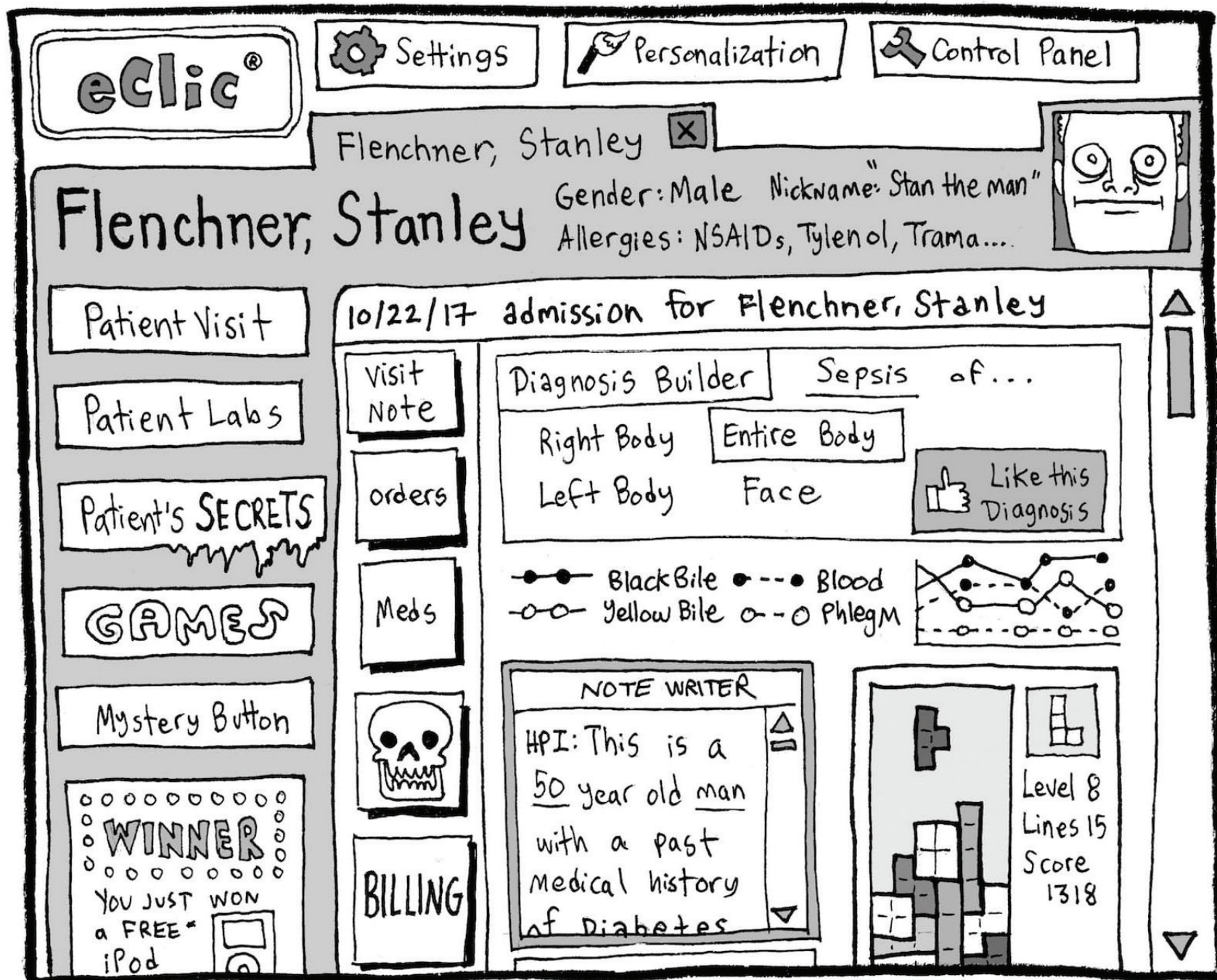


# A TAXONOMY OF electronic medical records



In this comic, Jason Bitterman, the physician who taught the Comics and Medicine course, satirizes the variety of electronic medical records providers deal with.

3/21:  
ROUND 2SUPER VIRTUAL MEDICAL RECORD 4000 @

Patient name: Rose Wintchertsonstein

Age: 72

Disease: Pneumonia



1. Enter new disease
  2. Write note
  3. View notes
  4. Order medication
  5. Discharge
  6. Choose new patient
- Selection? |

Drawing his initial inspiration from the likes of “Calvin and Hobbes,” Bitterman has been honing his skills as a comic artist since grade school.

# DRAWING FROM EXPERIENCE

“T

ell a story about a personal experience with health care and do that by drawing it.”

That was a required project in the Comics and Medicine course offered in November 2022 to fourth-year Pitt Med students. They were asked to draw and write as a patient, a medical student or someone standing by a friend or family member dealing with a health issue. The experiences they chronicled varied—sexual assault, deciding on a career in medicine and burn-out are among some examples—but the projects they took on had a common outcome. *(Continued on page 32.)*

**ELECTIVE HELPS MED  
STUDENTS OFFER THE BEST  
OF THEMSELVES  
BY MICHAEL AUBELE**



I WAS ALWAYS TRYING TO 'BE PRESENT' AND 'SHOW OFF' TO ATTENDINGS AND RESIDENTS WHICH LED ME TO FEEL...



BUT THEN AN ATTENDING TOLD ME SOMETHING I REALLY NEEDED TO HEAR.

TAKE THIS TIME TO BE A MEDICAL STUDENT. LEARN WHAT YOU WANT TO LEARN. ESPECIALLY ON ELECTIVES. ENJOY BEING A STUDENT BEFORE YOU HAVE ALL THE RESPONSIBILITIES OF A RESIDENT!



Christina Cheung's project took her on a cathartic process, helping her overcome student burnout. The course contributed to her change in perspective that will help when the demands of the medical profession build up, in residency or her future practice. "I definitely learned to look at things in different ways," she says. For instance, she says she became more willing to take advice from mentors rather than put all of her stock in the expectations she's created for herself.

IT'S STRESSFUL TO BE 'ON' OR 'THE BEST' ALL THE TIME. BUT, A SURGEON ONCE SAID TO ME...

CAN I SCRUB INTO YOUR SURGERY?

DO I PAY YOU TO BE HERE OR DO YOU PAY? YOU CAN BE IN WHATEVER YOU WANT!

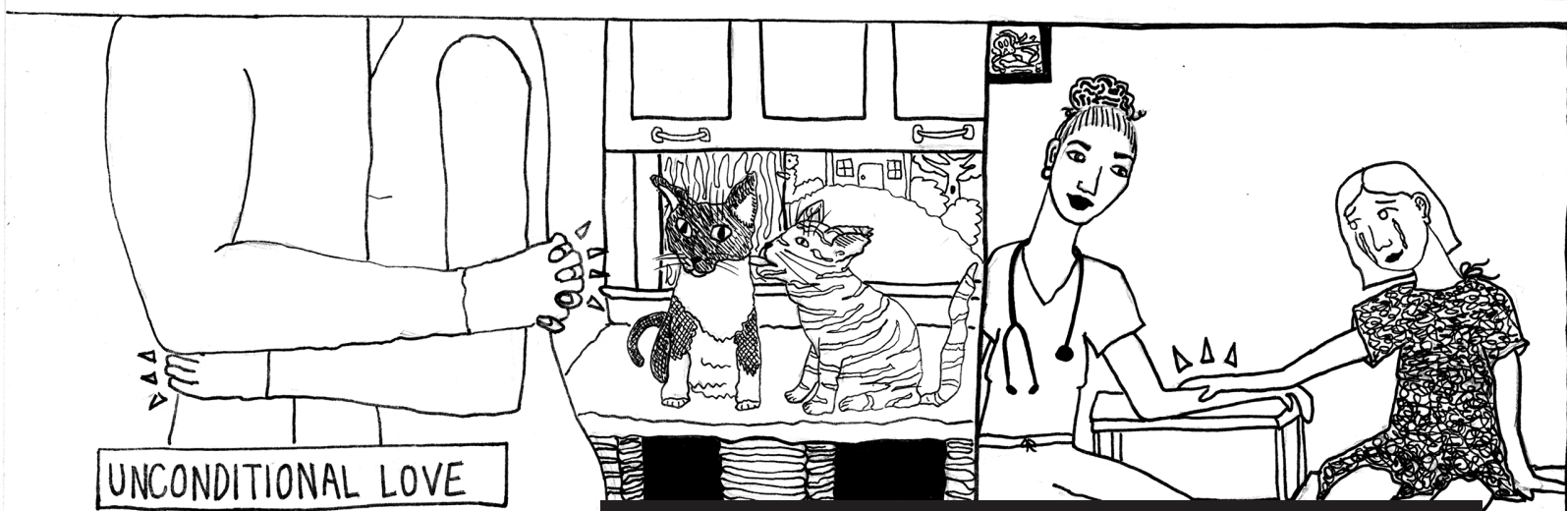


SO MAKE THE MOST OF WHAT YOU WANT AND ENJOY THE RIDE!



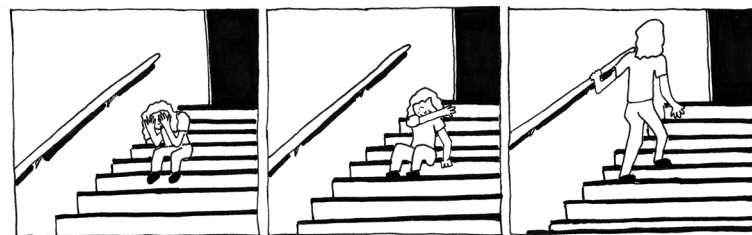
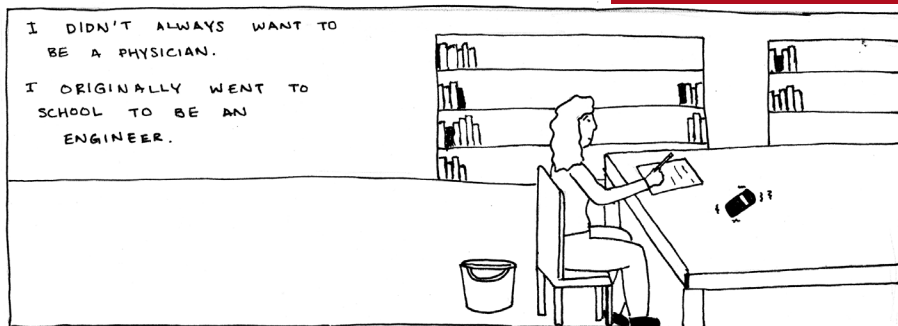


Students shared deeply personal, and even traumatic experiences, as well. In the course, Olivia Legan revisited her experience following a sexual assault. Her comic depicts living with post-traumatic stress disorder and healing from trauma during medical school. "It was something I really didn't anticipate exploring," she says. "But I found it very therapeutic to sift through those memories."



Legan draws herself walking down a subway tunnel, surrounded by #MeToo headlines, and later working on homework distracted by headlines doubting survivors of sexual assault by powerful men. She also shows her healing process and patient interactions. Legan wanted to create an alternative to the common depiction of survivors as broken. "Not only can we be whole and worthy of love, but we also can use our experience to connect with and advocate for young people who have been abused or assaulted."





Vaidehi Patel tells a story about her father—his hospitalization led her to switch gears and want to become a doctor. She also took the opportunity to articulate how health care can be “desensitizing,” but that she remains committed to being empathetic. “Sometimes we can lose a little of that empathy, but I wanted to convey that it’s not gone; it’s going to be there when the patient needs us.”

Students say they walked away from the assignment with a deeper understanding of their experiences, a new way to express their emotions and the ability to better cope with stressors—all insights they expect to rely on as doctors to keep themselves grounded and to offer the best of themselves to their patients.

For most, the course was also a chance to relax in the classroom after three grueling years of study and exams. “It was a super-not-stressful thing to do,” Vinod Rajakumar says. His classmate, Vaidehi Patel, admitted as much and adds there was a certain allure in exploring her chosen field through a different lens.

“I personally find it hard to express myself in words,” she says. “I’m more of an artistic person who finds it easiest to express my emotions through [other] media.”

Regardless of their experience level, Jason Bitterman, the MD assistant professor of physical medicine and rehabilitation who taught the class, started them at the ground floor before they really put pencil to paper.

“A lot of medical students don’t have an arts and humanities background,” Bitterman says. Yet: “This is a skill they can take on to make themselves better clinicians.” He says comic journalism has helped him process and respond to the social, economic and philosophical issues that arise in medicine.

Bitterman took the class through his creative process: First, form themes or ideas for a story. Think about how to present the ideas in

pictures; draw thumbnails, then draw at a larger scale and trace in ink. “Like any kind of art,” he says, “there are steps.”

Bitterman also brought the students to the Carnegie Museum of Art to show them how the pros form certain features or postures and to give them space to think more deeply about what individual pieces express—and how those pieces may elicit different emotions and responses from different people.

For their second major project, Bitterman had the students create a patient education comic—an informative piece that might live in an emergency room or doctor’s office. “Patient education documents are often mainly text,” Bitterman says. “Visual media like comics may teach patients in a more easily digestible and engaging way. You could use them to explain most things: What are the signs of depression? What is appendicitis? What’s a colonoscopy?”

A fascination with classic strips such as “Calvin and Hobbes” got Bitterman hooked on the genre in grade school, and his love for it has persisted. The themes of his own comics reflect major stages in life, from high school (notably, social dynamics) to medical school (and its stressors) and joining the workforce (for instance, the challenges of transitioning from a resident to an attending physician). In all of it, he has looked for a common underpinning . . . something, well, comical.

Sketching comics has become a routine for Bitterman, who writes or draws several times a week, though he doesn’t always do it for publication. “It’s a skill I’ve had for a really long time that I don’t want to lose,” he says.

See more of the student pieces online: [pi.tt/comicsmedicine\\_pittmed](http://pi.tt/comicsmedicine_pittmed)

Gallagher interview continued from page 7.

particular problem.

There's been a bias embedded sometimes in science, engineering and technology: "If we can only come up with the answer, then good things will flow from that." There's certainly great benefit that comes from the technological outputs of what we do. But having the tools doesn't necessarily mean they're going to be used for those that have the greatest need.

We have to be the catalyst to provide new ways of thinking about questions like, "What does the problem of health look like when you're not looking at it from the

be that a student who's never come to Pitt knows all the things that you can do here?"

**Pitt Med:** What about your role as director of the National Institute of Standards and Technology (NIST)? How did that inform your leadership here?

**PG:** At NIST, there was a fundamental purpose behind everything we did. We were there to help understand measurement and how to apply it to the most important challenges that the country had. Everyone there bought into that. That sort of centering in your purpose is what made coming into Pitt so natural. Because let's be

The ones that tip in, everyone is out there, working together, and they rebuild the city. And the ones that tip out fall apart, and it's never the same. Pitt tipped in.

**Pitt Med:** Thinking about your next life chapter, are there any issues that you plan to tackle, whether societal, scientific or whatever?

**PG:** No, at this point, my goals are very modest. I want to be a good professor, but I'm a rookie. What I'm planning to do is to reconnect with the world of physics, but also to learn both the art and science of teaching.

## As a university . . . we also have something that's often forgotten, but really important: We're a place to experiment, to try something new.

perspective of curing a disease or a specific condition, but more holistically, in a social context?" That's going to look very different. It may in fact create new kinds of innovations that are either technological, or social, or policy.

**Pitt Med:** How did your training as a physicist and early career experiences influence your outlook coming to Pitt?

**PG:** A very formative experience for me was teaching high school for one year.

I was not trained as a teacher: They had lost a teacher, and they knew I was available. But it was life-changing. It was the first time I saw that I wanted to go deeper into the realm of teaching. I wanted to do it at a college level, and that's what brought me to Pitt [for a PhD].

Of course, though, I failed. I never became a college teacher. I became a researcher and then an administrator. It's only now, after this long career, that I'm in some ways finally realizing one of my initial dreams. [Editor's Note: Gallagher will transition to the faculty of Pitt's Department of Physics and Astronomy after stepping down as chancellor.]

What our educational experience, particularly in higher ed, does is not so much give you the pathway that you already selected coming in. It's giving you an opportunity to explore and see what these other fields look like. I mean, how can it possibly

honest—there's no better mission than a university's. We're here to make the world a better place through knowledge and understanding.

**Pitt Med:** There was a recent *Journal of American College Health* paper about the University's approach to the pandemic and how it could be a model for others. Of course, we're hoping there isn't another pandemic around the corner. But what do you think worked particularly well at Pitt?

**PG:** When I look back to that experience, it was defined by three things: One is complete uncertainty; the fog of war problem was enormous. The second was the speed and the scale. It was a great teachable moment, but exponential dynamics are just not something human beings are very good at. How small things became massive so fast defied a lot of expectations we had about how things should work. And the final one was, unlike almost any other emergency that you can imagine facing, it wasn't contained. The pandemic was the whole globe, everywhere, everybody. It stressed all of our organizations. And look, there was a lot of stress for us, too. We were not immune in any special way. But our community, even when it got tough, in the end came together.

Craig Fugate, a former director of FEMA, once told me that places that experience natural disaster either tip in or tip out.

**Pitt Med:** We all went remote for a while during the pandemic. What do you think are the advantages of gathering, learning and living on campus? Do you think that will still be valued in 10, 15, 20 years?

**PG:** I don't know, but I hope it matters. Technologies allowed us to do dramatic things like pivot to online teaching and keep most organizations operating with very few employees working together physically as they traditionally did. They were amazing. But the penalty we paid for that has been quite high.

There is a magic that comes from direct human contact. I think that's true if you're a student: learning from your peers, interacting with them, living together; being away from home and trying on adulthood for the first time in a supportive environment. It's very difficult for me to see how technology supplants that without consequences. And students seem to be, in some ways, voting with their feet on that.

Education, exploration, scholarship—yes, they're knowledge activities, but they're social activities. And I think it's important to maintain that. Otherwise our relationships change and are distorted, and some of those changes and distortions may not be to our advantage. ■

—Interview by Erica Lloyd  
Edited for space and clarity.