Dear Colleagues,

Labor Day became a federal holiday in 1894, and it pays tribute to the American labor movement. The work culture has certainly evolved since then, especially with COVID-19, but one aspect remains, achieving promotion and recognition for our work efforts. On August 27, I co-signed an important email with the Office of Faculty and Academic Affairs and the San Francisco Division of the Academic Senate, describing how we’re rethinking academic advancement [1] as one way we can collectively promote equity for those impacted by the pandemic.

Looking beyond the work space, the past few weeks have been particularly difficult. Hurricane season is once again battering the Southeast, and as Chancellor Sam Hawgood wrote on August 19, the news about Afghanistan, Haiti, California wildfires, and the rising wave of COVID-19 is heart-wrenching. Please read the message again for ways to support relief efforts as well as UCSF resources for well-being and mental health [2].

We also have a very important state election on September 14. If you haven’t voted yet, make haste and cast your vote. Vice Chancellor Francesca Vega wrote on August 24 with helpful information and guidance [3]. There is a lot at stake!

Across the country, school is now back in session – and in person! I recently checked in with the educational leaders of our various schools and programs at UCSF to reflect on how education in the health professions is shifting. In some ways, the pandemic is prompting or accelerating the change; in other ways, adjustments and trends are part of the constant evolution that education undergoes, perhaps quickened by technology.

It turns out, no surprise, that our leaders think about this sort of thing all the time. I heard such thoughtful and farseeing opinions that I’m splitting their responses into two parts. This month, I’ll share what I learned from the schools of Dentistry and Medicine; next month, we’ll hear from the schools of Nursing and Pharmacy, as well as from the Department of Physical Therapy and Rehabilitation Science.

This month’s topics:

- Shining a Light on Trends in Health Science Education: Perspectives from our leaders
- COVID Behavior: Let’s stay safe

With our three-day weekend fast approaching, I hope you will enjoy the time and truly disconnect from work if your schedule allows it. For those of you who need to work over the holiday, please be sure to find some good quality downtime later in the month; you deserve it! If you feel like dropping me a line at ExecutiveViceChancellor@ucsf.edu [4], I would enjoy hearing from you.
Shining a Light on Trends in Health Science Education: Perspectives from our leaders

Earlier this year, Caduceus International Publishing produced an eye-catching essay that I found quite intriguing. “Five Trends Influencing Health Science Education Today” highlights many of the changes—some of them pandemic-driven—that are coming to the field of health care.

I was keen to know whether the UCSF leaders overseeing our education mission would agree or disagree with the main points, or if they saw other trends coming. I am grateful to former School of Dentistry Associate Dean Sara Hughes, School of Medicine Executive Vice Dean Catherine Lucey, School of Nursing Dean Catherine Gilliss, School of Pharmacy Vice Dean Sharon Youmans, and Physical Therapy and Rehabilitation Science Department Chair Amber Fitzsimmons who committed their expertise and time to provide their reactions to the essay.

Their robust feedback reflects their dedication to fulfilling the enormous responsibility of ensuring that UCSF is providing the best education to its students—who represent the future generation of clinicians and practitioners. To provide the reading real estate warranted, you’ll hear from the schools of Dentistry and Medicine this month, with Nursing, Pharmacy, and Physical Therapy and Rehabilitation Science in October.

- Trends in Professional Health Education: School of Dentistry—rising to meet new challenges
- Trends in Professional Health Science Education: School of Medicine—addressing health disparities

Trends in Professional Health Education: School of Dentistry—rising to meet new challenges

Sara Hughes, associate dean of education and student affairs in the School of Dentistry, thinks a lot about changes coming to dental education, and even published a blog post this year on “Five Trends Impacting Dental School Graduates.” Some of those trends dovetail with those mentioned in this article by Caduceus International Publishing. Yet in Sara’s view, Caduceus identified some things that don’t have as much relevance in dentistry, which is changing in different ways.

For instance, Caduceus identified standardization of knowledge, skill, and professional competencies as a trend on the rise, as it helps move health science education away from specific, often irrelevant academic cultures and toward real-world practice. Sara sees that as nothing new, but instead the norm for many years. The move to outcome-based education, of which competency is one measure, gained significant traction some twenty-plus years ago, she said. Yet when Caduceus asserts that students and professionals with
demonstrable specializations or skills can relieve much of the burden on overworked doctors,? Sara agrees, and sees it as a way to help address health care disparities.

?The introduction of the mid-level provider (dental therapist) in many countries around the world has eased the health care burden and improved access to care for traditionally hard-to-reach but easy-to-ignore communities,? she says, from developing countries in Asia, Africa, and Latin America to poor communities in the U.S. Yet the use of dental therapists remains poorly understood in this country, with only a handful of states licensing such workers under a hodgepodge of rules that make standardization difficult.

While Sara also agrees with Caduceus? vision for an increased use of portfolios to recognize students learning at different paces, she adds that portfolios represent a useful concept that has suffered from poor conception and bad design ? e.g., little attempt to link evidence to learning outcomes or competencies; reflective accounts that stand alone rather than reflecting on the evidence/artifacts provided. Poorly defined criterion, design errors, and a slow system of change can leave learners and faculty frustrated to the extent that dental schools and/or licensing bodies have been slow to adopt portfolios. To learn more about learning portfolios, see Schuwirth et al, 2017 [7].

Caduceus forecasts an increased focus on teamwork, in which the model of the physician as the autocratic decision maker and sole care provider is now, in many cases, a vestige of the past. Moving forward, collaborative health care will take center stage. Sara anticipated this similarly in her blog for dental education, writing, ?As oral health care increasingly is delivered in group practices and localized health hubs, our graduates must be able to function as part of interprofessional teams working alongside nurses, doctors, pharmacists, and other health and social care providers.? But, she noted, ?for this to become a reality, higher education institutions need to facilitate major structural and organizational change ? everything from classroom space, timetables, to faculty and staff contracting.?

And while Caduceus predicts an increase of simulations and virtual reality, Sara explains, ?I don?t think it will unless it comes with a fiscally optimal way for health care institutions to wholesale adopt it.? Instead, she looks at other aspects of dentistry with which UCSF?s current crop of graduates will have to adapt, including:

- **Aging patients:** ?Thanks to decades of better preventive care, these people are keeping more of their teeth than their predecessors?. [Dental professionals] will need to focus less on acute, hospital-based interventions and more on primary care interventions, such as compliance with medications, prevention services, and lifestyle changes.?
- **Dental consumerism:** ?With a simple tap on the keyboard, patients can find the average cost of dental services in their area. Traditional care is being swapped for at-home teeth whitening, mail-order orthodontics, and other direct-to-consumer services.? 
- **Personalized data-driven dentistry:** ?Advancements in genomic data and science will further deepen our understanding of precision dentistry and health care. To have a deeper influence on patients? day-to-day health and wellness, our graduates must be able to integrate the digital health care landscape of wearable technology, embedded applications, and real-time monitoring sensors into their patients? care plans.?
- **Sustainable practice:** ?Dentistry has a significant environmental impact due to its high utilization of energy and resources. Our graduates have a professional obligation and social responsibility to transform the practice of dentistry from an environmentally perilous model to a sustainable one.?
In closing, a big congratulations to Sara on her retirement from UCSF. Thank you, Sara, for your excellence and contributions to our University!

Trends in Professional Health Science Education: School of Medicine ? addressing health disparities

Catherine Lucey, executive vice dean and vice dean for education in the School of Medicine, and John Davis, associate dean for curriculum in the School of Medicine, partnered with counterparts from Northwestern University Feinberg School of Medicine to author a commissioned paper on the future of medical education following the pandemic. It will be published by the Josiah Macy Jr. Foundation and Academic Medicine, and I’ll post a link in a future Expresso.

Catherine says that first and foremost, we should appreciate the many things that medical education does right. For instance, during the pandemic, many health professionals have risen to the occasion ? using science to solve problems, showing extraordinary competency and flexibility, working in teams, putting their own lives on the back burner to meet the needs of the health crisis. ?There?s a lot to celebrate about how, over the past twenty years, we have redesigned health professions education to prepare these individuals,? Catherine says.

Yet the pandemic also showed us that we still have major issues to address. ?Writ large and top, front and center? in the list of issues facing the development of the health professions workforce, Catherine says, ?is health care disparities and the need to meet all communities where they are, partner with them to address the major causes of morbidity and mortality in their communities, and ensure that every single person that we educate is prepared to work effectively to mitigate the consequences of structural racism on health care.?

The pandemic showed us certain things are possible that we didn?t know we could do ? and these things could help bring about other changes we need. For instance, Zoom allowed us to efficiently and effectively open our Grand Rounds to everyone and garner 5,000 attendees. Rather than having separate events for students, nurses, doctors, and other groups, people who attended absorbed the content they needed and found ways to fill in any gaps. It also underscored inadequacies in the old system, i.e., first the faculty learn something, then they teach the residents, and then the medical students ? with the result that things take a long time to filter into the environment.

And I agree with Catherine, ?We need to think more systematically about what other things could we push to everyone in the continuum ? from everyone who starts medical school to the final day of their career,? she says. ?What if we could energize people around the issue of health care disparities and unmet needs to solve other chronic epidemic problems? Could we activate everyone simultaneously to up their game in dealing with these things and really move the needle??

Another major area for possible change driven by the pandemic is assessment. People
wanted to fast-track graduation for medical students to help with the pandemic, but we couldn’t because of the patchwork of rules from accrediting agencies, residency programs, licensing bureaus, and more. There was no single agency which we could go to and say, “We believe our students are capable of graduating early. Can you approve that and make it happen across the country?”

Imagine if we could somehow create a nimbler strategy for advancement across that continuum. Catherine suggests, “The best way to do that would be to define competencies and make sure we have the tools we need to assess those competencies. We shouldn’t require people to stay in a program for a specific duration of time if their performance suggests that they would do fine advancing.” What the pandemic showed us in many ways is that we can in fact advance some students faster than others.

Another idea Catherine posits is modernizing the transition points, and designing them to be efficient, affordable, effective, and equitable, particularly the medical student to residency transition, but also the undergraduate to medical school transition. Virtual interviews worked fine. They saved thousands of dollars for every medical student, many days of missed educational experiences in their fourth year, and mitigated some of the inequity between students who have the means to travel to 20 or 25 programs and students who are really limited in the number of programs that they visit. The benefits far outweigh the downsides, especially from an equity standpoint.

That doesn’t mean, however, that technology is a cure-all. It has benefits, but it’s just a tool. Now some people are pushing simulations, but simulations can’t take the place of much that is valuable in medical school. “There’s not a lot of data that simulation in the later phases of education substitutes for actually taking care of patients under the guidance of an experienced faculty member,” she says.

These are all important, but the big issue Catherine keeps returning to is structural racism and its impact on health care and health education.

“We have to actually work within medical education and our health professions to actively seek and eliminate the consequences of the manifestations of structural racism in medicine and medical education,” she says. “The manifestations of those are very significant and trump issues of who gets to go to medical school, advances to the most competitive residency programs, and ultimately becomes a faculty member. What does everyone learn about how structural racism can influence their decisions as a physician?”

The pandemic further amplified how important this trend is. If we consider our approach to patient safety and the concept of zero harm, then we have to talk about zero racial harm. And we must analyze legacy practices to do better on removing potential bias.

On the national level, Catherine identifies one more medical education issue. Failure to have a national vision of a successful workforce. “We haven’t come together as a group of medical schools, even within the state of California, to say: What does success look like in terms of what do our physicians learn, where do they go, what type of specialties do they practice?”

“If we have a commitment to our country as health professions education schools, to prepare the workforce that our nation needs, how will we know if we’ve been successful? Unlike Canada, which does have a national health service, we don’t. We’re sort of a loose federation of medical schools and organizations and regulatory bodies and licensing
Because it’s that messy, everyone could say, “Well, I’m going to carve out this piece and do that. You carve out this piece and do that.” But there’s no coordination. No strategy. As a consequence, she says, we end up with communities with woefully inadequate public health, from California’s Central Valley to the Navajo Nation to rural Mississippi.

Catherine sums it up by noting that “while we should be proud of how well we responded to the worst pandemic of the century, we should not just measure our success based on all we accomplished during that time. We should measure our success long-term, in terms of how well we respond to everything that’s happening to our patients on a day-to-day basis, when we’re not called to be super heroic, but just actually doing the work that we all went to medical school to do to help people live healthier lives.”

COVID Behavior: Let’s stay safe

“It’s like déjà vu all over again.” This truism by great baseball philosopher Yogi Berra is certainly applicable to the unpredictable COVID-19 pandemic. Many folks acted like it was over this past summer, when the number of new cases eased and more people were vaccinated. Those fully vaccinated were told we could take our masks off. Yet COVID had other ideas, and the Delta variant struck with a vengeance, forcing us to rethink our behavior and return to safety mode again. Even at UCSF, where more than 90 percent of our employees and learners have been vaccinated, we need to keep taking precautions. Delta is causing breakthrough infections, and even vaccinated people can spread the virus.

Jon Giacomi, assistant vice chancellor for Facilities Services and our COVID-19 recovery operations director, says modeling data from the San Francisco Department of Public Health shows that we should hit our peak transmission of the Delta variant in late August, right before this newsletter lands in your inbox. In early- to mid-September, we may experience an increase in hospitalizations with the potential for our hospital to reach capacity. The data further predict that six weeks after the peak, the Bay Area will return to the baseline COVID case levels we saw a couple of months ago. Whether this modeling holds true or not, we should do what we can to help alleviate the surge in our community.

Like many of us, Dave Morgan, vice dean for Research in the School of Medicine, reads the UCSF COVID-19 alert messages that come daily. Even though most of the transmission has occurred off-campus in the community, he finds the fourth surge concerning. We want to wrest the control that the virus has on our lives and get back to a state of widespread health.

I admit that I’m disappointed to learn (and this has been shared in many a UCSF COVID-19 Response Town Hall) that members of our UCSF community are not taking the health screener, badging in, and practicing the utmost in COVID-19 safety precautions. UCSF Health launched a campaign to its staff about the importance of “speaking up” if they see anyone in our facilities not following our best safety practices. This includes patients, visitors, colleagues, vendors, and leaders. These conversations may feel uncomfortable, but they are critical for everyone’s safety. Our safety standards apply to everyone at UCSF:
Guiding Principles:

- As COVID rages in our country, complacency is not an option
- Everyone has a shared responsibility to speak up to ensure our culture of safety
- In line with our PRIDE Values, we will always be respectful in giving and receiving feedback
- Our policies are guided by public health orders and scientific evidence

Aim:

- To continue to build on our UCSF Health culture of safety
- To reinforce the behaviors that are going to keep us safe during this pandemic and beyond
- To provide multiple tools and tactics to help us all give and receive feedback when safety is not at its best

One area where we could improve behavior is in the break rooms. Dave notes that, People are removing their masks to eat lunch, which is fine if they’re alone, but frequently they’re not alone. They’re often chatting with other lab mates. To see people around a small table talking with their masks off while eating lunch and drinking coffee is concerning. Break rooms are where transmissions mostly occur in the workplace.

Jon says other things are in the works for keeping our campus safe, from administrative actions to personal tips:

- Non-essential indoor events through the end of September: halted
- Consuming food or beverages in classroom settings and at indoor meetings: When feasible, eat meals outdoors instead of using indoor spaces, including cafeterias or dining rooms. If it’s not, please stay current about dining guidelines [8].
- Masks on campus, regardless of vaccine status: required
- Return to on-site work (for the 5,000 or so people of our 30,000+ community who have not needed to be on-site): now extended to March 1, 2022
- Proof of vaccination or approved exemption/deferral from vaccination: required
- Verification of vaccination status before entering UCSF fitness centers or any dining establishment on campus: required (per City of San Francisco mandate)
- Daily health screener on the UCSF website or mobile app: required ? please complete the screener before coming on-site! The screener has been simplified, but still collects the information we need. It also provides guidance that could potentially save you from wasting a trip to work on-site as well as give your manager time to arrange back-up coverage. The Delta variant presents as a common cold, so if you have any symptoms whatsoever, please stay home.
- Badging in: required ? to gauge how many people are coming on-site in a given day/week, we need everyone to tap their badge at least once when they get to work at UCSF. This helps us monitor compliance and will be very useful in a disaster or emergency situation.
- COVID-19 testing: available ? vending machines by a company called Color have been brought to various campuses. Once a week, you can obtain a self-administered COVID test and receive your result in two days.
I know many people are looking forward to returning to on-site work, but if you can do your job from home, please continue to do so. If you must come on-site, please mask up, take the health screener, and tap your badge. Reminder — take care, be kind, stay safe.

We will keep everyone posted and ask that you be patient as we continue to determine what is best in these uncertain times. And please, reach out to others, do what you can to support one another, and be sure to avail yourselves of the emotional and mental well-being resources collected on our coronavirus website.

Remember, ?It ain?t over till it?s over.? Yup, Yogi Berra said that, too.

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Dan?s Tip of the Month

The question is, ?What?s that bird?? The answer can be found in a free app called Merlin from the Cornell Lab of Ornithology. Made possible in part by support from the National Science Foundation, Merlin was launched in 2014 and is a global bird guide that offers quick identification help for all levels of birders to help them learn about the birds across the Americas, Europe, Asia, Africa, and Oceania. Beyond that, it is a great reminder about the breadth of science and academia. Not only can both save lives, they also enhance and celebrate life. (Tune into the ?BirdNote? podcast to learn how listening to birdsong may make you healthier and happier!) It truly is an amazing app. Give it a try. The other evening, I actually identified a Great Horned Owl while walking back from Tennessee Valley Beach. Hoot would have known? ?

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