

JUCM™

THE JOURNAL OF URGENT CARE MEDICINE®

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Sudden Cardiac Death

*Identifying Risk Factors in
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LETTER FROM THE EDITOR-IN-CHIEF

To Board or Not to Board... That Is the Question!



With the announcement of the Board of Certification in Urgent Care Medicine (BCUCM), an American Board of Physician Specialists (ABPS) member board, the urgent care community is abuzz about its meaning, value, and importance for specialty recognition of the discipline and professional identity for its physician practitioners. Some believe the American Board of Medical Specialties (ABMS) is the only body with the authority to anoint specialty certification and provide board examination. Others feel ABMS is an autocracy of self-protecting interests intent on limiting outsiders from identifying and defining specialties of medicine without their permission. Who is right? Here is my perspective.

How Is "Certification" Defined?

According to the Accreditation Council for Graduate Medical Education (ACGME), "certification" is "a process to provide assurance to the public that a certified medical specialist has successfully completed an approved educational program and an evaluation, including an examination process, designed to assess the knowledge, experience, and skills requisite to the provision of high-quality care in a particular specialty."

Who Are These Certifying Bodies?

State medical boards determine recognition of certification and regulate the ability of practitioners to advertise themselves as "board certified." ABMS has long represented the gold standard of certifying bodies, but it is not the only recognized one. The American Osteopathic Association (AOA) Board of Specialties and the American Board of Physician Specialists (ABPS) are both nationally recognized. The only states to explicitly exclude some or all ABPS diplomates from advertising themselves as "board certified" are California, Kentucky, Oklahoma, Oregon, South Carolina, Texas, Utah, and Washington.

"Primary Specialty" vs "Subspecialty"

All the nationally recognized certifying boards make important distinctions between the two. Primary specialties require a unique scientific body of knowledge not present in other primary specialties. "Urgent care medicine" does not meet the criteria established for

primary specialties, though most agree that the discipline meets most subspecialty criteria. It is, however, important to note that even if subspecialty recognition is achieved, a nationally recognized primary board certification will always be a prerequisite. It is, therefore, critical to understand that any board certification in urgent care medicine will not be a pathway for those not certified by a recognized national body for primary specialties.

Is BCUCM Certification Legitimate?

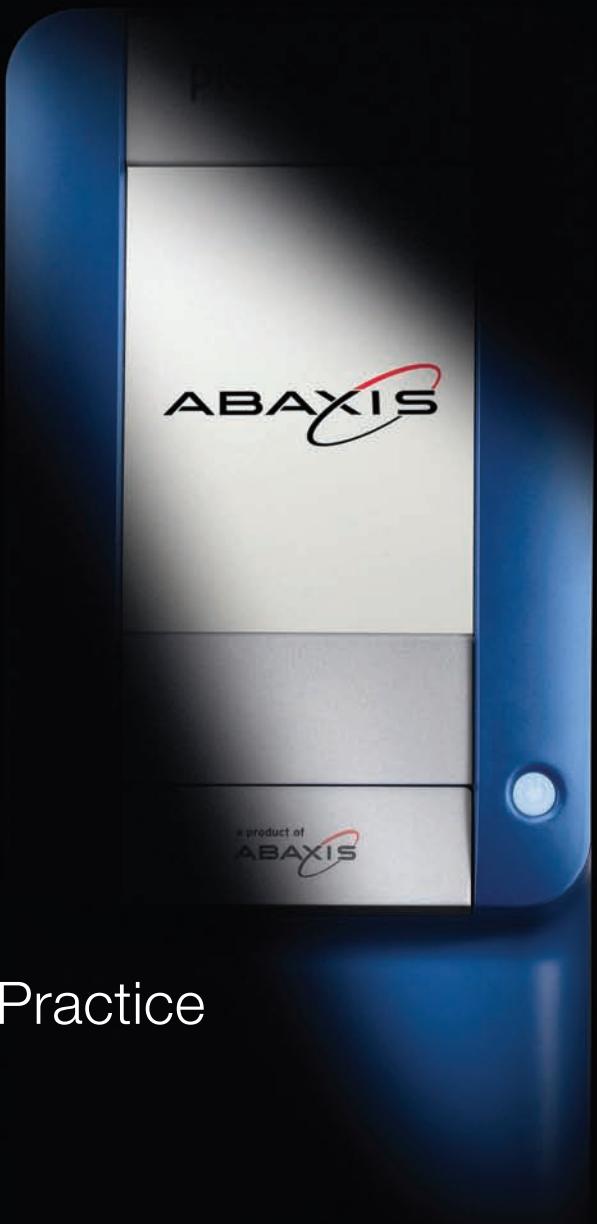
As a member board of ABPS, BCUCM has developed a board certification process for eligible candidates in accordance with the training and examination requirements laid out by ACGME (though not officially approved by this body). Training and prior certification requirements are detailed on their website (www.abpsus.org) and are notably similar to ABMS requirements.

To make BCUCM a credible certifying body, the examination development process closely reflects the core competencies developed for fellowships in urgent care medicine (a critical criterion). While not ABMS-recognized, BCUCM is part of a nationally recognized certifying body. Prerequisites for eligibility closely resemble those of both ABMS and ACGME. These are key distinctions that set BCUCM apart from other urgent care certifying bodies.

In my opinion, BCUCM is currently the only legitimate certifying body in urgent care medicine. It is important to ensure that a candidate should understand the meaning, value, and relevance of our certification process. It is by no means a pathway for recognizing non-board-certified physicians, nor does it replace certification by a recognized primary specialty board.

For those seeking to reflect their commitment to and competence in the discipline of urgent care medicine, BCUCM represents a credible step. ■

Lee A. Resnick, MD
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Eric McDonald

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Prescribing Miralax and an enema would likely have killed this patient. He nearly died in the hospital. Can you figure out why?

William A. Gluckman, DO, MBA, FACEP, CPE, CPC

**IN THE NEXT ISSUE OF JUCM**

A wondrous variety of objects find their way into the ears, noses, and throats of children. Some can be life-threatening and require ED or specialist referral. Others can be safely removed in an urgent care setting. Learn which is which in Pediatric Foreign Bodies in the October issue.

WEB EXCLUSIVE

A Waiting Room That Makes a Doctor Visit Fun? See for Yourself

Taking the hate out of the wait has a powerful appeal to kids and grownups alike. Join Jimmy Hoppers, MD, owner of Physician's Quality Care in Jackson, Tennessee, on a pictorial tour of a waiting room that patients like so much they sometimes linger after their visits.

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Mission Statement

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

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Sudden cardiac death in young athletes is a rare event, but when it occurs, the ensuing shock and grief can devastate a community and sometimes a nation. And it raises legitimate questions: who else is at risk, and how can they be identified before disaster strikes? Enter the preparticipation physical and the providers who conduct it.

But does the cardiovascular portion of these physicals do any good? That is a subject of heated debate that Nathan P. Newman, MD, FFAFP, addresses in our cover story this month. Dr. Newman examines famous cases of sudden cardiac death in young athletes; discusses causes of sudden cardiac death, most notably hypertrophic cardiomyopathy (HCM), the primary culprit; explains what a realistic cardiovascular screening involves; and considers the use of ECGs in light of a recently published study in which pediatric cardiologists were asked to evaluate ECGs indicative of cardiovascular problems. With HCM, a disconcerting number missed the diagnosis.



Dr. Nathan is Chief Medical Officer of Solantic walk-in urgent care in Jacksonville, Florida, where he designs, manages, and implements policies for more than 180 providers in 32 sites throughout the state. He is Vice President of the Urgent Care Association of America Board of Directors.

Our practice management article this month is a call to action. According to the 2010 Urgent Care Benchmarking Survey, nearly 70% of urgent cares use EHRs. CMS offers generous stimulus funds (up to \$18,000 in 2011 alone) to providers who "attest" that their EHRs are being used to improve patient care. What do "attest" and "improve" involve? What are the deadlines for qualifying for the incentives? How much money is at stake?



Eric McDonald, CEO of DocuTAP, a vendor of urgent care-specific EHRs in Sioux Falls, South Dakota, provides answers. His article is important for three reasons: the stimulus funds available are substantial but time-limited; providers who see Medicare and/or Medicaid patients who don't achieve meaningful use by 2015 will have their reimbursements reduced; and if you hope to join an ACO, achieving meaningful use is apt to be a requirement, so you may as well get paid for it.

Also in this issue:

William A. Gluckman, DO, MBA, FACEP, CPE, CPC, responded to our call for Case Reports with a real brain teaser. A patient in no apparent distress came to an urgent care for constipation. He was sent to the hospital for a CT scan, where he nearly died. Had he been given an "enema cocktail" instead, it would have been disastrous. What is his problem? A clue is hidden in plain sight.

Nahum Kovalski, BSc, MDCM, reviews new abstracts on current literature germane to the urgent care clinician, including whether antibiotics alone can cure uncomplicated appendicitis; the rapid, alarming increase in diagnostic imaging in children; the



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most effective treatment for acute pediatric bronchiolitis; which clinical decision rules for suspected pulmonary embolism work best; and the first in-depth look at the May 2011 *E. coli* outbreak in Germany.

What if you perform preparticipation physicals as an ancillary business and a student athlete you examine and pass then dies of sports-related sudden cardiac death? **John Shufeldt, MD, JD, MBA, FACEP**, offers a perspective on urgent care liability in his Health Law column this month. Dr. Shufeldt irreverently recalls the perfunctory physicals he and his colleagues performed as medical residents, but he stresses that to win a malpractice suit, sports physicals today must adhere to a much higher standard.

Also part of our special edition on sports physicals this month is *Marketing to Local Schools* by **Tim Reynolds, MD**. Dr. Reynolds' discussion of traditional and social media marketing opportunities, as well as techniques for marketing directly to local schools, marks the return of our Occupational Medicine column after three-month hiatus. Dr. Reynolds is president of HealthCARE Express, a chain of urgent care centers based in Texarkana, Texas, and publisher of *UrgentCareManagementMonthly.com*.

David Stern, MD, CPC, continues his series on medical necessity in E/M coding. This month marks his third installment, which focuses on proper coding of the physical exam in the wake of inappropriate downcoding by auditors unfamiliar with urgent care.

Our **Developing Data** end piece in this issue looks at two intriguing questions: how many urgent care patients have primary doctors, and how many patients who don't receive referrals from an urgent care? Be prepared for some surprises. ■

To Subscribe to JUCM

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FROM THE EXECUTIVE DIRECTOR

ACOs, Hospitals, and You

■ LOU ELLEN HORWITZ, MA

The folks at the Centers for Medicare & Medicaid Services are busy reviewing all the comments on their proposed accountable care organization (ACO) regulations that were submitted by over 1,200 organizations, including UCAOA. All that reviewing and the subsequent adjustments and rewrites will take some time. In the meantime, what's an organization to do?

There was a great article in the journal *HealthLeaders* in July on "The Hospital of the Future" (available free at www.healthleadersmedia.com). It had a great thought that neatly addresses the issue:

The key is for leaders to strive toward achieving the goals behind the regulations because they are the right thing to do for their organization's future, rather than what may or may not come of government initiatives.

What's also interesting about the article is what it's recommending that hospitals do: start paying attention to "downstream providers" whom they have been virtually ignoring. For some hospitals and health systems, that has meant opening their own urgent care centers, but for most, it means finding partners and building relationships. This is where you come in!

What's tricky for hospitals is finding a way to work with you (and with other providers) that does not run into a variety of regulations against paying for referrals and the like. The naturally creative, entrepreneurial spirit of the typical urgent care owner can be a strong asset at a time like this.

ACOs will make these relationships both easier and harder to establish, it seems, depending on how events unfold. But, unlike in the past when payers were in charge of coordinating care (managed care), this time physicians will be in charge of coordination, if all goes as designed. In a way, this

"For some hospitals, paying attention to 'downstream providers' has meant opening their own urgent care centers, but for most, it means finding partners and building relationships.

This is where you come in!"

is a very good thing: instead of hinging hopes on a stranger in a corporate office thousands of miles away, providers can hinge their hopes on one another.

More Support Is on the Way

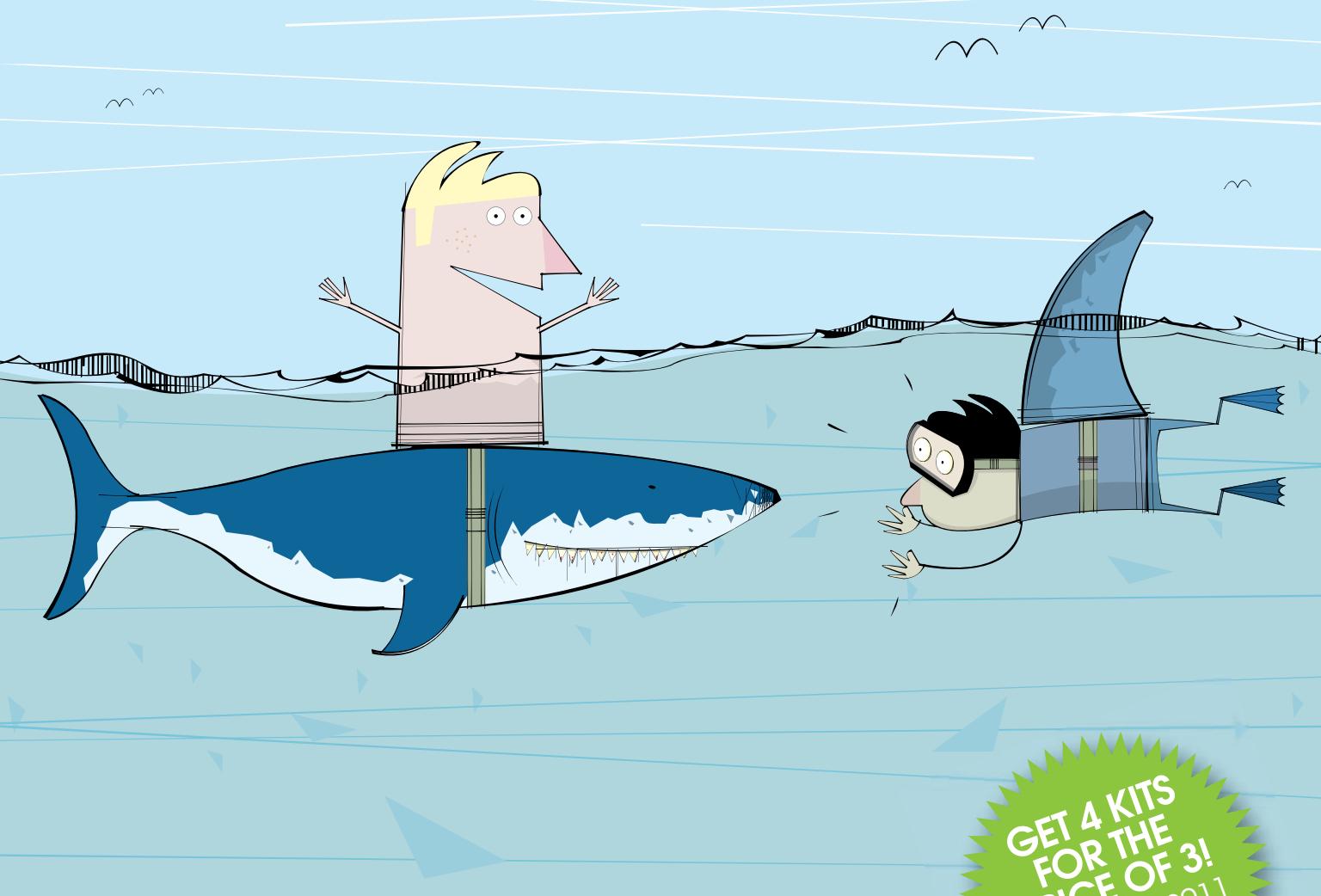
As I mentioned in my last editorial, UCAOA is working on a subtle but important transformation that will help us support you more effectively as we all muddle through these times together. We have been working on some aspects of the transformation for a long time; other efforts have just started and a few have yet to begin. We are adding staff. We are expanding our focus, our reach, and our expertise. We are expanding our membership. We are collaborating with other entities to assist in developing new studies of the industry.

At the same time, we are improving our existing programs so they will continue to be the best you can find. We recently received accreditation from the Accreditation Council for Continuing Medical Education, so we will be able to provide even more CME programs than in the past and make them more accessible. We are partnering with the Urgent Care College of Physicians to cosponsor our conferences to further improve the clinical content of our meetings. We are also working on our practice management courses to keep them at the advanced levels you are demanding.

In short, we are taking the resources you have entrusted to us and putting them back to work for you. We hope you like what we are up to, and we invite you to share your comments and suggestions with us. ■



Lou Ellen Horwitz is Executive Director of the Urgent Care Association of America. She may be contacted at lhorwitz@ucao.org.



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*Theocharis, George, Vouloumanou, Eviidiki et al. "Evaluation of a direct test for seasonal influenza in outpatients", *European Journal of Internal Medicine*, Vol.21 (2010) 434-438





Sudden Cardiac Death: *Identifying Risk Factors in Preparticipation Physicals for Young Athletes*

Urgent message: Doctors in the US and Europe are divided over what the cardiovascular component of a proper sports physical should include. Here is a reasonable approach.

NATHAN P. NEWMAN, MD, FAAFP

*The time you won the town the race
We chaired you through the market-place;
Man and boy stood cheering by,
And home we brought you shoulder-high.*

*To-day, the road all runners come,
Shoulder-high we bring you home.
And set you at your threshold down,
Townsman of a stiller town.*

A.E. Houseman, "To an Athlete Dying Young" (1896)

Introduction

Sudden death in young athletes is not new. In 490 BC, when the Greeks improbably defeated the invading Persians at Marathon, a young herald, Phidippides, ran 25 miles back to Athens to announce the victory, whereupon he collapsed and died on the spot.¹ Now, over 2,500 years later, the sudden death of an athlete while playing high school, college, or professional sports is still a rare event, but when it occurs, the ensuing shock and grief can shatter a community and devastate a nation.

Nathan P. Newman is Chief Medical Officer of Solantic walk-in urgent care in Jacksonville, Florida, where he designs, manages, and implements policies for more than 180 providers in 32 sites throughout the state. He is Vice President of the Urgent Care Association of America Board of Directors.



© Basketball Photo: iStockPhoto.com; Heart: Shutterstock.com; Composite: Tom DePenda

Sports, in and of themselves, are rarely a cause of increased risk of death, but they can be the environment that triggers sudden death in athletes with predisposing heart or blood vessel abnormalities. Some well-known athletes who have been victims of sudden death include marathon runner Jim Fixx (1984), Olympic volleyball star Flo Hyman (1986), NBA basketball stars "Pistol Pete" Maravich and Hank Gathers (1990), and Darryl Kile, all-star pitcher for the St. Louis Cardinals (2002).¹ Last March, a 16-year-old Michigan high school

basketball star, Wes Leonard, collapsed on the court after making the game-winning layup and later died of sudden cardiac arrest.²

Death in athletes in the United States can be due to a number of causes, many unrelated to cardiovascular diseases. Korey Stringer, an offensive tackle with the Minnesota Vikings, died of heat stroke in 2001.³ Unfortunately, heat stress diseases and dehydration cause unexpected deaths annually throughout the country. Other reported causes include exercise-induced asthma, sickle cell trait, head and spinal trauma, rhabdomyolysis, and exercise-induced anaphylaxis. This review focuses on cardiovascular causes of sudden death in athletes.

The purpose of preparticipation screening is to identify those cardiovascular diseases responsible for athletic deaths in order to disqualify those at risk. The scope of screening needed to prevent sudden death is controversial. For example, should electrocardiography (ECG) or echocardiography be a routine part of the evaluation? The European Society of Cardiology recommends ECG for all high school and college athletes before athletic participation. Would this process reduce sudden deaths in the US athletes? This issue will be addressed later in this article.

Incidence of Sudden Death in Athletes

In our country, sudden death most commonly occurs in football or basketball, accounting for two-thirds of all sudden deaths of athletes. Soccer is the sport most commonly associated with sudden death in the rest of the world. The exact frequency with which sudden death occurs in young athletes (those under 35 years of age) is unknown, as such data are limited. It has been reported that cardiovascular-related sudden death occurs in 1 to 2 in 200,000 high school athletes annually.¹

The US National Registry of Sudden Death in Athletes reports that such deaths have increased at a rate of 6% per year. The proportion of deaths reported is predominately higher in male athletes. However, sudden deaths in female athletes have notably increased, reaching 12% in 2006. This may be a result of the increased numbers of female athletes participating in organized sports. Interestingly, the age at death showed no trend for change over time.⁴

Goals of Cardiovascular Assessment

The purpose of preparticipation screening is to determine the medical eligibility of athletes based on evaluations of several organ systems. The cardiovascular portion of the screening is focused on reducing cardiovascular risks

associated with participating in athletics. It is important to note that once a potential cardiac abnormality is detected, subspecialty referral for further diagnostic testing is an appropriate next step.

A review of guidelines for preparticipation physicals shows that they relate primarily to mass screening of high school and college athletes of all races and both genders.⁵ However, these recommendations may also apply to athletes in youth (<13 years of age) or masters (>40 years of age), as well as to evaluations in other venues, such as individuals who are evaluated primarily in office practice settings.

Intense athletic activities may act as a trigger to increase the risk for sudden cardiac death in athletes with underlying heart disease. Most young athletes who die suddenly of cardiovascular disease do so during sports training or competition. So there appears to be a relationship between intense physical activity and sudden death. The key to preparticipation screening is the early detection of clinically significant cardiovascular disease and, at least in some cases, allow for timely therapeutic interventions that may alter the clinical course and prolong life.

Causes of Sudden Cardiac Death

Atherosclerotic coronary artery disease is the primary pathological finding in individuals >40 years of age who die during physical activity from cardiovascular causes, whereas inherited cardiovascular conditions are primarily responsible for deaths in younger athletes. Hypertrophic cardiomyopathy (HCM) accounts for most (36%-44%) of these deaths in American athletes.⁴ Other abnormalities—including anomalous coronary arteries (17%), myocarditis (6%), arrhythmogenic right ventricular cardiomyopathy, mitral valve prolapse, intramyocardial coronary arteries, coronary artery disease, aortic stenosis, and aortic rupture—are associated with many of the remaining deaths (all less than 5%).⁴

Athletes who smoke or have hypertension, diabetes, hyperlipidemia, or a strong family history of heart disease are at an increased risk of heart attack. Jim Fixx, the renowned marathoner, who died suddenly of coronary artery disease at age 52,¹ had been an overweight smoker with high cholesterol before taking up running. His father had died of a heart attack at age 43. Reports indicated that he had adamantly refused cardiac testing even though he had been noting chest pains prior to his heart attack. Autopsy revealed three-vessel coronary artery disease.⁶ A similar situation occurred when Darryl Kile, a pitcher for the St. Louis Cardinals, died sud-



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denly at age 33.¹ The cause of death was attributed to a 90% blockage in two coronary arteries. His father had died of a heart attack at age 44.

Hypertrophic cardiomyopathy

HCM is the most common cause of sudden death due to cardiovascular disease in the US, accounting for about one-third of these events. HCM is an inherited disorder, characterized by an asymmetrically hypertrophied and non-dilated left ventricle. Sudden death is likely due to ventricular tachyarrhythmias.⁷

Pathologic hypertrophy vs “athlete’s heart”

An important delineation exists between physiologic hypertrophy or “athlete’s heart” and pathologic conditions. In physiologic hypertrophy, cardiac mass increases in response to systemic training in dynamic (aerobic) and/or isometric (static) exercises. The structural remodeling noted in many athletes with this condition includes enlargement of the left and right ventricles and left atrium; however, the function of the heart remains preserved.⁸ Physiologic hypertrophy can sometimes present diagnostic challenges, especially when the echocardiographic dimensions are outside of clinically normal values.⁷

Unhealthy cardiac hypertrophy (pathological hypertrophy), on the other hand, is a response to stress or disease such as hypertension, myocardial infarction, valvular heart disease, or neurohormones. Pathological hypertrophy also leads to an increase in muscle mass, but the muscle does not increase its pumping ability. Instead it accumulates myocardial scarring (collagen). In pathological hypertrophy, the heart can increase its mass by up to 150%, with the potential for sudden cardiac death.^{9,10}

Congenital coronary artery anomalies

Another common cardiovascular cause of sudden death in athletes is congenital coronary artery anomalies. The most common of these anomalies is when the left main coronary artery originates from the right sinus of Valsalva.⁷ Any history of chest pain or syncope should alert the clinician to the possibility of a coronary anomaly.¹¹ A resting ECG exercise electrocardiogram may not be abnormal because the myocardial ischemia is episodic. This limits the value of random screening for coronary anomalies.¹²⁻¹⁴ The most likely cause of ischemia is either acute-angle kinking at the origin of the coronary artery or compression of the anomalous artery between the aorta and pulmonary trunk during exercise.

Myocarditis

Myocarditis has been associated with sudden cardiac death in its active or infectious phase or even in its healed stages due to arrhythmias.¹⁵ It may also be the consequence of drug abuse. Myocarditis may be challenging to diagnose clinically. A histological examination may be required with endomyocardial biopsy.

Marfan syndrome

Marfan syndrome is an inherited, degenerative disorder of the connective tissue.¹⁶ Several organ systems are affected, including the ocular, cardiovascular, and skeletal systems. The number and severity of symptoms vary from person to person. In a typical case, the affected individual is taller than average for his age, is nearsighted, has an arm span exceeding his height, is loose-jointed (especially in the knees, wrists, and fingers), is excessively flexible, and may have kyphoscoliosis. Olympic volleyball star Flo Hyman had undiagnosed Marfan syndrome and died of aortic rupture sitting on the sidelines of a volleyball game. A three-week-old clot was found around the tear, indicating that an earlier rip in the same spot had already begun to heal when the fatal second rupture occurred in her aorta.¹⁷ Florida State basketball player Ronald Pierce also died from an aortic rupture that was thought to be a result of this syndrome.¹⁸

Other cardiovascular causes

About 2% of young athletes who die suddenly have normal cardiac structure at autopsy, and death is presumed to be due to ion-channel disorders (eg, long QT syndrome²² and Brugada syndrome²³), Wolff-Parkinson-White syndrome,²⁴ and coronary vasospasm.

Other Noncardiac conditions

Athletes without underlying heart disease have been victims of sudden cardiac death following a seemingly innocent blow to the chest by a baseball or hockey puck. This is called “commotio cordis” or “cardiac concussion.” Death presumably occurs due to ventricular fibrillation.¹

Performing the Preparticipation Screening

The tremendous number of athletes requesting preparticipation physical examinations (approximately 12 million per year) and the rarity of cardiac disorders causing sudden death (<0.3%) are major barriers to effective screening.²⁵ US high school and college athletes’ preparticipation evaluations are typically restricted to history taking and a physical examination. Only 3% of trained athletes



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Table 1. Questions for a Preparticipation Cardiovascular Assessment

- Have you ever experienced chest pain with exercise?
- Have you ever felt faint or lost consciousness while exercising?
- Have you ever experienced dizziness with exercise?
- Have you ever experienced excessive shortness of breath or fatigue with exercise?
- Does your heart race or skip beats during exercise?
- Have you ever had prior limitation for participating in a sport for a medical reason?
- Have you ever been diagnosed with heart disease, heart murmur, or high blood pressure?
- Have you ever had rheumatic fever?
- Has anyone in your family died unexpectedly before 50 years of age?
- Have you ever had problems keeping up with others while jogging, cycling, or playing team sports due to shortness of breath for a reason other than because you were out of shape?
- Has anyone died in your family from an unknown cause?
- Does anyone in your family have a heart condition?
- Does anyone in your family have Marfan syndrome?

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who died suddenly of heart disease were suspected of harboring cardiovascular disease on the basis of a history and physical examination during screening.²¹

Clinical history

A complete clinical history is more likely to uncover a cardiovascular abnormality than the physical examination portion of a preparticipation screening. Likewise, physicians are more likely to recommend limiting activity due to a history indicating possible cardiovascular concerns than due to clinical findings on examination.^{26,27} If any of the history questions yields a positive response, further questioning and evaluation are recommended (**Table 1**). If possible, the athlete's parents should be involved in answering questions about their child's history.²⁸

Physical examination

The keys to the preparticipation cardiovascular examination are blood pressure measurement, palpation of radial and femoral pulses, and dynamic cardiac auscul-

tation. A quick screen for Marfan syndrome should also be considered when athletes may have common characteristics for this disorder.^{25,29,30}

Blood pressure should be measured while the patient is seated using an appropriately sized cuff. If an athlete's blood pressure is initially high, have the patient sit quietly for about five minutes and repeat the reading at least twice to ensure an accurate reading. Hypertension in children and adolescents is defined as an average systolic blood pressure and/or diastolic blood pressure that is above the 95th percentile on at least three occasions for the patient's sex, age, and height. Recommended guidelines for evaluation of hypertension this age group are shown in **Table 2**.

In adult athletes (>18 years of age), stage 1 hypertension is defined as blood pressure greater than 140/90 mm Hg. Stage 2 hypertension is defined as blood pressure greater than 160/100 mm Hg. Blood pressure readings indicating Stage 2 hypertension or any evidence of target-organ damage should prompt discontinuation of athletic

participation until a full evaluation is conducted and the hypertension is controlled.³¹

An athlete's heart rate and rhythm can be easily determined by palpation of the radial and femoral pulses. The pulse should have a smooth, rapid upstroke, a smooth summit, and a more gradual downstroke.³² The radial and femoral pulses should be synchronized without significant delay. Coarctation of the aorta may be evidenced by a diminished or delayed femoral pulse relative to the radial pulse.

Athletes with HCM may have a large-amplitude, rapidly rising pulse or a double-peaked pulse. Alternatively, athletes with a small-amplitude, slowly rising pulse may have aortic stenosis and low cardiac output (congestive heart failure). Any significant variation of alternating strong and weak pulse may signal left ventricular systolic dysfunction. Any irregular rhythm may indicate arrhythmia or a conduction problem.

Many preparticipation sports examinations are performed in gymnasiums or other large venues, making auscultation of the heart challenging. The cardiac exam-

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Table 2. Recommended Guidelines for Evaluation of Hypertension in Children and Adolescents

Stage	Systolic or diastolic blood pressure percentile	Frequency of blood pressure measurement
Normal	<90th percentile	Recheck at next scheduled physical
Prehypertension	90th to <95th percentile or if blood pressure exceeds 120/80 mm Hg even if below 90th percentile up to <95th percentile	Recheck in 6 months
Stage 1 Hypertension	95th percentile to 99th percentile plus 5 mm Hg	Recheck in 1-2 weeks or sooner if patient is symptomatic; if persistently elevated on two additional occasions, evaluate or refer to source of care within 1 month
Stage 2 Hypertension	>99th percentile plus 5 mm Hg	Evaluate or refer to source of care within 1 week or immediately if patient is symptomatic

Source

National Heart, Lung, and Blood Institute. The Fourth Report on the Diagnosis, Evaluation, and Treatment of High Blood Pressure in Children and Adolescents. NHLBI Website. Available at: www.nhlbi.nih.gov/health/prof/heart/hbp/hbp_ped.pdf. Accessed August 17, 2011.

ination is best performed in a quiet setting. First, inspect the precordium to look for any asymmetry or abnormal impulses. Then palpate the chest wall to detect any thrill or parasternal heave. Next, with your stethoscope, listen carefully for any murmurs, extra heart sounds, and splitting of the first and second heart sounds (ie, S₁ and S₂). Remember that the S₂ is composed of closure of the aortic valve followed by closure of the pulmonic valve. As we inspire, increased blood flow into the pulmonary vascular bed occurs, slightly delaying closure of the pulmonic valve. This widening of the S₂ ("physiologic split") can be a sign of normal cardiac function.³² Any narrowing of the S₂ split may be a sign of severe aortic stenosis, HCM, or left bundle branch block. A "fixed split," without inspiratory changes of the S₂, may be a sign of atrial septal defect.³³

Murmurs are particularly important to detect. They may vary due to location, intensity, timing, and character. Some murmurs may be difficult to hear. Dynamic auscultation, or having the patient perform a squat-to-stand exercise or the Valsalva maneuver, may change the intensity of the murmur.³² Increasing stroke volume usually causes murmurs to become louder (with squatting) and decreasing stroke volume may make murmurs quieter (with standing or the Valsalva maneuver). On the other hand, HCM or mitral valve prolapse should be considered if a murmur is softer when the patient squats or is louder or longer when he returns to a standing position or during the Valsalva maneuver.^{29,34}

Marfan syndrome, a genetic disorder of the connective

tissue, may be suspected due to characteristic clinical manifestations (**Table 3**). Aortic root dilatation is a common trait and can cause aortic dissection and sudden death. Further evaluation may include electrocardiography, slit-lamp eye examination, and echocardiography.³²

Red Flags

If syncope or presyncope, palpitations, dyspnea and easy fatigue, exertional chest pain, or family history of sudden death are present, further evaluation may be warranted.

Syncope or presyncope

Exercise-related syncope or presyncope may indicate HCM from left ventricular outflow tract obstruction or ischemia from congenital coronary anomalies. Other causes may be due to hypoglycemia, side effects from medications, or a vasovagal reaction.³⁵ Participation in athletics is not recommended when being evaluated for syncope and/or presyncope. Referral to a cardiologist should be considered if no cause can be determined.³⁵⁻³⁷

Palpitations

Athletes who experience palpitations should be evaluated for arrhythmia.³² Characteristics of abrupt or gradual onset, regular or irregular heart rate, and frequency of episodes and their relationship to exercise may be important. Supraventricular tachycardia may occur with an abrupt onset with a rapid heart rate and stop with vagal maneuvers. On the other hand, sinus tachycardia may have a slower onset and gradual res-

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Table 3. Common Signs, Symptoms, and Sequelae of Marfan Syndrome

Cardiovascular	<ul style="list-style-type: none"> ■ Aortic dilation and aneurysm ■ Aortic dissection ■ Mitral valve prolapse ■ Significant cardiac murmur (III/IV or higher) or a mid-systolic click
Skeletal	<ul style="list-style-type: none"> ■ Long arms and legs (arm span > height, upper to lower body ratio > 1 standard deviation below the mean) ■ Tall and thin body type (male > 6', female > 5'10") ■ Scoliosis or kyphosis ■ Pectus excavatum or pectus carinatum ■ Long, thin fingers ■ Flexible joints ■ Flat feet ■ Teeth that are too crowded
Ocular	<ul style="list-style-type: none"> ■ Significant myopia ■ Ectopic lens ■ Detached retina ■ Early glaucoma or cataracts
Other body systems	<ul style="list-style-type: none"> ■ Stretch marks on skin not explained by pregnancy or weight gain ■ Spontaneous pneumothorax ■ Dural ectasia

Source

Adapted from the National Marfan Foundation. Marfan syndrome facts. Available at: www.marfan.org/cms/uploaded_files/8XJIUG81F3/89/docs/factsheet_mfs%20facts%200311.pdf. Accessed August 17, 2011.

olution with exercise.³² Ventricular arrhythmias may also cause symptoms of palpitations. Common ventricular arrhythmias include long QT syndrome or arrhythmogenic right ventricular cardiomyopathy. Comprehensive evaluation of an athlete's use of tobacco, caffeine, alcohol, over-the-counter drugs, supplements, and illegal drugs should be conducted. If these questions do not lead to a probable cause, basic laboratory testing should be performed, including TSH, electrolytes, and an ECG. Possible review of event monitor or Holter evaluation may be considered if no clear etiology is determined. Athletes should not engage in sports until further evaluation is conducted by a cardiologist.³²

Dyspnea and easy fatigue

Complaints of dyspnea on exertion and easy fatigue are difficult to evaluate. They may simply be the result poor conditioning. However, they may also be signs of anemia, exercise-induced asthma, an underlying cardiovascular disorder, or primary pulmonary hypertension.³² If an athlete with dyspnea has a past history of high blood pressure, hyperlidemia, or other cardiac abnormalities, echocardiography should be considered prior to exercise testing to rule out aortic stenosis and HCM.³²

Exertional chest pain

Symptoms of exertional chest pain in young athletes demand further evaluation, although the cause may simply be exercise-induced asthma.²⁹ Exertional chest pain can be a sign of ischemia from coronary artery abnormalities or left ventricular outflow tract obstruction from HCM.⁷ However, a resting ECG or exercise stress test may not detect the episodic nature of this ischemia. Diagnosis might require a cardiology consultation for further diagnostic imaging including echocardiography or cardiac catheterization.

Family history of sudden death

Any athlete's family history of premature sudden death (ie, <50 years of age) must be evaluated thoroughly.³² Further diagnostic tests—including ECG, echocardiography, and exercise stress testing, as well as fasting lipids—should be considered.³²

Electrocardiography: To Test or Not to Test?

The ECG has been reported to be abnormal in up to 75%-95% of patients with HCM.²⁹ An ECG may also identify individuals with the long QT syndrome or Brugada syndrome, and it may raise suspicion of myocarditis by premature ventricular complexes and ST-T abnormalities. Despite this, an ECG may not be a viable

addition to a preparticipation history and physical examination screening of US athletes. A key reason: ECGs are commonly misread—even by experts.

A study published in the *Journal of Pediatrics* last July reviewed the accuracy of pediatric cardiologists reading ECGs with common cardiac abnormalities causing sudden death in athletes vs normal controls.³⁸ Results noted a sensitivity of only 68% and a specificity of 70% for recognition of ECG abnormalities by US cardiologists. The false-positive and false-negative rates were 30% and 32%, respectively. The investigators concluded that preparticipation screening ECGs are difficult to interpret and mistakes in ECG interpretation—even by cardiologists—could lead to high rates of inappropriate sports guidance and overuse of ancillary diagnostic tests.

These results appear to validate the common belief on this side of the Atlantic that preparticipation screening of US athletes with ECGs would not duplicate the results of a 25-year-long Italian study.³⁹ In this study, the rate of sudden cardiac death among competitive athletes in Italy was reported to have been significantly reduced by including ECGs in preparticipation physicals as standard procedure. However, these physicals were performed—and the ECGs evaluated—by sports physicians and other cardiovascular specialists “with extensive clinical experience with young competitive athletes.”

In the US, the situation is quite different. Here, primary care physicians perform the majority of the 12 million-plus preparticipation physicals conducted each year. The results of the Italian experience may not translate in a country in which evaluation of competitive athletes by non-cardiologists is the rule.^{32,40} Given the rarity of HCM and other cardiac anomalies requiring accurate reading of ECGs to detect, changing our system to include specialist evaluation of ECGs would not be a cost-effective approach.⁴¹

Automated External Defibrillators: To Adopt or Not to Adopt?

Identifying an athlete predisposed to sudden cardiac death with a preparticipation physical examination is one way to prevent this devastating event. But what if an athlete has sudden arrhythmia? A cohort study published in 2009 reviewed the use of automated external defibrillators (AEDs) in US high schools. There were 36 cases of sudden cardiac arrest (SCA) reported between December 2006 and July 2007 for athletes and non-athletes at the responding 1,710 high schools. Of the 36 SCA cases reported, 35 (97%) were witnessed, 34 (94%) received bystander cardiopulmonary resuscitation, and 30 (83%) received an AED shock. Twenty-three SCA victims (64%) survived to hospital discharge. The investigators concluded that school-based onsite AED programs could provide high survival rates for SCA victims. As more people participate in strenuous activities and exercise programs, availability of AEDs and coordinated emergency response programs should be considered a standard for all locations where athletic competition and participation occur.⁴²

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Conclusion

Cardiovascular-related sudden death in high school and other athletes is rare but worrisome. Common causes include hypertrophic cardiomyopathy, congenital coronary artery anomalies, myocarditis, and Marfan syndrome. Obstacles to diagnosis include the large number of student athletes needing preparticipation physicals each year, the rarity of the condition, the cost of ECGs and echocardiograms, and the high rate of ECG misreadings, even by cardiologists. A good clinical history is likely to detect more cardiovascular anomalies than a physical examination, the main components of which are blood pressure measurement, palpation of radial and femoral pulses, dynamic cardiac auscultation, and, in athletes with common characteristics of the disorder, screening for Marfan syndrome. If syncope, presyncope, palpitations, dyspnea and easy fatigue, exertional chest pain, or family history of sudden death are present, further evaluation may be warranted. ■

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Practice Management

Planning for Meaningful Use? The Clock Is Ticking

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ERIC McDONALD

Introduction

"Meaningful use" refers to the use of a "certified" electronic health record (EHR) to meet specific objectives established by the Centers for Medicare & Medicaid Services (CMS), which administers the EHR incentive program. An EHR is certified when it demonstrates that it can perform certain functions mandated by CMS, such as electronic prescribing, computerized order entry, and the electronic exchange of clinical information (eg, problem lists, medication lists, allergies and diagnostic test results) to providers of care and patient-authorized entities.

For use to be considered meaningful, however, it is not enough for an EHR to offer the CMS-approved functionality. A medical practice must actually employ this functionality in its EHR to meet specific performance targets set by CMS; it must "attest" that it has done so, and it must meet these goals by specific dates to qualify for stimulus funds.

What are these goals and dates, and how much money is at stake? Let's take a look.

Qualifying for Meaningful Use

You can qualify for meaningful use in one of two ways: by participating in either the Medicare or the Medicaid reimbursement program. You can't participate in both programs at once. Important differences between the two include eligibility and incentive payments.

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Participation in the Medicare program is open to MDs and DOs and provides a maximum incentive of \$44,000 per provider over five years. Participation in the Medicaid program is also open to nurse practitioners and, in some cases, physician assistants (among other providers) and provides a maximum incentive of \$63,750 per provider over six years, including up to \$21,250 for the adoption and implementation of a certified EHR.

In both the Medicare and Medicaid programs, incentive payments decrease each year, so the longer you wait to adopt a certified EHR—or use one you already have—to achieve meaningful use goals, the less you stand to earn. In addition, Medicare-eligible providers who do

before selecting this measure. On the other hand, clinics that already submit immunization or health surveillance data to state registries may consider selecting one or both of those measures to submit the same data to CMS (in the case of Medicare patients) via the EHR.

What Does “Attest” Mean?

Medicare-eligible professionals must attest to meaningful use through CMS’s web-based Registration and Attestation System, available at: <https://ehrincentives.cms.gov/hitech/login.action>. Providers fill in numerators and denominators for the meaningful use objectives and clinical quality measures (which a certified EHR will be able to generate), indicate whether they qualify for exclusions to specific objectives, and legally attest that they have successfully demonstrated meaningful use.

As soon as you enter that data into the online Attestation System, you will see a summary of your attestation and whether it was successful. The Attestation System for the Medicare EHR Incentive Program went online on April 18, 2011.

For the Medicaid EHR Incentive Program, providers follow a similar process using their state’s Attestation System. The states’ scheduled launch dates for their Medicaid EHR Incentive Programs are available at: www.cms.gov/apps/files/medicaid-HIT-sites.

To attest for the Medicare EHR Incentive Program in your first year of participation, you will need to have met meaningful use for a consecutive 90-day reporting period. If your initial attestation fails, you can select a different 90-day reporting period that may partially overlap with a previously reported 90-day period. To attest for the Medicare EHR Incentive Program in subsequent years, you will need to have met meaningful use for a full year.

Under the Medicaid EHR Incentive Program, providers can attest that they have adopted, implemented, or upgraded certified EHR technology in their first year of participation to receive an incentive payment. Medicaid EHR Incentive Program participants should check with their state to find out when they can begin participation.

However, any provider attesting to receive an EHR

Table 2. Menu Set Measures

The Centers for Medicare & Medicaid Services have established that five of 10 Menu Set Measures must be met using a certified EHR to demonstrate meaningful use. Details about each measure are available at: www.cms.gov/EHRIncentivePrograms/Downloads/EP-MU-TOC.pdf.

- Implement drug formulary checks
- Incorporate clinical lab test results into an EHR as structured data
- Generate patient lists by specific conditions to use for quality improvement, reduction of disparities, research, or outreach
- Send patient reminders in a form the patient prefers for preventive/follow-up care
- Provide patients with timely electronic access to their health information
- Use certified EHR technology to identify patient-specific educational resources and provide those resources to the patient if appropriate
- Perform a medical reconciliation if a provider receives a patient from another setting of care or from another provider or if it is believed an encounter is relevant
- Provide summaries for transition of care to another care setting or provider, including referrals
- Have the capability to submit electronic data to immunization registries or immunization information systems and perform actual submissions according to applicable law and practice
- Have the capability to submit electronic surveillance data to public health agencies and perform actual submissions according to applicable law and practice

incentive payment for either the Medicare or the Medicaid EHR Incentive Program may be subject to an audit. Providers should therefore retain all relevant supporting documentation used to complete the Attestation Module responses. Documentation to support the attestation should be retained for six years post-attestation. Documentation to support payment calculations (such as cost report data) should continue to follow current documentation retention processes.

CMS and its contractors will perform audits on Medicare providers. The states and their contractors will perform audits on Medicaid providers. CMS and the states will also manage appeals processes. If, based on an audit, a provider is found to not be eligible for an EHR incentive payment, the payment will be recouped.

How the Payment Schedules Work

Participants in the Medicare program can receive a maximum of \$44,000 over five years. Participants in the Medicaid program can receive a maximum of \$63,750 over six years. Distribution payments are made according to schedules established by CMS (**Table 3** and **Table 4**).

Important differences in incentive payments exist between the two programs. For the Medicare program,

Table 1. Core Measures

The Centers for Medicare & Medicaid Services have established that 15 Core Measures must be met using a certified EHR to demonstrate meaningful use. Details about each measure are available at: www.cms.gov/EHRIncentivePrograms/Downloads/EP-MU-TOC.pdf.

- Use computerized provider order entry (CPOE) for medication orders
- Implement drug-drug interaction checks
- Maintain an up-to-date problem list of current and active diagnoses
- Generate and transmit electronic prescriptions
- Maintain an active medication list
- Maintain a medication allergy list
- Record demographics (including preferred language, gender, race, ethnicity, and date of birth)
- Record and chart changes in vital signs (including height, weight, blood pressure, body mass index [BMI], and growth charts for children 2-20 years of age, including BMI)
- Record smoking status for patients ≥ 13 years of age
- Report ambulatory clinical quality measures to CMS (Medicare) or the states (Medicaid)
- Implement clinical decision support rules
- Provide an electronic copy of health information to patients
- Provide clinical summaries for patients for each office visit
- Provide electronic exchange of clinical information (problem lists, medication lists, allergies, and diagnostic test results) to providers of care and patient-authorized entities
- Protect electronic health information by implementing appropriate technical capabilities

not successfully demonstrate meaningful use by 2015 will have their Medicare reimbursement reduced. The reduction starts at 1% and increases each year that meaningful use is not demonstrated, up to a maximum of 5%.

To participate in the Medicaid program, adopting a certified EHR, and using it to meet the meaningful-use goals by the deadlines established by CMS, are not sufficient. To qualify for stimulus funds, at least 30% of a provider's patients (by volume, not by charges) must be Medicaid patients. The Medicare program does not have a corresponding requirement for Medicare patients.

You can't participate in both programs simultaneously. However, once a provider (referred to as an "eligible professional" for the purposes of qualification) selects one program, he or she is allowed to switch to the other program—but only once.

Demonstrating Meaningful Use

To demonstrate meaningful use, a provider must attest to

meeting each of 15 Core Measures (**Table 1**) and five of 10 Menu Set Measures (**Table 2**).

Each Core Measure is accompanied by a percentage-based measure as a threshold for meeting that requirement. For example, you must maintain an active medication list for at least 80 percent of your patients.

Many of the measures are self-explanatory. Recording a patient's demographics, vital signs, and smoking status, for example, while maintaining a list of that patient's diagnoses (problem list), medications, and medication allergies is pretty simple.

However, some measures may require additional explanation. For example, providers are required to report information on clinical quality measures, such as how often patients were queried about their smoking status, and, if applicable, offered cessation counseling, or how often hypertensive patients have had their blood pressure checked.

Beyond the clinical quality measures, providers must demonstrate the ability to implement a real-time clinical decision support rule related to a patient's diagnosis, medication use, allergy, or lab test result.

A number of the core measures focus on the provision of health information (electronic or otherwise) to patients or other parties, such as primary care providers, and the ability of the system to protect patient health information when transmitting it through password protection and data encryption.

Remember, all 15 Core Measures must be met to attest to meaningful use.

As for the Menu Set Measures, a provider needs to attest to meeting the requirements of only five of 10. Selecting which five measures to meet may depend on the provider's or clinic's preferences, on whether there are additional costs associated with any of the features required, or even on whether the functionality involved is easy and practical to use.

For example, a clinic not using a lab interface would not be likely select the clinical lab test requirement, or would at least consider the cost of interface design

Table 3. Medicare Schedule for Maximum Available Payments for EHR Meaningful Use

If you qualify to receive your first payment in:					
	2011	2012	2013	2014	2015
2011	\$18,000	—	—	—	—
2012	\$12,000	\$18,000	—	—	—
2013	\$8,000	\$12,000	\$15,000	—	—
2014	\$4,000	\$8,000	\$12,000	\$12,000	—
2015	\$2,000	\$4,000	\$8,000	\$8,000	\$0
2016 and beyond	—	\$2,000	\$4,000	\$4,000	\$0
TOTAL	\$44,000	\$44,000	\$39,000	\$24,000	\$0

Table 4. Medicaid Schedule for Maximum Available Payments for EHR Meaningful Use

If you qualify to receive your first payment in:					
	2011	2012	2013	2014	2015
2011	\$21,250	—	—	—	—
2012	\$8,500	\$18,000	—	—	—
2013	\$8,500	\$12,000	\$15,000	—	—
2014	\$8,500	\$8,000	\$12,000	\$12,000	—
2015	\$8,500	\$4,000	\$8,000	\$8,000	\$0
2016	\$8,500	\$2,000	\$4,000	\$4,000	\$0
TOTAL	\$63,750	\$44,000	\$39,000	\$24,000	\$0

payments are calculated at 75% of the total allowable Medicare charges for each provider. Thus, in order for a provider to receive the maximum first-year payment of \$18,000, he or she would need to have billed at least \$24,000 in Medicare charges. For the Medicaid program, payments are calculated at 85% of the cost of the EHR, up to a maximum of \$8,500 paid per year following implementation.

The total incentives of \$44,000 (Medicare) and \$63,750 (Medicaid) represent not only the maximum total payment available to each provider, but this money is available only to providers who attest to demonstrating meaningful use as early as 2012. Each year thereafter, the maximum available incentive payment for each program is reduced.

Incentive payments for the Medicare EHR Incentive Program will be made approximately four to eight weeks after an eligible professional meets the program requirements and successfully attests that he or she has

demonstrated meaningful use of certified EHR technology. CMS began making Medicare incentive payments in May 2011. Payments will be held for eligible professionals until the eligible professional meets the \$24,000 threshold in allowed charges.

Medicaid incentives will be paid by the states and are also expected to begin this year. States are required to issue incentive payments within 45 days of providers successfully attesting to having adopted, implemented, or upgraded certified EHR technology during their first year of participation in the Medicaid EHR Incentive Program. Launch dates for the Medicaid EHR Incentive Program vary by state, so the earliest date attestation can begin also varies by state. Several states have disbursed incentive payments as early as April 2011.

The Payment Process

CMS will issue incentive payments in the same manner that providers receive payments for Medicare services, via electronic funds transfer or check. Payments will be made to the taxpayer identification number (TIN) selected during registration for the Medicare EHR Incentive Program.

Attesting to Meaningful Use After 2012

The EHR Incentive program is being unfolded three phases. Phase I lasts through the end of 2012. Phase II begins in 2013 and ends in 2014. Phase III runs from 2015-2016.

Both Phase II and Phase III will introduce new requirements for demonstrating meaningful use. When the requirements, which are still in development, are finalized, it will mean that EHR vendors will need to re-certify their products in order to comply. Similarly, the standards for providers to demonstrate meaningful use will change accordingly.

As such, to claim your maximum share of the financial incentives in the years to come, it is crucial that your vendor be committed both to EHR re-certification and to training your staff in the use of any new functionalities needed to meet new meaningful use requirements.

With an EHR, particularly one being adopted to achieve meaningful use, vendor support is as important as the system itself. Choose a vendor with a track record of delivering it. ■

with reduced creatinine clearance will have diminished clearance of the drug. SPRIX® is contraindicated in patients with advanced renal impairment. Patients treated with SPRIX® should be adequately hydrated. Use SPRIX® with caution in patients with impaired renal function, heart failure, liver dysfunction, those taking diuretics or ACE inhibitors, and the elderly. Long-term administration of NSAIDs has resulted in renal papillary necrosis and other renal injury such as interstitial nephritis and nephrotic syndrome.

Anaphylactoid Reactions. As with other NSAIDs, anaphylactoid reactions may occur in patients with or without a history of allergic reactions to aspirin or NSAIDs and in patients without known prior exposure to ketorolac. SPRIX® should not be given to patients with the aspirin triad.

Cardiovascular Effects

• Cardiovascular (CV) Thrombotic Events

Clinical trials of several COX-2 selective and nonselective NSAIDs of up to three years duration have shown an increased risk of serious CV thrombotic events, myocardial infarction and stroke, which can be fatal. Patients with known CV disease or risk factors for CV disease may be at greater risk. To minimize the potential risk for an adverse CV event in patients treated with an NSAID, the lowest effective dose should be used for the shortest duration possible.

• Hypertension

NSAIDs can lead to onset of new hypertension or worsening of preexisting hypertension, either of which may contribute to the increased incidence of CV events. Patients taking thiazides or loop diuretics may have impaired response to these therapies when taking NSAIDs.

• Congestive Heart Failure and Edema

Fluid retention, edema, retention of NaCl, oliguria, and elevations of serum urea nitrogen and creatinine have been reported in clinical trials with ketorolac. Therefore, only use SPRIX® very cautiously in patients with cardiac decompensation or similar conditions.

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

Pregnancy. Starting at 30 weeks gestation, SPRIX® can cause fetal harm when administered to a pregnant woman due to an increased risk of premature closure of the ductus arteriosus. If SPRIX® is used at or after 30 weeks gestation, the patient should be apprised of the potential hazard to a fetus.

Hepatic Effects. Use SPRIX® with caution in patients with impaired hepatic function or a history of liver disease. Borderline elevations of one or more liver tests may occur in up to 15% of patients taking NSAIDs, including ketorolac. In addition, rare cases of severe hepatic reactions, including jaundice, fulminant hepatitis, liver necrosis, and hepatic failure, some of them with fatal outcomes, have been reported.

Inflammation and Fever. The pharmacological activity of SPRIX® in reducing inflammation and fever may diminish the utility of these diagnostic signs in detecting infections.

Preexisting Asthma. Patients with asthma may have aspirin-sensitive asthma. The use of aspirin in patients with aspirin-sensitive asthma has been associated with severe bronchospasm which can be fatal. Since cross reactivity, including bronchospasm, between aspirin and other NSAIDs has been reported in such aspirin-sensitive patients, do not administer SPRIX® to patients with this form of aspirin sensitivity, and use with caution in patients with preexisting asthma.

Eye Exposure. Avoid contact of SPRIX® with the eyes. If eye irritation occurs, wash out eye with water or saline, and consult a physician if irritation persists for more than one hour.

ADVERSE REACTIONS

The most frequently reported adverse reactions were related to local symptoms, i.e., nasal discomfort or irritation. These reactions were generally mild and transient in nature. The most common drug-related adverse events leading to premature discontinuation were nasal discomfort or nasal pain (rhinalgia).

The data described below reflect exposure to SPRIX® in patients enrolled in placebo-controlled efficacy studies of acute pain following major surgery. Most patients were receiving concomitant opioids, primarily PCA morphine.

Table 1. Post-operative Patients with Adverse Reactions Observed at a rate of 2% or more and at least twice the incidence of the placebo group.

	SPRIX® (N=455)	Placebo (N= 245)
Nasal discomfort	15%	2%
Rhinalgia	13%	<1%
Lacrimation increased	5%	0%
Throat irritation	4%	<1%
Oliguria	3%	1%
Rash	3%	<1%
Bradycardia	2%	<1%
Urine output decreased	2%	<1%
ALT and/or AST increased	2%	1%
Hypertension	2%	1%
Rhinitis	2%	<1%

In controlled clinical trials in major surgery, primarily knee and hip replacements and abdominal hysterectomies, seven patients (N=455, 1.5%) treated with SPRIX® experienced serious adverse events of bleeding (4 patients) or hematoma (3 patients) at the operative site versus one patient (N=245, 0.4%) treated with placebo (hematoma). Six of the seven patients treated with SPRIX® underwent a surgical procedure and/or blood transfusion and the placebo patient subsequently required a blood transfusion.

DRUG INTERACTIONS

Ketorolac is highly bound to human plasma protein (mean 99.2%). There is no evidence in animal or human studies that ketorolac induces or inhibits hepatic enzymes capable of metabolizing itself or other drugs.

Warfarin, Digoxin, Salicylate, and Heparin. Therapeutic concentrations of digoxin, warfarin, ibuprofen, naproxen, piroxicam, acetaminophen, phenytoin, and tolbutamide did not alter ketorolac protein binding.

Aspirin. When ketorolac is administered with aspirin, its protein binding is reduced, although the clearance of free ketorolac is not altered. The clinical significance of this interaction is not known; however, as with other NSAIDs, concomitant administration of SPRIX® and aspirin is not generally recommended because of the potential of increased side effects.

Diuretics. Clinical studies, as well as postmarketing observations, have shown that ketorolac can reduce the natriuretic effect of furosemide and thiazides in some patients.

Probenecid. Concomitant administration of oral ketorolac and probenecid resulted in decreased clearance and volume of distribution of ketorolac and significant increases in ketorolac plasma levels (total AUC increased approximately threefold from 5.4 to 17.8 mcg·h/mL), and terminal half-life increased approximately twofold from 6.6 to 15.1 hours. Therefore, concomitant use of SPRIX® and probenecid is contraindicated.

Lithium. NSAIDs have produced an elevation of plasma lithium levels and a reduction in renal lithium clearance. The mean minimum lithium concentration increased 15%, and the renal clearance was decreased by approximately 20%. Thus, when SPRIX® and lithium are administered concurrently, observe patients carefully for signs of lithium toxicity.

Methotrexate. NSAIDs have been reported to competitively inhibit methotrexate accumulation in rabbit kidney slices. This may indicate that they could enhance the toxicity of methotrexate. Use caution when SPRIX® is administered concomitantly with methotrexate.

ACE Inhibitors/Angiotensin II Receptor Antagonists. Concomitant use of ACE inhibitors and/or angiotensin II receptor antagonists may increase the risk of renal impairment, particularly in volume-depleted patients. Reports suggest that NSAIDs may diminish the antihypertensive effect of ACE inhibitors and/or angiotensin II receptor antagonists. Consider this interaction in patients taking SPRIX® concomitantly with ACE inhibitors and/or angiotensin II receptor antagonists.

Antiepileptic Drugs. Sporadic cases of seizures have been reported during concomitant use of ketorolac and antiepileptic drugs (phenytoin, carbamazepine).

Psychoactive Drugs. Hallucinations have been reported when ketorolac was used in patients taking psychoactive drugs (fluoxetine, thiothixene, alprazolam).

Pentoxifylline. When ketorolac is administered concurrently with pentoxifylline, there is an increased tendency to bleeding. Therefore, concomitant use of SPRIX® and Pentoxifylline is contraindicated.

Nondepolarizing Muscle Relaxants. In postmarketing experience there have been reports of a possible interaction between ketorolac and nondepolarizing muscle relaxants that resulted in apnea.

Selective Serotonin Reuptake Inhibitors (SSRIs). There is an increased risk of gastrointestinal bleeding when selective serotonin reuptake inhibitors (SSRIs) are combined with NSAIDs.

Fluticasone/Oxymetazoline. The rate and extent of absorption of ketorolac from SPRIX® administration were assessed in subjects with allergic rhinitis before and after the administration of a single daily dose of fluticasone and oxymetazoline. There was no effect on the pharmacokinetic characteristics of SPRIX® that can be considered clinically significant.

DRUG ABUSE AND DEPENDENCE

Ketorolac does not bind to opiate receptors.

Symptoms and Signs. Symptoms following acute NSAID overdose are usually limited to lethargy, drowsiness, nausea, vomiting, and epigastric pain, which are generally reversible with supportive care. Gastrointestinal bleeding can occur. Hypertension, acute renal failure, respiratory depression, and coma may occur, but are rare.

Treatment. Manage patients using symptomatic and supportive care following an NSAID overdose. There are no specific antidotes.

PATIENT COUNSELING INFORMATION

Instruct patients to read the NSAID Medication Guide that accompanies each prescription dispensed.

Case Report

A Surprising Cause for Constipation?

Urgent message: Prescribing Miralax and an enema would likely have killed this patient. He nearly died in the hospital. Can you figure out why?

WILLIAM A. GLUCKMAN, DO, MBA, FACEP, CPE, CPC

Introduction

Constipation, a common urgent care complaint, can be a symptom of many things, not all of them obvious, and some life-threatening. In this tricky case, the underlying problem is one that many urgent care physicians would not consider in a differential diagnosis, yet a clue that the condition is a distinct—if uncommon—possibility is hidden in plain sight.

Case Presentation

JW is a 72-year-old male who presented to urgent care with four days of constipation. He had a history of hypertension. He had also had a partial colectomy for colon cancer 15 years earlier. He had not seen a physician in over 10 years, with one exception: a colonoscopy had been performed 1.5 years earlier and was reportedly normal.

JW stated that he normally had a soft BM every day and had never had constipation before. He was not on any medications. He denied any changes in his diet. He reported taking magnesium citrate at home earlier in the day. He had no BM but had experienced increasingly diffuse abdominal discomfort that was vague, with periods of cramping, but it was not “really” painful, he said. He was passing some flatus. His ROS was positive for a little nausea but no vomiting. On the day of presentation, he had eaten normally. He reported no recent black or bloody stools, no urinary problems, no fever, and no back pain. His social history was positive for smoking (>50 packs per year).

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Observations/Findings

Evaluation of the patient revealed the following vital signs:

- T: 98.9° F
- R: 18
- O₂ Sat: 96% RA
- Pulse: 100
- BP: 210/110

The physical exam revealed JW to be a cachectic male who appeared to be his stated age and in NAD. His sclera were not icteric. His conjunctiva were not pale. His lungs were CTA B/L. His heart was nml S₁/S₂, with no murmurs. His abdomen was flat, with slightly decreased bowel sounds. No palpable masses were detected, although there was some mild, diffuse tenderness without guarding or rebound. His femoral and DP pulses were strong and symmetric. There was no CVAT and his back had good ROM, without pain. His rectal exam showed a

minute amount of stool in the vault that was trace guaiac positive. His bladder was not distended.

Labs/Imaging

A KUB and CXR were obtained. They revealed a possible fecal impaction with ileus. The CXR showed a hilar mass. JW was sent to the local tertiary care ED for a CT scan of the C/A/P. The ED only did the A/P and admitted him to the floor of the medicine service with a vascular consult.

Diagnosis

5-cm abdominal aortic aneurysm (AAA).

Course and Treatment

Within 12 hours of admission, JW had a sudden onset of severe back pain and ruptured his AAA in front of his medical attending, sustaining a PEA cardiac arrest. He was resuscitated and transferred to the CCU, then taken promptly to the OR, where his AAA was repaired. JW survived to discharge and returned home after rehab to his wife.

Discussion

AAA may seem like a surprising diagnosis, but it should not be. The clue is JW's risk factors. He is a pack-a-day smoker and has uncontrolled hypertension (he has a history of the condition and has not seen a doctor for it in over a decade). Tobacco use and uncontrolled hypertension are major risk factors for AAA.

While tobacco use and hypertension alone are not confirmatory of the diagnosis, given the presentation and the patient's age, AAA should be considered as one possibility. Ischemic colitis, another life-threatening condition, should also be on the list.

The urgent care practitioner must remain vigilant and maintain a high index of suspicion for life-threatening intra-abdominal issues with all complaints of abdominal pain, no matter how seemingly minor. Constipation is not commonly the presenting symptom of AAA. A clinician could easily have been tempted to tell this gentleman to go home and take Miralax and an enema or another "constipation cocktail," which would have resulted in disaster in this case. ■

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SPORTS PHYSICALS



Are Urgent Cares Liable?

■ JOHN SHUFELDT, MD, JD, MBA, FACEP

Full disclosure: I was not always the smooth, confident provider I hope I am today. No, there was a time when I would say or do things while practicing medicine that would shine a bright light upon my medical inexperience, naiveté, or general ignorance.

To wit, the emergency medicine residents where I trained were pressed into servitude twice yearly to go out to the local high schools and perform sports physicals. On one particular day, I was wading through dozens of budding high school student athletes when I happened upon a young woman whom I believe was around 16. She was next in line for her preparticipation physical. As I recall, her particular sport was cheerleading.

Generally speaking, the women had it easier; their physicals consisted of a brief head and neck exam, listening to their heart and lungs, a cursory abdominal exam, and checking to see if their spine was straight. If they could walk *and* communicate, their neuro exam was judged to be normal. It was basically the “fog-a-mirror-while-preserving-their-modesty exam.” Typically, the dress du jour was gym shorts and a tank top. The men had it a bit harder. They received all of the above plus an inguinal hernia exam.

While I was “examining” this young lady, I could not help notice that she had petechiae (red and purple spots caused by broken capillaries) all over her neck and upper chest and on the top of her breasts. She also had a few spots scattered on her abdomen. I went into “Mayo mode.” I was sure that because of my differential diagnostic acumen, I was going to save her young life. I started inquiring about bruising, heavy menses, medication use, recent viral illnesses, mono, syphilis—you name it. Finally, she said, “Doctor, why all the questions? I’m a cheerleader!” I explained in my most Marcus Welby-like voice, “I am concerned about those spots—the obvious petechial le-

sions—on your neck, chest, and abdomen.” To which she replied, “You mean these?” She pointed to her rash. “They’re hiccies, you idiot!”

Perfunctory Exams No Longer

Back in the day, sports physicals were no-brainers; no one was too concerned about and consequently did not pay much attention to possible red flags. We operated in the ignorance-is-bliss days of “what could these healthy-appearing teenagers possibly have wrong with them?”

Those days are over. We are now keenly aware—or should be—that undiagnosed, critical conditions (now and back then) can kill a student athlete.

A frequently used marketing tactic for both new and well-ensconced urgent care centers is to market sports and back-to-school physicals to the communities they serve. While this is a solid marketing tool, the medical/legal risks may actually outweigh the return on investment in increased patient volume and revenue that preparticipation physicals can generate. This is particularly true if these physicals are treated with anything less than utmost care and diligence.

The most glaring example of the necessity for diligence in the preparticipation physical is case of the Loyola Marymount University basketball star Hank Gathers, who collapsed and died during a game in 1990. The cause of death was determined to be secondary to idiopathic cardiomyopathy, which was previously undiagnosed. A \$32.5 million claim was filed against 11 defendants, including Mr. Gathers’ physicians. The suit was eventually settled for \$1 million in 1992.^{1,2}

The goal of a preparticipation physical is to identify serious conditions that may preclude athletic participation. Perceived or real inadequacy of this exam can lead to litigation when a student athlete is felled by a condition that could have possibly been diagnosed during the physical. Although a number of serious conditions could surface on the playing field, cardiomyopathy is particularly concerning inasmuch as it is the leading cause of death in young athletes, followed by coronary



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artery anomalies and increased cardiac mass not meeting the diagnostic criteria for hypertrophic cardiomyopathy.³

Despite this, cardiac abnormalities are still rare. The incidence of cardiac-related death of young athletes is one in 217,000 to 300,000 deaths, which equates to approximately 10 deaths per year in the US.^{4,5}

Historically preparticipation physicals were performed by the family physician or by a team physician. Today, urgent care providers perform a significant number of these exams, which are often tightly scheduled on certain days or between certain times. The assembly line nature of the enterprise may further augment the perception of the inadequacy of the examination should tragedy later strike. Also, the very nature of the encounter (loud, busy environment) can make detecting subtle clues even more challenging. In one study, 501 college athletes were screened with an ECG and medical history.⁶ Of these 90 were selected for an echo. Ultimately, none were disqualified from participation in school sports. This study illuminates the "needle in the haystack" epidemiology of the conditions that we absolutely need to detect.

In 2005, 23-year-old Thomas Herrion, an offensive lineman (6'3" tall, 310 pounds) for the San Francisco 49ers, dropped dead of a myocardial infarction.⁷ This young athlete had repeatedly sailed through all his collegiate and professional screening exams, yet his autopsy revealed long-standing heart disease. This case further illustrates the lack of effectiveness of the preparticipation exam and led one author to conclude that "although the conduction of the preparticipation exams is considered medically and legally necessary and benevolent by many, the actual utility of at least the cardiovascular component, specifically in terms of screening for lethal conditions, is questionable from an epidemiological standpoint."⁸

The AHA Weighs In

Despite this, the American Heart Association (AHA) recommends an adequate screening exam be performed on compet-

itive athletes by trained professionals.⁹ At present, however, there is no consensus regarding what constitutes an appropriate preparticipation screening history and physical. In a study looking at the preparticipation forms used by 193 high schools, only 32 of them included all three components deemed necessary by the American Academy of Pediatrics: cardiovascular symptoms, blood pressure, and family history.¹⁰

To complicate matters, providers have been sued for deeming an athlete ineligible for participation. Although, to my knowledge, none of these suits have been successful, denying eligibility to the next budding NBA star may cause some grief.

I know what you are thinking; "Other than that, Mrs. Lincoln, how was the play?" Actually, it is not all bad. It is simply an area in which providers may need to be more cautious than they have been historically.

Preparticipation exams are an integral part of the services we provide in urgent care medicine. These exams should be performed with diligence adequate to detect cardiac anomalies. ■

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Had Any Interesting Cases Lately?

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





OCCUPATIONAL MEDICINE

SPORTS PHYSICALS



Marketing to Local Schools

■ TIM REYNOLDS, MD

Offering preparticipation physicals to student athletes is a win-win proposition. It can be lucrative. It renders an important service. And because of the exalted place of school sports in American society, ensuring that young athletes are healthy enough to participate spotlights your urgent care in your community and makes people aware of the many other services you offer.

The key to profitability is effective marketing. Area school children who participate in sports are required to take and pass a preparticipation physical once a year. For urgent cares, pediatricians, and family doctors seeking ancillary revenue, this is low-hanging fruit. So how do you market your center to ensure that it is you providing physicals to the majority of student athletes in your area?

Take Advantage of Local Media

The start of any athletic season is a golden opportunity to promote your urgent care to local newspapers, magazines, and radio and television stations by sending out a press release. This simple one- or two-page document should offer compelling details about the importance of sports physicals for student athletes. A Google search using the phrase "how to write a press release" will turn up a wealth of tips.

Last April, for example, a study published in the American Heart Association journal *Circulation* found that basketball had the highest risk of sudden cardiac death, followed by swimming, lacrosse, football, and cross-country track. Many of these deaths could possibly have been prevented by a preparticipation screening that assessed cardiovascular risk. Such information is readily available online.



Tim Reynolds is the president of HealthCARE Express (<http://healthcareexpress.us>), a chain of urgent care centers headquartered in Texarkana, Texas, and publisher of *UrgentCareManagementMonthly.com*, a free online publication for urgent care owners and managers. He can be reached at TReynoldsMD@urgencaremanagementmonthly.com.

"Techniques for marketing preparticipation physicals are linked by a common theme: know your customer."

With all that is happening in the world, why would local media outlets want to publish articles, conduct radio interviews, or air TV segments on such a mundane topic as sports physicals? Because all these outlets have a large news hole to fill every day, and they will consider any news that might help them fill it, particularly the most attention-getting news of all: local news.

When news that affects a multitude of families in your area is timed to coincide with a predictable current event, like the start of basketball practice in the fall, it has a good chance of being covered, particularly if a savvy urgent care draws attention to it. When that news concerns a health risk to children, and the messenger is someone credible, like a physician, coverage prospects soar.

While most parents know their children are required to have physicals to participate on a school athletic team, many do not understand why a sports physical is mandatory. Informing them is news.

In addition to covering the risks involved in playing sports, your press release should explain how a doctor taking a good medical history prior to a student taking the field can prevent serious injuries and accidents from occurring. Be sure your press release includes the convenient hours when preparticipation physicals are conducted at your center.

Also wise is to purchase airtime on a local cable channel and run a TV commercial to promote sports physicals at your clinic. Using local athletes will better target your commercial to local viewers. In addition, providing a digital copy of the commercial for student athletes to share on their social media networks can spark a viral marketing campaign that quickly saturates your region with the news.

Once you have a commercial, you can also purchase airtime at local movie theaters. Many theaters air the commercials of local advertisers prior to the film for a modest fee. The commercials typically rotate in a repeating cycle. A packed theater waiting for the movie to begin is a captive audience that may view your commercial a dozen or more times before the lights dim.

Gain Attention With Social Media

You Tube (www.youtube.com), Facebook (www.facebook.com), and Twitter (www.twitter.com) are no-cost conduits for sharing information on sports physicals online with a select group of people who have opted in to receive your messages. If you find social media bewildering, consult with your younger staffers, or your own children, for whom tweets and Facebook postings are as natural as breathing.

If your urgent care already has a You Tube "channel" (that is, a homepage for your account), recruit a staff provider to star in a weekly 10-to-15-minute video on preventing sports injuries to post on the site. Because sports seasons come and go throughout the year, the topics your provider chooses to discuss can be fairly diverse and tailored to different sports, including:

- The importance of pre-season conditioning
- Altering a training regimen gradually and safely
- Proper warm-up techniques to prevent injury
- Why equipment in good condition is essential for safety

At the end of the video, take a moment to promote your center's ability to handle both preparticipation physicals and sports injuries. In addition to posting the video on YouTube, you can also post it on Facebook, Tweet about it on Twitter, upload it to your website, and add it to your center's blog. Filming should take you (or the staffer you delegate it to) about an hour a week. An entire year's worth of video topics can be shot in about a day and then scheduled to run throughout the year.

Offer Free Physicals at School

Because preparticipation physicals are required before players can start practicing with the team, many coaches prefer them to be conducted at school en masse on one convenient day. Contact high school athletic directors in your area to see how your providers can be part of such a program. This may mean volunteering your services, but it is really a barter arrangement. In exchange for donating your time and expertise, request that prospective team members who miss their free physicals be referred to your clinic for a make-up physical at your standard rate.

Giving freebies may seem heretical, but do not be shortsighted. This is an opportunity to forge relationships with local athletic trainers and coaches. Sports injuries occur year-round. Coaches are more inclined to send an injured player to an urgent care with which they have a relationship.

In addition, going back to school for a day gives you the opportunity to interact with hundreds of area school kids and their parents for only the cost of your time. Be sure you bring plenty of brochures on your clinic's services to send home with each student following the physical exam.

Become a Team Sponsor

An easy and exciting way to market preparticipation physicals is by sponsoring a junior or senior high school athletic team. These days, many schools face budget shortfalls and must trim their athletic program expenses. This presents a great marketing opportunity for your urgent care.

School athletic directors are continually looking for ways to partner with area businesses to provide new uniforms, equipment, hydration stations, digital scoreboards, and even mentorships for players who may be struggling academically. Sponsorships are not charity; they should provide a mutual benefit to the team you are sponsoring and to you. In exchange for a donation, request that your center's logo be affixed to the item or items you fund. Request that team announcers mention your center as a sponsor during season games or meets. In exchange for a sizable donation, request that your center be the school's primary referral source for sports physicals and injuries. That is money well spent.

If your budget is limited, more modest sponsorships are available through a local athletic booster club. Booster clubs provide support and encouragement to coaches and student athletes to promote school spirit and athletic excellence and encourage good sportsmanship. Through a booster club, you can place ads in game programs distributed at an event, sponsor team banners, and even host fan appreciation nights. For the latter, you would typically provide free noisemakers, sports balls, water bottles, or other sports-related items to team fans. For maximum effectiveness, such promotional items should sport team colors and feature both the team logo and your clinic logo. On game day, members of your staff should be at the playing field, court, track, or pool to distribute the items before play begins.

A Common Theme

These techniques for marketing preparticipation physicals are linked by a common theme: know your customer. Traditional media may give your urgent care exposure money can't buy if you meet their need for news. Student athletes can make your cause their own if you give them an opportunity to star in your commercial and then give them a copy to share with their friends. School coaches and athletic directors will send business your way if you take time to establish a good relationship with them. Spending a relatively modest sum to sponsor a school team is a community service that members of the community are not likely to forget as long as athletic competition remains integral to American life. ■



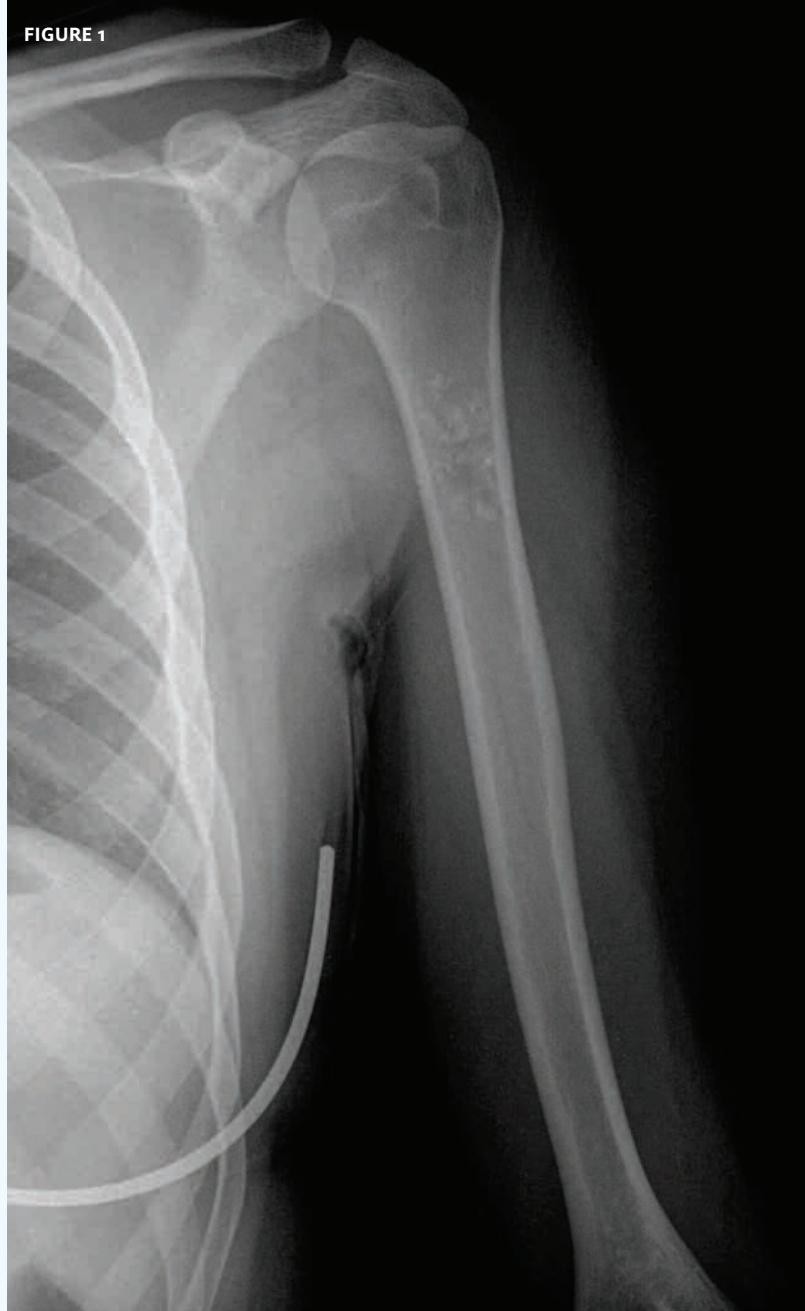
INSIGHTS IN IMAGE

CLINICAL CHALLENGE: CASE 1

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 email the relevant materials and presenting information to editor@jucm.com.

FIGURE 1



The patient, an otherwise healthy 18-year-old, presented with pain in the upper arm. There was no history of trauma.

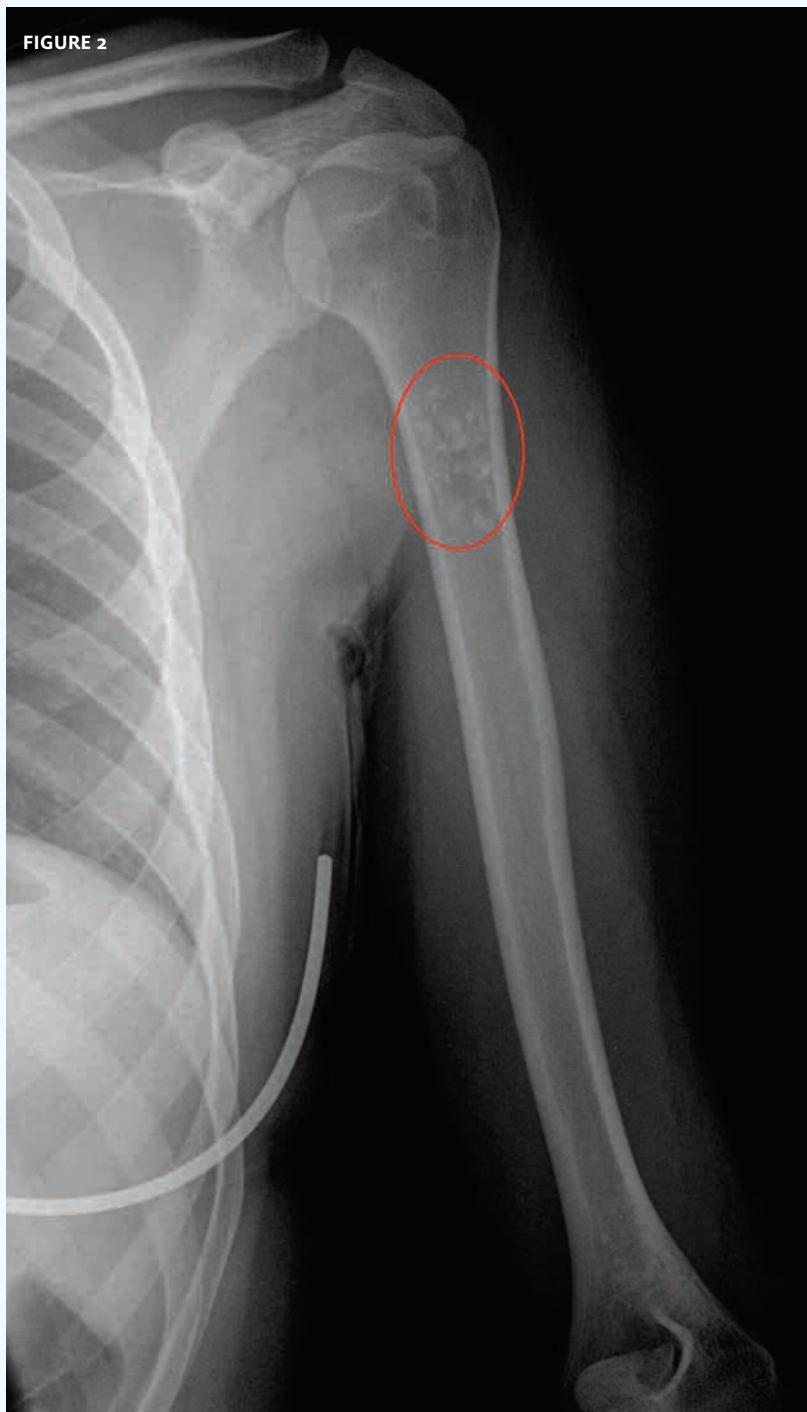
View the image taken (**Figure 1**) and consider what your diagnosis and next steps would be.

Resolution of the case is described on the next page.

INSIGHTS IN IMAGES: CLINICAL CHALLENGE

THE RESOLUTION

FIGURE 2



There is a lesion in the upper humerus that is consistent with an osteoblastoma.

Next step: urgent orthopedic consultation.

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



INSIGHTS IN IMAGES

CLINICAL CHALLENGE: CASE 2

FIGURE 1



The patient, an otherwise healthy 10-year-old, fell and suffered a blow to the shoulder. The patient presented with a decreased range of motion.

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

Resolution of the case is described on the next page.

INSIGHTS IN IMAGES: CLINICAL CHALLENGE

THE RESOLUTION

FIGURE 2

Lt



The patient has a greenstick fracture of the proximal humerus.

Next steps: sling and pain control.

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



ABSTRACTS IN URGENT CARE

- Antibiotics vs Appendectomy
- Diagnostic Imaging in Children
- Acute Bronchiolitis Treatment
- NAHUM KOVALSKI, BSc, MDCM

- Decision Rules for Suspected PE
- 2011 *E. coli* Outbreak in Germany

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

Antibiotics Are Not Equal to Appendectomy for Appendicitis

Key point: *The incidence of peritonitis at 30 days was higher in the antibiotic group than in the surgery group; 68% of patients treated with antibiotics did not require appendectomy*

Citation: Vons C, Barry C, Pautrat K, et al. Amoxicillin plus clavulanic acid versus appendicectomy for treatment of acute uncomplicated appendicitis: an open-label, non-inferiority, randomised controlled trial. *Lancet.* 2011;377(9777): 1573-1579.

Four recent randomized trials suggest that antibiotics alone can cure uncomplicated appendicitis or be used as first-line treatment. In this noninferiority trial, 239 adults with computed tomography-confirmed acute uncomplicated appendicitis at six academic hospitals in France were randomized to receive amoxicillin plus clavulanic acid (3 g daily for 8-15 days) for emergent appendectomy.

Incidence of peritonitis at 30 days, the primary endpoint, was significantly higher in the antibiotic group than the surgery group (8% vs 2%). Overall, 68% of antibiotic-treated patients did not require appendectomy during 1 year of follow-up.

Published in *J Watch Emerg Med.* June 3, 2011 — John A. Marx, MD, FAAEM. ■

Diagnostic Imaging Is Common in Children

Key point: *More than 40% of continuously enrolled children in a national healthcare organization underwent at least one imaging procedure during a 3-year period.*

Citation: Dorfman AL, Fazel R, Einstein AJ, et al. Use of medical imaging procedures with ionizing radiation in children: a

population-based study. *Arch Pediatr Adolesc Med.* 2011;165(5): 458-464.

The rapid increase in diagnostic imaging has raised concern about low-dose ionizing radiation exposure in children. Two new studies shed light on this problem.

In one study, investigators used claims data from a large national healthcare organization to determine how many diagnostic imaging procedures with ionizing radiation were performed in continuously enrolled children (age, <18 years) between 2005 and 2007. Among 355,000 children, 151,000 (43%) underwent 437,000 imaging procedures; 25% underwent two or more procedures, and 16% underwent three or more. Plain radiographs accounted for 85% of procedures, and computed tomography (CT) accounted for 12%. Overall, 8% of all children had at least one CT scan, and 3.5% had two or more.

Another study drew from a nationally representative annual survey of emergency department (ED) visits. Between 1995 and 2008, the proportion of ED visits by children (age, <18 years) that included CT scanning rose from 1.2% to 5.9%. This fivefold increase was noted in all age groups, from infant and toddler to adolescent. The most common complaints for which CT scanning was performed were head injury, headache, and abdominal pain.

Published in *J Watch Pediatr Adolesc Med.* June 15, 2011 — Howard Bauchner, MD, and Allan S. Brett, MD. ■

Which Treatment Is Most Effective for Children With Acute Bronchiolitis?

Key point: *Epinephrine (adrenaline) is the only treatment shown in clinical studies to reduce the rate of admission of children younger than 2 years who are treated in the emergency department for acute bronchiolitis (number needed to treat = 15).*

Citation: Hartling L, Fernandes RM, Bialy L, et al. Steroids and bronchodilators for acute bronchiolitis in the first two years of life: systemic review and meta-analysis. *BMJ.* 2011;342:d1714.



Nahum Kovalski is an urgent care practitioner and Assistant Medical Director/CIO at Terem Emergency Medical Centers in Jerusalem, Israel. He also sits on the JUCM Editorial Board.

These authors combined the results of 48 studies with a total of 4897 children younger than 2 years with a first episode of acute-onset bronchiolitis, defined as acute wheezing and respiratory distress associated with evidence of viral infection. The randomized controlled trials were identified by searching many databases, including the Cochrane Central Register of Controlled Trials. Two reviewers selected studies for inclusion and extracted the data. Only eight of the studies were of high quality.

In four studies of 920 children initially treated in an emergency department, only epinephrine decreased admissions at the time of treatment, with 1 admission prevented for every 15 children treated (95% CI, 10-45). Steroid treatment alone was no more effective in decreasing admissions in eight studies of 1762 patients, and other treatments were ineffective though they were studied in many fewer patients. Using a probabilistic approach to analysis, epinephrine with or without steroids had the highest probability of success. No treatment was better than placebo in decreasing the length of stay in hospitalized children. ■

Four Clinical Decision Rules for Suspected PE Perform Equally Well

Key point: Clinicians can feel comfortable choosing any of these rules to evaluate pulmonary embolism.

Citation: Douma RA, Mos CM, Erkens PMG, et al. Performance of 4 clinical decision rules in the diagnostic management of acute pulmonary embolism: a prospective cohort study. *Ann Intern Med.* 2011;154(7):709-718.

Several clinical decision rules (CDRs) are available to guide management of patients with suspected pulmonary embolism (PE); these CDRs use elements of medical history and physical exam to designate the pretest probability of PE as "likely" or "unlikely." However, choosing one rule over another can be problematic because the rules have not been compared directly.

Dutch researchers prospectively enrolled 807 patients with suspected acute PE and evaluated them with D-dimer testing and four CDRs: Wells rule, simplified Wells rule, original revised Geneva rule, and the simplified revised Geneva rule. Patients underwent computed tomography testing for PE if any CDR result was "PE-likely" or if D-dimer testing was positive. Patients with histories of PE were excluded.

During 3 months of follow-up, the overall prevalence of PE was 23%. CDR results were discordant in 29% of patients. The prevalence of PE in patients classified as "PE-unlikely" by CDR ranged from a low of 13% (simplified Wells rule) to a high of 17% (simplified revised Geneva rule). However, when combined with normal D-dimer results, all CDRs exhibited similar performance in excluding acute PE (negative predictive value ranged from 99.4%-99.5%).

Published in *J Watch Gen Med.* June 23, 2011 — Jamaluddin Moloo, MD, MPH. ■

First In-Depth Look at the *E. coli* O104:H4 Outbreak in Germany, 2011

Key point: As of mid-June, more than 3000 cases had been reported, including 39 fatalities. The outbreak-associated strain produces Shiga toxin and also has enhanced adherence to intestinal epithelial cells.

Citations: Frank C, Werber D, Cramer JP, et al. Epidemic profile of Shiga-toxin-producing *Escherichia coli* O104:H4 outbreak in Germany—Preliminary report. *N Engl J Med.* 2011. [Epub ahead of print.]

Bielaszewska M, Mellmann A, Zhang W, et al. Characterisation of the *Escherichia coli* strain associated with an outbreak of haemolytic uraemic syndrome in Germany, 2011: a microbiological study. *Lancet Infect Dis.* 2011. [Epub ahead of print.] Pennington H. *Escherichia coli* O104, Germany 2011. *Lancet Infect Dis.* 2011. [Epub ahead of print].

In May 2011, an outbreak of *Escherichia coli* O104:H4-associated hemorrhagic diarrhea began in Germany. Now, two research groups provide some details.

A preliminary report describes the epidemiologic, clinical, and microbiological features of the outbreak. As of June 18, 2011, 3222 cases had been reported, including 39 fatal cases. Hemolytic uremic syndrome (HUS) developed in 810 (25%) of the patients. Among those with HUS, 89% were aged >17 years, and only 1% were aged <5 years; 68% were female. The interval from onset of diarrhea to onset of HUS was 5 days for the 79 patients with such data available.

Another study analyzed stool samples from 80 patients (including 67 with HUS) hospitalized in 17 German cities and characterized the outbreak-related isolates. All isolates were serotype O104:H4, fermented sorbitol, and belonged to sequence type (ST) 678, leading the authors to conclude that they were a single clone. All produced Shiga toxin 2, characteristic of enterohemorrhagic *E. coli* (such as *E. coli* O157). In addition, all isolates had the molecular characteristics associated with an aggregative pattern of adherence to intestinal epithelial cells.

The investigators compared the 2011 isolates with three *E. coli* O104 reference strains—two from Germany and one from Korea. One of these reference strains (isolated in 2001 from a child with HUS in Germany) had a similar virulence pattern, with Shiga toxin 2 production and the enteroaggregative trait. The outbreak isolates have an extended-spectrum β-lactamase phenotype (ie, resistance to all penicillins and cephalosporins; susceptibility to carbapenems) that is absent in the 2001 isolate. They are resistant to sulfamethoxazole-trimethoprim but remain susceptible to fluoroquinolones and aminoglycosides.

Published in *J Watch Infect Dis.* June 29, 2011 — Mary E. Wilson, MD, and Larry M. Baddour, MD. ■



Medical Necessity in E/M Coding, Part 3: Correctly Coding the Physical Exam

■ DAVID STERN, MD, CPC

Some coding auditors do not understand the urgent care setting. As a result, they have been inappropriately downcoding evaluation and management (E/M) levels—not based on levels of documentation, but rather on whether the documentation is supported by their “view” of medical necessity, even though these auditors have usually never been providers and lack clinical experience.

In this situation, the best defense is a strong offense. This column reviews medical necessity and level of physical exam for two conditions commonly seen in urgent care centers: sore throat and chest pain. The goal is to clarify the logic underlying medical necessity documentation. These examples are given so that providers and coders may apply similar logic to the documentation of other complaints that are commonly evaluated in urgent care.

Q Which elements and systems are appropriate for a provider to perform and document in the physical exam for a patient presenting with a chief complaint of a sore throat?

A When a patient presents with a sore throat, it is appropriate to document the following items:

- **Constitutional:** vital signs and general appearance.
- **Ear/Nose/Throat:** presence or absence of pharyngeal erythema or swelling, tympanic erythema or bulging, etc.
- **Skin:** presence or absence of exanthema or other rash.



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

Concurrent inflammation of the skin and pharynx is frequently seen with scarlet fever, scarletina, measles, etc.

- **Psychological:** mood and affect. These are always appropriate to observe and document, as they have a bearing on the accuracy of the history and the ability of the patient to comply with physician instructions.
- **Eyes:** presence or absence of icterus. Jaundice is an indication that the patient may be suffering from hepatitis, which may indicate that infectious mononucleosis may be the cause of the sore throat.
- **Neck:** presence or absence of nuchal rigidity. Signs of meningeal inflammation may indicate concurrent viral or bacterial meningitis, which may have the same etiology as a pharyngitis.
- **Lymphatic:** presence or absence of palpable lymph nodes. Cervical lymphadenopathy is commonly seen with pharyngitis, especially when caused by group A streptococci. Diffuse lymphadenopathy is more common with infectious mononucleosis.
- **Respiratory:** presence or absence of respiratory distress and/or adventitious lung sounds. Findings here may indicate concurrent asthma, pneumonia, croup, or epiglottis, all of which would be more common in a patient with a complaint of a sore throat.
- **Musculoskeletal:** gait and station. The ability to stand and walk normally tells the physician a great deal about any patient's condition.
- **Cardiovascular:** presence or absence of a murmur. A cardiac murmur may indicate concurrent endocarditis or may be a result of previous rheumatic fever caused by group A streptococci. ■

Q Which elements and systems are appropriate to perform and document in a physical exam for a patient

presenting with a chief complaint of chest pain?

A. When the patient presents with chest pain, it is appropriate to document the following items:

- **Constitutional:** vital signs and general appearance
- **Ear/Nose/Throat:** presence or absence of oral mucosal pallor. Pallor may be consistent with anemia, which may exacerbate or precipitate cardiac angina.
- **Skin:** presence or absence of rash or petechiae, which should raise suspicion of endocarditis or pericarditis.
- **Psychological:** mood and affect. The rationale for documenting psychological status for chest pain is the same as for sore throat (see the previous page).
- **Eyes:** presence or absence of icterus. Jaundice may result from heart failure. Blockage of biliary ducts may produce chest pain with jaundice.
- **Neck:** presence or absence of signs.
- **Lymphatic:** presence or absence of palpable lymph nodes. Lymphadenopathy may indicate a localized or systemic inflammatory process or carcinoma, either of which may be a clue to the cause of the chest pain.
- **Respiratory:** presence or absence of respiratory distress and/or adventitious lung sounds. Findings here may indicate concurrent asthma, pneumonia, heart failure, or one of many other chest conditions.
- **Musculoskeletal:** gait and station. The ability to stand and walk normally tells the physician a great deal about any patient's condition.
- **Cardiovascular:** any patient with chest pain should have a complete cardiovascular system exam.

Under the 1997 Medicare E/M documentation guidelines, either a sore throat or chest pain only qualifies for a detailed physical exam, which would support a 99203 or 99214 CPT code. If the 1995 E/M guidelines are used, documentation of each physical qualifies as a comprehensive physical exam, which would support a 99205 or 99215 CPT code.

This is not to suggest that a 99205 or 99215 code is always appropriate for these complaints. Complexity of medical decision making (CMDM) is likely to support a 99205 or 99215 code for a chief complaint of chest pain. However, a single chief complaint of sore throat (without evidence of acute epiglottitis or another more serious condition) would at most support a moderate level of CMDM consistent with a 99203 or 99214 code.

Documentation of the physical exam, which is driven by medical necessity, may produce a comprehensive exam for many common medical problems, especially when coded using the 1995 guidelines. This is especially true in urgent care, where unexpected findings are more likely to be discovered because a provider often has not previously examined the patient.

Providers should ensure that coders are familiar with both sets of guidelines so that the practice can receive full credit for the work performed. Providers who use an EHR that performs automated E/M coding should know which set of guidelines is being used; almost all EHRs use the 1997 guidelines, which tend to reduce the level of E/M codes for a significant proportion—often more than 30%—of patient visits.

If your EHR does use the 1997 guidelines, consider hiring a coder to recode all visits according to the 1995 guidelines. Although manually recoding visits is costly, the substantial increase in revenue often justifies the investment. ■

Note: CPT codes, descriptions, and other data only are copyright 2011, American Medical Association. All Rights Reserved (or such other date of publication of CPT). CPT is a trademark of the American Medical Association (AMA).

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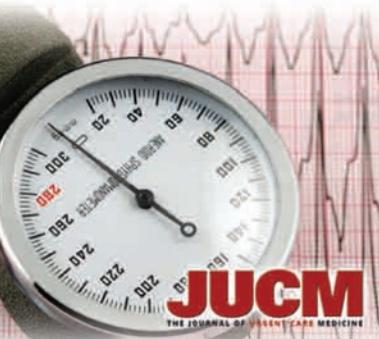
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Medac Health Services, P.A.
4402 Shipyard Blvd., Wilmington, NC 28403
Phone: (910) 452-1400 • Fax: (910) 791-9626
Email: dkey@medachealth.com



ATLANTIC EMERGENCY ASSOCIATES URGENT CARE CENTER EMPLOYMENT OPPORTUNITIES FOR BOARD CERTIFIED PHYSICIANS

Atlantic Emergency Associates (AEA) is currently seeking BC/BE physicians to provide coverage at a **BRAND NEW** Urgent Care Center opened in Somers Point, NJ in conjunction with the AtlantiCare Physician Group. The center opened in May 2011.

The Urgent Care provides care for all non-life threatening emergencies, upper respiratory infections, minor fractures, simple lacerations, and other uncomplicated illnesses and injuries. Full plain radiograph capabilities and point of care testing are available. Exceptional support staff includes RNs and medical assistants.

AEA is an independent democratic physician group that provides services to the Emergency Departments of AtlantiCare Regional Medical Center in Atlantic City, Pomona and the satellite Emergency Department in Hammonton, New Jersey and now, the new 7-bed Urgent Care Center in Somers Point.

Our emergency medicine providers work in both the Atlantic City Campus (Level 2 Trauma Center) in Atlantic City, and at the Mainland Campus (Heart Institute) in Pomona, NJ. Both emergency departments are certified Chest Pain Centers, and certified Stroke Centers. We provide emergency care to more than 120,000 patients annually at these two facilities. Additionally we staff the Satellite Emergency Department in Hammonton 24 hours per day and the Urgent Care center located in Somers Point 11 hours per day.

Currently we are recruiting qualified candidates to cover the Urgent Care Center with full-time or part-time employment available. Additional coverage in the Emergency Department listed above can be offered to qualified BC/BE Emergency Medicine-trained candidates. Excellent salary and full benefits packages available to all new physicians. Scheduling equity in Urgent Care from the start.

If you are interested in further discussing this opportunity please contact:

John W. Becher, D.O., Chair, Emergency Services, john.becher@atlanticare.org or call Tom Walsh at 609-923-4315.
At your convenience, we will arrange your visit to Atlantic City. Please check our website – www.aeadocs.com

CAREERS

Dunkirk and Solomons, Maryland

Seeking part-time BC/BE EM, IM, and FP physicians to practice urgent care medicine at Dunkirk and Solomons Urgent Care Centers in Calvert County, Maryland. Enjoy a collegial relationship with nurses, mid-level providers, and urgent care support staff, excellent work environment, a flexible schedule, and competitive compensation.

**Send CV: Emergency Medicine Associates
20010 Century Blvd, Suite 200
Germantown, MD 20874
Fax: (240) 686-2334
Email: Recruitment@EMAonline.com**



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Please contact Lindsay LaPointe for more information.
To apply please email: Ladams@mountainmedical.net



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Righttime Medical Care, a physician-owned urgent care, is currently recruiting full and part-time physicians to meet the ever-increasing patient care needs of our growing healthcare business.

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Please email your CV to mdirecruitment@myrighttime.com
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myRighttime.com

Georgia

Thriving urgent care practice located in beautiful Roswell/Alpharetta, Georgia seeking full-time and part-time physicians and mid-levels to work in urgent care setting.

Candidates must be BC in primary care or emergency medicine and must have a minimum of 3 years in ED, urgent care or family medicine.

Please email CV to:
sharrison@qps-ga.com



URGENT CARE OPPORTUNITY IN THE SOUTHWEST

San Juan Regional Medical Center in Farmington, New Mexico is recruiting BC/BE Family Physician to a hospital-owned Urgent Care facility. Base salary of \$215,000 plus productivity, excellent benefits, and relocation.

Snow skiing, golfing, fly fishing and many other outdoor adventures – at your doorstep.

Contact: Terri Smith
(888) 282-6591
Email: tsmith@sjrmdocs.com
www.sjrmdocs.com

Email: jucm@russelljohns.com

FAMILY PRACTICE, INTERNAL MEDICINE, MED/PEDS OR EMERGENCY MEDICINE PHYSICIAN OPPORTUNITY

If you are looking for an unsurpassed quality of life while pursuing an active, challenging medical career, then consider an employment opportunity in Charleston, West Virginia - a state that is rated as one of the top ten in the nation to practice. You will find that Charleston Area Medical Center has the best of both worlds if you are seeking the perfect life-work balance.

Charleston Area Medical Center and CAMC Physicians Group are recruiting for one full-time BC/BE Family Practice, Internal Medicine, Med/Peds or Emergency Medicine physician to join our Urgent Care team. The facilities have been in operation for more than 25 years, and we have four convenient locations. The hours of operation for three locations are from 9 a.m. to 9 p.m., seven days a week. The fourth is open Monday - Friday, 10 a.m. to 6 p.m. Candidate should have a full range of urgent care skills. Easy referral access to more than 400 subspecialists on staff at our medical center.

This outpatient opportunity offers flexible scheduling, work only 14 shifts per month and no call.

Our comprehensive benefits, enhanced compensation and productivity package as well as a generous sign-on bonus provide the opportunity to reach your financial goals quickly. Opportunity to work extra shifts if desired.

Affordable housing is located in safe and attractive neighborhoods and our school system is exceptional with both private and public school options. This is the ideal place to raise a family in a balanced and fulfilled lifestyle.

For consideration of our opportunity, please e-mail your formal CV to Carol Wamsley, Director, Physician Recruitment at carol.wamsley@camc.org.
Toll free number: **866-551-8927**.



Charleston Area
Medical Center

CAMC Physicians Group
AFFILIATED WITH
Charleston Area
Medical Center

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OREGON URGENT CARE PHYSICIAN

Salem Clinic, P.C., Oregon's leading physician owned multi-specialty medical practice, has an opening for a board certified/board eligible family medicine physician to work at our

Urgent Care Center. Salem, Oregon is located between the Coast and the Cascade Mountain Range, as well as near a major metropolitan area with multi-cultural opportunities.

The Medical Group Management Association (MGMA) has rated the Salem Clinic as a "better performing" medical group. We offer an excellent benefit package. Community: 152,000. Excellent school system, higher education systems. Capital of Oregon.

To learn more about our Clinic, please visit our website at: salemclinic.org or call Connie Finicle: **503-399-2470**.

You may also mail, email or fax your CV to: Connie Finicle, Salem Clinic P.C. 2020 Capitol St. N.E., Salem, OR 97301 Email: conniefinicle@salemclinic.org Fax: **503-375-7429**

We look forward to hearing from you soon!

ILLINOIS

Part-time/full-time, BE/BC Family Practice/ER physician needed for Urgent Care position in Huntley and Crystal Lake, Illinois. 12-hour shifts Monday-Friday, 9-hour shifts Saturday/Sunday. Competitive salary and benefits. Interested candidates email resume to:

mabraham@centegra.com

Columbus, Ohio

Urgent Care physicians needed to work in a brand-new physician owned facility. Part-time and full-time position available. An entrepreneurial inclination is desired as the company expects to grow rapidly. Ownership opportunity for the right candidate. Competitive compensation with potential for bonuses. Health benefits, paid med-mal and vacations.

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mjrankin@gmail.com
 or contact Michael Rankin
(740) 503-2538

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NYU Langone Medical Center

Urgent Care Physician

**Hospital for Joint Diseases/
 NYU Langone Medical Center**

New York, NY

The Department of Emergency Medicine at NYU School of Medicine is looking for a physician with experience in Emergency Medicine to work at our Urgent Care practice at the Hospital for Joint Diseases in Manhattan, New York.

This is a unique practice at our Orthopedic Hospital, where you will care for acute, walk-in orthopedic injuries and supervise orthopedic residents who are also supervised by orthopedic attending staff.

We have full and part time positions available. We offer an outstanding compensation and benefits package.

Please send CV and Cover Letter to:

Robert Femia, MD, MBA, FACEP
 Vice Chairman, Clinical Operations
 Department of Emergency Medicine

In care of: Danielle Rodriguez
 462 First Avenue, OBV-A345
 New York, NY 10016
emjobposts@nyumc.org

Urgent Care of Connecticut

Urgent Care of Connecticut (UCC) is currently recruiting full-time board certified Family Medicine, Emergency Medicine, or IM/Peds physicians to join our team of healthcare professionals. Our company strives to exceed patients' expectations on every visit.

UCC is a rapidly growing healthcare company dedicated to providing top-notch urgent care medicine. Our four locations in Southbury, Brookfield, Norwalk and Ridgefield, Connecticut provide care to the local communities 365 days per year. This generates a large amount of flexibility in scheduling for our physicians. Our growth plans are aggressive and include multiple opportunities for full-time and per diem physicians.



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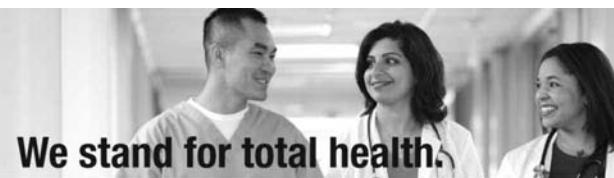
Competitive salary with bonus/incentive plan • Professional Liability Insurance • Eight and Ten hour shifts
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For more information, please contact:

**Jeannie Kenkare, DO
 Chief Medical Officer**

human.resources@ucfconnecticut.com



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CHIEF OF URGENT CARE & URGENT CARE PHYSICIANS

We seek a Chief of Urgent Care in Baltimore, MD and Staff Urgent Care Physicians for our Baltimore/DC/Suburban Maryland and Northern Virginia locations. For the Chief opening, must be a BC Physician in Family Practice or Emergency Medicine who has or can obtain an active Maryland, Virginia and District of Columbia Medical License. Three years of team lead or supervisory experience is essential. Staff openings offer flexible schedules and require a BC Family Medicine Physician or BC Med/Peds Physician who has or can obtain an active Maryland, Virginia and District of Columbia Medical License. All positions require ACLS and PALS certification and computer/typing, advanced communication and organizational skills.

Join us and benefit from an integrated medical information system, excellent team approach, reasonable and predictable schedules, clinical autonomy, subspecialist support, energetic focus on excellence and comprehensive benefits, including 100% paid occurrence based malpractice, a pension plan and a 401K.

To apply, please contact **Cooper J. Drangmeister at: (301) 816-6532 or apply online at: <http://physiciancareers.kp.org/midatl/>**



Mid-Atlantic Permanente Medical Group, P.C.

EOE



Full-time and part-time job openings for ER physicians at a state-of-the-art Urgent Care center with two locations in beautiful Charleston, South Carolina - on the coast!

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Urgent Care Opportunities

Indianapolis Area

Community Health Network is seeking BE/BC Family Medicine physicians for openings in Urgent Care, Occupational Medicine and School Based Clinics for locations throughout Indianapolis and central Indiana. Physicians will enjoy the flexibility of working **Full-time, Part-time or PRN** and have the ability to see patients in multiple locations. Candidates should have a consistent and consecutive employment or training history.

MedCheck, Community Health Network's Walk in Care Clinic, is located in various locations across the Indianapolis area, including Noblesville, Carmel, Anderson, Greenwood and Indianapolis. These opportunities are geared towards a physician who enjoys flexible scheduling and the ability to see patients in multiple locations.

Community Health Network is a network of 5 central Indiana hospitals and 5 Indiana Surgery Center locations. We are known for our physician partnerships and ranked among the top 40 integrated health care networks in the nation. **Indiana** is consistently ranked as one of the nation's top physician friendly states with low cost malpractice, a simplified licensing process and affordable cost of living.



For More Information, Contact: Angela Trussel
DocJobs@eCommunity.com
 (866) 588-5777 toll free
www.eCommunity.com/PhysicianRecruitment



Urgent Care and Outpatient Family Practice Opportunities!

Would you enjoy an attractive work/life balance with a flexible schedule and no call? How does living 90 minutes to Houston and Austin sound? St. Joseph Health System is offering outstanding full-time practice opportunities within Bryan-College Station metro area as well as new clinics surrounding the city. From sports, shopping and fabulous dining, Bryan-College Station has it all. Home to the University of Texas A&M, it boasts the title of the most educated city in Texas (Money Magazine). With facilities serving the seven county areas known as Brazos Valley, over 470,000 people entrust their care to SJHS.

Contact Jane Dierberger at:
(800) 243-4353 or jdierberger@strelcheck.com

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Urgent Care Physician



Finding Balance

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HealthCare Partners Medical Group is a multi-specialty medical group that is recognized for its quality of care and high rates of patient satisfaction. HealthCare Partners has over 4,000 employees, including 700+ primary care and specialty physicians, caring for more than 700,000 patients throughout Los Angeles County and Northern Orange County.

As part of our continued growth, we are currently seeking outgoing Urgent Care Physicians to join our team in Long Beach, Los Angeles, and Pasadena.

In this role, you will have the opportunity to provide care and support to a wide variety of patients working in fast-paced Urgent Care Centers. Candidates should be Board Certified in Family Medicine, and be ACLS and PALS certified. Board eligible candidates will also be considered.

For immediate consideration or to learn more about our company, please email your CV to John Haigh at jhaigh@healthcarepartners.com.

You can also visit us at:
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URGENT CARE PHYSICIAN, GRAND FORKS, North Dakota

Altru Health System, a multi-specialty, integrated healthcare system of 185 physicians, has a wonderful opportunity for a BC/BE Family Practice physician to practice in an outpatient Urgent Care setting in Grand Forks, a city of 60,000, with a referral population of 225,000. Practice with 4 other providers working roughly 144 shifts per year.

Excellent benefits package including pension/profit sharing. Teaching opportunities available through Altru's Family Medicine Residency Program and University of North Dakota School of Medicine. Grand Forks offers a wide variety of cultural, recreational and athletic activities. Upper Midwest living offers the advantages of low crime rates and excellent schools.

For more information contact: Kerri Hjelmstad
(800) 437-5373, ext. 6596
Email: khjelmstad@altru.org • www.altru.org

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DEVELOPING DATA

In each issue on this page, we report on research from or relevant to the emerging urgent care marketplace. This month, we offer a look at data from the 2010 Urgent Care Benchmarking Survey Results. These data are based on responses of 1,691 US urgent care centers; 32% were UCAOA members. The survey was limited to "full-fledged urgent care centers," the qualifications for which included accepting walk-ins during all hours of operation, as well as having a licensed provider on site, x-ray and labs on-site, the ability to administer IV fluids and perform minor procedures, and being open seven days a week, at least four hours per day.

In this issue: What percentage of patients who visit an urgent care center have a primary care physician, and if they don't, what percentage of urgent care centers help them find one?

HOW MANY URGENT CARE PATIENTS HAVE PCPs AND HOW MANY RECEIVE REFERRALS?

In more than half of urgent cares, the majority of patients have a primary doctor. In 38% of urgent cares, however, over half of patients don't (**Figure 1**). Are they referred? Often the answer is No (**Figure 2**). For example, in urgent cares where one-third to one-half of patients lack a regular primary doctor, only 16% receive referrals. This may due to lack of patient desire or an ineffective referral process.

Figure 1. Urgent care patients who do not need a primary doctor referral.

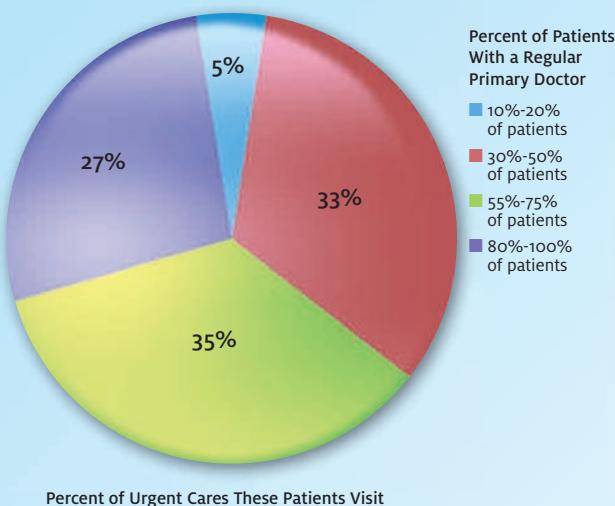
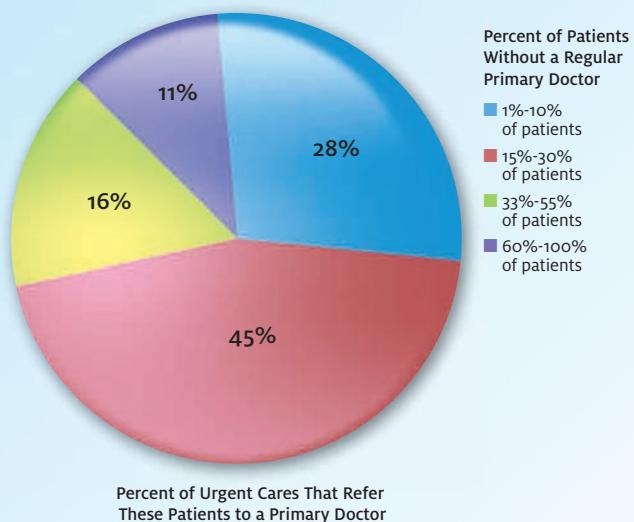


Figure 2. Urgent care patients who do need a primary doctor referral.



Acknowledgement: The 2010 Urgent Care Benchmarking Study was funded by the Urgent Care Association of America and administered by Professional Research Associates, based in Omaha, NE. The full 40-page report can be purchased at www.ucaa.org/benchmarking.

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

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