

Let's Get Personal: Putting Personality Into Your Cases

By *Clyde Freeman Herreid*

Show me an actress who is not a personality and I will show you a woman who is not a star.

—Katherine Hepburn

You have a nice personality, but not for a human being.

—Henny Youngman

Personality trumps everything, say politicians. It is more important than policy, than demographics, than finances or amorous peccadillos. If folks relate to a politician on a personal level, you have a winner; everything else is theatrics. Writers say this too. Personality is essential. You must have characters that the reader cares about; otherwise, you are writing a novel that no one will ever read. Even if we don't like the protagonist very much, if she has charisma, we will watch her antics. How else can we explain the success of reality shows and the public's fascination with the exploits of celebrities? It is the interaction of people that capture our interest—much more than the titanic struggles of nations.

This brings me to the point: Why is it that so many medical case study writers fail in this regard? Instead, they write clinical puzzles for students and ask them to diagnose illnesses for phantoms. A typical case might read like Case 825 from the University of Pittsburgh's Department of Pathology (<http://path.upmc.edu/cases/case825.html>) and contrib-

uted by Daniel D. Rhoads, MD, and Octavia M. Peck Palmer, PhD.

Case 825: 66-year-old female with weakness

A 66-year-old female with metastatic colon cancer presents to the emergency department (ED) with the complaint of weakness, which was so bad that she had to be carried to the car before being driven

to the ED. She underwent debulking surgery one month prior to presentation and has since followed up for problems including fecal impaction and diarrhea. She has poor oral intake and is losing weight. She reports compliance with her bowel regimen of docusate sodium, senna, polyethylene glycol, and milk of magnesia. Initial laboratory findings are listed in Table 1.

TABLE 1

Laboratory findings for female patient in Case 825.

| | ED visit | 5–10 days prior to ED visit | Reference range |
|------------------|----------|-----------------------------|-----------------|
| PLASMA | | | |
| Sodium | 127 | 137 | 136–146 mmol/L |
| Potassium | 4.4 | 4.0 | 3.5–5.0 mmol/L |
| Chloride | 85 | 99 | 98–107 mmol/L |
| Bicarbonate | 27 | 31 | 21–31 mmol/L |
| Calcium | 6.2 | 8.3 | 8.4–10.2 mg/dL |
| Phosphorous | 8.9 | 3.2 | 2.5–4.6 mg/dL |
| Magnesium | 11.5 | 3.0 | 1.6–2.3 mg/dL |
| Albumin | 2.9 | 3.1 | 3.4–5.0 g/dL |
| BUN | | | |
| BUN | 51 | 20 | 8–26 mg/dL |
| Creatinine | | | |
| Creatinine | 2.1 | 1.1 | 0.5–1.4 mg/dL |
| WHOLE BLOOD | | | |
| Hematocrit | 34.1 | 28.0 | 34.1–43.3% |
| URINE | | | |
| pH | 8.0 | N/A | 5.0–8.0 |
| Specific gravity | 1.015 | N/A | 1.005–1.030 |
| Ketones | 2+ | N/A | Negative |
| Protein | Trace | N/A | Negative |

The ED evaluation concluded that the patient had an acute kidney injury that was likely due to volume depletion. Intravenous fluid resuscitation was commenced, and the patient was admitted. Which electrolyte abnormality may best help to explain the patient's weakness, and what predisposing factors put this patient at risk for the development of this abnormal finding?

Reflection

This may be a swell academic exercise; it was chosen as the case of the month for May 2014. But why should anyone really care about this patient who has no personality, no dog, no friends, no sister, no brother, no children, no spouse or lover, and most important of all, no name?

Does medicine merely consist of plumbing problems? Doesn't this play into the stereotype of the impersonal nature of the medical profession? Worse still, this type of case serves as a prototype for other health disciplines like nursing, physical therapy, pharmacology, and dentistry. Their cases are often mirror images of those in medicine. Perhaps we should be more forgiving. Medical personnel are relentlessly exposed to traumatic illness and devastating injuries; they are cautioned to set their emotions aside, otherwise they run the risk of jeopardizing the health of their patients and their own psychological well-being. This was nowhere better illustrated than in the MASH movie and television series where surgeons were regularly confronted with the horrendous casualties of the Korean War. The characters responded by continual jokes and hijinks to avoid the psychic devastation they faced daily.

Linda Young and Rodney Anderson of Ohio Northern University decided to find out if these cases can be im-

proved (Young & Anderson, 2010). Teaching microbiology to nursing, pharmacy, and biology students, they chose to compare standard clinical cases with personalized cases that covered the same material. They wanted the case design that "was the most effective in promoting long-term retention of clinically significant microbiology concepts, developing patient empathy, improving comprehension of patient compliance problems, and facilitating student understanding of transcultural health care concerns." They used the case study approach in three microbiology classes, asking students to work in teams to analyze and discuss various patient problems. They alternated using both types of cases throughout the course, and they individually tested students on their retention and understanding of material using multiple-choice questions, fill-in-the-blank, and essays in midterm and final examination.

Here is an example of two versions of the same case (one clinical, one personalized) that they sent to me as an example of those used in their study. (See Anderson & Young, 2012, for further examples of personalized microbiology cases.)

Case: 50-year-old man with infection

Clinical case

Quadruple bypass surgery was performed on an obese, 50-year-old white male who was a noncompliant patient suffering for 8 years from Type II diabetes. Postoperative recovery progressed well, with the patient willingly participating in rehabilitation and closely monitoring his diet and blood glucose levels. On discharge, a home health worker was assigned to provide incision care and monitor continued rehabilitation. At the first home visit, the caregiver re-

ported the following violations of the patient's discharge orders: failure to adhere to his prescribed diabetic diet, no monitoring of blood glucose levels, and showering before complete incision healing. Three days postdischarge, the patient's incision showed pronounced inflammation. The caregiver cleansed the site, applied a sterile dressing, and reported the symptom to the patient's cardiologist.

1. These symptoms suggest the development of an infection in the chest incision. What are the likely sources of microbes?
2. How could elevated blood glucose levels complicate this infection?
3. To counter this problem, what policy is typically implemented for patients during and immediately after open heart surgery?

The caregiver returned the next day to culture the incision and deliver a prescription of Cipro. Despite antibiotic treatment, the infection spread, oozed pus, and developed a "fruity" odor.

4. What is the formal name of Cipro? How does this drug work?
5. Why was antibiotic therapy initiated prior to receiving the culture results?
6. The fruity odor from the incision is significant. What microbe is suggested as the causative agent of this infection?

After 48 hours of antibiotic treatment, the infection was significantly worse, the patient was febrile, and the laboratory confirmed the presence of *Pseudomonas aeruginosa*. The patient was immediately transported to the hospital.

7. Characterize the morphology and Gram staining of *Pseudomonas aeruginosa*.
8. What was the most probable source of the *P. aeruginosa* infection?
9. The laboratory report indicated that the infection was Cipro sensitive. Why hasn't the patient responded?
10. What feature(s) of *Pseudomonas aeruginosa* makes it a challenge to treat?

On admission to the ICU, the patient presented with a fever of 101.6°F. He received a combination antibiotic therapy and was recultured at three successively deeper sites within his incision. Because the laboratory reported even the deepest tissues were contaminated, blood cultures and a biopsy of the sternum were ordered to monitor the spread of infection.

11. What medical term describes a bone infection? . . . infection in the bloodstream?

When the culture from the sternal biopsy was positive for *Pseudomonas*, the bone was surgically removed along with infected surrounding tissues. Intensive IV antibiotic therapy was continued to target the systemic infection indicated by positive blood cultures. Twenty-four-hour, post-operative blood cultures were free from infection, yet the patient remained febrile and developed signs of vascular collapse. As pulmonary capillaries were affected, the subsequent edema resulted in adult respiratory distress syndrome (ARDS). Although the systemic infection had resolved, the patient declined rapidly and expired 16 hours later.

12. Why did the patient worsen

and die despite a successful antibiotic therapy?

Personalized case

Bud had a long history of doing things his own way. He had always been a firm believer that rules were made for the other guy. As a young man, the consequences for violating the rules weren't too severe: a 5-day suspension for setting the high school science lab on fire, a weekend in JDC for shoplifting a pack of cigarettes, and of course, the unrelenting "I told you so's" from his parents.

As a 50-year-old man, Bud was not about to change his ways, and that was especially true regarding his doctor's rules. Bud carried 260 lbs. on his 5'8" frame. His favorite pastime was football and brews at the pub with his buddies. He was a meat and potatoes man whose idea of exercise was stretching to reach the bag of Doritos on the top shelf. Bud's lifestyle resulted in his diagnosis of Type II diabetes 8 years ago. Most days he remembered to take his "sugar pills" since that wasn't much of an inconvenience. But Dr. Dvorak's orders about counting carbohydrate grams and calories were out of the question! Bud felt fine (those pills must be working). Why should he give up donuts, ribs, and his wife's famous buttermilk biscuits? "You only live once and you ought to enjoy it," was Bud's motto. In fact, he was convinced that doctors weren't happy unless they were scaring their patients with horror stories about heart attack and stroke.

But here Bud was in the ICU of St. Vincent's Medical Center recovering from the quadruple bypass Dr. Dvorak performed yesterday. Bud couldn't believe it . . . and he couldn't wait to get home and away from all of the new medical rules. The only thing

worse than the hospital rules was the hospital food. Everything was grilled or steamed and there was never enough. Desperate to get home to his old life, Bud feigned sincere compliance with every medical instruction. He diligently performed his rehab exercises for the next 5 days and promised Dr. Dvorak he was turning over a new leaf and focusing on the control of his diabetes. He convincingly agreed to all of the discharge orders the nurse reviewed with him: continue rehab exercises, walk twice a day, take all medications on time, follow the carbohydrate-restricted diet, and work with the home health nurses on wound care.

On his first day home, Bud reminded his wife, Jenny, how lucky she was that he was still around. Voila! Jenny made Bud his favorite chicken fried steak, biscuits with gravy, and sugar cream pie for dinner. When Nancy from home health arrived the next morning, she scolded Bud. He hadn't taken a walk or followed his diet and as a result had a blood glucose level of 352 mg/dl. To make matters worse, Nancy discovered that Bud had disregarded his discharge orders and taken a shower as soon as he got home. She tried to explain the risk of infection, but Bud knew he had nothing to worry about because soap and water washed away germs.

Bud's demeanor was very different 2 days later when Nancy returned to change his dressings. His chest incision had become quite tender. Nancy inspected the site and was concerned about the pronounced inflammation. After cleansing the site and applying a sterile dressing, she promised to report her findings to Dr. Dvorak immediately.

1. It appears Bud has developed an infection in his chest incision.

CASE STUDY

What are the likely sources of microbes?

2. How could Bud's elevated blood glucose levels complicate this infection?
3. To counter this problem, what policy is typically implemented for patients during and immediately after open heart surgery?

Nancy returned early the next morning with a prescription of Cipro for Bud and orders to culture his incision. Bud was a little nervous as he watched Nancy examine his incision and obtain the specimen. Her facial expression registered concern as she told Bud his infection had spread. The entire incision was now hot, red, and seeping a small amount of pus. Nancy smiled at Bud and told him at least his wound wasn't putrid. "In fact," she said, "you actually have a pleasant, slightly fruity aroma." Bud returned her smile . . . how bad could a fruity smell be?

4. What is the formal name of Cipro? How does this drug work?
5. Why did Dr. Dvorak initiate therapy with this antibiotic prior to receiving the culture results?
6. The fruity odor from Bud's incision is significant. What microbe is suggested as the causative agent of this infection?

When Nancy returned 48 hours later and examined Bud, she immediately placed a call to Dr. Dvorak. The wound was considerably worse. Bud had faithfully taken his antibiotic but confessed to continuing his indulgence in his wife's fine cooking. Dr. Dvorak ordered Bud to return to the hospital. The lab results he had just received indicated infection with

Pseudomonas aeruginosa. Because Bud was not responding to the therapy, it was time to implement more aggressive measures. Dr. Dvorak told Bud to come immediately, saying: "This is a bad bug to beat."

7. Characterize the morphology and Gram staining of *Pseudomonas aeruginosa*.
8. What was the most probable source of Bud's *P. aeruginosa* infection?
9. The laboratory report indicated that Bud's infection was Cipro sensitive. Why wasn't he improving?
10. Characterize the morphology and Gram staining of *Pseudomonas aeruginosa*.
11. What was the most probable source of Bud's *P. aeruginosa* infection?
12. The laboratory report indicated that Bud's infection was Cipro sensitive. Why wasn't he improving?
13. What feature(s) of *Pseudomonas aeruginosa* makes it a "bad bug to beat?"

On admission to the ICU, Bud received a combination antibiotic therapy and was recultured at three successively deeper sites within his incision. To Dr. Dvorak's dismay, even the deepest tissues were contaminated, and Bud had spiked a fever of 101.6°F. Concerned about the spread of *Pseudomonas* infection, Dr. Dvorak ordered blood cultures and a biopsy of Bud's sternum.

14. What medical term describes a bone infection? . . . infection in the bloodstream?

When the culture from the sternal biopsy was reported positive for *Pseu-*

domonas the next day, Bud underwent surgery to remove the bone. All infected tissues in Bud's chest were successfully removed. Intensive IV antibiotic therapy was continued to target the systemic infection indicated by his blood cultures. The morning after this surgery, repeat blood cultures were free from infection, yet Bud's temperature remained high and signs of vascular collapse appeared. As pulmonary capillaries were affected, the subsequent edema resulted in adult respiratory distress syndrome (ARDS). Although the systemic infection had resolved, Bud declined rapidly and expired 16 hours later.

15. Why did Bud worsen and die despite a successful antibiotic therapy?

Reflection

Yes, the personalized case is longer, but which would you rather read? Which would you remember? These are questions that concerned Young and Anderson (2010) when they surveyed the students on their preferences as well as their learning of concepts—nursing students overwhelmingly preferred personalized cases, pharmacy students preferred clinical cases, and biology majors had no preference. Regardless of their partialities, all said the personalized cases were the most effective at developing critical thinking skills and made it easier for remember the relevant factual information. Most important, as judged by their success in all question formats in exams, students recalled the content much more effectively after experience with the personalized cases. If this isn't a strong endorsement for personalizing cases, I don't know what is.

With this as background, let us

turn to the collection of case studies of the National Center for Case Study Teaching in Science (<http://sciencecases.lib.buffalo.edu/cs/>). This is arguably the largest reviewed collection of STEM cases with over 600 cases posted along with the teaching notes. Ninety percent of the cases are of the personal variety—protagonists struggling with dilemmas, many focused on environmental or health problems. We might take this as good news in light of Young and Anderson’s study and Herreid et al.’s (2014) report that clicker cases with people seemed to engage students more and produced greater learning than those without personages. Unfortunately, too often, these cases merely throw a few cardboard characters into the narrative and call it quits. Surely, we can do better than that.

How should we personalize cases? One thing is certain: The characters must have a name—a credible name. Then we need to give them flesh and bones make them interesting if not

fascinating. Sol Stein (1995), author and renowned editor, said give them distinctive traits, a tic, a tie, a tattoo—something memorable. Use detail in describing the situations they are in—but not too much. Use markers: easily identifiable signals that will reveal the characters’ cultural and social background such as clothing, jewelry, manicured fingernails, food, drink (beer, Perrier, martinis shaken, not stirred), dialogue, and action.

We individually don’t know how important these idiosyncrasies are. But collectively we know that without them, the story is doomed. Again a thespian comes to our aid to emphasize the point. “Personality is the glitter that sends your little gleam across the footlights and the orchestra pit into that big black space where the audience is” (Mae West). ■

References

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