

Tessnim Ahmad: Welcome to The Spark: Medical Education for Curious Minds. We present the people and stories behind medical advances at UCSF. From medical students, to physicians and faculty in the School of Medicine. Through The Spark, we share the innovations that are helping bring more equitable and better care to our communities. I'm Tessnim Ahmad, a student in the School of Medicine.

Tessnim Ahmad: Burnout is part of the American vernacular. It refers to the emotional exhaustion brought on by chronic work-related stress, and can manifest as cynicism, and feeling like your work lacks meaningful contribution. The term burnout was coined in the 1970s by Herbert Freudenberger, a psychologist. He volunteered in a free clinic for patients with drug addiction. He used burnout to describe the exhaustion suffered by workers in helping professions such as medicine, which carry rigorous demands and high ideals.

Tessnim Ahmad: While the term has been applied to other professions, burnout is particularly high in healthcare. A report released last month from the National Academy of Medicine describes rampant burnout, with up to half of doctors feeling burned out. There are many causes, such as demanding work schedules and little autonomy. System changes have also created burdensome administrative tasks and new care models, leaving some to feel the emphasis is on documentation, billing, and performance metrics, instead of patient care.

Tessnim Ahmad: Like clinicians, trainees also suffer burnout, an estimated 60%. The path to medical school, and then residency and fellowship is long and challenging, and it's becoming more competitive. Average MCAT scores and GPAs at most medical schools are rising. Medical advances also mean there's much more to learn now to be a competent physician than there ever was in the past. And there's the so-called hidden curriculum, an implicit socialization process that teaches things like stoicism in sad situations, and the need to toughen up and work through illness and injury. Erosion of empathy during medical school is a well-documented phenomenon. Superimpose an increasingly complex healthcare system, and burnout seems inevitable.

Tessnim Ahmad: Burnout and mental illness go hand in hand, and the lines between the two are often blurred. Physicians and trainees have higher rates of depression, compared to their counterparts in the general population. Doctors have the highest rate of suicide among any profession. Several physician suicides have made national headlines, and the problem was featured in a documentary called Do No Harm. However, research on the topics of burnout and suicide, especially among trainees, is extremely limited, in part because victims' families, schools, and hospitals may not share these events.

Tessnim Ahmad: Nikhil Rajapuram is a fourth year medical student at UCSF, who became interested in studying student wellbeing and burnout, after his own challenging experiences in medical school. He studied bio-engineering at U. Penn, and has taken the approach of listening to others before innovating for them, from the engineering to the burnout world, and his research is making a big impact. Nikhil

has taken a gap year to work in The Better Lab with Dr. Amanda Sammann and Dr. Simone Langness of the Department of Surgery. Nikhil plans to apply into pediatrics.

Tessnim Ahmad: Dr. Lee Jones is a professor of clinical psychiatry, and associate dean for students. Dean Jones oversees the medical student experience, and has worked with students for more than 15 years to support their personal and professional development. He's served as a mentor and resource for students, as they navigate the many challenges of medical school. Dean Jones and Nikhil were gracious in offering their time to discuss trainee burnout.

Tessnim Ahmad: You may hear the terms Bridges F1 and F2. Bridges is the new curriculum for the School of Medicine, launched in 2016, which emphasizes clinical engagement from day one of medical school. F1 stands for Foundations One, and comprises the first 18 months of pre-clinical training. In F2, students embark on clinical clerkships.

Tessnim Ahmad: So Dean Jones, I think a challenge for medical schools is the range of learning settings that students will be in. There may be a disconnect between a supportive medical school administration, and the larger culture of whatever medical field a student will encounter during their third year rotations or fourth year rotations, and even later in residency. How do you address managing burnout and the transition from pre-clinical to clinical years, as students encounter different settings with variable emphasis on well-being?

Dr. Jones: So I think there's several different approaches, and I think the broad categories are, what can we do to get people's habits that they can carry on through the clinical time? So sort of inoculating people, prophylactically, about what they're going to encounter. Another way is, well how do we change what they're going to encounter to make them better for people? And I think that's the second one, the latter one there, is not only important for trainees as for those of us that are... that's our lives, and what the trainee's life's going to be like for the next 30 to 40 years, if they're lucky.

Dr. Jones: And another part of the transition that we've talked about with students is, we go from learners being the focus to patients being the focus, which is also an interesting transition. While you don't have control over your schedule really in the first year and a half in F1, you have even less control in F2 and career launch, and you're being evaluated 24/7. So the stressors are sort of crazy there, and I think we've taken a couple of approaches. The biggest, most important one I think, has happened most recently, is going to pass-fail during the clinical year. That was a level of stress that was well documented in many different ways. It also was interfering with learning in many ways, and we did what Nikhil did, as suggested, is we talked to students about what were the stressors, what would be the things that would change in meetings across a couple of years with town halls, with individual students talking with students in governance. It

became evident that first of all, what we thought honors meant wasn't necessarily what honors actually meant.

Dr. Jones: So, and there was biases being played out in that, and perhaps the most sort of heart wrenching thing I think we heard, was how it interfered with people's learning, that we had people that were excited to take what they've learned in F1 into F2, which is our clinical, but they felt sort of their hands were tied, because they were being evaluated. And people very frankly, were saying, "I don't ask questions that I don't know the answer to because I'm being judged all the time". And taking people that want to learn and be the best that they can be to take care of patients, and putting them in that situation was bad, and it was just a stressful, terrible thing to do to people. So I think changing that has made a difference for people, and we certainly hear from residents and faculty that are working with students, that people are much more engaged, students are more engaged, and they're there. They're asking lots of great questions, which is why you're paying tens of thousands of dollars a year to get an education.

Nikhil: I think Dean Jones did a fantastic job of explaining it, and I particularly loved what you said about we're both simultaneously trying to inoculate students against what they're going to see, transitioning from pre-clinical to clinical, while also thinking about removing those barriers, right, and not just accepting those as inevitable. I think that's a beautiful way of putting it, and I'm definitely biased. I am a budding pediatrician in training, so I like to think of things in terms of early intervention, and if we think of pre-clinical as more of kind of the infancy of medical training, and clerkships as a more of an adolescence, or maybe adulthood. It's how can we really get people what they need before, recognize who is going to need extra help, and also, what kinds of things are coming up?

Nikhil: And I do think that we can support pre-clinical students, because we know that switching to pass-fail for pre-clinical as that shift has happened over the last 15 years, students have tremendously increased their well-being in those first two years, but there's a lot less control over clerkship year for most schools, and I found that speaking with a lot of administrators, that is a challenging piece for them to actually create change amongst all the clerkships, and the directors, and all the logistics. So if we can get students in the first two years thinking about what kinds of challenges are coming ahead and not adding to their plate, and not putting more onus on them, but integrating ways in which they can build those skills, while also removing some of those obstacles in third year, I think we'll be in a much better place.

Nikhil: I also think one thing that we implemented pretty recently was, one thing I noticed during my third year was how difficult it was to get peer mentorship. It seemed so informal, and that I was actually feeling a lot of messages from students that were first and second years, who had a bunch of questions about how to manage if they failed an exam, or how they should manage the fact that they have to take care of their loved one, but they might have a rotation in

Fresno, and I loved speaking with these individuals and I had a good relationship with them, but I always wondered, what about those students who don't know me or don't feel comfortable asking these questions, who do they go to?

Nikhil: And the administrators were very lucky to have Dean Jones, and DQ, who are just amazing individuals, but by the time they were getting to them, it was already sometimes too late, or at a very late point in what they were suffering. And so, we came together and I came to them and said, "Hey, could we start some kind of peer mentorship program?" And this was maybe almost a year ago, and I'm so thrilled that they listened to me, they sat with me, we brainstormed, and earlier this year in about March or April, we launched the Med Peers program, which is about six to eight of us that are fourth years in gap years, who just we feel that this kind of 24/7 hotline email, for any medical student that can reach out to us. It's confidential, completely, and I've been very grateful to see how we've been able to help students with that, and partner with the administration, and those kinds of ideas where we think a little bit outside of the box, and we take a chance, and students overwhelmingly, are positive.

Tessnim Ahmad: You mentioned pass-fail grading, so just to give some background, UCSF and some other medical schools moved a number of years ago to pass-fail for the first 18 months of pre-clinical training, for a lot of the reasons that you've already mentioned. As of this year, third year clinical rotations are also pass-fail. Now, residencies want a way to differentiate applicants. At this point, it seems that Step scores and sub-internship grades will be the primary pieces of data that programs have. Is pass-fail a grading for so much of medical school just deferring the need for formal evaluation, and maybe even increasing the stakes of performance down the line?

Dr. Jones: That's a really, really important question, and I think there's a couple of different ways that we're approaching that. One is on, I have the good fortune of being able to, as do many of my colleagues here at UCSF, we do work on the national scene with the AMCA[?], and so there's been some great preliminary work looking at step one, and what we use and how we use that, and recognizing that that's just part of the system and that you can't just change one thing, because there's domino effects down the road.

Dr. Jones: When we talked about going to pass-fail in the F2 year, part of that was also based in educational pedagogy of formative versus summative, and we're saying it takes people different times to achieve different milestones, but guess what? In the middle of that, we're grading you, which makes no sense. So in addition to wellness alone is more than enough reason, but really from an education perspective, it makes sense that the F2 year is formative, so that allows you to do that. As you said, residencies want a way to differentiate people. It's not uncommon for residency to take 12 people that have 3000 applicants, and how do they do that, and so how do they do that looking across 154 US medical

schools, plus EOS[?] schools, plus international schools. So being able to give people the tools to do that is the other thought.

Dr. Jones: So there's now a coalition has been formed from a multiple of the big stakeholders, so AAMC, the AMA, NRMP, NBME, looking at that, and I'm joining that from the AAMC perspective, representing AAMC, and the first time that I know of, there's been a real concerted effort to look at the system as a whole, and how do we address things, and we're having discussions we've never had before. So I'm as hopeful as I've ever been that there will be some big changes coming. As far as how do we handle it here locally, it puts the onus more on sub-I's, obviously, but it also, it levels the playing field and that everyone for sub-I's is doing, you know, has gotten the formative part that they need. And the other thing I should say is that that residencies are only taking people that are at the top 3% of the class. They're, you know, they, they are looking across the range and we have some good data for that, particularly with some of the specialties that are doing more standardized letters of recommendation that those organs of evaluation.

Dr. Jones: And so that, that's working very well. We did talk to other schools that went to pass fail and you know, Vanderbilt and Harvard are the two that we talked to and they did it before we did it and they didn't really notice any change in their matching. So that's the thing moving into this. Now convincing students and faculty advisors of that. The proof will be in the pudding when the first class goes out. But we're all very confident that things will be okay.

Nikhil: So I think, I think Dean Jones is a national leader on this, so I really defer to his answer and this is a really tricky question. One that keeps me up at night at times when I'm doing this work and advocating for pass-fail grading and removing evaluations is, are we pushing, you know, the buck a little bit further down the line, but a point I wanted to make I think is, well, there's two. I think first you mentioned, so how does a residency determine when they have 12 spots and 3000 applicants? How do they determine, you know, how to choose and that nagging engineer in my head starts to ask, how did we get here? How do we get to 3000 applicants and 12 spots? You know, this didn't used to be this way, right? When you apply to residency, I'm sure there were still competitive with 3000 for 12 spots?

Nikhil: And it got me thinking and I started digging and learning more about how do we determine how many residency spots are there? Why are there such a huge magnitude greater of medical students today than there were 20 years ago with this cropping up of hundreds of medical schools here and internationally to train more medical students and more applicants and not a concordant increase in residency applications. And there did I learn about Congress and Medicare and Medicaid and how we fund residency positions and, and previously lobbying efforts from national organizations to either increase or decrease those to affect a demand and supply. And it's a lot of politics and it's not something we think about. We kind of accept things as inevitable, I think a lot.

Nikhil: And I like to, I can't do that, but I also recognize that some of those things are a little bit outside of our hands, but some of those things we can assuage. So it's doing a little bit of both. It's making sure, you know, we do prepare students for residency in the applications that they need, but also recognize that this residency match process has become so twisted and put such an onus on students and medical schools in ways that they didn't in the past. And how can we change that by increasing residency positions so we don't have that level of competitiveness just to be trained as a physician when we have a doctor shortage. Ironically.

Nikhil: And the second point I want to make is that I've encountered a lot is this tension between wellbeing and match rate. And it is just all too real. We all dance around it a little bit because it's tough. We, I think Dean Jones and I, you know, we're biased. We care deeply about student well-being. I've encountered it personally. We've worked with so many students and peers that have struggled with this and yet we're often up against people whose priorities might be a little bit different. They are very concerned about rankings and philanthropy and match rates. And unless they're given that evidence that that match rate will not change, well-being efforts sometimes can be a little bit maligned.

Nikhil: And that's a challenge and something that we've been careful to say over a podcast. I recognize the heat I might get for it, but fundamentally I think it is at the crux of what we're talking about is how are we going to re-prioritize and maybe align our incentives with the incentives of those that are on the other side of the aisle.

Dr. Jones: Apple I think is a great example. So one of the schools I've worked at previously sort of accidentally accepted 20 people, or 15 or 20 people, from the bottom of their list. Fast forward four years ago, it was actually 20 people. Of those 20 people, eight were in the top 20 graduating when it came to ranking. So it really calls into question, what are we actually looking at? You know, in medical school we've done this thing called holistic review where you look at what's the floor of GPA and MCAT score you need. And then once you do that, then you look at what are the other things that your specialty needs, including diversity, distance traveled, languages spoken, those kinds of things, and that's been very successful with medical school. We're now talking about how nationally, how even that into residencies.

Tessnim Ahmad: We thank Nikhil and Dean Jones for sharing their insights and for their advocacy. We'd like to remind students of available resources. The confidential Med Peer program can be reached any time by emailing [medpeer@ucsf.edu](mailto:medpeer@ucsf.edu). Students can also reach out to the student experience team, student help and counseling any of the school of medicine deans and the 24-hour urgent line, which are all available in the weekly student newsletter. Nikhil's survey already has 2000 responses. The goal is to reach 8,000 medical students. We've included a link to the survey in the description for the segment. Please participate if you haven't already and consider sharing with your medical student networks. If you have

comments or questions for Nikhil, you can reach him by email, which is also in the description for the segment. Thanks for listening.