develop treatments with different mechanisms of action. Development of new and effective treatments is also an urgent matter of health equity, given that minority racial or ethnic groups are overrepresented among patients with gonorrhea in the United States and that men who have sex with men and young people are also at the leading edge of increased gonorrhea incidence.

Studies like the one reported on by Taylor et al. in this issue (pages 1835–45) are a step forward in the quest to identify new antimicrobial options for gonorrhea treatment. Given the challenges in clinical follow-up in this patient population, the single-dose regimen is promising. Though the study was small, the efficacy shown is encouraging, and zoliflodacin has the potential to be an effective antibiotic for treating gonorrhea, though the limited activity observed in key anatomical sites of infection such as the pharynx will need to be better defined.

In parallel with ongoing work to develop and approve new drugs, we need to develop point-of-care molecular diagnostics that permit rapid diagnosis of gonorrhea with real-time assessment of antimicrobial susceptibility in order to allow targeted therapy rather than empirical treatment that may be inadequate in the context of increasing antibiotic resistance.

With more dedicated research on sexually transmitted infections to advance biomedical innovation and develop better diagnostics, therapeutics, and even vaccines, we may be able to avoid the advent of gonorrhea that is either treatable only with expensive intravenous or intramuscular agents or entirely untreatable. Meanwhile, additional support for the public health infrastructure required for the surveillance, prevention, and treatment of sexually transmitted infections will be critical.

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Terra Nova

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A few months before I started my surgical residency, I became obsessed with tales of polar exploration. I devoured accounts of early 20th-century Englishmen attacking the problem of the great unknown, seeking the extreme reaches of the earth for the benefit of science and the glory of their country (see photo). In expectation of my own impending journey, I was enthralled by the idea of explorers bidding farewell to their wives and children and setting out in flimsy wooden boats, knowing that they might not return, compelled by a deeply felt duty to see, to know, to map. Equally seductive was the sheer act of enduring: slogging forward in gale-force winds; dutifully documenting their expeditions in temperatures well below zero; eating "hoosh" — a foul-sounding sludge made from hot water, beef tallow, dried meat, and oats — all in pursuit of a technicality. Being the first person to stand on a particular bit of earth in the middle of an icy hell made all manner of discomfort and suffering worthwhile. The whole undertaking seemed mad, and yet the idea of undergoing true physical hardship for a greater goal, the path and price unknown, was not so foreign.

Bound by our menial status, my fellow surgical interns and I quickly became a close-knit crew. Our year comprised 12 rotations lasting 4 weeks each, and "You can do anything for a month" became the mantra we repeated to each other when the enormous scope of the job overtook us. We set our alarms for 4 in the morning 6 days a week, gritted our teeth through the inevitable humiliating "beats" from our chiefs, took responsibility for dozens of

Members of the British Antarctic Expedition, 1910 or 1911.
Library of Congress. Photograph by Herbert G. Ponting

sick patients on overnight rotations, and through it all, learned to cut and care and suture and tie. We survived largely on scraps of food scavenged from various staff meetings and on the crackers and ginger ale nominally reserved for patients. I developed an encyclopedic knowledge of the best snack caches in the hospital that I maintain to this day. We took great pride in the one thing we could reliably control in a world where we controlled nothing: we complained to no one but each other and competed over who had it worst. Lest we get smug, our superiors constantly alluded to the fact that they had suffered far more than we did, citing our work-hour restrictions policed by surveys (on which, by the way, we lied every month).

I found myself reading and rereading the last words of Sir Robert Scott, captain of the ill-fated Terra Nova British Antarctic expedition in his final letter to his wife: "What lots & lots I could tell you of this journey. How much better has it been than lounging in too great comfort at home — what tales you would have for the boy but oh what a price to pay."[1] The crew made it to the South Pole only to discover that their Norwegian rivals had beaten them by a matter of weeks. Owing to bad weather and worse luck, the crew perished 11 miles from a depot with stored rations that could have revived them. Scott scratched out missives from the tent where he lay, scurvy-ridden and starving, praising his crew for their bravery and stoicism: "We are very near it now and I should like you to know how splendid he was at the end," he wrote of Edward Wilson, his lieutenant and the crew's doctor: "Everlastingly cheerful & ready to sacrifice himself for others, never a word of blame to me for leading him into this mess."[2] I would remember this sentence in particular as I trudged over the Longfellow Bridge each morning, the winter constellations above me in a silent sky.

Everlastingly cheerful, I stayed at work with a temperature of 102°F, as measured by a knowing nurse; I worked through pneumonia and norovirus, covering my mouth with a surgical mask as though that would protect my patients; I lost 15% of my body weight in a month. My distress tolerance rose to astronomical heights, and with it my pride; when my resolve faltered, I reminded myself that my suffering was trivial compared with that of my patients. Surgical residency programs, smaller than medical residency programs, don't have a dedicated backup system in case someone falls ill. The zero-sum game meant that to leave was abhorrent: "You can miss a day as long as you can tell me what your ventilator settings were," one chief resident had warned us at the beginning of the year. I wasn't about to burden a peer by admitting my own weakness.

This dubious bravery culminated, one day, in my unceremoniously fainting in a patient's room while gowned up and performing a sterile procedure, smacking my head on a heavy metal cart on my way to the ground. I remember waking up concussed with a prickly feeling all over my body, my neurosurgery attending crouched over me and shouting that I must have had a seizure. He half-heartedly palpated my scalp and declared, "The bony anatomy is normal" — meaning, I suppose, that I didn't have an obvious skull fracture. That pronouncement was probably intended to be comforting. My pager beeped relentlessly. A nurse took one look at my gray visage and forced me to drink two cartons of sugary orange juice. Nobody quite knew what to do other than to ask me, maybe facetiously, not to tell my program director what had happened. I was allowed to leave the hospital after completing a few more tasks, and the consensus, over my (admittedly unenthusiastic) protestation, was that I should take the next weekend day off. In retrospect, my downfall was inevitable: I hadn't eaten or drunk anything since I'd arrived at the hospital 16 hours earlier, the room was stiflingly hot, and I suppose the stress of the day had taken its toll. Still, "She's weak, she's dead to me," one of the seniors quipped on my return.

The lesson I initially took from this episode was to carry packets of honey in my scrubs for emergencies (practical!). My partner, a psychiatry resident, was horrified that I'd let things get so bad and exhorted me to slow down. My nonmedical friends were appalled that anyone would willingly choose a life like mine. But once I was sure I'd suffered no lasting damage, I told the story all the time: *You think your job is tough?*

There is value in self-sacrifice — and there is value in naming residency as the sacrifice that it is — but obviously not to the point of injury. There's nothing noble in exposing patients to the carelessness that accompanies true exhaustion. But there is also the inconvenient fact that the worst nights I've had on call — waves of consults from the emergency department, that feeling of being the only person in the hospital, airway disasters on the unit, riding into the operating room on a patient's bed holding pressure on a pulsatile vessel — are the nights I've learned the most, discovering that my previously perceived limits were simply mirages. Reconciling these truths is not a trifling exercise: I'm torn between envying my friends with vibrant lives outside the hospital and being disappointed in myself for not studying harder, working longer, committing more. I'm learning to ask for help when I need it, I have made it a point to offer explicit support to co-residents going through difficult times, but I find myself falling into the same "we had it worse" platitudes with my junior residents that I'd rolled my eyes at as an intern.

When Scott arrived at the South Pole only to see the Norwegian crew's flag waving in the wind, his defeat confirmed, he turned to his journal in lamentation: "Great God! This is an awful place." After immense effort, the trophy he'd pursued with such vigor became his tomb, and with that realization, the romance of the journey evaporated. Residency, too, has its awful moments: at my darkest I sometimes wonder whether its sparkle will one day fade for good, but for now — Great God! I'd hate to be anywhere else.

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