

Bouncebacks

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

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

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

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

Approaching Differences in Risk Tolerance (Part 2 of 2)

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

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

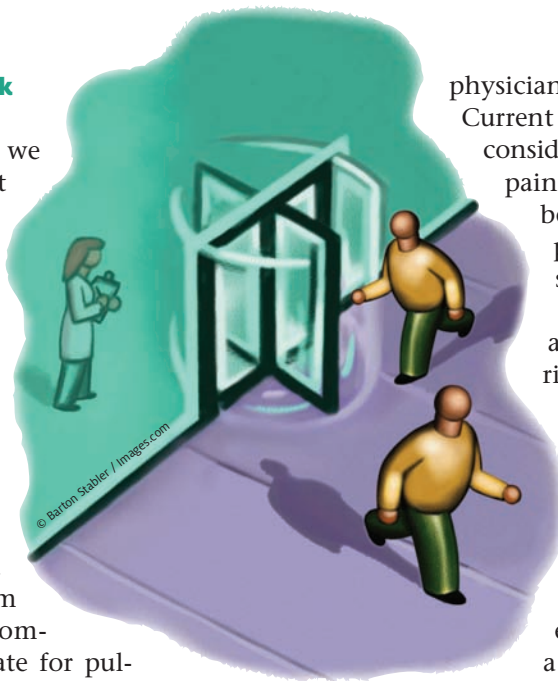
The patient and her husband received different advice from two physicians, the first recommending a CT scan to evaluate for pulmonary embolism (PE), and the second telling her the test was not necessary.

Traditionally, medical schools have taught that a diagnostic test needs to be administered whenever the

physician considers the diagnosis of PE. Current thinking is that PE should be considered in every patient with chest pain, but often this diagnosis can be clinically excluded without potentially harmful and expensive testing.

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

tenderness. Additionally, the patient was a diabetic with only one kidney, increasing the risk of contrast nephropathy.



This was not a patient to be “cookbooked!”

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

This begs several questions:

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

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

Initial Visit

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

CHIEF COMPLAINT: Rib pain

VITAL SIGNS

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

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

HISTORY OF PRESENT ILLNESS:

71 year old female presents with right sided chest pain which is sharp and worse with movement. Her pain began two days ago which was one day after she fell out of a hammock. Her pain is worse when she moves her body and takes a deep breath. She did go to an urgent care who did a chest x-ray which was read as normal and sent her to be evaluated for a blood clot. The patient does have a history of DVT which occurred 24 years ago after a Cesarean section and she did take Coumadin and heparin for six weeks and has not had a problem since that time. She denies any further risk factors for blood clots such as pain or swelling of the lower extremities,

prolonged immobilization, long plane or car trips recently or trauma requiring the use of any casts or splints of the lower extremities. No history of recent surgery, hemoptysis, cancer, or hormone therapy.

PAST MEDICAL HISTORY/TRIAGE:

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

PMHx: Meningits, Ulcer disease, Diverticulitis, diabetes, Remote DVT after surgery

PSHx: TAH, Tubal Ligation, Back Surgery, C-Section, Appendectomy, Cholesectomy, Bladder Suspension, Right Nephrectomy,

Med Allergies: Dilaudid

Medications: None

Social History: Smoker

Family History: Negative for heart disease

EXAM (shortened):

General: Well-appearing, well nourished; A&O X 3, in no apparent distress. Significant pain evidenced by facial wincing when she sits up for lung auscultation.

Resp: Normal chest excursion with respiration, breath sounds clear and equal bilaterally, no wheeze, rhonchi or rales.

Card: RRR no m/r/g

Chest: very severe right sided chest pain with palpation of right chest under the breast which is point tender.

Abc: Non-distended, Non-tender, soft without rigidity, rebound or guarding. No pulsatile mass

Extremities: Pulses are 2 plus and equal times 4 extremities, no peripheral edema or calf tenderness

ORDERS:

Percocet 10mg po

RADIOLOGY:

Chest x-ray: Normal

PROGRESS NOTES:

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

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

DIAGNOSIS:

Chest Pain—musculoskeletal

DISPOSITION:

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

Discussion Point 1: Managing Patient Expectations

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

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

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

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

Though the stakes are raised when a patient is concerned about a specific disease, be it pneumonia or anthrax, we need to provide the best medical advice possible and to, first, do no

harm. Just as a surgeon is never forced to operate, we are not forced to order tests or administer medications we feel may harm the patient.

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

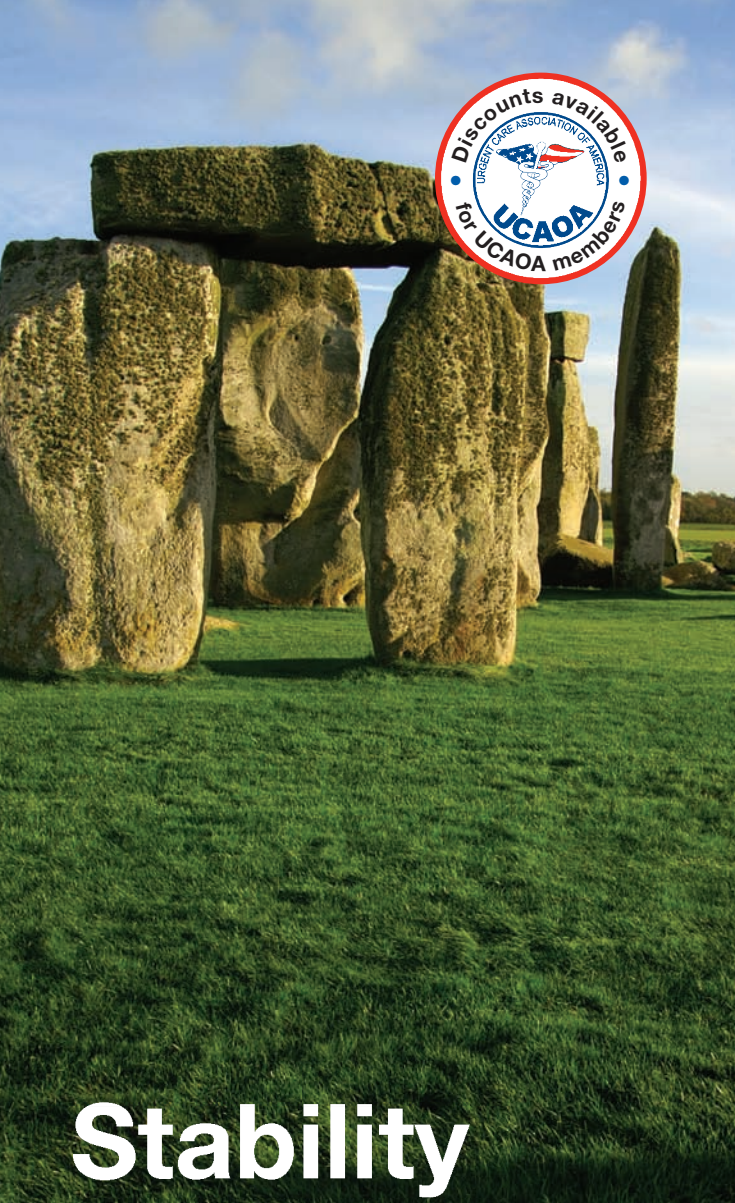
We practice in a time where the paternalistic approach to medicine is out of favor. Most clinicians prefer to engage their patients as partners and to include them in the decisions of their medical care. In lieu of this relationship, the physician is still ultimately responsible for a safe and successful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

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

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

Table 1. Modified Wells Criteria for PE

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



Stability

in an unstable market.

History has proven that insurance rates of member-owned companies have not been subject to the wild fluctuations of the traditional insurance marketplace. UCAC offers stability to our member/owners through low cost insurance, regardless of market volatility.

Contact a Medical Professional Insurance Advisor today. We welcome the opportunity to present you with an alternative to traditional insurance.

www.urgentcaremedicalmalpractice.com • 847.463.7333



**Urgent Care
Assurance Company, RRG**

An insurance company created and owned by urgent care physicians.

THE CASE OF A 49-YEAR-OLD WOMAN

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

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

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

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

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

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

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

Discussion Point 2: Defensive Medicine

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

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

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

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

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

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

Communication is the key to avoiding the vast majority of suits. Anger, not injury, is the most frequent precipitating factor to claims. Treating our patients with patience and respect can greatly improve

patient satisfaction, improve patient's clinical response to treatment, and decrease the risk of being named in a malpractice suit.


Visit 2: Next Day

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

Table 2. PERC Rule Criteria


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


A NEW DAY IS DAWNING...



DAYFORCE RADIOLOGY

Delivering Fast, Accurate Radiology Interpretations to Your Practice






- Convenient for Your Patients**
- Piece of Mind**
- Cost Effective for Your Practice**
- Quick, Hassle-Free Set-Up**

Contact DAYFORCE Radiology today:

1-877-4-DAYFORCE (1-877-432-9367)
www.dayforceradiology.com
info@dayforceradiology.com
 210 Spring Hill Drive, Suite 150
 Spring, TX 77386

DAYFORCE is a service of:



NIGHTFORCE RADIOLOGY

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

Discussion Point 3: Evaluation for Pulmonary Embolism

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

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

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

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

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

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

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

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

JUCM

THE JOURNAL OF URGENT CARE MEDICINE®

presents a series of FREE webinars exclusively for urgent care practitioners, sponsored by



Session 2: Decision Points in the Management of Foot and Ankle Injuries

Keynote presenter:

Phillip H. Disraeli, MD, FAAFP

Metro Urgent Care

Frisco, TX

Urgent Care Association of America

**Date: Tuesday,
May 5, 2009**

Time: 12:00 p.m., EDT

This exclusive 45 minute educational experience will cover:

- Key decision points the clinician faces, including:
 - who to treat and who to refer
 - what diagnostic tools are needed
 - how to choose the right management options
- Discussion of related coding issues
- Q&A with the speakers

**To sign up for this FREE WEBINAR:
Simply log on to**

[https://www1.gotomeeting.com/
register/765710578](https://www1.gotomeeting.com/register/765710578)

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

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

Summary

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

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

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

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

Resources and Suggested Reading

- Press I. Patient satisfaction: Defining, measuring, and improving the experience of care. *ACHE Management Series*. Health Administration Press: Chicago, IL; 2002.
- Guidelines on diagnosis and management of acute pulmonary embolism. Task Force on Pulmonary Embolism, European Society of Cardiology. *Eur heart J*. 2000;21:1301-1336.
- Stein PD, Saltzman HA, Wed JG. Clinical characteristics of patients with acute pulmonary embolism. *Am J Cardiol*. 1991;68(17):1723-1724.
- Eng J, Krishnan JA, Segal JB, et al. Accuracy of CT in the diagnosis of pulmonary embolism: A systematic literature review. *Am J Roetgenol*. 2004;183(6):1819-1827.
- Van Belle A, Buller HR, Huisman MV, et al. Effectiveness of managing suspected pulmonary embolism using an algorithm combining clinical probability, D-dimer testing, and computed tomography. *JAMA*. 2006;295(2):172-179.
- Kline JA, Mitchell AM, Kabrhel C, et al. Clinical criteria to prevent unnecessary diagnostic testing in emergency department patients with suspected pulmonary embolism. *J Thrombosis Haemostasis*. 2004;2(8):1247-1255.



OSSUR IS URGENT CARE SOLUTIONS

When you work in an environment that's so unpredictable, it's reassuring to know that you can rely on Ossur's variety of urgent care products to help deliver successful outcomes for a range of patient needs. Whether it's casting tape, splints, soft supports, slings, collars, or a host of other urgent care solutions, Ossur's products are a perfect blend of economy, comfort and design.

That's why, out of more than 100 different walker designs on the market today, our Equalizer® walker boots remain the industry standard. And with 3 models to choose from — Standard, Air, and Pre-inflated Air — plus low top and standard height versions of each, you can be confident that there is an Equalizer solution for every unique patient.

Contact Ossur Customer Service at (800) 521-0601 today to learn more about our urgent care product line.

WWW.OSSUR.COM



Life Without Limitations