or "at-home" medicine—affords unique business opportunities to urgent care providers who can overcome barriers to adoption such as reimbursement.

Introduction

Telemedicine is a topic that frequently comes up among UCAOA's membership as an area of interest. Some urgent care providers view telemedicine, or "at-home" medicine, as an opportunity; others see a threat. A lot of questions exist about telemedicine and with this roundtable, we've pulled together the unique experience of individuals who are offering telemedicine as a standalone service, have integrated it into their delivery models, and who bring legislative, regulatory or policy perspectives.

Telemedicine Business Models

Alan Ayers: Telemedicine is an umbrella term that encompasses many different technologies and services. What specific telemedicine business model stands to impact urgent care?

Karen Mathura: For better or for worse, depending on your viewpoint, telemedicine is having an impact on a lot of urgent care center visits. Many apps are available that individuals can use to get an assessment by a health care provider via an electronic connection. I think the trend is toward patients logging on from home, putting in their credit card information, and initiating a telemedicine session. But urgent care centers like the one down the block from me really thrive on the individuals who



need a strep culture, have a rash that needs to be appreciated, or need a check for head lice. In many cases, those encounters start with telemedicine. In some states, it would be a breach in the standard of care to prescribe antibiotics to a patient during a telemedicine session. Urgent care centers can be the "boots on the ground," so to speak, for telemedicine providers in that situation. That's why I encouraged urgent care providers to partner with telemedicine providers during my presentation at the UCAOA conference.

Alan Ayers: What Karen described is similar to the ZoomCare model. Kit, how would you respond to the

PARTICIPANTS: **Alan A. Ayers, MBA, MAcc** (moderator), Content Advisor, Urgent Care Association of America, Associate Editor, *JUCM*, and Vice President, Concentra Urgent Care; **Ralph Derrickson**, CEO of CarenaMD; **Karen Mathura**, RN, JD, CPHRM, Claims & Risk Management Consultant at RCM&D, Inc.; **Katherine (Kit) Sandstrom**, FNP, a Family Nurse Practitioner at ZoomCare; and **John Shufeldt**, MD, JD, MBA, FACEP, CEO of MeMD and Urgent Care Integrated Network.

question about telemedicine's potential for impacting urgent care?

Kit Sandstrom: There is going to be some overlap between telemedicine and urgent care, but as Karen said, there will always be some things that will require a physical exam or a point-of-care test or a sendout test for accurate diagnosis and treatment. At ZoomCare, we have a list of conditions for which patients can be seen virtually and we have standard questions about history of present illness that we ask

patients. Answering "red flag" questions in a certain way results in conversion of a telemedicine visit to an in-clinic visit. The care is standardized and we don't double-charge a patient whose care is converted to inclinic. That process is the way we ensure patient safety and access to care while allowing consumers to drive their own health care choices.

Alan Ayers: Ralph, I am very intrigued with CarenaMD's model of partnership between direct public health medicine models and health systems. What's your perspective on specific telemedicine business models that will impact urgent care?

Ralph Derrickson: At Carena, we empower hospital system brands and other organizations to take advantage of telemedicine. Our clients' business objectives vary from patient acquisition to increasing access, improving convenience, and providing care that makes sense for patients, on their time and schedule. Classically what urgent care centers have done is offer patients a place to get care in person without having to go through the trouble of getting an appointment with a provider and planning treatment around the provider's schedule.

I think telemedicine is going to have a huge impact as consumers become more responsible for the cost of the health care they receive and are encouraged to choose their own insurance plans and providers. More and more, their expectation will be that medicine should be like the experience of the Internet—on their terms, when and where they want it and how they want it. If it is clinically appropriate to do it virtually, then that's what the patients are going to want.

Carena started working with large self-insured com-

"I think telemedicine is going to have a huge impact as consumers become more responsible for the cost of the health care they receive and are encouraged to choose their own insurance plans and providers."

Ralph Derrickson

panies before we started working in the hospital systems. We've seen a lot of patients transition from PPO-type insurance plans to highdeductible plans. When patients face making both medical and economic choices, their care-seeking behavior changes. If they can get something taken care of virtually, without an in-person exam, great. If they need an in-person exam, they want the full spectrum of services, whether that's the strep test we've talked about or other

specialty care. So we think there's a huge opportunity to use telemedicine in a service offering that is going to challenge the urgent care space as a stand-alone set of clinical services.

John Shufeldt: I've been involved in the teleradiology business for a while, and at the end of the day, teleradiology is telemedicine. At MeMD, we are looking at having mental health and employee assistance program products in telemedicine as well. There are many areas of medicine with potential crossover for telemedicine and urgent care. For example, through a HIPAA compliant telemedicine portal, a hand surgeon could be shown a patient's x-ray and perform a virtual exam and then discuss with the urgent care provider when the patient can be seen in clinic or scheduled for surgery. Direct-to-patient, and direct-to-employer and then to employee or health system member models also are possible and they all affect what has traditionally been done in-clinic, in person.

Ralph Derrickson: I think the most obvious model that we talk about is direct-to-consumer. Technology changes the paradigm from with whom we do things in medicine to how we do them. I have a tremendous amount of respect for what's happening in ZoomCare. They don't think about a traditional doctor/patient relationship or about how hospital systems and health systems have traditionally thought about health care. ZoomCare's focus is on a consumer who is working 5,6,7 days a week and has to work their health care in and around their schedule. Banking is a great proxy for the way consumer behavior and perspective on technology have morphed in a business model. Technology hasn't changed who a person banks with but it certainly

has changed how you bank with them. And it created an opportunity for new brands to emerge. ZoomCare is a great example of a brand that is very smartly putting services on the Web where they make sense, and in person where that makes sense.

Telemedicine as a Direct-to-Consumer Delivery Channel

Alan Ayers: How would you

describe the adoption or maturity of telemedicine as a direct-to-consumer delivery channel for treatment of minor illness and injury? Kit, as you roll that out in your markets, how have consumers responded to your retail clinics and what are some of the challenges you've run into?

Kit Sandstrom: Patients love our telemedicine visits. At the end of their first visit, they're smiling because they can't believe how easy it was with all of the unnecessary barriers removed. To give you an anecdote, I had a telemedicine visit with a woman who worked in a hospital and was on a Smartphone. She had terrible allergic rhinitis and was self-conscious about sniffling and coughing around patients even though she was not infectious. Our visit was during her lunch hour and I was able to assess the woman's symptoms, rule out anything more serious, and call in some prescriptions for the woman. She didn't need to miss work, was able to get better faster, and it was a financially sound and safe visit. Toward the end of it, the woman looked around at the other people in the room with her and said, "This is amazing. I just had a doctor's visit." On my end as a provider, getting a reaction like that is unique and exciting and I hope that the technology and innovation is more widespread, because I think it's great for patients.

It's interesting how long it has taken to adopt telemedicine because *The Journal of Telemedicine and Telecare*, which is solely dedicated to studying this topic, has been in publication since 1995, but it is still perceived as new technology. The barrier that we've struggled with most at ZoomCare is lack of reimbursement from private insurers. Some private insurance will cover a visit to the emergency room (ER) for a simple urinary tract infection (UTI) but won't cover the same treatment delivered via telemedicine. That certainly is a very big barrier that we struggle with

"When telemedicine becomes widespread, I really fear for urgent care providers because we will be taking their bread and butter away from them."

John Shufeldt

right now but culturally that will change.

John Shufeldt: Consumers that use telemedicine love it. Our Net Promoter scores are always over nine and I get more praise treating someone with a UTI virtually than I do literally saving someone's life in the ER. It is the weirdest thing. When telemedicine becomes widespread, I really fear for urgent care providers

because we will be taking their bread and butter away from them. They may be forced to do more of the higher-level care that has typically gone to the ERs and the providers will be ill-prepared to do it.

Karen Mathura: During my presentation at UCAOA, I encouraged urgent care providers to adapt their business model to work hand-in-hand with the telemedicine providers. They need to think out of the box and to try to form relationships with entities that are partnering and, as I previously said, be the "on the ground" people that telemedicine providers can go to. I agree that ZoomCare's model is really phenomenal.

The Growing Availability of Telemedicine Solutions

Alan Ayers: Consumers have historically valued urgent care due to its shorter wait times and lower costs and other options including the ER, but telemedicine is prospectively cheaper and more convenient than urgent care. How do you feel that the growing availability of telemedicine solutions will affect urgent care in the future?

Ralph Derrickson: A factor that will impact business for physicians in clinics and traditional medicine will be the revelation of what health care really costs. One of the things that we're seeing is a dramatic shift in patient care-seeking behavior because of enrollment in high-deductible plans under the Affordable Care Act. Patients are realizing that a trip to the doctor isn't really a \$25 or \$35 affair. It's a \$150 to \$175 event and it was difficult to make happen because of scheduling, parking, etc. Primary care physicians are under pressure as patients look at what it costs to receive care in the clinic setting and how unpleasant the visit logistics were and consider other alternatives. It's not just urgent care providers who are going to be pressured to provide the highest-quality care clinically and meet patient needs and objectives in a constrained-time and constraineddollar world. I think the best comparison I can make is to dia; it's going to be about purchasing health care after the cost is transparent. I think there's going to be some very interesting shifting in what doctor-patient relationships look like and what systempatient relationships look like as the costs of care become transparent and the real costs of these services start to be borne by patients in significantly large volume.

Kit Sandstrom: Our telemedicine visits are discounted, so patients can get the same outcome for a lower cost. But as I mentioned earlier, with the lack of insurance reimbursement, it is still more expensive for people with private insurance to pay the full amount for a telemedicine visit than just the co-pay for a covered office visit. What's exciting about telemedicine is that it broadens access to care. For example, this winter, we had terrible weather in some areas of the country. In those areas, primary care offices and urgent care clinics were closed and people couldn't leave their house even if they wanted to get to a doctor. In those situations, patients either delay treatment or end up seeking it in an inappropriate setting such as an ER. Telemedicine has the capability to improve outcomes through improving access. So if urgent care successfully incorporates with telemedicine that could potentially be a way for urgent care centers to expand their business by bringing in those additional patients.

Karen Mathura: I live in Washington, DC, where we have ERs and urgent care centers all over the place. A lot of physicians in the area are thinking about taking urgent care on the road. They want to cater to people who don't have Internet and don't have anyone living with them who can arrange for the service and handle the set-up for a Skype visit. These physicians are looking at an on-call service for urgent care matters. If a person has, say, an allergic condition or ear infection and they don't have an Internet access and don't want to get in a car and drive to the ER or an urgent care center, a mobile urgent care provider would go to them. The target market is patients aged 80 and older.

Telemedicine as a Business Opportunity

"If urgent care successfully airline ticketing before Expe-*incorporates with telemedicine* urgent care providers with the that could potentially be a way for urgent care centers to expand their business by bringing in those additional patients."

Kit Sandstrom

Alan Ayers: What business opportunities do you see for

growing potential of telemedicine in the United States?

John Shufeldt: The reason I started the telemedicine service was because I would go around to our urgent care centers and see some physicians practicing their golf swings for lack of patients. They were willing to see patients if we brought them to them. So we came up with a telemedicine

model that allows providers to see patients in any states in which they are licensed. I thought it was the greatest thing since sliced bread, but when I went out to sell it, urgent care providers thought they would be cannibalizing their own business. Maybe, but with telemedicine, you are only going to potentially lose some patients from within a radius of a 10-minute drive to a particular clinic. However, if those patients see you virtually, I would argue that the margins for that care are better than for in-clinic care. But from the rest of the state, with telemedicine, you get patients who may never use your clinic and who would never have heard about it otherwise. So telemedicine is a great way to market and also to see patients who are remote. I see virtual medicine as a way for providers to fill up their downtime in urgent care, help cover high fixed and provider overhead, and add a few more patients and a few more dollars to the bottom line.

Ralph Derrickson: We're happy to partner with urgent care providers that want to use virtual medicine as an entry point for their clinics. Patients are likely to find an urgent care center in the first place by doing a directed search online for a specific clinical condition or for medical care in their area. The question is what can urgent care centers do to increase their relevance to a patient who starts with that kind of search? The best thing to do is convert that search into a transaction right then and there, the same way Google and Amazon work together to turn a problem-focused search into an economic transaction. I think there are huge opportunities for partnering with the urgent care market for us and we certainly welcome the chance to empower an urgent care brand. As has already been mentioned, that allows us to increase a brand's reach because it is no longer material that the actual clinic is located at the corner of, say, Pike and Fourth in Seattle. Anyone in business today should be constantly looking at ways to use technology to business model and not relying on protectionism or pricing or non-reimbursement to drive business their way. Urgent care providers need to be increasingly ready for patients who their plan will or won't pay for because they are on the hook for the deductible. I'm curious if others are seeing care-seeking behavior driven

"Telemedicine companies" have to make sure that the improve and innovate their *physicians and care providers* involved are licensed not only in the state where they're physically located but also in money. behave irrespective of what the states where their patients biggest barrier to telemedicine are physically located."

Karen Mathura

by patients' willingness to absorb costs regardless of the design of an insurance plan.

Kit Sandstrom: We've found that some patients with private insurance opt to self-pay for a telemedicine visit just because it's convenient for them and they feel like that's the most appropriate way to treat their condition. Unfortunately only a small segment of our patient population can afford to do that and we would like telemedicine to be accessible to more people.

Barriers to Adoption of Telemedicine

Alan Ayers: What barriers are there to consumer adoption of telemedicine solutions?

Karen Mathura: Telemedicine companies have to make sure that the physicians and care providers involved are licensed not only in the state where they're physically located but also in the states where their patients are physically located. So, just getting the licensures in and of itself is a challenge. Making sure that physicians are credentialed and privileged is trickier if they are going have virtual visits with patients in a hospital setting because they have to be credentialed at the site where the patients are located as if they are actually, physically there on staff. Many states have different requirements for whether doctors can prescribe medication without conducting in-person, physical examinations. Privacy and security issues regarding other people who might be in the room with a physician on the other side of the computer also are a concern. Patients sometimes worry that about whether dissemination of information through a telemedicine portal is compliant with the Health Insurance Portability and Accountability Act (HIPAA). A lot of the physicians at

the UCAOA conference were concerned about whether billing under Medicare and Medicaid in areas that are not medically underserved area. Identifying and overcoming challenges before crafting a telemedicine program is very important to avoid losing

Kit Sandstrom: Probably the that we've been struggling with is lack of reimbursement by private insurance. We hope that will change and insurers will recognize that it is a great

way to decrease cost and the burden on ERs.

I think it's notable that in a lot of ways, home medicine visits actually enhance patient privacy. For example, for certain psychiatric issues, leaving the house alone to go into a medical facility for care is a huge barrier. Telemedicine eliminates that and the Veterans Affairs system has used it for psychiatric illnesses such as post-traumatic stress syndrome. Veterans can go online and participate in support groups without having to leave home and the outcomes are a lot better. Eliminating any stigma associated with going outside the home and decreasing administrative staff associated with a visit are ways that telemedicine can contribute to enhancing privacy.

Ralph Derrickson: Reimbursement is obviously frustrating for everybody. I think it's ridiculous when Medicare and Medicaid will pay for UTI treatment in an ER and not over the telephone or via Skype at a fraction of the cost. Technology is doing what it always does, which is running well ahead of regulatory and business rules; I hope they catch up quickly.

The other potential barrier I see is patient comfort with the use of technology. At Carena, we find that patients most often use Skype, FaceTime, or a webcam on devices into which the technology is well integrated. Telemedicine sessions on a laptop or a desktop are unusual, whereas use of a tablet or Smartphone is common. When the technology is well integrated, there is no need for a download or installation. Making technology dead easy to use is a big thing. We have a BYOV-bring your own video- approach to webcam visits. We offer integrated solutions, but if you want to bring your own Skype or FaceTime, we'll use that.

Another barrier is making sure that what is being done icine and communicating that to patients. The providers are credentialed and licensed and are in the United States. They're not in a call center in some far-off place. Patients need to understand the credentials and capabilities of the providers and that they are going to be receive clinically appropriate

"Providers are ultimately virtually is high-quality med- responsible for knowing what the standard of care is and how and where they need to be licensed to practice telemedicine."

Karen Mathura

medical care from a qualified provider, just as if they had gone to an in-person facility down the road. These issues are not gender- or age-related. There is a general perception that young people adopt technology quickly and seniors do not, but a lot of seniors are doing some pretty interesting things with iPads.

John Shufeldt: I agree that telemedicine issues, for the most part, are not gender- or age-sensitive. Generally speaking, the patients who I personally have treated virtually are raving fans of the technology and completely get it. In the ED, I still see patients who really don't need to be there and that's a problem that we have all been trying to solve for years. Oddly enough in virtual medicine, very rarely do I see patients whose conditions aren't suitable for management with through telemedicine. For whatever reason, people seem to intuitively get what can and can't be treated virtually. They aren't calling in with the worst headache of their life, crushing chest pain, or a bone sticking out of their skin. For example, I'm not a believer in rapid strep testing because the test lacks sensitivity. Maybe I'm just old school, but if a patient's throat has been red for a couple days, it's covered with pus, and there is no history of exposure to mononucleosis, I'll treat for strep without a test. Is that below the standard of care? I don't know and I think it can be argued both ways. But the patients who call us seem to have conditions that are suitable for telemedicine.

Legal, Privacy, Regulatory and Payor Considerations

Alan Ayers: John, you have a unique perspective as a provider, an operator, and an attorney. I am curious about your view of some of the legal, privacy, regulatory, and payor considerations for urgent care operators who are exploring telemedicine.

John Shufeldt: The standard of care is the standard of care and it doesn't really change because the setting is

virtual. Standard of care does not vary from state to state. It is what a typical provider with similar background and training would be expected to do in a face-to-face encounter involving a similar problem. The regulatory aspects are pretty black & white in many respects because you have to have a license to treat a patient in the state in which they are residing or visiting. The chal-

lenge, however, is what constitutes an exam? Everyone on this panel is an expert in telemedicine and we've all looked at these laws ad nauseum, but they are still pretty gray. Is a face-to-face exam me looking at somebody through a HIPAA-compliant video interface? I would argue it is, but I don't think that's what the law meant. Unfortunately a lot of this is going to be vetted when there is a bad outcome associated with telemedicine. As the panelists know, bad facts make bad laws. Unfortunately, at some point we're going to have some bad facts and we may be forced to deal with some bad laws that come out of it.

Karen Mathura: One of the issues that comes to mind for me is how the Centers for Medicare and Medicaid (CMS) regulate urgent care centers. Under Medicare and Medicaid, an urgent care center is classified as a medical treatment facility. The offices of physicians or practitioners are qualified as CMS originating sites regardless of geographical location yet getting paid by Medicare or Medicaid for telemedicine is a challenge. The other thing is state-by-state variation in requirements for licensure. For example, 36 states now require a full medical license to provide direct care, including telemedicine. In 10 states, telemedicine is considered a special licensure practice. In 43 states, practice across state lines requires licensure in that other locality. You really have to know who you are reaching with telemedicine. I talked to an urgent care provider from Boston who was looking into working with a telemedicine company in Florida that had users in various states. The company told the urgent care provider that it wasn't necessary for him to be licensed in those states. I told him that it was dangerous and potentially problematic. Providers are ultimately responsible for knowing what the standard of care is and how and where they need to be licensed to practice telemedicine. If you are having a virtual encounter with a patient in Alaska, do you need to be licensed in that state and can you order a prescription for that patient without conducting an in-person physical examination that literally involves laying hands on the patient? There are many different governing entities related to telemedicine and my best advice is to seek out an expert in it before embarking on use of the technology.

Alan Ayers: Kit, you mentioned some of the payor issues. I believe that Oregon

is the only state in which ZoomCare offers take-out visits or telemedicine. Are there any other legal, privacy or regulatory concerns that you'd like to address? Kit Sandstrom: Yes. Currently ZoomCare is only providing telemedicine visits between our providers located in clinics in Oregon and patients in the State of Oregon. We hope to expand these services to Washington State where we currently have neighborhood clinics where patients can be seen in person. The lack of reimbursement by private insurers is our biggest obstacle both in Oregon and in the State of Washington in expanding these services to a wider patient population. Patient privacy should always be a priority, but as I mentioned earlier, it is important to note that in many instances, telemedicine is often a tool to enhance patient privacy because it delivers are to patients in the privacy of their homes. We think that it's important that the benefits of telemedicine get equal time in debates surrounding regulatory concerns.

Ralph Derrickson: The other issue that I'd like to address is understanding insurance obligations. You have to understand that when you're treating a patient, you have to be licensed where that patient is located at the time you're treating them, not where they are domiciled or collect their bill. There's a great deal of variation in licensure and professional obligations for providers. That's why we look at telemedicine on a

"Telemedicine providers also need to adhere to rules regarding commerce and privacy on the Internet, such as safe transmission of a patient's credit card and personal information."

Ralph Derrickson

state-by-state basis and tell everybody that there is no such thing as "national" telemedicine. The intentions and objectives of local regulatory medical boards and insurance commissions always need to be taken into consideration. Telemedicine providers also need to adhere to rules regarding commerce and privacy on the Internet, such as safe transmission of a patient's credit card and personal information. In some states, the Internet

rules are as restrictive as or more restrictive than HIPAA rules. That's another area of complexity that people should explore before they just start taking credit card payments on the Internet and bringing things online. Karen Mathura: Urgent care providers exploring telemedicine may be interested in reading about a legal case involving telemedicine Internet prescribing that I mentioned as an example during my presentation at the UCAOA conference. Hageseth v. Superior Court (150 cCal.App.4th 1399, 59 Cal. Rptr.3d 385) revolved around purchase of Prozac through a website outside the United States by a 17-year-old in California. The company outside of the United States forwarded the request for the script to a Colorado physician, who then worked with another company in Florida for processing. Two months after the prescription was filled, the teenager committed suicide. The physician was prosecuted for and found guilty of prescribing without a license in California. He surrendered his license and served a 9-month sentence in Colorado. The Prozac was not found to have caused the patient's death. The take-home message is that a provider sitting in an urgent care center in one state who is dealing with a patient in a second state and a company in yet another location can be prosecuted in any of those jurisdictions. In Hageseth, the provider got into big, big trouble and ended up losing his license because of what he did in telemedicine.

Case Report

Acute Rheumatic Fever

Urgent message: Patients with seemingly unusual conditions do present to urgent care, underscoring the need to always take a thorough history for all "red flag" symptoms.

LEE A. RESNICK, MD, FAAFP

Introduction

While the incidence of acute rheumatic fever has declined significantly in developed countries over the last several decades, sporadic cases do still occur. Diagnosis may be difficult due to the non-specific symptoms and the lack of experience with the condition amongst most urgent care practitioners. However, delays in diagnosis can lead to severe complications and even death, so urgent care providers must remain vigilant with a high index of suspicion. A refresher on the red flags and diagnostic criteria of acute rheumatic fever can help the physician identify at-risk patients who need further testing and evaluation. This case report highlights the presentation and its relevance to urgent care practice.

Case Presentation

An 18-year-old male presented to the urgent care with fever, sore throat and body aches of 2 to 3 days duration. Prior to entering the room, the physician was notified that a rapid strep test was completed per nursing protocol and was positive. The physician was relieved that he would be able to manage the encounter quickly within an otherwise busy Monday filled with other, more complex cases. The additional ease with which patient expectations can be met, through antibiotics and a quick recovery, makes this one of the most welcomed patient encounters in urgent care.

Confident, the physician entered the room for a req-

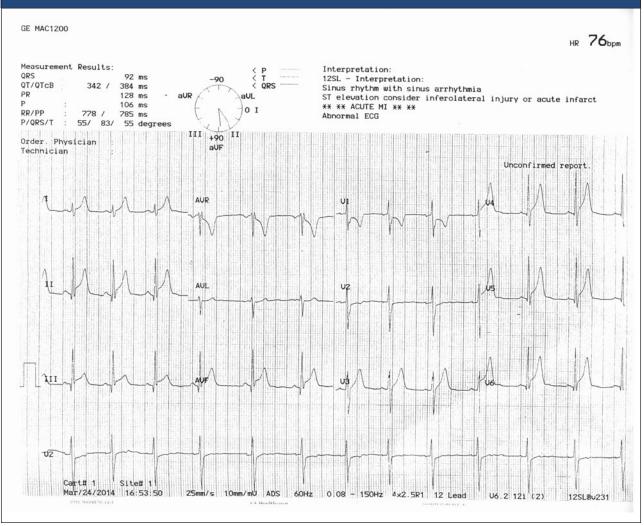


uisite, though pre-rehearsed, History and Physical. Upon further questioning the patient explained, "Everything hurts: I have a headache, my body aches, I have chest pain..." He was nauseated over the weekend and had two episodes of emesis. He has been weak and febrile throughout the entire course. He revealed that he is a Division 1 offensive lineman on scholarship with a local university. His spring practices, the first of his Division 1 college career, start the following day, and he wanted to get treatment so he "doesn't have to miss any practice time."

Vital signs T: 101.5°F BP: 110/65 P: 80 bpm O₂ Sat: 99%

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Figure 1. ECG



On physical exam, the patient looked moderately ill, but appropriate and typical for the diagnosis. He was a bit diaphoretic, but was also febrile. Vitals were otherwise normal. He was a large, athletic young man, consistent with his history. His tonsils were 2+, erythematous and full of exudate. The airway was patent and there was no sign of abscess. Neck exam revealed cervical adenopathy. Heart was normo-dynamic, and did not demonstrate any murmurs or gallups. There was no peripheral edema, no rash and no joint swelling or tenderness.

After leaving the room to write prescriptions, the physician became bothered by the "chest pain" comment from the patient. Although the examination did not reveal any cardiac signs, the physician felt compelled to inquire further. Upon further questioning, the patient clarified that the chest pain is different from the rest of the body aches. He stated the pain was constant, leftsided and moderately severe in intensity. As the pain increased, the nausea and vomiting followed.

To the chagrin of the nursing staff, the physician ordered an electrocardiogram (EKG) and was shocked by the results. Diffuse ST elevations were present (**Figure 1**) consistent with carditis. While awaiting ambulance transfer, the patient was placed on O_2 and a complete blood count and serum troponin test were ordered. The troponin I was 23.6 (reference range: 0.00-0.06). The patient's WBC count was 11.4.

Disposition and Hospital Course

The patient was admitted to an academic medical center

for further evaluation and treatment. An echocardiogram was performed which revealed severe LV dysfunction and an ejection fraction of 30% (less than half of normal for age). Cardiac magnetic resonance imaging (MRI) revealed diffuse myocarditis. The patient's erythrocyte sedimentation rate (ESR) was very elevated, as was the Creactive protein (CRP). He patient was started on intravenous antibiotics and steroids. Interestingly, due to the rapid and acute nature of his presentation, his ASO titer was initially normal. In fact, ASO does not peak until 2 weeks after onset of symptoms, so a test that is initially negative does not rule out acute rheumatic fever. In a somewhat complicated course, this patient's heart failure finally resolved and he was discharged 2 weeks later on highdose steroids that were to be continued for at least 6 months. He was given strict activity restrictions. His future in competitive athletics is unlikely.

Discussion

This is a dramatic case that could have ended very poorly. Considering the severe carditis and heart failure in this patient, had he returned to the practice field, he risked unimaginable morbidity and even mortality.

While acute rheumatic fever is thought of as a disease of developing countries, cases in the developed world still occur. It is noteworthy that cases in developed countries have a strong predilection for the upper class, a finding of unknown significance. The cases in the developed world also appear to be more acute and more aggressive, raising concerns that a virulent strain may be emerging. It has been theorized that high antibiotic usage rates in upper class communities may be contributing to these trends.

It is important to remember that most cases of acute rheumatic fever are preceded by a latent period of 1 to 5 weeks (mean of 18 days). Therefore, acute streptococcal pharyngitis is not usually present at diagnosis as it was in this case. Strep bacteria are only isolated in 25% of cases, and therefore, rapid antigen testing and throat culture are not reliable when negative (though positive tests are very helpful).

Diagnostic criteria have been revised over the years, but still use a version of the original Jones Criteria first noted in 1944. The diagnosis of acute rheumatic fever (first episode) is suggested by the presence of at least two major or one major and two minor criteria plus supportive evidence of previous streptococcal throat infection.

- Major criteria:
 - Carditis (40%)
 - Polyarthritis (80%)

- Chorea (rare)
- Subcutaneous nodule (<10%)
- Erythema marginatum (<10%)
- Minor criteria
 - Fever
 - Polyarthralgia
 - Elevated ESR/CRP; leukocytosis
 - Prolonged PR interval on EKG
- Supportive evidence of previous streptococcal throat infection:
 - Elevated ASO and/or Anti DNAse B
 - History of (within 45 days):
 - Strep throat
 - Scarlet fever
 - Positive throat culture
 - Positive rapid antigen test

Once the diagnosis is suspected, additional testing is suggested. Echocardiogram is a very useful tool for evaluating myocardial function and for identifying valvular involvement. Cardiac MRI is sometimes used to assess the extent of myocarditis.

Treatment with antibiotics and steroids is the mainstay of treatment, the details of which are beyond the scope of urgent care practice. Patients with carditis are at risk of developing rheumatic heart disease, therefore, steroids are often continued for extended periods (as in this case).

Conclusion

This case demonstrates that patients with seemingly rare or unlikely conditions do, in fact, present commonly in urgent care settings. It also serves as an important reminder to take a thorough history for all red flag symptoms in an "unbiased" way, without weight given to the time of day or business of the clinic. In this patient, the complaint of chest pain, while seemingly more likely to be a "constitutional" symptom of his strep throat, required its own history and confirmation of the physical exam. As it turns out, the decision to explore this symptom more thoroughly, and the concern that history revealed, was the difference in the outcome of this case.

References

^{1.} Digenea AS, Ayoub EM. Guidelines for the diagnosis of rheumatic fever: Jones criteria updates 1992. Circulation 87. *Circulation*. 1993;87:302.

^{2.} WHO Expert Consultation on Rheumatic Fever and Rheumatic Heart Disease (2001 : Geneva, Switzerland) Rheumatic fever and rheumatic heart disease : report of a WHO Expert Consultation, Geneva, 29 October — 1 November 2001.



- Clinical prediction rule for ureteral stones
- Tetracaine for corneal abrasion
- New algorithm for DVT
- Home treatment for DVT
- Wheezing and pertussis
- SEAN M. MCNEELEY, MD

ach Month the Urgent Care College of Physicians (UCCOP) provides a handful of abstracts from or related to urgent care practices or practitioners. Sean McNeeley, MD, leads this effort.

Clinical prediction rule for ureteral stones

Key point: A new clinical score may predict the presence of uncomplicated ureteral stones and reduce the need for CT scan.

Citation: Moore CL, Bomann S, Daniels B, et al. Derivation and validation of a clinical prediction rule for uncomplicated ureteral stone—the STONE score: Retrospective and prospective observational cohort studies. *BMJ*. 2014; 348:g2191.

In this two-phase trial, five factors were identified and then prospectively validated for prediction of ureteral stones and reduced likelihood of an alternative acute diagnosis. Phase one included a retrospective review of about 1000 patient charts, which revealed five predictors of ureteral stones. The predictors were gender (male 2 points, female 0 points), timing (<6 hours 3 points, 6-24 hours 1 point and >24 hours 0 points), race (black 0 points, non-black 3 points), nausea (none 0 points, nausea 1 point, emesis alone 2 points), and hematuria on dipstick (present 3, absent 0). Total possible score was 13 points. Both phases showed similar performance of the score divided into low 0-5 (<10%), moderate 6-9 (50%) and high 10-13 (90%) likelihood of a stone present.



Sean McNeeley is an urgent care practitioner and Network Medical Director at University Hospitals of Cleveland, home of the first fellowship in urgent care medicine. Dr. McNeeley is a founding board member of UCCOP and vice chair of the Board of Certification of Urgent Care Medicine. He also sits on the *JUCM* editorial board. From an urgent care perspective, this new score might be used to decide on alternative methods of diagnosis of ureteral stones such as ultrasound, low-dose computed tomography or perhaps even no testing at all if further studies validate the tool.

Tetracaine for corneal abrasion

Key point: Short-term tetracaine does not appear to slow corneal abrasion healing.

Citation: Waldman N, Denise IK, Herbison P. Topical tetracaine used for 24 hours is safe and rated highly effective by patients for the treatment of pain caused by corneal abrasions: A double-blind, randomized clinical trial. *Acad Emerg Med.* 2014; 21(4):374-382.

Traditionally there has been a recommendation not to allow patients access to tetracaine for symptomatic treatment of a corneal abrasion. One fear was the concern about tetracaine's effect on healing on the cornea. This study attempted to determine if tetracaine is safe and effective when used by patients with corneal abrasions for a 24-hour period. The authors detail a 12-month prospective, randomized, double-blind study of tetracaine versus saline in patients treated in a tertiary care emergency room. A total of 116 patients were randomized (59 in tetracaine group). Tetracaine or saline drops were used every 30 minutes while awake. Follow up included re-exam at 48 hours and calls at 1 week and 1 month. No complications attributed to topical anesthesia were noted. Patient reports also showed tetracaine was more effective for symptom relief. For urgent care providers, this study is interesting but because of its small size it is unlikely to change most physicians' opinions.

New algorithm for DVT

Key point: Upper extremity deep venous thrombosis may safely be evaluated by a new algorithm.

Citation: Kleinjan A, Di Nisio M, Beyer-Westendorf J, et al. Safety and feasibility of a diagnostic algorithm combining clinical probability, D-dimer testing, and ultrasonography for suspected upper extremity deep venous thrombosis: A prospective management study. *Ann Intern Med*. 2014;160(7):451-457.

Although use of decision-making rules including use of D-dimer and ultrasound for lower extremity deep venous thrombosis (DVT) have been well studied, rules for upper extremity DVT (UEDVT) have been less well studied if at all. Currently contrast venography is considered the gold standard in ruling out UEDVT. The authors reviewed 406 patients at 16 centers in the United States and Europe. A total of 390 patients completed the algorithm. The primary outcome evaluated was upper extremity DVT or pulmonary embolus in patients with a negative work up. The authors used Constans clinical decision score, Ddimer and if needed ultrasound. Constans clinical score includes three items that add a point (venous foreign material present, localized pain and unilateral edema) and one negative point (other diagnosis just as likely). Scores of two or above are considered likely; less than two is considered unlikely. Using a complex decision tree, the authors were able to rule out UEDVT with a failure rate of 0.4%. From an acute care perspective, this study is a good beginning but further confirmation of these results is needed before the algorithm should be adopted.

Home treatment for DVT

Key point: Home treatment of deep venous thrombosis may be a better choice in many patients.

Citation: Lozano F, Trujillo-Santos J, Barrón M, et al. Home versus in-hospital treatment of outpatients with acute deep venous thrombosis of the lower limbs. *J Vasc Surg*. 2014;59(5):1362-1367.

Despite recommendations for home treatment of deep venous thromboembolism (DVT) based on studies suggesting better outcomes and quality of life, many providers are reluctant to treat at home due to fears of negative outcomes. This study reviewed the records of patients in the RIETE database fitting their criteria of treatment with low-molecular-weight heparin or fondaparinux and no evidence of pulmonary embolus. The RIETE (Registro Informatizado de la Enfermedad TromboEmbólica) registry is an ongoing, international (Spain, France, Italy, Israel, Germany, Switzerland, Republic of Macedonia, and Brazil), multicenter, prospective registry of consecutive patients presenting with symptomatic acute venous thromboembolism. This database started in Spain in 2001 and grew to include the other countries. By 2012, the database had 13,493 patient that met criteria, of whom 4,456 were treated at home. The authors noted the percentage of patients treated at home increased yearly but was only half by 2012. The patients treated at home were compared with their hospitalized counterparts for outcomes. In their review of the two groups, those treated at home were younger, male and heavier. Hospitalized patients were more likely to have chronic medical problems such as heart and lung disease or cancer. The authors concluded that treatment at home was associated with better patient outcome. However, some of the patients treated at home did have serious complications including four deaths. From an urgent care perspective, this information should help our conversation with patients about the risks and benefits of location of treatment.

Wheezing and pertussis

Key point: Wheezing should not rule out the possibility of pertussis.

Citation: Taylor ZW, Ackerson B, Bronstein DE, et al. Wheezing in children with pertussis associated with delayed pertussis diagnosis. *Pediatr Infect Dis J*. 2014;33(4):351-354.

Recent outbreaks of pertussis including the one in California (June 2010) have raised the concern of many. Although it is mostly a persistent and annoying cough for adults it can result in severe cases, including death, in infants and younger children. The ability to diagnose the condition early and prevent transmission is important. The authors in this study looked at cases of pertussis with a desire to describe atypical cases. Waning immunity in adults and older children is likely the cause of mild cases. The authors hypothesized that atypical cases were also to blame for the reservoir of infections in adults and older children. In this retrospective cohort study, the authors used a database from Kaiser Permanente Southern California of patients with positive pertussis polymerase chain reaction tests. A total of 501 patients were identified from this 6-month period. The authors noted that wheezing was present in twice as many patients with a delayed diagnosis as those without wheezing (60% vs 29%). Although the study is limited by its retrospective nature, at the very least, the consideration of pertussis should be made for patients with mild wheezes and a possible exposure to pertussis.



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*.



This patient presented with a sprained knee.

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

Resolution of the case is described on the next page.

INSIGHTS IN IMAGES: CLINICAL CHALLENGE

THE RESOLUTION



Diagnosis: The x-ray reveals a Segond fracture.

A Segond fracture is an avulsion fracture of the lateral tibial condyle of the knee, just distal to the articular surface with the femur (red arrows). This fracture is associated with ligamentous and meniscal injury. Orthopedic referral is indicated.

Acknowledgement: Case presented by Teleradiology Specialists (http://www.teleradiologyspecialists.com)



HEALTH LAW

Smile! You're on Candid Camera

JOHN SHUFELDT, MD, JD, MBA, FACEP

A 34-year-old patient presents with an acute exacerbation of chronic low back pain. A cursory review of his medical records done before seeing him reveals that he has had multiple visits to your urgent care for a variety of complaints including: Flank pain and blood in his urine Dental caries

Gout

Dental cariesHeadache

Low back pain

Knee strain

He typically shows up about 5 minutes before closing and is always pleasant to a fault. He is not demanding but always leaves with a prescription for narcotics – typically Percocet. The last time he was in the center was for his fifth visit for back pain. He was denied narcotics and given Robaxin. When that happened, the previous provider noted that the patient became belligerent.

You sense that he may have an issue with substance abuse so you query your state's prescription monitoring website and discover that he has almost daily visits to a variety of providers and almost always receives a narcotic prescription. When you enter the room, the patient is fiddling with something that looks like a pen. He immediately places it in his shirt pocket and seems to obsess about always turning his torso towards you. You soon realize that he is not only recording but also videotaping the encounter. What are your options?

I have personally had patients say, "Hold on for a sec" and whip out their iPhone and record a procedure or an exam. It is a bit unnerving. Does my hair look ok? Do I have food in my teeth? Do my clothes match (After Garanimals went out of style, I always wonder!)?

One-Party States

Federal law allows recording of phone calls and other electronic communications with the consent of at least one party to the call. In other words, only the party doing the recording has to know about it. In my home state of Arizona as well as 37 states



John Shufeldt is CEO of Urgent Care Integrated Network and sits on the Editorial Board of *JUCM*. He may be contacted at *Jshufeldt@Shufeldtconsulting.com*. and the District of Columbia, the law permits individuals to record exchanges to which they are a party without informing the other parties that they are doing so. These states are referred to as "one-party consent" states, and as long as you are a party to the exchange, it is legal for you to record it. Like Federal law, only the person doing the recording has to know.

An exception exists in Arizona and most other states where the person has a right to expect privacy – a bathroom, locker room, exam room or bedroom. Thus, you can't secretly audiotape or videotape an interaction where a reasonable person would expect privacy. In every state, a medical provider is ethically barred from surreptitiously recording an interaction without the patient's consent. That action would violate the patient's right to privacy, and would be considered unprofessional conduct by licensing boards.

Two-Party States

Twelve states are two-party states (at least two and however many more parties participate) and the consent of all parties involved in a conversation is mandatory under most circumstances. Those jurisdictions are California, Connecticut, Florida, Illinois, Maryland, Massachusetts, Michigan, Montana, Nevada, New Hampshire, Pennsylvania and Washington. Generally, you may record, film or broadcast any interaction where all the participants to it consent. Thus, it is legal to record, tape or film a face-to-face interview when your recording device is in plain view. In these situations, the consent of the parties is presumed.

Patients Recording Interactions

In a medical malpractice case, the admission of a video recording or the interaction would constitute "real evidence" and as such, its validity and authenticity would supersede testimony recounting the event. Thus, there are pros and cons of allowing patients or surrogates to record a visit.

If providers at the center elect not to allow recordings of the encounter, it is best to have a written policy banning the use of recording devices and to post a conspicuous sign at the reception desk, in triage and in each exam room. Also, alert staff to be aware of patients, family or friends who may record.

Call for Articles

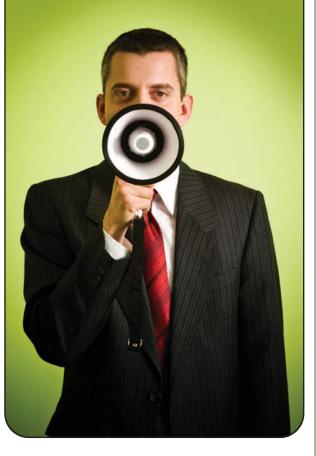
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> Please e-mail your idea to JUCM Editor-in-Chief Lee Resnick, MD at editor@jucm.com.

He will be happy to discuss it with you.



HEALTH LAW

Model Policy Language

When Visitors and/or Patients Try to Record Health Care Activities

Patients/visitors are generally not permitted to photograph or record by any means center activity without the express permission of those being recorded, including employees, providers, volunteers, and other patients or visitors.

If a visitor attempts to photograph staff without staff's express permission, staff may reiterate to the visitor that permission for photography is not given. If the visitor persists, staff may request that the offending visitor leave the premises or call security, provided that will not adversely impact treatment provided. In such situations, staff should enter an event report to document the situation for Risk Management.

Cases and Investigations

If a malpractice case ensues and the plaintiff produces a recording thus violating the office policy, the violation may give the court appropriate grounds to exclude the evidence at trial. At a minimum, the violation of the policy would justify dismissing the patient from your practice and should negatively affect his or her credibility with the jury.

In fraud investigations, government investigators use secret videotaped recordings of office visits to prove that a provider did not do what is claimed by testimony or an office note. An example of a circumstance in which this would occurs is when a provider routinely documents, codes and bills for a test or exam not actually performed. Such a video always trumps the provider's testimony or documentation for what occurred.

In Desnick v. ABC, an ophthalmologist who agreed to be interviewed for "Primetime Live" sued ABC under the federal wiretapping statute for videotaping consultations between the doctor and video-camera-equipped individuals posing as patients. The 7th Circuit rejected this argument because the federal statute requires only one-party consent, and the undercover "patients" had consented to the taping.

Conclusions

The take-home points are these:

- In one-party states you do not have to consent to be recorded.
- If you don't want to be recorded, post signs in the treatment areas and have a policy that prohibits patients from recording interactions. If you become aware that the interaction is being recorded you are within your rights to ask the individual stop. If he or she refuses, you are also within your rights to end the interaction and even dismiss the individual from the practice.
- Never videotape or record an interaction with a patient unless the patient or his or her guardian consents. Patients have an expectation of privacy in the exam room.

CODING Q&A

E/M for Sinusitis and Pharyngitis

DAVID STERN, MD, CPC

The clinic I work at uses 99214 for most patients (50%) for sinusitis and pharyngitis. Is this a common code to use for these problems?

A. The E/M levels of services recognize seven

- History
- Examination
- Medical decision making
- Counseling
- Coordination of care
- Nature of presenting problem
- Time

The history, examination, and medical decision making are considered to be the key components in selecting a level of E/M service. Counseling, coordination of care, and the nature of the presenting problem are considered contributory factors. Although they are important E/M services, they are not required for each patient encounter.

When face-to-face counseling and/or coordination of care dominates (more than 50%) the encounter with the patient and/or family, then time shall be considered the key or controlling factor to qualify for a particular level of E/M service. This does include time spent with parties who have assumed responsibility for the care of the patient.

E/M codes for office or other outpatient services are based on the patient being new or established. According to CPT guidelines, a new patient is one who has not received any professional services from the physician/qualified health care professional or another physician/qualified health care professional of the same specialty and subspecialty who belongs to the same group practice within the past 3 years. Professional services are those face-to-face services rendered by



David E. Stern, MD is a certified professional coder and board certified in Internal Medicine. He was a Director on the founding Board of UCAOA and has received the organization's Lifetime Membership Award. He is CEO of Practice Velocity, LLC (www.practicevelocity.com), PV Billing and NMN Consulting, providers of software, billing and urgent care consulting services. Dr. Stern welcomes your questions about urgent care in general and about coding issues in particular. "The history, examination, and medical decision making are considered to be the key components in selecting a level of E/M service."

physicians and other qualified health care professionals who may report E/M services.

You can read more on this subject in one of my columns in *JUCM*: http://jucm.com/magazine/issues/2009/0209/files/36.html.

In addition to having different codes for new and established patients, you must also determine the extent of the history obtained, examination performed, and the complexity of the medical decision making in order to determine the correct E/M code.

Let's look at a scenario in which an established patient presented with a sore throat. Because the provider had not seen that patient previously she did an extended history of present illness (HPI) (5 elements), complete review of systems (ROS), and a complete past, family and social history (PFSH). Eight systems were documented for the PE. The rapid test was positive and the provider prescribed an antibiotic.

If you were just counting the elements as noted in the 1995 E/M guidelines, the algorithm for the documentation noted would produce a 99215. According to CPT guidelines using the case presented above, the history (Hx) component would be deemed comprehensive, the physical examination (Px) deemed comprehensive, and the medical decision making (MDM) moderate. The final code should result from meeting at least two of the three key components (Hx, Px, MDM) for an established patient visit. Thus, you drop the lowest component (MDM) and the code results from the lowest remaining component. However, in this case, the two remaining components (HX and PX) are both documented at a level consistent with a level 5. Many providers might choose to throttle the code to the level of MDM, which would result in a 99214 code.

Even though you can count key elements to get a code, according to the Medicare Internet-Only Manual, publication

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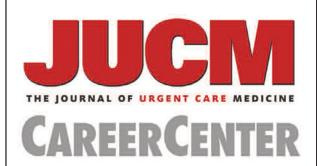
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CODING Q&A

"E/M codes for office or other outpatient services are based on the patient being new or established."

100-4, chapter 12, "Medical necessity of a service is the overarching criterion for payment in addition to the individual requirements of a CPT code. It would not be medically necessary or appropriate to bill a higher level of evaluation and management service when a lower level of service is warranted. The volume of documentation should not be the primary influence upon which a specific level of service is billed." It is up to the provider to determine what information is medically necessary to evaluate the patient and document accordingly.

If this was an otherwise healthy patient with a sore throat, the question for you to answer is this: "Was it medically necessary to perform a comprehensive history and exam?" That is a provider decision, but in many cases, in urgent care the provider is not very well acquainted with the patient (even if officially an "established" patient), so doing a more thorough history and physical exam is often quite appropriate. I have written about this specific issue in *JUCM*:

- http://jucm.com/magazine/issues/2011/0511/files/ 43.html
- http://jucm.com/magazine/issues/2011/0611/files/ 33.html
- http://jucm.com/magazine/issues/2011/0911/files/ 45.html

One of the main criteria to consider in selecting an Electronic Medical Record (EMR) is to make sure that you choose an EMR that systematically and automatically codes (preferably using 1995 rules for E/M coding) the same way for every provider, so that your providers can be comfortable that they are fully compliant in their coding and still being fully compensated for the work that they have done. Having such a system is important to avoid and detect outlier physicians that can cost over \$100K in annual lost revenues and/or get your practice into serious compliance issues. No matter what EMR you select, it still remains important to regularly audit charts of each provider to make sure that the coding is accurate and the documentation and procedures are consistent with medical necessity.

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36 The Journal of Urgent Care Medicine | July/August 2014

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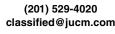
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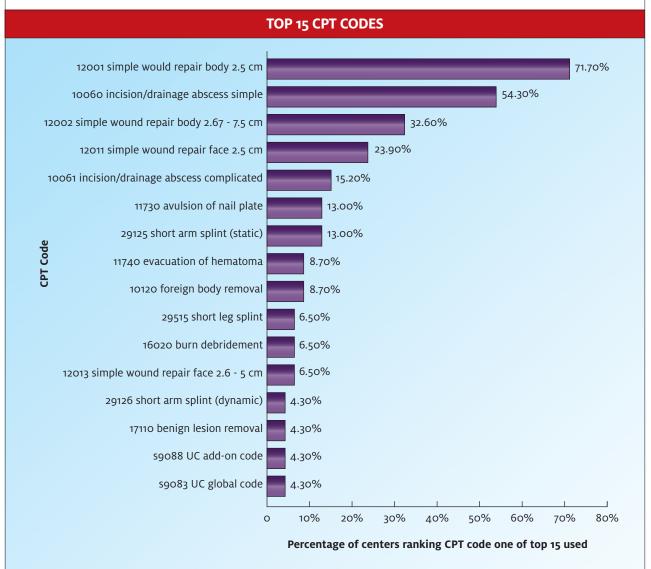


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DEVELOPING DATA

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

In this issue: What Are the CPT Codes Most Used by Urgent Care Centers?



A distinction between urgent care centers and most primary care offices and retail clinics is their ability to perform **minor procedures**. The nomenclature used to describe and report these procedures is the Current Procedural Terminology (CPT), maintained by the American Medical Association.

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



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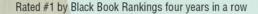


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