

The background of the cover is a photograph of a street in a town, viewed through a large, dark wooden archway. The street is paved with stone and leads into a valley with rolling hills and green fields. A stone cross stands in the middle of the street. There are several cars parked along the street, and buildings with red-tiled roofs are visible. The sky is bright with some clouds. A large red vertical bar is on the right side of the cover.

H&P

The Stanford Medical Student Journal
Volume 15 | Number 1 | Winter 2011

RITUAL AND CULTURE
IN MEDICINE

EDITORS-IN-CHIEF

Andrew Chang
Ryan Schubert

FEATURES EDITORS

Mihir Gupta
Jai Madhok
Casey Means
Aarti Sharma
Jennifer Wang
James Xie

Humanities
Andrew Chang

Leaders in Medicine
Casey Means

LAYOUT
Stesha Doku

EDITORIAL GUIDANCE

Andrew Connolly, MD, PhD,
Associate Professor of Pathology

Audrey Shafer, MD,
Professor of Anesthesiology

Abraham Verghese MD, MACP,
Senior Associate Chair for the Theory and
Practice of Medicine

FRONT/REAR ARTWORK:
Front Cover photo by Johana Oviedo.

Back Cover photo by Hersh Sagreiya.

GRAPHIC REDESIGN
Stesha Doku: dohkoo.com

POLICY

H&P, the Stanford Medical Student Journal, is published by students of the Stanford University School of Medicine. All articles are written by students. H&P is not an official publication of the Stanford University School of Medicine or its faculty. Expressed written opinions are solely those of the authors and do not necessarily represent those of Stanford University or the School of Medicine.

SUBMISSIONS

H&P is published quarterly. Submissions are accepted by e-mail.

Please submit inquiries to StanfordHPJournal@gmail.com. Correspondence may be addressed to OSA, Stanford University School of Medicine, Stanford, CA 94305.

<http://bioethics.stanford.edu/arts/H&P.html>

LETTER FROM THE EDITORS

Dear Readers,

Thank you for taking a moment out of your busy lives to read the H&P. This issue, themed Ritual and Culture in Medicine, is truly special thanks to the hard work of our writers, editors, and layout designers. But before we enter the details, we'd like to take a step back and discuss the meaning of H&P. Many people have asked us over the years about the significance of the journal's title. H&P represent the initials of two Greek goddesses, Hygeia and Panacea, the daughters of Asclepius, the Greek God of healing. Asclepius was an incredibly important deity to the Greeks. It is possible that in a temple dedicated to Asclepius, Hippocrates, the father of modern medicine, began his career as a physician. The winged, serpent-entwined staff, known as the Caduceus of Asclepius is undoubtedly recognized by all physicians, although the ancient ritual of putting non-venomous snakes in a patient's room is clearly out of style in the 21st century.

Perhaps the first medical specialties were represented by Hygeia and Panacea, who were also physicians. Hygeia symbolized the practical aspects of human care, starting with healthy habits and public health. Today many of the same hygienic rituals we go through on a daily basis were also practiced by the healthiest Greeks. On the other hand, Panacea literally translates as "all healing". She represented cures, remedies, and surgeries. Our current focus on curing illness is thus such a universally human one, and arising from ancient culture.

Fast-forwarding a few thousand years to the Stanford University School of Medicine, we find many new rituals, including one performed every year by entering students. The SWEAT (Stanford Wilderness Experience Activity Orientation) trip often stands out in the minds of students as one of the most formative events in their first year. James Xie, one of the student leaders, captures the hard work that goes into preparing SWEAT, and spotlights some of the students who organized this year's trip.

Once school begins, one of the first things that medical students learn about the practice of medicine is how to take a history using the medical interview. Jennifer Wang attempts to address the question of whether labs, images, and tests are more important when caring for a patient than the ritualized act of taking a patient's history and physical. Her answer and the story that lead her to it are textbook examples for understanding clinical reasoning.

Though most doctors consider themselves scientists, perhaps our lineage is still strongly rooted in our religious origins. Beginning with a story about the twelfth-century physician Maimonides, David Carreon argues that there are a number of striking similarities between modern physicians and ancient priests. His piece is sure to make you think about how the history of medicine has intersected historically with religion.

Andrew Chang discusses a popular medical school rite of passage not performed at Stanford, the White Coat Ceremony, and places our Stethoscope Ceremony in the context of a discussion on the symbolism of white coats. Beyond their implications in our sartorial celebration, Andrew's

article focuses on why the ceremony has the power to transform and elevate physicians, sometimes to uncomfortable heights.

As is tradition, the H&P strives to obtain international health articles detailing both research and personal experiences abroad. First, we have published some reflections from Dr. Phuoc V. Le, a 2006 Stanford Medical School graduate and current resident at Brigham and Women's Hospital (BWH) in Boston and Dr. Evan Lyon, a Professor of the Division of Global Health Equity at BWH. They discuss the incredible strides humanity has made in fighting cholera in the developing world, and frame it in the context of their own experiences face-to-face with patients in Haiti after the 2010 earthquake. Our second international health article comes from Stacie Vilendre and Deshka Foster. Their research on malaria management in Tanzania spotlights the shortage of workers in that region and the cultural gap between health care providers and patients that exists and is often filled by traditional healers.

The humanities section is rounded out by a lovely article titled The Good Chair by Christine Nguyen. She writes of her experiences interacting with a patient at the free clinic, including the dilemma of which chair to offer her. It seems that these things have strong traditional implications for the relative importance of doctors and teachers, as well as their relationship to patients.

Rarely, we receive submissions for book reviews, and we are doubly excited when they include a discussion with the author. In this issue, Mihir Gupta shares a conversation he had with Dr. Steven Miles, MD, author of The Hippocratic Oath and the Ethics of Medicine. The interview sheds light on an unforgettable medical ritual, one that we still practice today in the form of an affirmation. Its content has been changed many times, but the concept of the Hippocratic Oath and the core principles behind it are still embraced today.

The issue concludes with a discussion Casey Means had with Dr. Chris Hayward, Professor of Psychiatry and Chief of Hospital Services at the Stanford School of Medicine. Dr. Hayward is beloved by students at Stanford, and his work with preclinical students is the first introduction many of us have to illnesses of the mind. His interview includes insights on various aspects of medical school, including rotations, additional degrees, mentorship, and the current state of psychiatry research.

As for the editing staff, our own quarterly ritual of soliciting articles, recruiting writers, and printing H&P will be coming to a close with this issue. We leave the magazine in good hands, however, as our two new chief editors, Aarti Sharma and Mihir Gupta, will undoubtedly take the publication to new heights. We hope you have enjoyed reading the H&P as much as we have enjoyed writing it, and look forward to joining you as enthusiastic followers of the journal.

Sincerely,
RYAN SCHUBERT AND ANDREW CHANG

Features

4 Transitioning Into
Medical School?
No SWEAT!

JAMES XIE

Features

9 Learning the Art of
the Medical Interview

JENNIFER WANG

Features

12 Modern priesthood

DAVID CARREON

Features

15 The White Coat
Ceremony

ANDREW CHANG

International Health

18 Woch Nan Soley

PHUOC V. LE, M.D., M.P.H.
EVAN LYON, M.D.

International Health

20 Malaria Management
& Healthcare Worker
Shortage in Tanzania

STACIE VILENDRER
DESHKA FOSTER



Stesha Doku

Humanities

23 The Good Chair

CHRISTINE NGUYEN

Conversation

25 The Hippocratic
Oath and the Ethics
of Medicine

MIHIR GUPTA

Leaders In Medicine

29 Dr. Chris Hayward

CASEY MEANS

TRANSITIONING INTO MEDICAL SCHOOL? NO SWEAT!

JAMES XIE

A wilderness pre-orientation experience for Stanford Medical Students



Jai Madhok

EVERY YEAR BEFORE THE START OF CLASSES AND BEFORE THE OFFICIAL ORIENTATION, a large proportion of the entering first-year class partakes in a Stanford School of Medicine tradition affectionately abbreviated as SWEAT. The Stanford Wilderness Experience Active Orientation Trip is a student-led backpacking excursion in the California Sierras that serves to bond the new class together, and for the second-year students, to acquaint themselves with

and provide mentorship for the first year class. Arguably, the SWEAT rite of passage has been just as important as traditions such as the Stethoscope Ceremony in helping students feel welcome and ready to begin the pathway to becoming a physician.

SWEAT has evolved throughout its course of over fifteen years of annual trips. This past year was no different. SWEAT 2010's "super-leaders" – the head student coordinators – Julia Pederson (SMSII) and Erick Westbrook (SMSII) took the helm in organizing the trip for 66 entering medical students and 1 Master of Medicine student. Each year, the number of students participating in SWEAT has always been high, with a yield of typically over 70% of the incoming class. The trip to Lake Alpine, CA lasted four days and three nights, with different options of difficulty for backpackers, and a car camping option for students interested in day hiking.

Dr. Smith-Coggins has been the faculty liaison for the SWEAT program since 2006. Over the course of this time, she has worked closely with SWEAT's super-leaders, enhanced SWEAT's training of its leaders as role models, and improved safety and risk management for the trip as a whole.

This year, Pederson and Westbrook engaged supporters of SWEAT to a greater degree. While one of



Jai Madhok

SWEAT's greatest strength is that it has always remained student-run, the non-student stakeholders and supporters of the program have grown. For example, the Stanford University Medical Center Alumni Association helped to provide transportation for the incoming students to and from Lake Alpine.

Through collaboration with the Educators for Care (E4C) program led by Dr. Lars Osterberg, Pederson and Westbrook also secured a donation of a small notebook and pen for each student to journal their thoughts and reflections both during and after the SWEAT experience. With fears of physician burnout and depression recognized throughout the medical community, positive social mentoring experiences such as SWEAT that help establish the habits of reflection and build a support network are a key step in promoting mental health among students.

"There are elements to the SWEAT model, such as its setting in the great outdoors, that lend themselves to cultivating skills that can really benefit medical students," explains Dr. Rebecca Smith-Coggins, the faculty advisor for SWEAT, Associate Dean of Student Life, and Associate Professor in Emergency Medicine. "Developing the skills of resiliency, reflection, and peer



Jai Madhok



Jai Madhok

support will make for stronger, happier students and physicians in the future.”

A significant body of literature in the field of experiential learning has been published on the positive effects of pre-orientation trips for students both at the undergraduate and professional level. Gass et al. found long-term benefits for students participating in wilderness orientation programs, citing the effects of peer relationships and the challenging of student assumptions. Opportunities to study the SWEAT model are a real possibility this year and some students are already beginning the preliminary steps to look at the ways in which SWEAT has made a difference in the lives of first year medical students.

Having done a superb job with SWEAT 2010, Pederson and Westbroek have passed the torch to James Xie (SMSI) and Lizzy George (SMSI) to plan SWEAT 2011. While SWEAT 2010 will be a hard act to follow, both Pederson and Westbroek have provided a solid platform on which to build upon. Of course, Xie and George are not without a host of supporters both in the School of Medicine administration and in the student body.

Most important to SWEAT’s success are the student leaders. The SWEAT program is a tremendous

boon not only for the incoming class of students, but also for current student leaders to gain formal leadership and mentoring skills, practice in wilderness medicine, and experience in camping and backpacking. This spring, a formal curriculum encompassing these skills has been developed for a medical school elective class INDE 235 (“Wilderness Leadership and Mentorship Skills for Medical Students”) in which SWEAT 2011’s leaders will enroll.

By the time August 2011 rolls around, the new leaders will be ready to embark once again on the ritual trek into the California Sierras with Stanford School of Medicine’s newest batch of students – to camp, to hike, to bond, to reflect, and of course, to sweat. &

Interested in SWEAT? Email James Xie and Lizzy George at jxie@stanford.edu and lizzyg@stanford.edu

Further Reading:

Gass, M. (2003). “The long-term effects of a first-year student wilderness orientation program.” *Association for Experiential Education* 26(1): 3.

Gundersen, L. (2001). “Physician burnout.” *Annals of Internal Medicine* 135(2): 145-148.

Meldrum, H. (2010). “Exemplary physicians’ strategies for avoiding burnout.” *Health Care Manag* 29(4): 324-31.

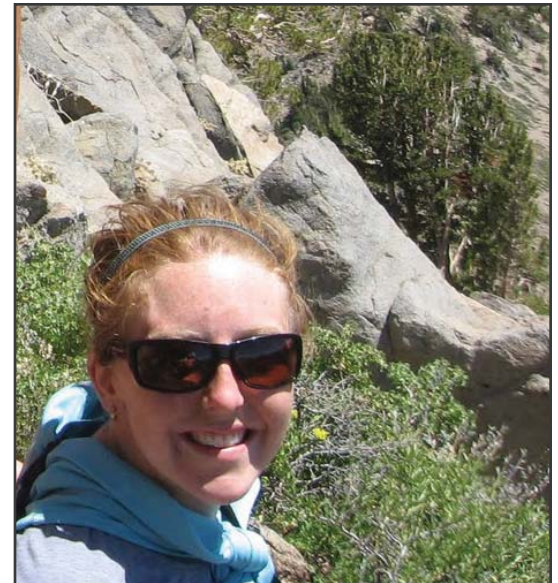
SWEAT STUDENT PROFILES

It is for these reasons that entering students feel welcome, included, and hopefully more at ease about the daunting prospects of histology, anatomy, and molecular biology that will become a routine reality shortly after the official orientation. For the returning second years, the experience of leading a group of new students into the wilderness is not only rewarding and self-gratifying, but also provides a similar time of reflection as medical school begins again.

NAME: CASEY MEANS, SWEAT 2010 PARTICIPANT

YEAR: ENTERING CLASS OF 2010

I remember being astounded by how incredible, interesting, and fun my new classmates were. Every little detail from the trip was a delight: the amazing food (thank you Trader Joe's); a particularly epic selection of trail-mixes; the re-ignition of the childhood joy of playing group games (of note: cramming twelve large adults into a tent and playing "Mafia"); sleeping outside under the stars with all my new classmates; gorgeous California mountain vistas; swimming in Lake Alpine on the last day; our shockingly successful skit; learning about how amazingly involved in research and medical school activities our SWEAT leaders were (shadowing, research, being SWEAT leaders, and both were TAs!). Even though they were only second years, they gave such great advice about enjoying medical school and how to get involved. SWEAT made me so excited about my new classmates and so thankful to be back in California. My advice to incoming students? You must go!



Jai Madhok

NAME: STEPHANIE SMITH, SWEAT 2010 LEADER

YEAR: ENTERING CLASS OF 2009

I never really liked camping, and the first time I ever backpacked was on SWEAT before I started at Stanford in 2009. Despite this, I loved every second of my first time backpacking (well, maybe not the trowels, but at least we bonded over this). The second time I backpacked, I was a SWEAT leader. It seemed quite fitting, in keeping with the medical school mantra of, "See one, do one, teach one." (Although it was more like "do one, teach one," in my case). As August rolled around and my last free summer came to a close, I second-guessed myself. Why had I decided to give up these last few weeks of summer to prepare for and lead a SWEAT trip? I wasn't ready to start classes again. What if I had forgotten all of what I learned during my first year? Brains can atrophy over a summer, right? Worries abounded. And then, just like they had the year before, all my fears melted away




Jai Madhok

in the Sierras. Surrounded by the incoming first years and my fellow leaders, I was worlds apart from school. Grounded by the mountains, sleeping out under the stars, my perspective returned. I came back to school reinvigorated by the first years' enthusiasm, excitement, and passion – just what I needed to rekindle my own.

SWEAT STUDENT PROFILES

NAME: , SWEAT 2010 SUPER-LEADER

YEAR: ENTERING CLASS OF 2009

I've always loved the wilderness. One of my favorite quotations is from John Muir: "Everybody needs beauty as well as bread, places to play in and pray in where nature may heal and cheer and give strength to the body and soul." For me, nature has always been a place that invigorates me and allows me to feel most alive. To share this through SWEAT is so rewarding because it is such a critical time for incoming students. All the anxieties about medical school tend to go away (at least for a bit), when you are focused on the beautiful mountains and lakes around you, your heavy backpack, and getting to know your ten new classmates on the trail. As a SWEAT leader, after the trip I continue to have the opportunity to be a friend and a mentor, and I really enjoy helping my SWEATers in any way I can. The bonding experience is incredible: you start as a group of strangers and by the end of the three days you really feel a deep bond with your group. You feel like people understand you and are more similar than different. In medical school, knowing that others are going through what you are makes a big difference. SWEAT is the perfect way to break the ice and start building great friendships and a support network for what is a very demanding and rigorous stretch of your life. Being able to help someone else navigate medical school is a great feeling too! 



Jai Madhok

LEARNING THE ART OF THE MEDICAL INTERVIEW

JENNIFER WANG

“Have you seen my scans yet?”

“Not yet,” the doctor responded, “but I will in the next hour. I’m here to talk to you first, to get your story, so that when we discuss your case I’ll understand it better.”

“But the scans?”

The doctor paused, his right hand stuck halfway into a glove, and turned to face the patient squarely.

“Let me ask you this: which do you think is more important, the MRI scan or the patient?”

The patient pondered the question for a moment, his brow furrowed in thought over what had to be a trick question.

“Well, the MRI scans, of course.”

The doctor chuckled wryly.

“Spoken like a true modern medical student!”

AS GENUINELY AMUSED AS I WAS AT THE PHYSICIAN’S WITTY COMEBACK, I COULDN’T HELP BUT CONSIDER THE MEANING BEHIND HIS WORDS.

There I was, standing in the corner, a bright-eyed first-year student with a clean white coat on my back and a school-issued iPad in my bag, a real-life example of a “modern medical student.” But this dependence on technology, this dismissal of the human connection, and all the other pities suggested by the doctor’s response—were those a part of me as well? I laughed with the patient, adjusting my white coat nervously.

In an era where the most advanced imaging modalities and molecular diagnostics can tell a physician more details about a patient’s condition than vague, potentially inaccurate anecdotes of “not feeling well,” it becomes easy, even tempting, to rely less on the person on the examination

table and more on the numbers in his chart.

Despite this trend toward all things high-tech, an emphasis on the art of doctoring has been a major part of my training at Stanford from the start. With Dr. Abraham Verghese’s *My Own Country* as assigned summer reading, I began the year understanding the value of the patient encounter as a “ritual” of sorts, an experience with a revered, obligatory place in the practice of medicine. The fact that not many medical specialties can function without ever seeing the person being treated suggests that face time is an essential aspect of the medical profession, one requiring professionalism, skill, and a degree of artfulness that can only be mastered with practice, experience, and time.

And so, three weeks into my medical education, before



Hersh Sagreiya

any of my classmates or I really knew anything about anything medically inclined, I found myself before a standardized patient in the Immersive Learning Center, ready to master—or strive to, at least—the first component of my clinical skills training: the patient interview.

My task that afternoon, I was informed, was to introduce myself to the patient as a first-year medical student coming to find out the reason for his or her clinic visit. According to the chart on the door, Pat Brown was in today for a physical exam—not that I actually knew how to conduct one. The patient’s vital signs were also noted: body temperature, respiratory rate, pulse—not that I knew what to do about those either. I took a deep breath, knocked, and entered the mock exam room. Have a nice conversation with the standardized patient—easy enough, right?

I’ll admit that the baseline patient encounter with Pat Brown was even more difficult and awkward than I had feared it would be. It really was not as simple as having a day-to-day conversation with an acquaintance, or making small-talk with a neighbor on

the plane. Something about the white coat I was wearing raised the stakes of that very brief, contrived encounter. For the first time, I was assuming the role of a medical provider and learning to perform the ritual of the medical interview.

As I discovered over the course of the quarter, the medical interview offers a structured but highly personalized means of comprehensively learning about an individual, oftentimes a complete stranger, in a limited period of time. Each aspect of the interview—eliciting the chief complaint, taking the history of present illness and past medical

history—provides us, the medical caregivers, with a broad picture of not only a person’s past and present health but also his or her general lifestyle, beliefs, and concerns. All these factors, whether or not they appear relevant at the moment, are important to consider when treating the patient—if not directly for a medical reason, then at least for understanding the patient as an individual in order to care for him or her as such.

Indeed, establishing rapport and gaining the patient’s confidence from the very start—the warm introduction, the handshake, the focused attention—is essential to the physician-patient relationship. A fifteen-minute clinic visit may be the first time that the patient and physician have ever interacted, and yet, the patient may be asked to divulge highly personal information regarding drug use, sexual practices, and potential violence to a complete stranger.

Given the immense degree of trust involved in the patient interview, it is not surprising that most Americans would rate interpersonal skills, qualities such as respectfulness and careful listening, among the most important characteristics of a physician, the lack of which has contributed the most

to patient dissatisfaction. Furthermore, a physician's knowledge of the latest medical science appears to be less of a priority than his expertise in the medical art of compassionate bedside manner.

For me, this meant that, regardless of my inability to diagnose diabetes or differentiate normal from not, I could still contribute to a patient's satisfaction by taking the time to listen to their concerns and taking interest in their well-being. With conducting the patient interview as one of my future duties as a clinical student, I would not only serve as an information gatherer for the attending physician but also as an empathetic advocate for my patient.

Of course, this would first require knowing *how* to conduct a good interview. Learning to navigate the various aspects of the patient encounter was no simple stroll through the park. Each week in small group sessions, we tackled different portions of the medical interview to better understand what questions needed to be asked when, how, and why. This structural approach helped me gradually build a mental checklist and a road map of how I was to steer the conversation with my patients. Now with a purpose in mind, I no longer had any reason to sit speechless in front of a patient, hoping that he or she would simply tell me everything that I needed to know.

This is not to say that awkward silences, misplaced commentary, and standardized patient discomfort found no place in my learning. It was as much about mastering the mechanics as it was about developing good style. Choice of words, tone of voice, engaged posture, eye contact—every practice session revealed a new area to work on for the next week.

Largely, how confident I felt with my developing clinical skills depended on the particular standardized patient scenario we encountered that day. Certain sessions I anticipated anxiously—how difficult would the “difficult” patient be? From other, my classmates and I left with much thought and discussion amongst ourselves—how *would* one go about gracefully discussing sex changes, illicit drug use, and other potentially

uncomfortable topics?

From these sessions, it became clear that adaptability was as necessary a skill as attentive listening when talking with patients. Being able to tailor my style to an individual patient's needs and personality, while challenging at first, made the process of establishing rapport much easier, much quicker, and more enjoyable. Even though we were working with standardized patient actors and actresses in class, the patient interview itself was not a scripted act, a mere going-through-the-motions formality. It's true that parts of that once-overwhelming mental checklist have become rather routine: the greeting and introduction, the transition statements, the closing. But this has not taken away from my ability or desire to personalize each interview and really learn about my patient as a person, not just another disease, another treatment, or—as much as I love technology—another imaging study.

As for the patient with the MRI scan, the results were presented by radiology at Tumor Board later that morning. It turns out that the mass, though palpable on physical examination, was hard to distinguish on imaging. No further information than what had already been gathered could be provided by the scan.

Good thing we still had the patient. &

1. *Harris Interactive Poll, Doctors' Interpersonal Skills Valued More than Their Training or Being Up-to-Date. 2004.* <<http://www.harrisinteractive.com/news/all-newsbydate.asp?NewsID=850>>

MODERN PRIESTHOOD

DAVID CARREON



Mackenzie Wehner and Kevin Nead

NINE CENTURIES AGO IN EGYPT, THERE LIVED A REMARKABLE MAN.

His name was Moses ben-Maimon and he was called Maimonides (1135-1204). He was perhaps the greatest physician of his age, acting as court physician of the sultan Saladin and writing works such as “Treatise on Hemorrhoids” and “Glossary of Drug Names.” Later in his career, he would work late at the Sultan’s palace and then return home to remark, “I would find the antechambers filled with gentiles and Jews ... I would go to heal them, and write prescriptions for their illnesses ... until the evening ... and I would be extremely weak.” (1) But beyond his work as a physician, he was something else: a remarkable religious leader. He was a rabbi, appointed leader (“Nagid”) of the Egyptian Jewish community. He was an incredible scholar and, between seeing patients, wrote a commentary on the Torah, “Mishneh Torah,” which is still venerated.

But this pattern is not unique to Maimonides. It has been the pattern of religious leaders throughout human history. Healing has long been a part of religion, from the ancient medicine men, to the Persian Magi, to Hebrew, Egyptian, and Christian priests. Hebrew Scriptures declare, “When the plague of leprosy is in a man, then he

shall be brought unto the priest” (2) and Jesus says of the leaders of his new church, “...they shall lay hands on the sick, and they shall recover” (3). Healing has been a part of the priesthoods of old and continues today.

There are many similarities between priesthoods and doctor-hoods. The first notable similarity is that both are hereditary, passed on from generation to generation. The Egyptians priesthood “was in great degree hereditary,” and the Persian Zoastrian priests were a “hereditary sacerdotal caste” (4, 5). In the Hebrew Scriptures, God declares the priesthood hereditary, “I will sanctify also both Aaron and his sons, to minister to me in the priest’s office.” (6) In fact, some argue that the Jewish surname ‘Kohen,’ tracks back to the original Hebrew high priest (there is even some Y-chromosome genetic evidence for this [7]). Though we don’t like to admit it, medicine is the same way. In the US, the prevalence of doctors is 2.67 per 1000 (8). If medical students were taken equally from all families, one with any parent with an MD should come around slightly less than every other year $\left(1 - \frac{2.67}{1000}\right)^2 = 5.33$ leaving either parent be a doctor is per 1000, or about every 188th person. With class sizes of 86, that’s

rarer than 2 full Stanford classes. Do you know of anyone in your class whose parent was an MD? Statistically, you shouldn't, yet of course we all do.

Another thing that priests throughout the ages enjoyed was the respect of the people. In Catholicism, the priest stands in the very place of Christ, and for much of history, he was treated very well because of it. Our priesthood is no different. What parent hasn't coaxed, if ever so gently, entrance into this order? Which of our parents didn't brag when we got into medical school? But even beyond proud parents, there is the average citizen. I heard a story of a doctor who shared at a party that he had invested in a particular stock. Someone at the party heard it, sold his stocks, and bought the one the doctor did. Why? Because doctors are smart (a modern translation of 'blessed')! I can't speak for my peers, but I don't remember many lectures on derivatives markets. We have a world of opportunities before us, far exceeding the scope of our explicit training. How many of us have positions that were utterly closed to us the moment before we got the call from Dr. Garcia?

Society rewards our hard work with one of the highest regular incomes available. There are those who earn more, but as a class, even subtracting the cost of our schooling and malpractice insurance, we will do very well for ourselves. Like confessors, people reveal to us their darkest secrets. No other class of people is entrusted as much as the physician. With such an incredible spectrum of substances at their disposal, the doctor is a powerfully entrusted figure. What professional since the Inquisitor could, on the authority of his opinion alone, deem a person a danger to others and have him or her imprisoned in a psychiatric ward?

And what priesthood is complete without a Rite of

Passage? There must be some way that the uninitiated pass from the laity to the priesthood. Hebrew priests would memorize the entirety of the Torah. We must memorize the entirety of First Aid for the Step 1. Medieval priests would speak in Latin, a language that no one understood, thinking it holier. We speak in a language that our patients don't understand, thinking it more scientific. "Unfortunately I don't know what caused your..." becomes "idiopathic" and "I'm terribly sorry, but I screwed up," is "iatrogenic." Through the initiation into the old priesthoods, the hierarchy of the institution would be made clear; the initiates would painfully learn that, though they were above the people, they were at the bottom. We have learned and are learning that we are

not on top. Though Stanford does not make us wear our shame with inadequate white coats, pathologists point to invisible findings that are 'clearly evident' and attendings use many great and terrible implements of humility, especially 'pimping'.



David Carreon

Priesthoods have served many purposes throughout history. But the one that is perhaps most critical and constant is the role of the priest as intercessor for the people. Priests mediate between man and his god or gods. The priests would be the intercessors, the ones who, through rite and ritual, could make the requests of the people known to the divine.

Doctors serve the very same purpose today. Of course, the people now are secular, and the gods whom they worship are material. We no longer fear lightning from Zeus, but we do fear thrombosis from vascular

disease. We do not worry about black bile imbalances as a cause of melancholy, but we do worry about Major Depressive Disorder. Demons torment us no more, but microbes do. There once were demons which could not be exorcised, and now there is MRSA.

Physicians have the role of telling people what they must do to ward off disease, and if they do become afflicted by it, how to cure it. Our role in society is analagous to that of the Priest of ancient times. The major difference is efficacy. Shamans indeed mediated, but only recently have we developed the tools to have some assurance that we're actually helping. We are intercessors.

For most societies, intercession was no civil discourse between priest and god; it was a thing of fear and wonder. Men would bring their firstfruits, the first and best of their harvest or animals and these would be given up to be sacrificed by the priests to the gods. In the Jewish Scriptures, God explains to the high priest, "All the best of the oil, and all the best of the wine, and of the wheat, the firstfruits of them which they [the people] shall offer unto the LORD, them have I given thee" (9). The unblemished, the pure, the best, the strong were given to ward off disaster and to bring blessings.

We are no longer farmers, and we have no lambs to offer, but we also offer our first and our best. These payments are truly first fruits; for many, healthcare is paid by the employer and the money is never seen by the employee. The major difference is not in currency, but in amount. Under a Theocracy, the Hebrews had to pay a tithe ("a tenth") to God and this amount then became a benchmark for giving in various Christian systems. But what do we Moderns hand over to our priests? Of every hundred dollars we earn, sixteen go to the medical priests (10). And unlike the merciful Bronze Age, we demand more from our poor than we do from our rich; we demand the poor pay twenty of every hundred dollars to appease our gods of disease (11). We make these huge sacrifices for the blessings of health and longevity just as our fathers and our fathers' fathers have for generations.

So what shall we do? Should medicine repent of becoming a Priesthood? No; the people have bestowed on us these holy garments, white coat and stethoscope,

and we must honor them as best we can. Medicine is set apart (literally, *made holy* or *sanctified*) from other professions. We have become part of a proud tradition, a tradition critical for the flourishing of the soul of humanity. We are not just chemical mechanics, raising blood levels of this, blocking receptors with that. One of our professors recently said, "People don't come to a place like Stanford to be healed. They come to find out why this is happening to them." A reason is what people want of us.

I think Maimonides well described his role as both physician and Rabbi:

Oh, God, Thou has appointed me to watch over the life and death of Thy creatures (12).

We must remember that our calling is one set apart. Let us make ourselves worthy of the honor bestowed on us by others. Let us humbly and graciously accept the trust our patients give us with their bodies, but also remember they also entrust us with their souls. They want us to walk with them, to explain the world to them, to talk with them. They don't just want to be fixed; they want us to mediate for them. And though our training is mostly in offering up dollar sacrifices by MRI machines and branded drugs, let us be the sort of priests who aspire to heal both body and soul. Most of all, let us watch over the life and death of our patients.

References

- (1) Responsa Pe'er HaDor, 143.
- (2) Leviticus 13:9. Holy Bible, King James Version.
- (3) Mark 16:18. Holy Bible, King James Version.
- (4) "Egypt". Encyclopædia Britannica. Vol 5. 1833
- (5) "Persia". Encyclopædia Britannica. Vol 9. 1910
- (6) Exodus 29:44. Holy Bible, King James Version.
- (7) "Extended Y chromosome haplotypes resolve multiple and unique lineages of the Jewish priesthood". Hum Genet. 2009 Nov;126(5):707-17. Epub 2009 Aug 8.
- (8) <http://www.census.gov/statab/ranks/rank18.html>
- (9) Numbers 18:12. Holy Bible, King James Version.
- (10) <http://www.forbes.com/2010/01/31/health-care-gdp-reform-opinions-columnists-john-tamny.html>
- (11) Baker, Lawrence. "Health Policy: Health Reform: Proposals, Policies, and Politics." Lecture. Monday, 3/2/2009
- (12) <http://www.pneuro.com/publications/oaths/>

THE WHITE COAT CEREMONY

ANDREW CHANG

Demystifying a Rite of Passage

ON A LATE AUGUST EVENING, EIGHTY-SIX FIRST-YEAR STANFORD MEDICAL STUDENTS FILE INTO THE PAUL BERG HALL AT THE LI KA SHING CENTER, chattering excitedly about the rousing orientation week speeches and the anticipation of their first cadaver lab. Joined by parents, spouses, and friends, they enter the closed invitation ceremony, nervous anticipation palpable throughout the catered dinner. A hush fills the air as the Dean of Students dims the lights, then one by one, he meticulously pronounces the names of every member of Stanford Medical School's Class of 2010. Individually-engraved stethoscopes are then ritually presented to each of the honored attendees. When the last of the stethoscopes is united with its owner, the students rise and solemnly recite an oath, pledging their all to their future patients, regardless of race, creed, or sexual orientation. Applause, much hugging, and photos follow, and the joyous relief is punctuated with peals of laughter from the repeated "Doctor So-And-So" jokes. The students feel they are truly on the way



Andreas Rauschecker

to becoming physicians now, having been sworn into a new era of their lives.

Though Stanford observes this distinct event known as the Stethoscope Ceremony, entrance celebrations are held at virtually every other allopathic school of medicine in the United States. Usually, they take the form of a White Coat Ceremony (WCC). The rite of passage, usually performed during the first few weeks of a medical student's education, includes a pledge of professional ethics based on the timeless Greek Hippocratic Oath (believed to have been written by the Father of Modern Medicine himself). In addition, speeches on the importance of humanism in medicine are delivered by faculty members and alumni, often followed by the literal cloaking of students in the doctor's white coat—hence the namesake.

Despite the mystical, almost archaic-seeming nature of this celebration, few know the roots of the White Coat Ceremony. In fact, it often comes as a surprise to many students that the inception of the WCC occurred barely over two decades ago. In 1989, Dr. Norma F. Wagoner, Dean of Students at the University of Chicago's Prizker School of Medicine, decided to invite friends and family of students to attend an event at which white coats were presented. The occasion was intended to increase the professionalism with which students conducted themselves around patients during their preclinical years.

According to the Arnold P. Gold Foundation, the first modern WCC was performed in 1993 at Columbia University College of Physicians and Surgeons, when Dean Linda Lewis adopted Prizker's white coat garbing and also incorporated a modernized Hippocratic Oath. The Gold Foundation, whose mission is "to help physicians-in-training become doctors who combine the high tech skills of cutting edge medicine with the high touch skills of effective communication, empathy and compassion", sponsored the ceremony and began to promote it to other medical schools. Since then, grants from the Robert Wood Johnson Foundation have enabled the WCC to reach 90% of osteopathic and allopathic schools of medicine, as well as four schools in Israel, the University of Cologne in

Germany, and the University of Queensland in Australia.

Despite the rapid popularity of the WCC, it is not without its fair share of critics. Commentators from both within and outside of the medical community charge that there are multiple flaws within the current structure of the ceremony. For one, Georgetown bioethicist Robert Veatch argues that the use of an oath is inappropriate so early on in the training of a physician. How could a student understand what it means to provide compassionate, humanistic care as a doctor when they have not yet undergone the many years of schooling, patient interaction, and moral development that lies ahead? If there is some form of a 'bonding process', then what happens if a student realizes at the end of his or her training that they cannot or will not live up to the declarations of their pledge? Furthermore, he contends that some oaths do not take into account the cultural, religious, and personal beliefs of students, which may prevent them from carrying out the vow to its fullest.

Outside of the oath, skeptics also point out that the act of having a WCC itself promotes separatism and paternalism between physician and patient, as if somehow being honored in a ceremony means that one is now no longer in the same category as a patient. In his article "The White Coat Ceremony: Turning Trust into Entitlement", then-medical student Philip Russell contends "the [WCC] fosters a sense of entitlement whereby authority based on title and uniform, and authority based on trust, are poorly distinguished." Particular disapproval appears to be derived from the fact that by imparting any sort of significance to white coats or stethoscopes outside of their practical uses as medical instruments and uniforms gives their wearers a false sense of superiority and elitism. Russell notes that "by officially sanctioning the white coat as a sign of the psychological contract of professionalism and empathy, the medical establishment...is teaching students that they are respected for their sartorial behavior separate from their behavior as individuals."

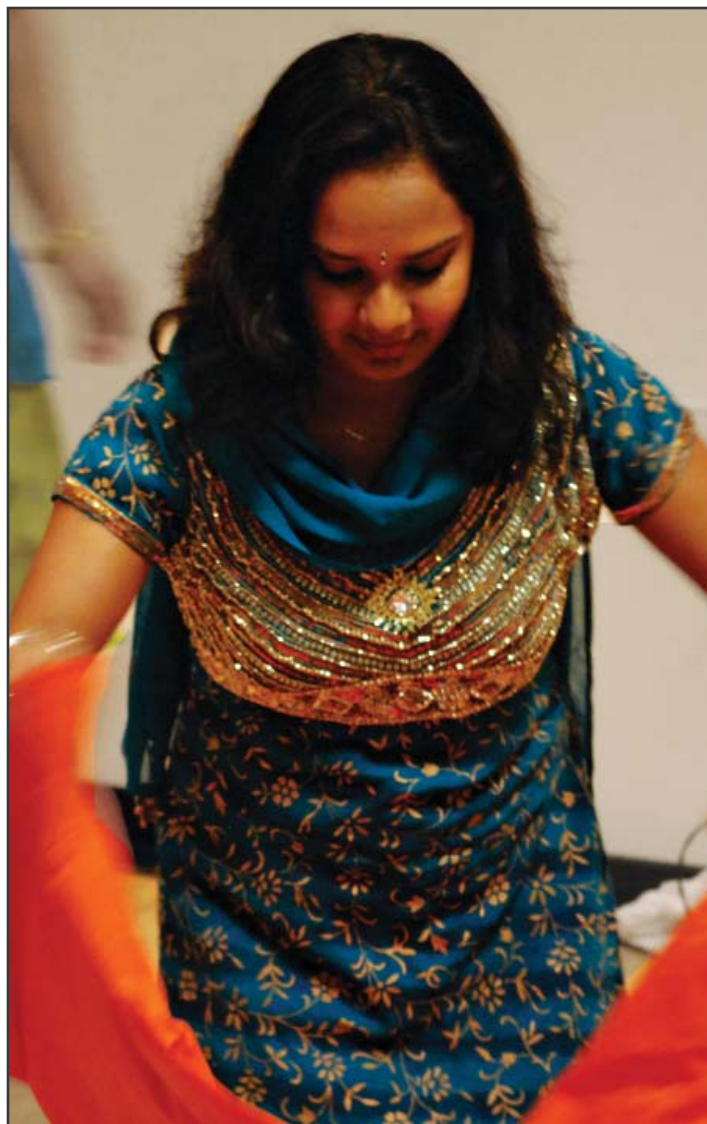
In the face of such criticism, how do we approach

or even justify the WCC? One must contend with attacks on both the oath-recitation, as well as the significance of the white coats themselves. As to the former, Samuel J. Huber of the Rochester School of Medicine argues in his *Journal of Medical Ethics* article, “The White Coat Ceremony: A Contemporary Medical Ritual”, that one should not consider the oath a complete moral code—it is instead a statement of intent made by students to hold themselves to a strong humanistic standard in the challenging terrain of medical education that lies before them. Also, if there is any binding nature to the pledge, it applies to the individual as a medical student, not a full-fledged physician. Even Veatch notes the benefit that some form of self-accepted professional/academic vow holds, and suggests that oaths in their current form be replaced by either the Academic Honor Code of the medical school or an individually-written student self-expectation. Indeed, many WCC oaths (including Stanford’s) are revised every year by student panels to stay as current and applicable to each entering class as possible.

As for the coats and their exceptionalism, Huber believes that the purpose of the ceremony may be misunderstood by critics. Huber’s experiences have led him to see the WCC not as a “welcome to the club” event, but rather an acknowledgement of the difficulties lying ahead in medical school and the faculty members publicly encouraging students with a “you can do it” and “we believe in you” attitude. Furthermore, though he concedes that the white coat itself cannot be deprived of meaning, he ultimately agrees with the Gold Foundation that its significance can be shaped early on by a WCC not as a cold clinical garment of scientific efficiency, but a reminder of the innate humanity of our profession. In addition, he believes that beyond affecting the students, the annual occurrence of the White Coat Ceremony reminds faculty members of their own commitments to their patients, something that must never be forgotten.

Stanford Medical School’s own Stethoscope Ceremony, developed and revised by former Associate

Dean Dr. Elliott Wolfe, appears to have taken many of these concerns into consideration. Dean Philip Pizzo notes each year during his speech that a stethoscope is presented in lieu of a white coat because “it fosters a [physical and emotional] connection between the patient and physician, whereas the white coat tends to distinguish—and perhaps inadvertently separate—the patient and physician.” As to the controversial nature of the ceremony itself, many Stanford students recall that rather than feelings of empowerment or superiority, they had felt a sense of responsibility and awe. “I felt like I was a kid again, about to embark on a huge journey into the unknown,” recalls a member of the Class of 2008. “It was really humbling.” &



Isabella Lai



WOCH NAN SOLEY

ROCKS IN THE SUN

PHUOC V. LE, M.D., M.P.H.
EVAN LYON, M.D.

OUR BODIES ARE MADE OF ABOUT 60% WATER. We learned in medical school that what makes *Vibrio Cholera* so deadly is its ability to force an adult to lose up to three gallons of this water in just a matter of hours, which can stop the heart from beating.

Three months ago in St. Marc, Haiti, where the cholera epidemic started, we experienced an unacceptably high mortality rate. In those first few days, about one in ten people arrived at the hospital's doorsteps too far gone to be revived. Now, after extensive training of personnel and a concerted public health campaign, greater than 99% of our patients will survive with treatment.

Still, every night, while the media's focus has shifted from combating cholera to the protests against the recently held presidential election, we continue our rounds

on the dozens of new cholera victims. We find patients so weak from dehydration that they cannot mutter their names, let alone drink life-saving oral rehydration solution, a simple mixture of sugar, salt, and other electrolytes. Patients like this need two or even three intravenous lines pouring fluid in to replace their losses. Adequate rehydration can lead to striking resurrections within a matter of hours, and full recovery within several days.

We have the good fortune of working with tireless and compassionate volunteers, doctors and nurses who have come to Haiti's aid during this current crisis. Over mealtime conversations, they ask, "how could this happen?" That cholera took hold in Haiti because of poor public health infrastructure, weak governance, and poverty, which have been exacerbated since the devastating earthquake on January 12, 2010, does not tell the entire story. Looking for the root causes of Haiti's dismal water sanitation, we find compelling evidence that external, geopolitical forces have played a significant role in preventing Haitian citizens' right to clean water.

The connection between cholera and contaminated water predates the knowledge that germs cause illness. Medicines and rehydration can save many lives, but clean water is necessary to break the cycle of disease now set in motion. Our 2008 report – *Woch nan Soley: The Denial of the Right to Water in Haiti* – detailing actions from the previous decade, is sadly relevant for Haiti today. The Inter-American Development Bank (IDB), based on research about the water system, approved loans worth \$54 million for water and sanitation improvements in Haiti. At the time, as now, 2 out of every 3 Haitians had no access to an improved water source. A problem was recognized, and help was on the way.

Then it wasn't. The U.S. Treasury – as a shareholder in the IDB – succeeded in blocking aid from flowing. A Freedom of Information Act (FOIA) suit in the U.S. produced documents that revealed the political intent of slowing aid to Haiti. The initial IDB loans were intended for Port-de-Paix in the north and Les Cayes in the south. As we documented in our report, life-saving improvements to the water system in Port-de-Paix were left incomplete and, as a result, clean water remains inaccessible and dangerously contaminated. Neither city has seen water improvements. A second tier of projects – including repairs to water and sewage systems in St. Marc where cholera first appeared – are incompletely realized.

Haiti has not seen cholera in more than 50 years. Now, soon on the heels of the catastrophe in January 2010, this 19th-century terror has returned. Cholera has been found in all of Haiti's 10 departments, spreading rapidly from the first infections identified

“Adequate rehydration can lead to striking resurrections within a matter of hours, and full recovery within several days.”

in the Artibonite river valley. Water and sewage systems in the Artibonite – dangerously inadequate on January 11, 2010 – were not directly affected by the earthquake. But migration out of the devastated capital has forced 20-25 percent more people to rely on the same broken water systems. This appears to be how the two disasters are connected.

We cannot say this deadly cholera epidemic could have been avoided had the loans been properly disbursed. But we do know many communities now in mortal danger lack the protection of life-saving water systems. As physicians, each preventable cholera death we must pronounce, each family member we must console, reminds us of this fatal inequity.

A Haitian proverb says, “the rocks in the water do not know the suffering of the rocks in the sun.” A grave harm was done to Haiti's rights and health when the IDB loans were blocked a decade ago. As the violation continues today with millions lacking the security of clean, safe water, it is time for the rocks in the water to take notice and stand with the rocks in the sun. &

Dr. Le is an internal medicine, pediatrics, and global health equity resident at Brigham and Women's Hospital (BWH) in Boston and a 2006 Stanford Med graduate. Dr. Lyon is a staff physician for Partners in Health and on the faculty of the Division of Global Health Equity at BWH.



Mihir Gupta

CHILDHOOD MALARIA MANAGEMENT & THE HEALTHCARE WORKER SHORTAGE IN TANZANIA

STACIE VILENDRER
STANFORD MEDICAL SCHOOL

DESHKA FOSTER
STANFORD CENTER FOR AFRICA STUDIES

MALARIA HAS PLAGUED MUCH OF THE WORLD FOR THOUSANDS OF YEARS AND REMAINS ONE OF THE MOST PROMINENT GLOBAL HEALTH CHALLENGES OF OUR DAY.

In Tanzania, malaria is pervasive: the tearful wails of babies in their mothers' arms awaiting treatment at hospitals, the rush of *Anopheles* mosquitoes attacking bare skin when the sun begins to set, and poster advertisements for malaria drugs plastered to the walls in town. If you meet enough Tanzanians, you are guaranteed to encounter children and adults with brain damage due to a severe case of malaria. These are the ones that escaped alive, if not unharmed. Currently, some children receive malaria medications from hospitals and clinics as the World Health Organization (WHO) recommends, others receive treatment from family

members, traditional healers, or do not receive treatment at all.

Our research goal in 2007 was to explore why Tanzanian caregivers—usually mothers—follow various treatment paths to deal with malaria in their children. We chose to conduct the research in Tanga, a city on the eastern coast of Tanzania. The region is known in part for its prominent traditional healer population. Studying malaria treatment at the local level in Africa would have been incomplete without considering the role of traditional healers. Traditional healers partially fill a gap created by the severe shortage of healthcare workers—they are the first line of care for over 70 percent of the population in Tanzania. A traditional healer may prescribe an array of treatment remedies

for a child with malaria, ranging from the herbal, such as boiled roots, to the spiritual, such as exorcism.

We understood at the time that children with malaria often did not make it to the hospitals or clinics when they were sick. Global health initiatives to address malaria at the hospital level, such as providing low cost anti-malarial medication, cannot help if a sick child does not receive them. To understand the barriers in bringing a febrile child to the hospital, we interviewed over 50 female caregivers with children under the age of five, dozens of medical professionals, and traditional or local healers called *waganga wakienyeji* in Swahili.

We learned a great deal from these interviews. Malaria has remained a public health challenge in part because the disease is often difficult to diagnose. Symptoms range from fever, headache, malaise, diarrhea and vomiting in uncomplicated (simple) malaria to convulsions in complicated (severe) malaria. There are diagnostic tests, but not all clinics have laboratories, and technicians may not be on duty throughout the night and weekends.

In addition to diagnostic challenges, there were competing views of the etiology of the disease. While about half of the caregiver sample (N=37/61) identified convulsions as a symptom of severe malaria, the others reported that convulsions signified a separate disease, distinct from malaria, with its origins in the spiritual world. We gathered a set of Swahili words used to describe convulsions and their associated illness: *dege dege*, *mchango*, *uchawi*, *upepo*, and *zongo*. Around half of the traditional healers (N=8/18) reinforced a non-biomedical understanding of malarial convulsions, as one traditional healer pointed out: "I know that fever is caused by virus. But when I think it is malaria, I tell the people to go to the hospital... Other times when it is not caused by malaria, it can be caused by demons. When it is demons, I can treat them...I have some drugs that I am using to treat those demons. I call them to talk with them."

Remedies described by caregivers ranged from boiled herbs, consumed as a tea or used to bathe, to the use of elephant dung, indigenous hens, and spiritual and religious rituals. As one mother described, "For *mchango*, traditional healers take garlic peels and they mix with elephant waste and they heat the garlic peels...the smoke can spread it in the body of the baby." These misunderstandings about malaria emphasized by some traditional healers may be contributing to avoidable deaths. In this study, an alarming eight percent of the caregivers interviewed reported having had a child die from malaria.

Despite these shortcomings, traditional healers seem to fill an important niche in their communities where allopathic treatments and healthcare workers are not widely available. Research shows that traditional healers can provide valuable psychosocial support for their ill patients. In this study, they also reported a notable commitment to work alongside the allopathic community. Thirteen of the 18 traditional healers interviewed reported sending patients to allopathic facilities for malaria testing, even if they ultimately intended to treat them with traditional remedies. Some trees and herbs found in Tanzania have also been shown to be efficacious in reducing malaria symptoms. One of the most effective anti-malarial substances known to date is artemisinin, an herb found in Chinese traditional medicine. One of the challenges with such treatment, however, is accurate and appropriate dosage.

One might expect that with time the number of traditional healers will dwindle, as more people are educated about the biology of various diseases. In our experience, this may be only partially accurate. Several traditional healers we interviewed were relatively young and others had younger apprentices in training. We believe that these traditional healers will persist so long as they have patients that come to them because they fill important social and cultural roles in the community.

As the situation stands, patients' desires for traditional healers are not diminishing any time soon. Tanzania's shortage of doctors, nurses, and other healthcare workers exacerbate the problem, as caregivers often feel they have no other option than to turn to traditional methods for treatment. The WHO estimates

"International non-profit organizations should re-examine their models to ensure that they are complementing the existing medical structure, rather than facilitating the unintended recruitment of talent away from where it is needed most."

that a target of 2.3 trained healthcare workers per 1,000 population is necessary to reach the Millennium Development Goals. Based on this guideline, Tanzania should have a workforce of 92,000 healthcare workers. Its present workforce of 25,400 healthcare workers makes it one of lowest-ranking nations for doctor-to-patient ratio in the world. Africa in general bears 24 percent of the world's disease burden with only 3 percent of the world's healthcare workers. Alleviating this crucial shortage is no simple task. Getting a medical degree in Tanzania is a five-year, \$25,000 commitment. The Government of Tanzania recently outlined a plan to double its healthcare worker training capacity from 3,850 to 7,500 per year. Despite this commitment, the target numbers still fall short of WHO guidelines, and it is unclear whether resources will be available to see the plan through. In pro-bono work for an organization addressing this issue called the Touch Foundation, McKinsey & Company found that doubling the healthcare workforce training capacity could cost around \$150 million, exclusive of the increase in salaries.

While some Tanzanian medical schools are slowly growing, many prospective medical students are hindered by the lack of available loans. Low government-issued wages and assigned workplaces have discouraged others from entering the medical profession in the historically socialist country. For those who do complete their medical training, Tanzania's challenge lies not in external "brain drain"—medical workers leaving their native country to earn higher wages in another country—as one might predict, but rather in internal brain drain. Many talented individuals leave their public sector healthcare jobs to work for non-profits where they can often make a far better living. International non-profit organizations should re-examine their models to ensure that they are complementing the existing medical structure, rather than facilitating the unintended recruitment of talent away from where it is needed most.

There are several creative solutions currently being explored to address the healthcare worker shortage, including 'm-health' initiatives, which seeks to use mobile technology to provide diagnostic and treatment information to rural areas and medical education programs distributed over the internet. Social entrepreneurs are also exploring the development of mobile health clinics, including a favorite of ours, the Lake Tanganyika Floating Health Clinic, which serves

the remote area surrounding Lake Tanganyika in western Tanzania. However, without a hospital to refer patients in need of more advanced treatment, these solutions are only a band-aid.

This same critique applies to so-called 'vertical' global health initiatives designed to reduce the burden of individual diseases. Key organizations such as the Bill & Melinda Gates Foundation have focused resources on researching vaccines for malaria, HIV, and other diseases. However, even if an effective malaria vaccine could be made available to those in need (which has not been possible to date), such a vaccine would not ultimately help those multitudes in need of trauma and emergency care, maternal care, chronic disease treatment, and mental health care. These patients need healthcare workers that simply don't exist. While it is tempting for those of us involved in global health to go after seemingly high-impact initiatives, we do our international partners a disservice by not focusing more resources on the longer-term, and arguably more challenging, problems of expanding healthcare infrastructure and workforce.

We are pleased to see that the Stanford School of Medicine is addressing the global healthcare worker shortage in a new partnership with the University of Zimbabwe Medical School. With \$15 million in funding from the NIH Medical Education Partnership Initiative and a talented inter-institutional and inter-departmental team, the Stanford community has much to contribute to medical education and healthcare availability in Africa. As we have learned, there is no easy solution. However, as the healthcare infrastructures in these countries are slowly built up over time, it is our hope that people will eventually gain the knowledge and means to pursue curative treatment for illnesses that nobody in the world should ever have to suffer from.



Mackenzie Wehner and Kevin Nead

THE GOOD CHAIR

CHRISTINE NGUYEN
STANFORD MEDICAL SCHOOL



Pamela Pavkov

RING! Protected from the cold underneath my warm duvet, lying atop of my Egyptian cotton satin sheets, I struggled to lift my heavy eyes to the sound of my 9AM alarm clock. Though the closed curtains shielded me from the storm outside, I could hear the howling wind and pouring rain. Shower, eat breakfast, put on make-up, change into professional attire, drive ten minutes to the free clinic, and arrive at 9:58AM exactly 2 minutes before the clinic opens.

Yellow folder in my hands, I glanced over my patient’s profile before stepping out into the patient-waiting room. A rectangular sea of men, women, and children of different ethnic groups often overcrowd the room, taking up every seat. This vast sea of individuals always outnumbers the pre-clinical volunteers and doctors available, so the wait is often long. In the morning, anxious individuals line up along the walls because there are no more seats available. Towards the afternoon, it is because their bottoms have become numb from sitting too long.

“Ms. B.?” My patient immediately got up from her chair. I walked over and introduced myself: “Hi, I’m Christine Nguyen. Nice to meet you.” I smiled and held out my hand to shake hers. As her smile matched mine and our palms touched, I felt our established rapport.

Like gentlemen in the classic Hollywood movies, I stopped in front of the door and with my outstretched arm, indicated to my patient that she should walk in first. Once we both stepped into the room, I gestured for her to sit in the “good chair.”

In every examination room there is a good chair and a not-so-good chair. The good chair is well-cushioned, lined with leather, reclines back, and has rollers that make it easy to slide back and forth. The not-so-good chair is lined with lint-covered fabric, faded, stiff, and must be lifted up to be moved around. In most circumstances, the good chair is reserved for the person in charge: the professor, the chief executive, and the like.

These are the people who have scaled the hierarchy of academia or climbed up the corporate ladder, pulling all-nighters to get the job done: by the next morning— or a few hours later, depending on your frame of reference. These experienced individuals have earned the right to sit in the good chair to teach and mentor the next generation of potential good chair

“Patient, in contrast, means ‘one who endures’ in Latin. As my patient’s story unfolded, I learned that she had been waiting outside the clinic since 7AM. She endured the cold, wind, and pouring rain just to be seen by me that morning.”

sitters.

I often envision myself sitting in a good chair, especially when I meet with my academic advisor in his top-floor office, a room adorned with medical awards except along the glass wall which overlooks a pathway landscaped with bamboo trees and pebbles. As he rests against the good chair, I sit humbly in the not-so-good chair, absorbing the detailed advice that he shares so openly. Doctor means “teach” in Latin— I am privileged to have him teach and guide me through my medical journey.

Patient, in contrast, means “one who endures” in Latin. As my patient’s story unfolded, I learned that she had been waiting outside the clinic since 7AM. She endured the cold, wind, and pouring rain just to be seen by me that morning. I can’t imagine what time she had to wake up to arrive at the clinic by that time.

From my perspective, Ms. B is also my teacher. My interactions with her made both the empathetic facial expressions I had to rehearse in medical

school and the open-ended interview questions I had to memorize and regurgitate less robotic. They became the tools through which I earn patients’ trust, build understanding for the symptoms they struggle with, and become accountable for their well-being. Through these queries, patients feel that they can confide in me—that someone is taking the time to understand what they are going through and that their lives do matter.

I thanked Ms. B and went to get an attending physician. As the door closed gently behind me, I felt honored to have met Ms. B and learn about her journey to that examination room and appreciated the detailed medical history she shared so openly. A few minutes later, I came back and offered her a glass of water to thank her again for her patience.

My journey to that examination room does not begin to compare with the patient’s journey. While it would seem like the patients gain from my volunteer shifts at the clinic, it was I who is most enriched through these experiences. Although I cannot yet make a diagnosis, perform a surgery, or prescribe medicine to treat my patients, I am learning how to lessen their symptoms as I transfer the length and level of pain they have been enduring onto the pages contained inside those yellow folders.

In my examination room, patients like Ms. B are always given the good chair because they are teaching me how to become a great doctor with a compassionate heart. &



Carey Lee



Mihir Gupta

THE HIPPOCRATIC OATH AND THE ETHICS OF MEDICINE

*Steven Miles, MD is Professor of Medicine and Bioethics at the University of Minnesota Medical School, and the former President of the American Society of Bioethics and Humanities. Professor Miles' writings have illuminated the Hippocratic Oath as a source of the medical profession's history as well as the physician's identity, commitment to social justice and accountability. In his 2005 book, *The Hippocratic Oath and the Ethics of Medicine*, Professor Miles analyzes the history, meaning and contemporary relevance of the Oath. His 2009 book, *Oath Betrayed: America's Torture Doctors*, sheds crucial light on medical practices in War on Terror prisons and breaches of physicians' ethical duties. Here, Professor Miles joins H&P to explore the Hippocratic Oath as a historical document, ritual and enduring foundation for medical ethics.*

MIHIR GUPTA

A conversation with the Author, Steven Miles, MD

MG: What prompted you to study the Hippocratic Oath? Would medical students benefit from reading it?

SHM: The Hippocratic Oath is one of the most perfect moral documents I've ever read. I started studying it after I made the statement in a seminar that "justice" is one of the few words in the Oath that is used twice. A student raised her hand and said, "'justice' is not used once in my translation." I was shocked because justice is kind of a ten-dollar ethics word and I thought, how can it be twice in mine and not once in hers? I started researching the question of how that could happen. I think that the Oath, properly read, is as elegant as a sonnet and as meticulous in argumentation as the Gettysburg address or even better, Lincoln's Second Inaugural address. To simply appreciate it as a work of literature is, I think, astounding. Students should read it – but then they're going to have to read my book!

MG: Some have compared the Oath to a 'Constitution' of medical ethics. Is that an appropriate or productive analogy?

SHM: The Oath is definitely not a Constitution in the sense that it does not lay down binding laws. It says 'I will use the principle of beneficence and protecting from injustice in my relationship to society. I promise to carefully maintain my own integrity. I will use the principle of beneficence in refraining from injustice (as opposed to protecting from injustice) in my clinical relationships.' The rest is filled in with examples. There are two promises in the social section, two promises in the clinical section - the promise to not use defaming language and the promise to not sexually exploit patients or their households. But those are examples, not principles. So you wind up with a reference to beneficence and right living as a social promise and a clinical promise and integrity anchoring the two. To that extent you do have a Constitution of medical ethics. But I think the interesting thing is that, opposed to governing the provider, the Oath is stated in the first person; the Constitution is not. The doctor says I will uphold beneficence and justice to the best of my abilities, I will not engage in providing deadly drugs and so forth. The fact that

it is stated in the first person rather than the third person of laws makes it a much more personal thing than a Constitution or a legal code. The Oath was designed to be spoken aloud.

MG: How does the Oath's role in medicine compare to the roles of oaths in other professions?

SHM: It is fascinating that medicine developed an oath first. Part of that is because medicine was the first



Mihir Gupta

profession to evolve. There was an early essay that was written in the first century A.D. called 'Professio Medico' by Scribonius Largus. He really defined medicine as a profession by saying that a doctor is a person who 'makes a profession to heal.' So I think medicine did come up with it first, but today many professions have various kinds of oaths. There is the oath of office of the U.S. President, there is a similar oath to uphold the law and Constitution that all lawyers do, and so forth. What's so interesting is that those too are said in the first person. On the other hand, the [American Medical Association] ethics code is a code of behavior but it is not stated in the first person. All professions have ethics codes that are not stated in the first person, in part to get around the problem of what happens with a doctor who decides unilaterally that he is going to sexually abuse patients or whatever. Somebody can say it doesn't make any difference whether you said you weren't going to – the profession has to self-police itself against that kind of behavior.

MG: Given the difficulty of applying historical oaths to contemporary society, is taking an oath an important part of the medical training process?

SHM: It is important. A profession is essentially a moral community, and moral communities are by nature historical. Students can't feel that they have a stewardship responsibility over the profession unless



Mihir Gupta

they have a relationship to the history of the profession. For example, the doctors who fell off the way in terms of overseeing the mistreatment of prisoners at Abu Ghraib [are] doctors who don't have a sense of themselves as stewards of the moral profession of medicine. So taking an oath means recognizing [that] a doctor's spine is the historical community that you belong to and are responsible for conserving and passing down.

The relevance of the specific Hippocratic Oath is a somewhat different problem. The Oath is 2,500 years old. It used a set of ethical thinking and solved a set of ethical problems that were unique to its time. For example, the 'I will not use a destructive pessary,' which gets translated (badly) as 'I will not perform abortions,' referred to the fact that intravaginal pessaries that were soaked in various animal and plant products caused endometritis and toxic shock syndrome. They saw no therapeutic benefit from these, so they refrained from them. It had nothing to do with the fetus being alive; that concept didn't emerge until about three-hundred years after the Oath was written. It had more to do with keeping the women alive that were being injured by the pessaries.

MG: With that in mind, is there any danger in trying to modernize the language of the Oath for use in contemporary settings?

SHM: The simple transliteration of the Oath to modern times is not particularly useful. For example, the first part of the Oath, which says 'I swear by Apollo, Asclepius, Hygeia and Panacea...' is a very specific set of moral lessons about how medicine arose out of the experience of love and grief. By simply substituting 'I swear by all things important to me,' you're actually substituting in a set of concepts that didn't exist in the original Oath. Often that substitution is done without an awareness of the nature of the material that is being excised from the Oath.

MG: People have claimed the Oath in support of everything from abortion to HMOs. How could the Oath be used more productively in guiding the medical profession today?

SHM: First, I think that the concept of beneficence, that I am responsible for health in a public sense and a clinical sense, is a great anchor for the profession. Second, the idea that, insofar as my work touches on these areas, I am protecting patients from injustice, is an important public health statement. It does have application, for example, when [one is] doing research, of ensuring that the benefits and harms of drugs are fairly stated to protect people from injustice. Refraining from personal injustice on patients, whether it's sexually exploiting them, defaming them, or looking down on them, is also an incredibly useful anchor for the profession. Finally, the notion that there is some sort of unity between the doctor's personal life and work life is important. We do have a role model obligation in society that people will apply to their evaluation of our professional work.

MG: The first line of the Oath swears by Apollo, but the end of the Oath declares physicians' conduct will be judged by human society. Why is the Oath written that way?

SHM: We have to understand Greek mythology. First the Gods [were] created, then the humans, and finally the Olympic gods were created to educate the humans in the laws of right living. As the humans learned, the gods gradually withdrew. The gods are walking around the humans all the time in *The Iliad*, but by the time you get to the classical Greek plays, the gods are standing back and offering advice; [the

Greeks] saw them as retreating. This ultimately meant that the humans would be entirely liberated and left to their own devices. In Christian history, there is the creation story, the passing down of instructions via the tablets and the promise of a second coming when things will be judged. But that second coming was not part of Greek theology, so the Greeks are left then with a judgment problem: in terms of the closure of the Oath, if it's not going to be Apollo and Zeus, who judges? The Oath closes with the statement "I will let history judge if I have lived up to this Oath in its spirit and application," which is a recognition of the fact that what comes later is the judgment of history and that I am willing to abide by it.

The Oath [also] recapitulates Greek history. At the beginning, Apollo creates Asclepius, who is half-God, half-human. Apollo gives Asclepius to Chiron to learn to be a physician. But the next order is the human physicians, [led by] Machaon and Podalirius. Podalirius then becomes, sixteen to thirty generations later, Hippocrates. So you have this secularization of the history which is implicit in the first part of the Oath, and then, in a very elegant way, the Oath in its final paragraph has entirely humanized itself by saying, "if I render this Oath fulfilled, may it be granted to me to enjoy the benefits of the life and the art and good repute among all human beings for all time eternal." The fascinating thing about the Oath is that it goes from the Gods to humans, and from the top humans to the slaves. It is carefully structured to cover all the dimensions.

MG: Given that ethical values constantly change, how are we to interpret the Oath's call for being judged by "all human beings for all time eternal"?

SHM: I think there is a way to read that phrase. Let's take, for example, over the last 150 years of medicine – we had slave overseer medicine, race medicine, [even] Nazi medicine. Today we have gotten rid of the category of slavery and slave medicine. We have condemned Nazi medicine. We have tried, since 1975, seventy-five doctors for collaborating with torture, and they have been tried by human courts and human medical boards. Medicine looks back on, say, the overseer medicine and the Tuskegee experiment, or the Nazis, and what we see is an evolving historical standard. Every time that standard is applied, people say it's not fair to judge what went on in the past because that was normal for them. But it is fair to judge the past, and it is fair to say we are going to close this door in history and not ever let it rise again. I think that language, 'never again,' is in fact exactly the same thing as the word 'eternal' in the Oath.

MG: To what extent does the Oath's ethic of professionalism

persist today?

SHM: The concept of professionalism is very much alive and well in medical ethics. You have the statement on professionalism with the AMA and the ACP, the Gold Humanism Society, the rising use of white coat ceremonies, students writing their own oaths, and so forth. So the concept of professionalism, which means professing (the act of what an oath is), is fairly secure in medical ethics. Perhaps the biggest change is that, as doctors have become more corporatized into either working for various healthcare corporations, drug companies or large military corporations, we have failed to articulate the duty of the doctors in terms of professionalism, to push back against institutional priorities. Here, I think the Oath offers a grounding for doctors to say what their job fundamentally is.

There is an institutional role, but ultimately the institution depends on my pushback. How badly does an HMO get damaged if the doctors just cave when a therapy is withheld that is effective but outside the budget line, or hasn't been FDA approved but is clearly working in the medical literature? How badly was the United States damaged by the doctors who simply rolled under when the military said we're going to engage in medically supervised waterboarding? The United States was damaged by that. I think medical professionalism is an institution's counterweight.

MG: You write about the public's falling trust in the medical profession. How does that play out, and how can we harness the Oath to remedy it?

SHM: In one respect, it plays out in our work itself. Patients are afraid that we are fee for service. For example, when you come to a cardiologist, is he recommending a procedure or recommending his reimbursement? That is a big issue. The second part has to do with the major executives or doctors in the major firms drawing absolutely stupendous salaries while [their] health plans are denying basic care. That is a crisis of professionalism too. There is a certain fascinating modesty about the Oath in which the doctor does not stand on a tree and proclaim, 'I'm king of the mountain,' but rather, the doctor says, 'this is where I stand, but I don't stand on top, I stand accountable.' There is a certain humility to that, which I think is the strongest kind of professionalism we can have. &

LEADERS IN MEDICINE

DR. CHRIS HAYWARD

CASEY MEANS



Dr. Chris Hayward, M.D., M.P.H., is a Professor of Psychiatry at Stanford University and Chief of Hospital Services, Department of Psychiatry and Behavioral Sciences. He has been honored with many teaching awards such as the Golden Apple Award for Professor of the Year at Stanford University and the Palo Alto University Consortium, and Teacher of the Year at Stanford University's Department of Psychiatry. He also helped to develop the Stanford Center on Adolescence, a multidisciplinary research and training Center funded by the Carnegie Corporation of New York, where he is now Associate Director. Dr. Hayward completed his undergraduate degree at the University of San Francisco, his Masters in Public Health at the University of California Berkeley, and his medical degree at the University of California San Francisco. He completed his residency and fellowship training at Stanford University.

What caused you to choose a career in psychiatry?

I have always been fascinated by psychopathology, particularly severe psychopathology. The unusual nature of psychiatric symptoms attracted me to the study of abnormal behavior, and motivated me to help those suffering from psychiatric illness.

Were there any specific experiences in medical school or before that sparked your interest in psychiatry in particular?

I took a class as an undergraduate called "Perspectives on Madness" which was fascinating. I also volunteered in a residential facility in Vermont where there were a lot of chronically institutionalized patients. Even though the patients were not functional, the mystery surrounding their illnesses sparked my curiosity.

What was your experience like when you rotated through Psychiatry in medical school?

It was interesting, but like many clerkships, the concerns around performance in some ways interfered with being able to enjoy the experience as much as I might have.

In terms of shifting that into advice for medical students going into clerkships years, would you emphasize maybe not worrying so much about the evaluation component of it, or is that sort of part of the nature of the 3rd and 4th year experience?

You answered it. There is no getting around it. If anything, it is becoming more competitive and more necessary to

perform well. Sometimes, the focus on evaluation detracts from the excitement of learning medicine and taking care of patients.

You mentioned in class that there is not a clear understanding of the etiology and pathophysiology of many psychiatric illnesses and we often know how medications work but don't know why they work - is this a frustrating aspect of the field, or is this something that adds to the intellectual mystery and excitement of the profession for you?

For me, that makes it more challenging and interesting. But it may be frustrating for those who are more comfortable with conditions in which there is a clear pathophysiology, which then dictates the treatment. In psychiatry, there is more uncertainty about causes and even the boundaries around the conditions. I find this uncertainty to be a good source for research questions. But for some, it is a frustrating aspect of psychiatry.

What qualities do you think you need to be a good psychiatrist, from an emotional and intellectual standpoint?

Honestly, I believe that the qualities that define a good psychiatrist are much the same as the qualities necessary for being a good physician of any specialty including: a commitment to patient care, conscientiousness, working well within a system, being collegial and professional and training in being a critical thinker. With respect to what might be particularly important to psychiatry, perhaps tolerance for wide variations in human behavior and human action, not being overly reactive, and being willing to explore one's own psychological character. This latter quality tends to produce more mature psychiatrists.

For a student who is in the beginning of medical school and may have a strong interest in neurobiology and the brain sciences, what advice might you give them in trying to decide between the roads of neurology or psychiatry, or even neurosurgery?

With respect to research in neuroscience, for medical students I think the path should be determined by the nature

of your research interest and passion. Participate in research of interest to you with a faculty member who you want to work with, regardless of their specialty. When it comes time to selecting a clinical specialty, the choice depends on the type of clinical practice that you find rewarding. Neurosurgery, neurology, and psychiatry are all quite different with respect to the day-to-day practice. My recommendation is to try each one to see which is the best fit. You can study neuroscience in any of these specialties.

Many fields of medicine seem to be interested in the incorporation of genetic testing to better understand predisposition to disease, individual's interaction with pharmaceuticals, and disease outcomes. Is this something that is a part of the field of psychiatry, and is genetic testing changing the landscape of the field in the ways that it is in some other fields?

Not yet; I think that is the hope. To the extent that the genetic basis of psychiatric illness is beginning to be understood, the evidence suggests that the genetic contribution to psychiatric illness involves large numbers of genes with small effects. The idea of being able to identify one or two genes that substantially and consistently increase risk for common psychiatric conditions has not panned out. That is not to say that it might not in the future, but psychiatric illnesses, particularly the more common ones, as best we can tell, have multi-factorial causes, and the contribution of any one factor for a particular person is often unclear. It is likely that there are interactions between genetic vulnerability and many different types of environmental exposures. It is a challenge to identify a particular genotype and a particular environmental exposure that consistently produce a given disorder. Certainly, a family history of psychiatric illness and childhood adversity consistently increase risk for having a psychiatric disorder, but this increase in risk often lacks specificity. On the other hand, genetic variation related to treatment response whereby genotypes moderate treatment effects, has a

great deal of promise as an area of investigation.

You earned a masters degree in Public Health before pursuing medicine – how does your interest in public health interplay with your career as a psychiatrist and a researcher now, and what advice might you give to students who are considering pursuing a joint degree?

I would encourage anyone who is interested in public health at all to find a way to get an MPH – it is very helpful. My area was Epidemiology. It has broadened my view of the role of physicians. Altering risk at the level of the population is a powerful way to influence health. In psychiatry, there are fewer opportunities to intervene at this level than say, in cardiovascular disease, but ultimately, public health interventions will become one of the best strategies to influence the prevalence of psychiatric disorders. If we knew more about how psychiatric disorders develop, then we could potentially intervene prior to their onset. Because there will never be enough psychiatrists to take care of all those who have psychiatric conditions, approaching psychiatric illness from a public health vantage point has the potential to be much more effective for influencing the mental health of a population. This is particularly important, because so many psychiatric conditions have onset in young adulthood or adolescence. For me, having a public health background has been important in my research and teaching. Being a physician, can be more than treating one individual at a time. Potentially, we can influence the health of entire populations.

Where did your interest in working with medical student and residents arise from? It seems to be a large part of your career, and students really love your classes, you've won many teaching awards – where did this originally start, and how did this progress throughout your career?


That's a good question. I am not sure. I like teaching medical students, and now that I am the Training Director for Psychiatry, I value that role as well. Trainees have an enthusiasm about learning that is contagious. It helps me stay excited about the work I do. First and second year medical students, in particular tend to have a strong beliefs in the core values of

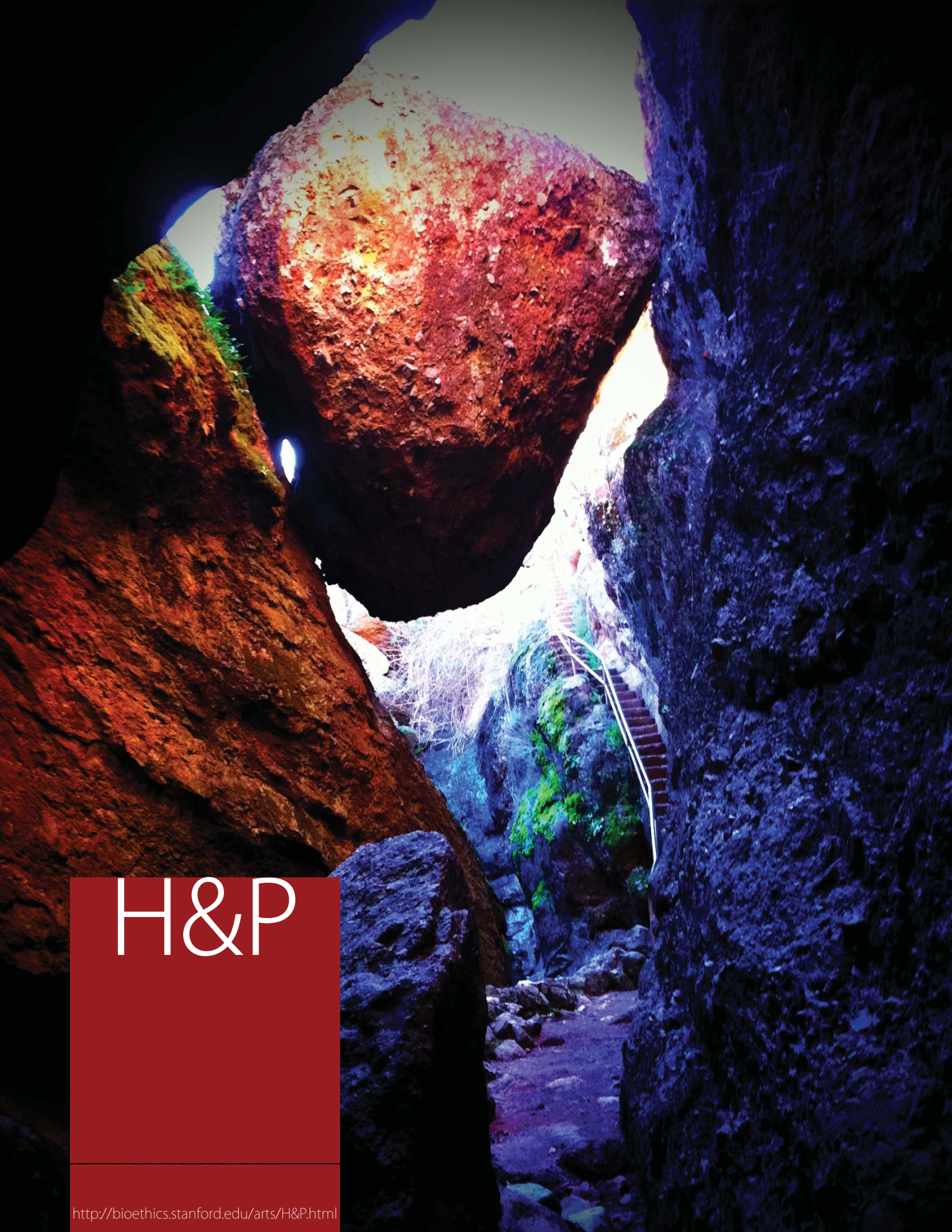
being a doctor. Sometimes these values fade. Hopefully, the Educators-4-CARE Program will be a help in this regard. For me, being an Educator-4-CARE faculty member brings me in contact with faculty in other departments who care deeply about teaching. This has also influenced my interest in teaching.

When you have a career that involves teaching, clinical practice, mentorship, and research, what pearls have you discovered for creating a sustainable, successful, and happy work-life, and what advice might you give to people starting their career in how to best balance these different aspects of a career?

Well first, it is extremely challenging to be an active researcher, a clinician, a teacher, an administrator, a responsive colleague, a good citizen in the larger medical school, a parent, a husband, and still play basketball! I am not sure I have successfully navigated this at all. In some ways I have been fortuitous in being at the right place at the right time for many of my advancements. Many of the trainees I supervise – fellows, residents and medical students – do a much better job of multi-tasking than I. What I've learned, from my own experience, from watching trainees, and from listening to Dr. Oscar Salvatierra, is, that you can't do everything. Understand your limits, and do a few things well.

What are your favorite interests and pastimes outside of medicine?

I enjoy time with my family, my children, being at home, and working in the garden, playing and watching basketball, football, and last year baseball. 



H&P