The Story of Jonathan—One Week in January

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.*

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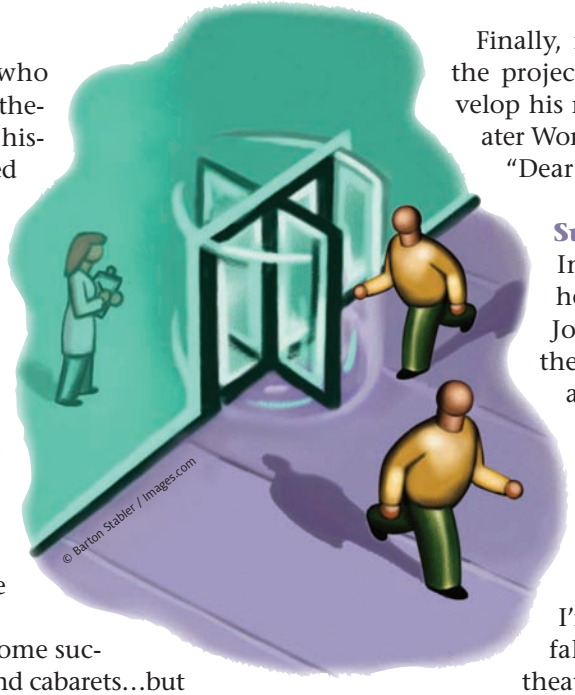
The Patient's Perspective

Jonathan is a young man who changed the course of musical theatre and would still be making history today if things had turned out differently.

Jonathan was born in Mount Vernon, NY in 1960. When he was 22, he moved to New York City to pursue his dream of writing a musical. Like most struggling artists, life wasn't easy. He spent weekends waiting tables at the Moondance Diner in Soho. He spent weekdays at his keyboard writing songs. His tattered four-story walkup was so tiny, he had a bathtub in the kitchen.



Through the years, he had some success writing for Sesame Street and cabarets…but not the big break he was hoping for.

In the late 80s, he began work on a new project; he had a vision to create a modern version of "La Boheme." He didn't merely want to update the opera, but to transform the American musical tradition, appealing to a younger audience raised on MTV and changing social values.

Finally, in1994, years after he began the project, he received a grant to develop his musical at the New York Theater Workshop. He sent his dad a note: "Dear Dad, I quit work. Love, Jon."

Sunday, January 21, 1996

In December 1995, dress rehearsals begin. A month later, Jonathan is in the theater for the final week of rehearsals, visualizing the last seven years of hard work.

After dinner, he is suddenly struck by intense chest pains. He is short of breath and dizzy. He tells a friend, "You'd better call 911. I think I'm having a heart attack," then falls to the floor between the theaters's last two rows. An ambulance rushes him to Cabrini Medical Center.

On the way, the paramedics record their diagnosis: pleuritic chest pain.

The Doctor's Perspective

Sunday, January 21, 1996

- **6:45 p.m.:** The patient is triaged at Cabrini and

"Sometimes, patients will tell approachable staff members information they will not share with you."

vital signs are recorded as normal. Triage nurse records a chief complaint of "Inspiratory chest pain."

- **7:00 p.m.:** He is seen by the doctor, who records a different chief complaint, "Epigastric pain."

  The physician records that the patient had "eaten a turkey sandwich which didn't taste right. Had dinner and smoked marijuana prior to developing Sx. Hx of ulcers but no hx cardiac disease, no smoking or cardiac risk factors… just finished producing a play…increased stress." ROS negative for n/v/d.
  - **PE:** Normal except for minimal epigastric tenderness with palpation.
  - **Testing:** EKG and CXR performed, but results not recorded on the chart.
- **8:35 p.m.:** The patient experiences a dizzy spell while in the radiology department. The nurse documents Jonathan saying, "I can't take a breath." It is unclear from records whether the doctor was informed of this episode
- Jonathan's friend asks the doctor for an update and is told, "I can't find anything wrong. You'll be out of here in one hour."
- **10:15 p.m.:** Diagnosis: Food poisoning.
- Vital signs are not repeated.
- **Disposition:** Patient is instructed to take a bland diet for 24 hours and return to the ED if necessary. The next morning, a radiologist over-reads the chest x-ray as normal.

DISCUSSION OF PATIENT SAFETY/RISK MANAGEMENT—VISIT 1

1. The six life-threatening causes of chest pain include:
   a. myocardial ischemia/infarction
   b. pulmonary embolism
   c. aortic dissection
   d. tension pneumothorax
   e. pericardial tamponade
   f. Boerhaave syndrome (esophageal rupture)

   This list can rapidly be narrowed to the first three with history and physical exam alone, assuming no history of vomiting in a patient with equal breath sounds who has normal heart sounds and is not tachycardic, tachypnic, or hypotensive.

2. A discrepancy in the records represents a significant medical–legal risk. The paramedics and nurse both recorded chief complaint of "pleuritic chest pain," whereas the doctor recorded "epigastric pain." There is no indication the physician was aware of the discrepancy. Some ways to address differences in documentation include:
   a. Confirm with triage/nursing that the history recorded was the actual history related by the patient. If not, ask them to change their documentation to accurately reflect the encounter.
   b. Specifically ask the patient about the discrepancy and record their answer in the chart. Sometimes the patient will confirm both versions, sometimes they will clarify the inconsistency.
   c. If unresolved, record "nursing note appreciated" and detail that you have asked the patient the question several times and they have confirmed that your history is the accurate one.

3. Though a patient has symptoms out of your eyesight, he is still under your care while still in the urgent care facility. Foster an atmosphere of approachability so that ancillary staff will understand they are partners in the care of patients; sometimes, patients will tell approachable staff members information they will not share with you.

4. Avoid specific unsupported diagnoses. Our patient was diagnosed with "food poisoning" without nausea, vomiting, or diarrhea. A better diagnosis remains "chest pain" or "epigastric pain." This also lets the patient know that there remains *diagnostic uncertainty* and if their symptoms persist or worsen they need to return.

The Patient's Perspective

Monday, January 22, 1996—Jonathan returns home

Jonathan wakes up and calls the hospital to see if tests showed evidence of food poisoning. He is told, "If there was something wrong you would have been notified."

That night, his roommate Brian returns to their apartment to find Jonathan in bed, short of breath

and mumbling. He described Jonathan's color as, "pale and off-greenish." Jonathan is able to eat only Jell-O and tapioca pudding. Jonathan asks Brian to sleep on the living room floor, so Brian sets an alarm and wakes every couple of hours.

Tuesday, January 23, 1996
Waking Tuesday morning, Jonathan finds that his symptoms have improved, but come evening the chest pains again become so intense that he takes a cab to the closest ED, St. Vincent's Hospital and Medical Center.

The Doctor's Perspective

Tuesday, January 23, 1996

- **23:00:** The nurse triages patient as "urgent" and records chief complaint of right-sided "inspiratory chest pain" for four hours. Notation is made that the patient thinks his pain may be from heartburn. There is no conversation between nurse and doctor.
  - **Vital signs:** temperature 100.4°, pulse 100, respiratory rate 22, normotensive.
- **00:40:** Seen by doctor. History is brief, but confirms fever and right-sided inspiratory chest pain which patient rates as 7/10. Patient complains of "not feeling right." Denies malaise, cough, diaphoresis, myalgia, n/v/d.
  - PE is normal.
  - Testing: CXR and EKG both read as normal by ED physician.
  - ED course, Vital signs not repeated.

Later, a friend describes Jonathan's appearance. "He was slumped over in a chair with his head in his hands, just completely out of it, white as a ghost, sweating and pissed off." He remembers Jonathan saying; "I just don't know what it is. I feel like shit, but they can't find anything and I just don't feel right."

- **Diagnosis:** Viral syndrome.
- **Disposition:** "Follow up with your physician." Condition: improved.

DISCUSSION OF PATIENT SAFETY/RISK MANAGEMENT—VISIT 2

1. Differential diagnosis now has pulmonary embolism near the top of the list. Our patient has pleuritic chest pain and is tachycardic. Neither a chest x-ray nor EKG has sufficient sensitivity to exclude this diagnosis.

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Other considerations still include myocardial ischemia/infarction and aortic dissection. With a fever, myocarditis has now entered the differential.

2. A red flag is the severity of his pain. Though the physician was not able to localize an exact etiology, a patient with severe pain should prompt a "second look," similar to a parent crossing a busy street with kids in tow who looks both ways twice.
3. A "bounceback" patient is a high-risk encounter, by definition. These patients require extra vigilance and care; confirm that the history and exam are accurate, recheck abnormal vital signs, speak with family and friends, arrange for timely and action-specific follow-up care.

This should not be an annoyance, but a "second chance" for the doctor to exclude life-threatening etiologies of the symptoms.

The patient's perspective—Who is Jonathan?

The writer we have been discussing is Jonathan Larson, author of the musical *Rent*, which went on to change the direction of musical theatre. *Rent* became one of the longest running shows on Broadway, closing 12 years later in the fall of 2008.

Wednesday, January 24, 1996—Jonathan returns home
During the cab ride home from St. Vincent's, Jonathan complains of continued pain and tightness in his chest, saying, "Nothing has changed."

- **Morning:** the radiologist over-reads the CXR as showing "Heart size upper limit of normal." Cardiologist reads EKG and writes "question lateral MI."

  There is no follow-up with the patient.
- **7:30 p.m.:** Jonathan arrives at the theater for a performance of *Rent* before 200 invited guests. His musical receives a standing ovation. The director describes Jonathan that night: "He was moving slowly and didn't speak loudly. Jonathan was usually an exuberant guy, and he was behaving gently."
- **Midnight:** Jonathan meets with a *New York Times* reporter and is told that the music is tremendous and will change the direction of musical theatre. Jonathan replies that he needs to respond in some way to celebrate the lives of his friends who have died young.

  Jonathan prophetically explains the message of his play to the reporter, "It's not how many years you live, but how you fulfill the time you spend here." He leaves the theatre in a cab planning to meet with the director in the morning.

Thursday, January 25, 1996
3:40 a.m.: Jonathan's roommate Brian returns home to find a gas flame burning under a scorched tea kettle and Jonathan lying on the floor. Brian opens Jonathan's shirt and begins chest compressions, yelling, "Wake up! Wake up, Jon!"

Police arrived shortly after and pronounce him dead, the day before opening night.

Friday, January 26, 1996—Autopsy is performed
Findings

1. Cystic medial degeneration of the aorta, likely from undiagnosed Marfan's syndrome.
2. Twelve-inch aortic dissection from base of aorta to the bifurcation of the common iliac arteries.
3. Hemopericardium and cardiac tamponade with 700 cc blood found in pericardial sac.

That night, the curtain rises on the first preview. The rock opera's opening night ends with no applause. The audience, cast, and crew sit completely silent until an unidentified voice says, "Thank you, Jonathan Larson."

Within a few months *Rent* moves to Broadway, where it wins the Pulitzer Prize, four Tony awards, six Drama Desk awards, and three Obie awards.

The Family's Perspective

Family files a negligence lawsuit for $250 million against both hospitals, based on estimates of revenues from *Rent*. The suit is settled for undisclosed amount. Part of the money is used to fund educational efforts by the National Marfan Foundation.

The New York State Health Commissioner's Perspective

A report on ABC New's *Primetime* raises serious questions about the quality of care administered and results in an investigation by the New York State Health Commissioner. The investigative process includes an extensive review of the ED visits and 29 interviews, plus the advice of eight physicians, including three with expertise in emergency medicine and five board-certified radiologists.

The commissioner summarized their findings: "While we believe the diagnosis of aortic dissection would pose a diagnostic challenge to the best clinician, we do have concerns about the appropriateness and medical soundness of the treatment Mr. Larson received. That is why we feel it is incumbent upon the state to impose fines and require corrective action to ensure these deficiencies do not occur in the future."

Cabrini Medical Center

- ED doctor did not fully evaluate the complaint of chest pain. No information was presented that considered or eliminated the possible causes of chest pain.
- There is no evidence the physician interpreted the chest x-ray r EKG prior to ED discharge, contrary to established procedures.
- The diagnosis of food poisoning was not supported by the patient's symptoms or complaints, except for possible epigastric tenderness and description of eating a turkey sandwich with a bad taste.
- There were no documented repeat vital signs despite nursing documentation of breathing problems and dizziness.
- *Summary:* The patient was not correctly diagnosed and was incorrectly treated. The Commission issued a statement of deficiency and fined Cabrini $10,000.

St. Vincent's Hospital

- Vital signs, including pulse, were abnormal and were not repeated, as required by the hospital's own protocol.
- With the exception of fever, diagnosis of viral syndrome was not supported by Mr. Larson's condition or presenting symptoms. There was no malaise, cough, diaphoresis, myalgia, nausea, vomiting, nor diarrhea.
- *Summary:* The patient was not correctly diagnosed and was incorrectly treated. The Commission issued a statement of deficiency and fined St. Vincent's $6,000.

Discussion

Mr. Larson had pain described by friends as severe, with associated shortness of breath and two near syncopal episodes.

In retrospect, these symptoms fit neatly into a picture of aortic dissection in a patient with probable Marfan's syndrome. It is easy to see how this unusual problem could have been missed, especially if it was not in the physician's differential diagnosis.

Like many of our patients, Jonathan Larson did not want to have a serious diagnosis, telling the first physician about a bad turkey sandwich and the second that he thought he had heartburn. Both physicians were led astray. But both missed opportunities to make the diagnosis, including reading the nurses' and paramedics' notes, getting additional history from the patient's friends in the ED, reassessing him after he had a near syncopal episode in radiology, and having time- and action-specific follow-up in a patient who is discharged with diagnostic uncertainty.

The second visit was more troubling, as he was now a bounceback patient; this puts him at higher risk of having serious underlying problem.

At that point, Jonathan also had another serious risk for misdiagnosis: a previous diagnosis. His doctor fell into the trap. His tachycardia was not recognized or repeated; his chest x-ray was possibly misread. Over-reliance was placed on testing above clinical findings. The ECG was abnormal and not discussed in a progress note by the physician, and was not repeated.

The findings of the New York State health commissioner speak for themselves, but more telling are the grievous words issued by Jonathan's father, Alan Larson, who summed up the feelings of any parent who survives their child. "You wake up and it's the same nightmare," he said. "Parents should never have to cry for their lost children." ■

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