


A Symphony of Cacophony

Paul S Jansson, MD, MS^{1,2} 

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The night before my first shift of fellowship, I diagnosed myself with appendicitis. Again. Unfortunately, this was not my first bout with appendicitis. Early in intern year, I snuck away on-shift with ultrasound the gnawing right lower quadrant pain that I couldn't quite ignore, only to find an enlarged circular target on the screen, proof of the diagnosis that I wanted to wish away. Through a combination of optimism, fear of surgery, and a firm desire to not call out sick and inconvenience a colleague (the aphorism “you can either be rounding or rounded on” came to mind), I chose antibiotic management, which carried me through residency with a more-or-less steady hand.

Throughout residency, we had been reminded that “the patient didn't read the textbook”: a reminder to not miss uncommon presentations of common diseases. Unlike my patients, however, I had read the textbook. Crampy periumbilical pain, migrating to the right lower quadrant, with associated nausea and anorexia. Textbook. I knew that I couldn't ignore it. So 4 years later, I found myself in the same emergency department (ED), one bed to the left this time, with the same glowing target shining down from the ultrasound screen.

While my healthy skepticism of surgery had only grown over my emergency medicine residency, having seen all of its terrible complications come through the ED (a bias that I'll readily admit), I knew that it was an inevitability at this point. Ironically, the article for our next residency journal club was on the use of antibiotic therapy for acute appendicitis. Four years out—where I was at this point—the recurrence rate was about 37% (1). I was one of them. Having just graduated from residency, I fancied myself as an evidence-based physician, and the evidence seemed to be pushing me toward surgery. More practically, I didn't want to live in fear

of every twinge of pain from my right lower quadrant over the busy next years of fellowship. Out it came.

Lying in the postanesthesia care unit, my bloodstream still seemingly composed primarily of propofol, I overheard the charge nurse saying that she had made a few calls and secured me a private room in the hospital, a minor miracle. Good, I thought to myself, I'll be able to get a good night's sleep and recover.

One part of the legacy of my lifetime as a classical cellist is that I always have some sort of music in my head, unless I am very ill. (One particular childhood episode comes to mind: very seasick on a boat, I turned panicked to my mother and said, looking green, “The music stopped,” then immediately vomited). As I drifted off to chemically aided sleep in my hospital bed, I heard the bird-like calls of the first clarinet in the pastoral first movement of Gustav Mahler's Symphony No. 1 in D Major (2): (Figure 1)

I smiled as I drifted off to sleep. I was going to be OK.

But then they continued. This was all wrong. Where were the flutes and oboes in their call-and-response? It was different this time: (Figure 2)

No, that was wrong. There was a repeat: (Figure 3)

As the note repeated, *ad lib*, I awoke enough to realize that it was not Mahler, but the call bell from a patient down the hall, ringing at the nurses' station and ricocheting into my room. As I drifted off to sleep again, the conductor signaled to a new instrument to play: (Figure 4)

This was more persistent, pulling me back to consciousness. What was it this time? A bathroom alarm? A bed alarm? A dangerous dysrhythmia? By the time I was awake enough to try and figure it out, the chime would be silenced but I had been pulled back to consciousness.

And so the night continued, a symphony of cacophony. Seemingly as soon as I fell asleep, the conductor signaled a

¹ Division of Emergency Critical Care, Department of Emergency Medicine, Brigham and Women's Hospital, Boston, MA, USA

² Department of Emergency Medicine, Harvard Medical School, Boston, MA, USA

Corresponding Author:

Paul S Jansson, Department of Emergency Medicine, Brigham and Women's Hospital, 75 Francis Street–Neville House, Boston, MA 02115, USA.
Email: pjansson@partners.org



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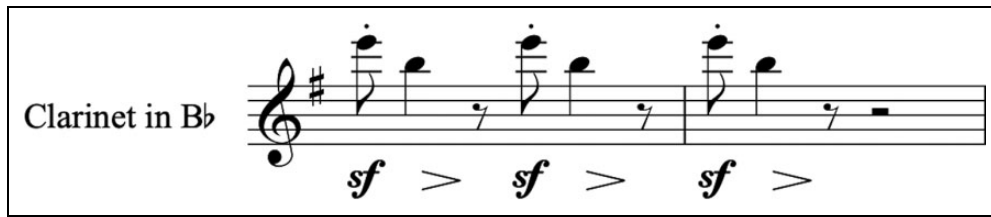


Figure 1. Clarinet “Bird Call”, Mahler Symphony No. 1.

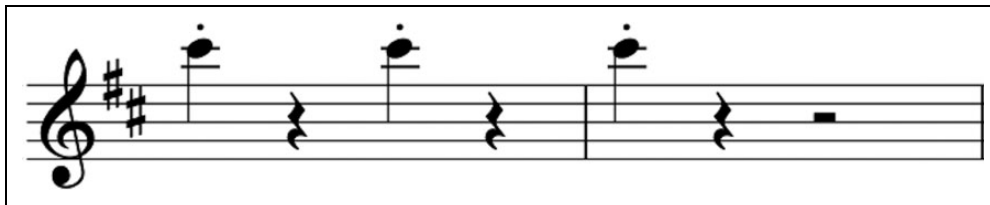


Figure 2. Patient Call Bell.

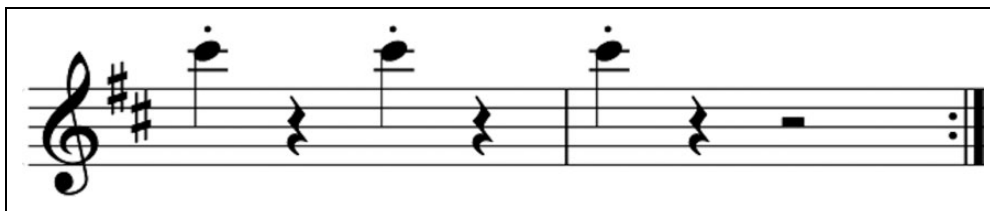


Figure 3. Patient Call Bell, on Repeat.



Figure 4. Unknown Alarm.

new instrument to play. The staff assist alarm completed her solo with panache: (Figure 5)

After she sat down, the telemetry decided that he was not to be left out: (Figure 6)

And so it continued, interrupted only when the intern stopped in for the postoperative check. Then, later that night, the postgraduate year 4 who had performed the surgery. A brief respite until it was time for my vital signs to be taken. Then the postcall attending stopped in on her way home. Then the morning surgical team. By the time the daytime nurse opened the door at 7 AM, it seemed like I had managed only a few minutes of sleep.

I used to joke that we should take away the hospital beds during the day for all but the critically ill patients. After all, “people aren’t meant to lie in bed all day” (3). Surely sleeping all day contributed to the epidemic of sleeplessness in the hospital at night.

Now, I realize, our patients sleep during the day because we are terrible at letting them sleep at night. How can we expect them to rest when we awaken them every few hours—or even more often—for a set of vital signs, a blood draw, or a wound check? And in between those in-person interruptions, they are serenaded by the near-constant barrage of automated alarms and notifications. Alarm fatigue is

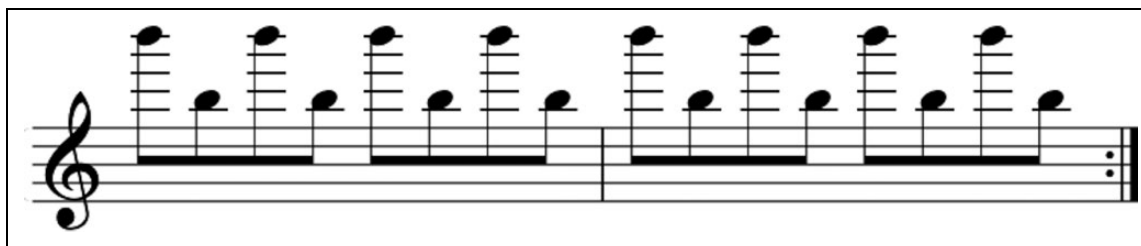


Figure 5. Staff Assist" Alarm.



Figure 6. Telemetry Alarm.

a problem in the hospital, and not just for staff. We subject our staff and patients to hundreds, if not thousands, of alarms a shift, the vast majority of them nonactionable (4,5). And yet, we act surprised when a true emergency alarm is ignored or when another patient reports a poor night's sleep.

For all of the work and awareness of the phenomenon of alarm fatigue with hospital staff, little attention has been paid to its impact on patients. Despite our desire to heal, hospitalization has been described as a traumatic experience, full of interrupted sleep, depersonalization, stress, and even starvation (6,7).

A night in the hospital is like a less-majestic version of, say, Mahler's Symphony No. 8 in E-flat major, the so-called "Symphony of a Thousand," whose orchestration is so massive that it requires a (figurative) thousand musicians to perform. Instead of surrounding our patients with the current symphony of cacophony, let's create a symphony of silence. Let us emulate the experimental composer John Cage's theoretical work *4'33"*, a 3-movement composition which demands that the performer *not* play their instrument for the duration of the work, which produces 4 minutes and 33 seconds of silence. Let our patients sleep.

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ORCID iD

Paul S Jansson, MD, MS  <https://orcid.org/0000-0002-9230-3249>

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Author Biography

Paul S Jansson is an emergency and critical care physician at Brigham and Women's Hospital and Harvard Medical School in Boston. He holds a master's degree in healthcare quality and patient safety.