

Aiming Higher

Examining the very real possibility that entirely new targets are within our reach

They are two important milestones of our academic year: The Miller-Coulson Academy of Clinical Excellence Symposium and The Miller Lecture. And this year, both of those events occurred in one special, combined program. It was a great day – a celebration of the very best things about academic medicine, marked by the induction of three new members into the Academy.

Above all, it was a day of broadening and raising our expectations of what is attainable: Not just the college commencement, “aim high” kind of talk, but examining the very real possibility, as challenged by our Miller Lecturer, Peter J. Pronovost, M.D., Ph.D., that entirely new targets are within our reach.

Pronovost is a critical care physician, an anesthesiologist who holds professorships in three schools at Hopkins: the School of Medicine, the School of Nursing, and the Bloomberg School of Public Health. As director of the Quality and Safety Research Group, he developed a method for reducing the deadly infections that often accompany central line catheters. The results have been so startling – every hospital that follows his approach has virtually eliminated these infections – that his protocol is being implemented state by state, and in other countries, as well. At the heart of his success are many of the core values of the Center for Innovative Medicine, particularly in our Pyramid model for academic medicine, the brainchild of the CIM’s co-founder, David Hellmann, M.D., the Alike Perroti Professor of Medicine. The Pyramid model puts patients at the very top, because patients and their

families are the reason we are here. Then, each side of the Pyramid – teaching, patient care, and research – depends on the others for support, and collaboration is essential. At the foundation is our entire work force. The Pyramid creates a culture in which everybody has ownership, and everybody can make a difference.

NO RESTING ON LAURELS ALLOWED

Hellmann has said that the best clinicians are unflinching; “they have the courage to hold up a mirror to their practice, and be brutally honest about what they see. They are committed to improving it, and sharing what they discover with others.” Pronovost made reference to this, and then reeled off some areas where medicine could stand a good, hard look in the mirror. “Patients across the country get the recommended therapies half the time; 100,000 people die each year from infections, 100,000 die from blood clots, and another 100,000 die from diagnostic errors,” he states. “In my field, in the ICU, one in 10 patients dies from something that we didn’t think they had. How do we reconcile this dichotomy between really committed clinicians and the amazing biotechnology discovery engine that Hopkins symbolizes, with the brutal reality that sometimes we fall short?”

“We changed our mental model from: ‘these infections are inevitable,’ to ‘they’re preventable.’”

Central line-associated blood infections used to kill about as many people each year in the U.S. as breast cancer. That number is dropping now, thanks to Pronovost’s work. But it didn’t change until several important things happened. “For decades, we thought these infections were inevitable, just the cost of doing business” with very sick patients. One day, he encountered the mother of a little girl who had died of one such infection. She wanted accountability. Could he assure her, she asked Pronovost, that someone with a central line was less likely

Every specialty has its tough moments, and unforgettable patients. New Academy inductee Ilene Browner, M.D., a geriatric oncologist, told the Symposium’s audience about “M.L.,” whom she first met when she was a first-year fellow, and he was newly diagnosed with Stage 3 lung cancer.

When Browner entered the room after reading M.L.’s chart, she found “a stoic Korean gentleman and his terrified wife.” The couple’s English was limited, and the three of them spent the next hour learning to work around that, using gestures, facial expressions, and pictures.

That struggle to understand each other forged “an incredible bond between us,” Browner says. In subsequent visits, she learned about M.L.’s life in Korea and America, his transformation from struggling businessman to successful entrepreneur, “his pride in his accomplishments and his family, his love of golf, of good food, and certainly a good cocktail. And, without ever telling me in words, his fears about his illness and its treatment, and more importantly about the welfare of his family. This was the information I needed to address his physical and personal needs.”

For three years, Browner, M.L. and his wife shared “the journey known as cancer. M.L. often told me that he liked our visits,” she says, “even when he was sick and getting treatment, because he could practice his English without feeling self-conscious, and voice his complaints and concerns without feeling weak. And because he felt that I understood what he really wanted and needed.” M.L. cared for Browner, too: “On snowy mornings, he would have the operator page me, to find out if I needed a ride in his big, white, safe truck.”

M.L. lost his battle with cancer, but Browner and his family have stayed in touch. “I’ve been fortunate to witness his daughter’s marriage, the recent engagement of his son, and the upcoming birth of his first grandchild.” M.L.’s daughter once told Browner that she took care of her father’s body and soul. “I hope never to lose the intensity, the urgency, and the devotion that I felt when I first met M.L., and that I feel every time I meet a person who comes to me for clinical guidance, as we work together to find or create a solution that not only sustains, but enriches life for as long as it lasts.”

CONTINUED ON PAGE 6

to die that day than four years earlier? “I started telling her about this program and that program,” and Pronovost says he rambled so much that he reminded himself of the game, “Whack-a-mole.” But in the end, he had to look into her eyes and admit that no, the odds of not dying from an infection in the central line had not improved. In fact, at Hopkins, “we were probably one of the worst in the country for infection rates.”

So he decided to start with that endpoint – reducing infection, as soon as possible – and work backwards to change the system. “I was criticized for it,” he says, because “most research is ‘feed forward,’ from basic to clinical.” Nonetheless, Pronovost went to the Centers for Disease Control’s guidelines for avoiding central line infection, and found that they were “elegant, scholarly, and near useless at the bedside.” The guidelines were 300 pages long, and recommended doing 90 to 95 things. “As a clinician, I can’t do 90 to 95 things.” Pronovost decided to whittle the guidelines down to one simple checklist, with items like: “Wash your hands, clean your skin with a soap called chlorhexidine, avoid putting catheters in the groin, cover yourself and the patient, and ask every day if I still need this catheter.” Then he looked in the harsh mirror of his own habits, and those of his colleagues, and found that “I was doing those

The problem, in the case of that little girl, was that “no one owned her infection. When the clinicians said, ‘this is our problem,’ we all began to tackle it together. There was no magic in the checklist. We simply helped hospitals believe they can do it.”

things, our hospital was doing those things, 30 percent of the time.” Why? Because everything was spread out, or not stocked, and if he had to go to eight different places to get a mask, a gown, and other equipment, “I made a decision, that the 10 minutes I could spend running down the hall, I could go in without it,” and spend more time with that patient and the next ones, too. So they made it easier. “We got a cart, took eight steps down to one, and the compliance went up to 75 percent. That was good, but still not good enough.” Next, Pronovost got the nurses involved; if they saw a physician not putting on a cap, or forgetting one of the steps, their job was to speak up – and to page Pronovost if anybody had a problem with that. “I was never paged, compliance went up to 98 percent, infection rates went down to 2 percent.” What was happening was a culture change, and also a shift in the mindset. “We changed our mental model from: ‘these infections are inevitable,’ to ‘they’re preventable.’” With further research, Pronovost and colleagues isolated the causes of the remaining 2 percent, and virtually eliminated central line infections at Hopkins – and then in Michigan, and onward from there.

The key, he believes, is that “we changed the norms. No one person was going to be great, everybody needed to be great.” The problem, in the case of that little girl, was that “no one owned her infection. When the clinicians said, ‘this is our problem,’ we all began to tackle it together. There was no magic in the checklist. We simply helped hospitals believe they can do it.”

Pronovost loves the example of Roger Bannister, an Englishman, who in 1954 was the first to break the four-minute mile. Nobody thought this was possible, Pronovost says, and the record had stood for 2,000 years. Then, after Bannister broke it, other runners did, too. “The only thing that had changed was their belief that it was possible.” ■



“Much of what we do is made possible by the sustained generosity of the Miller Family,” says David Hellmann, co-founder of the Center for Innovative Medicine. Here, from left, are: Anne G. Miller, G. Thomas Miller, Richard B. Worley, Leslie Anne Miller, Sarah Miller Coulson, Frank L. Coulson, Jr.

Raising the Bar for **Clinical Excellence** in Academic Medicine

“Prior to the Academy, there was very little scholarship written about clinical excellence,” says Scott Wright, M.D., director of the Miller-Coulson Academy. “We’re changing that.”

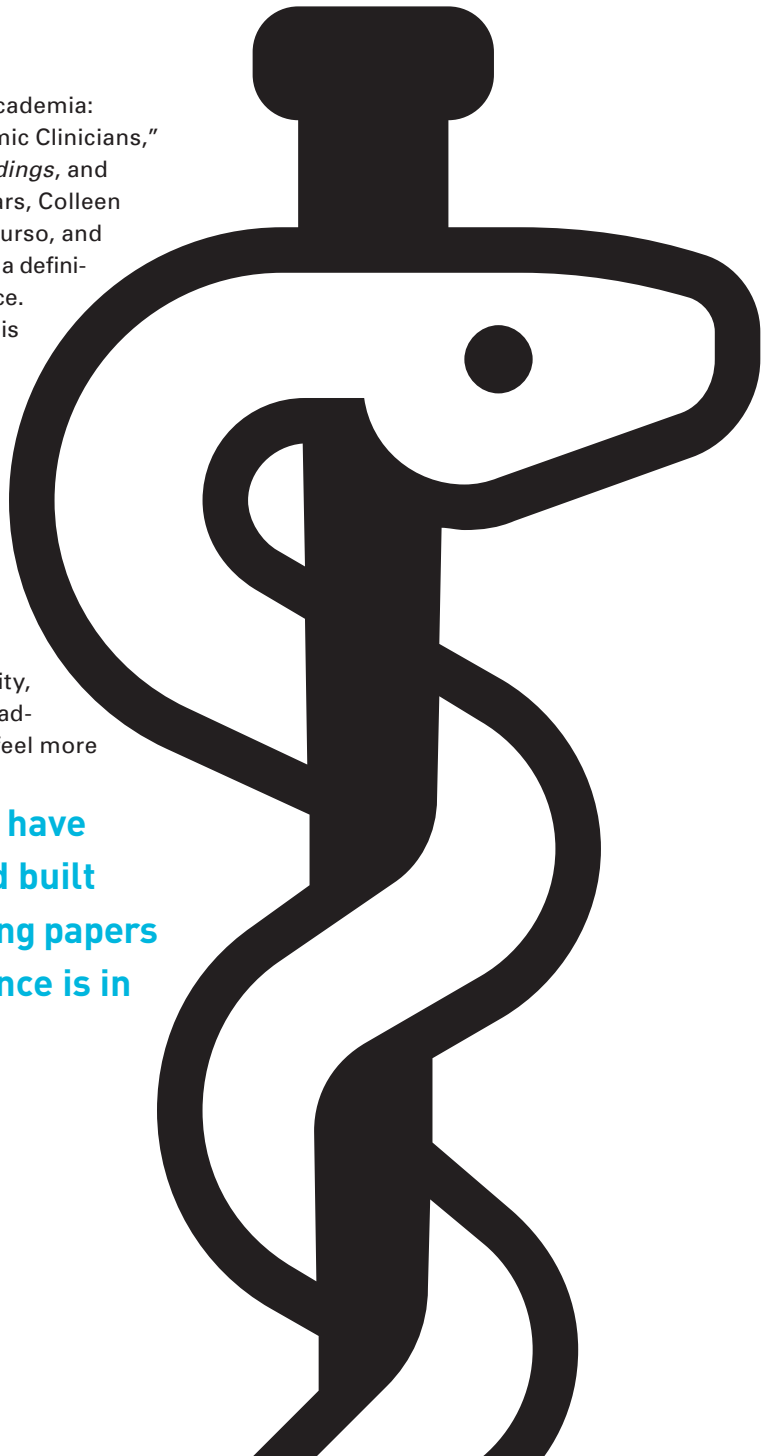
One paper, “Clinical Excellence in Academia: Perspectives from Masterful Academic Clinicians,” published in the *Mayo Clinic Proceedings*, and written by the Miller-Coulson Scholars, Colleen Christmas, Steven Kravet, Samuel Durso, and Wright, “served as a starting point for a definition and measure of clinical excellence. Our Academy members have taken this definition and built upon it, and are publishing papers on what clinical excellence is in different specialties.” The Academy has developed methods and materials to teach clinical excellence, and members have “taken the show on the road,” Wright adds, teaching the principles of clinical excellence to faculty at other medical centers. Their work has been welcomed. McGill University, in Montreal, is using some of the Academy’s processes to make clinicians feel more

valued, and Ohio State University has created a new promotion track, using the Academy’s clinical portfolio as the means of measuring faculty success.

The selection process for the Miller-Coulson Academy is rigorous; each potential inductee must

CONTINUED ON PAGE 8

“Our Academy members have taken this definition and built upon it, and are publishing papers on what clinical excellence is in different specialties.”



prepare a 40-page clinical portfolio, which then gets reviewed by an external review committee, made up of experts from around the country. In the last year alone, Academy members have had some 21,300 patient encounters. In their combined careers, they have published or collaborated on 683 peer-reviewed papers that have appeared in some of the country's top medical journals, and then have been cited hundreds of times in other medical literature. They have also served as award-winning teachers and course directors at every level of medical education, teaching medical students, interns and residents, fellows, and running continuing medical education courses for community and academic physicians. Also, the members' "Reflections on Clinical Excellence" blog is read by physicians around the world, many of whom post comments (you can get to this blog from our webpage, at: <http://www.hopkinsmedicine.org/innovative/>. Click on the link to the Miller-Coulson Academy of Clinical Excellence.)

Here are this year's inductees into the Academy. In future issues of *Breakthrough* and on the Center for Innovative Medicine's website, you'll get a chance to meet them and all the Academy's members, and hear what they have to say about the practice of medicine.

Ilene Browner, M.D., a specialist in geriatric oncology at the Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins Bayview, who is very interested in holistic care, and who is earning her Ph.D. at the Bloomberg School of Public Health at Johns Hopkins;

Michael Crocetti, M.D., M.P.H., an award-winning teacher and dedicated mentor, who in July will become Chief of Pediatrics for Johns Hopkins Community Physicians; and

Judy Huang, M.D., a neurosurgeon, award-winning clinician scientist and teacher, who also serves as Co-Director of the Neurosurgery Residency training Program, and Director of Medical Student Education in Neurosurgery. ■

Watching and Learning

Aaron Bobb, a fourth-year medical student, took a brand-new elective this year: He spent a half-day with each of the members of the Miller-Coulson Academy. His goal: Inspired by what he had seen watching David Hellmann, Roy Ziegelstein, and others, he wanted to learn how to talk, and listen, to patients like the best clinicians do. He kept a blog of his experiences, and spoke briefly about them at the Symposium. "What I found out," he says, "was that these doctors were all extremely different." Some had a light touch with patients, some were more serious. Some talked a lot, and some mainly listened.

"I've seen a lot of the challenges of medicine, the struggles of working long hours, of working...with a complicated system. The Academy members I shadowed didn't sugar-coat these difficulties. But they also didn't let them define their outlook on medicine."

Bobb came into this experience having heard a lot of talk about "how medicine isn't what it used to be, it's less rewarding, there's less autonomy, and it's more impersonal, and more rushed. I've seen a lot of the challenges of medicine, the struggles of working long hours, of working with patients with no or inadequate health insurance, working with a complicated system. The Academy members I shadowed," he continues, "didn't sugar-coat these difficulties. But they also didn't let them define their outlook on medicine." Most notably, "they also found pleasure in medicine, performing a thorough physical, educating a patient, or just connecting on a personal level. The entire tone of their encounters was different and more rewarding." Bobb met patients who had traveled hundreds of miles to see these doctors. "When the doctors would turn their backs, the patients would whisper to me how wonderful their doctor was. I want to get to that level."

Here are a few of the insights Bobb recorded in his blog:

After watching one of the Academy members deliver bad news to his patient, I asked if he had a systematic way of approaching such situations.

“It’s like asking a girl out,” he replied. “There’s no instruction book. You have to feel it out – it’ll be different for every patient.”

I have to admit, I was disappointed. Part of my reason for taking this elective – shadowing most of the members of the Academy for Clinical Excellence – was to learn the elusive secrets of medicine, the tricks to ensure that my future patients will hold me in high regard.

While I haven’t discovered any secrets, I have noticed that all of the Academy members provide small, often subtle gestures of respect for their patients. None is earth-shattering, and no gesture on its own would change a patient’s opinion of a doctor. But when two or three are combined during the course of a patient visit, a sense of compassion and respect is clearly conveyed to the patient.

“When the doctors would turn their backs, the patients would whisper to me how wonderful their doctor was. I want to get to that level.”

Below are a few of the gestures I’ve noticed:

Tell patients that you haven’t forgotten about them.

One afternoon a fellow was unexpectedly absent, so the attending doctor was running late for most of the clinic. In between seeing patients, she would stop into an exam room where a patient was waiting, and let the patient know that she hadn’t forgotten about them, she was sorry to be running late, and she would be in to see the patient as soon as possible.

Thank patients. Several times during this elective, I’ve heard doctors thank their patients. It might be during the greeting (“thank you for coming”), at the end of the history (“thank you for providing all of those details – it’s very helpful”), after an admission that the patient hasn’t quit smoking (“thank you for being honest with me”), or at the end of the visit (again, “thank you for coming”).

Often the Academy doctors will not only provide their card, but will write an additional email or phone number on the card, or will tell the patient which of the several ways of contacting them will be most likely to get through.

Give patients a reliable way to contact you. Often the Academy doctors will not only provide their card, but will write an additional email or phone number on the card, or will tell the patient which of the several ways of contacting them will be most likely to get through.

Introduce me (the med student). Often the medical student and the patient feel the same hesitance about interrupting the attending doctor. If the attending begins the encounter without first introducing everyone in the room, the introductions will likely never be made. This ends up making both the med student and, more importantly, the patient feel a vague sense of discomfort throughout the visit.

(Briefly) evaluate medical concerns that are entirely outside of your speciality. In a clinic for patients with renal transplants, a patient mentioned in passing that he recently slipped on some ice and fell on his shoulder. He had a negative x-ray, but still had some residual soreness. The doctor took a minute to examine his shoulder. I believe that small action reinforced the patient’s sense that his doctor cared for his whole person, not just for his kidney.