

Aequanimitas



A twice yearly newsletter for current and former
 Johns Hopkins Medicine housestaff and friends

Spring 2012

My Turn

I am very excited about the potential improvements to our medical service as many patient care areas move into the new hospital building.

All cardiovascular functions are moving to the new towers. The enlarged coronary care unit will be integrated into a single unit with the cardiovascular surgery intensive care unit. The ORs, catheterization laboratories, imaging and interventional suites all will be in the new center. The medical intensive care unit, which has not been upgraded in 40 years, will potentially double in size. In all of these areas, the housestaff will enjoy their critical role in caring for patients.

This campus shuffle also means that down the road, each of our firms will have its own floor in the to-be renovated Nelson Building. For now, two of the firms will move immediately to the Meyer Building; the other two will be in better parts of the existing Osler and Halsted buildings.

Altogether, the move not only will provide a significant upgrade in facilities and the way people perceive care, but will allow our housestaff to care for patients using innovative techniques in a modern setting.

Mike Weisfeldt, Director
 Department of Medicine

Padding the Work Week

Housestaff are using the iPad to save time, work more efficiently and ease the strain of diminished hours.

THE OSLER residency training program has faced a number of challenges due to the reduced work hours mandated by the Accreditation Council for Graduate Medical Education. Now leaders are studying physician workflow, seeing what can be cut from interns' duties without compromising education and patient care, and what technologies can be added to increase efficiency so they can spend more time learning and taking care of patients.

"The workflow is so complex, especially for interns, and the time they have to do everything is so short," says Osler Program Director Sanjay Desai, noting that the program was starting to violate recommended duty hours as interns were staying longer to get everything done. In addition, the time pressures forced compromises; housestaff often missed important educational opportunities like conferences, rounds or family meetings to complete their patient care responsibilities.

The Osler program in October purchased iPad tablet



Among the myriad ways residents are harnessing the power of tablet computing is getting in-depth information on the go.

computers for each of the 48 interns and a few others for the services staffed by junior and senior residents, with the goals of improving patient care by increasing clinical efficiency; creating new modalities for teaching housestaff and medical students on the wards; establishing a mobile platform for future integration with other mobile health care solutions; and improving communication among phy-

sicians, nurses and patients.

Spearheading the effort is second-year resident Satish Misra, one of several housestaff who had been bringing his own iPad to work before the program started. Misra is co-founder of iMedicalApps, a website that reviews mobile medical technology and applications and their usefulness to health care practitioners.

Before the iPad initiative, he says, some housestaff used laptop computers, but they were "tedious, and the batteries died quickly."

Nationally, Misra says, there has been a trend toward integrating new technologies to address workflow difficulties. iPads are becoming more popular in both academic and private health care settings, he says, and some

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Change, Innovate, Test, Repeat

THIS YEAR has been dominated by change. Change is good, and all systems must continue to evolve and adapt to remain vibrant. I am happy to report that the Osler Program, with its faculty and housestaff's unyielding pursuit of excellence, has excelled through this year. While adapting our program to the new ACGME regulations, we looked at other industries for relevant best practices. In the end, we tried to innovatively apply operational and technological strategies learned elsewhere to residency training.

The primary consequence of the restricted duty hours is that interns are in the hospital for less time. This leads to natural conflicts between patient obligations, such as documentation, and educational sessions, such as teaching rounds or noon conferences. Because our residents will always place patient care first, the educational mission can be compromised. To prevent this, we decided to examine the activities our interns and residents were performing to ensure that they were optimized for the

goals of a residency program. Our goal was to build on activities that added value and reduce or eliminate activities that did not.

We started by having senior residents shadow interns to take inventory of their tasks during the day. Not surprisingly, we quickly determined that many intern activities were not value-added, such as calling outside hospitals for medical records. We then worked with hospital leadership to apply methods developed in other industries to improve efficiency and reduce waste. We subsequently conducted a Lean Sigma analysis on intern workflow and identified multiple areas for improvement. These improvements include moving tasks from an intern to another member of the health care team, obtaining additional human resources and adopting new technologies.

Technology has been woefully behind in penetrating residency training programs. Although occasional early adopters of technology use it in innovative ways, they are significantly constrained by the lack of institutional sup-

port. Our operational analysis showed that significant time was used for documentation, and focus groups revealed that hand-held technologies would allow real-time documentation. We then began an iPad initiative, recruiting not only funds but also IT support for Apple products, which historically had not been supported. Housestaff (not surprisingly) enthusiastically welcomed the iPads. However, we were committed to studying their impact and are in the midst of measuring the efficiency we've gained.

We've learned a great deal by looking outside the health care and education industry to improve our own practices. We are committed to creating a system in which the goals of our program are optimized every day. This practice of continuing to evolve and innovate is in line with the spirit of this program and allows us to aspire for excellence. ■

Sanjay Desai, Director
Osler Medical Training Program

Padding the Work Week (*from page 1*)

medical schools are giving them out to students upon admission.

"Up front there was a lot of excitement about getting the iPad," Misra says. "It's a popular device. On top of that, it represents a commitment by the program and by Sanjay to not just settle for how things are but to evaluate how we can improve the day-to-day practice of medicine. Now we're going beyond distributing a cool, new device to figuring out how to make it useful."

Housestaff were given basic training in the device and then told to use it as they saw fit. The adoption has

been widespread, Desai and Misra say. Some interns are using iPads for patient education by sharing diagrams, scans and lab reports at the bedside; some are using the tablet's FaceTime videoconference feature or instant messaging options to consult each other; some have accessed reference materials, including shared libraries containing hundreds of peer-reviewed papers; and others have used the device for note-taking or clinical documentation.

At the same time, Desai and others have been analyzing workflow, looking at processes like phlebotomy,

medication reconciliation and tracking down medical records from outside hospitals—tasks that could be shifted to other health professionals.

As part of the program, Misra and Desai will be studying the devices' impact on operations. "We'll be the first ones to look at this beyond basic surveys," Desai says.

Misra says he hopes the devices will help housestaff work more efficiently: "Even simple things, like getting paged to put in orders while we're at rounds, can get delayed. Now you can just pull the device out of your pocket and enter the information right there." ■

Beyond the Dome

Charles “Chuck” Tuchinda:

Chief Innovation Officer, Healthcare, Hearst Business Media



Long interested in technology, Chuck Tuchinda started programming and developing computer games in middle school, designed a hovercraft using a two-story inner tube and leaf blower in college, and even today chooses computer programming manuals as his beach reads.

During medical school and residency at Johns Hopkins, Tuchinda balanced his studies with various side projects, like coding 3RADS, a computerized system that simplified test ordering and results reporting for the Department of Radiology, and providing computer repair and troubleshooting services for faculty and staff as “Dr. Bits.”

After residency, he earned an MBA from Harvard and worked in technology leadership jobs for several companies. Today at Hearst Business Media, Tuchinda invents new products and launches new businesses such as AlertSpace, a Web-based tool that allows hospitals to tweak their alert systems to decrease “alert fatigue.” He also directs a health care venture fund.

Aequanimitas: You were awarded the Chairman’s Prize in 2002 for creating PagerBox, a messaging platform that allowed Johns Hopkins employees to send text messages from their computers to alphanumeric pagers back when most people only had numeric pagers. Tell us about that.

Tuchinda: I started PagerBox as a medical student. It was a big pain to call the operator to find out who was on call, then page the person and wait for a reply. When that person finally returned my page, they would ask, “What’s your question?” Most of the time, the consultant would ask for more time to think about my question. It could take 15 minutes just to ask one question and not get an answer.

I coded PagerBox and tried it out on a floor or two. Charlie Wiener was supportive and we pushed to get alphanumeric pagers across the housestaff. I designed PagerBox to be extremely easy to use. Over the years, I added features, such as consult management, page forwarding and work hours (ACGME compliance) time tracking.

I think people liked it—traffic exceeded 4 million visits a month—and PagerBox spread across the United

States. The Hopkins call center, at the time, said call volume to their operators had dropped because they were no longer answering mundane requests.

Aequanimitas: How did you get interested in business?

Tuchinda: It probably started in college when I needed spare cash to do anything fun. I was doing layout for a local newspaper and paying a copy shop for a camera-ready proof. It dawned on me that with a special printer, I could make more money by preparing the proofs myself. I bought a \$2,000 printer and ended up making back the money quickly. That’s when I started thinking about business.

My interest in health IT started during residency. People were still arguing over “evidence-based” medicine versus “expert-based” medicine. I felt that one purpose for clinic was to help patients adhere to evidence-based regimens. I thought that in the long run, physicians would spend more of their time expanding the base of medical knowledge and/or handling patient exceptions, and that information systems would ultimately help them deliver care in a more standardized way. I wanted to work on those systems, so I applied for medical

informatics fellowship training. During my interviews, a CIO said I lacked the business background to become a CIO. I agreed and entered business school the next fall.

Aequanimitas: Any special memories from your time as a resident?

Tuchinda: I had been working 23 days straight. On my day off, I went biking, jumped my bike off a curb and fell on my head, which started bleeding. When I went back to work the next day, I had some nasty bloody discharge weeping from my face. My ACS said, “You look bad, but you can work.” Three days later, in the middle of my call night, the ED attending put me in the CT scanner because of my grotesque appearance. A few hours later the plastic surgery team called to tell me that I had four skull fractures and I should take narcotics for the pain. But how could I? An Osler marine cannot possibly leave call, especially after having managed on ibuprofen for three days. I’d be a loser compared to the other resident who dropped an NG tube into himself for his upper GI bleed. I try to make my ACS feel guilty about it to this day—but we end up just laughing about it. ■

Class Notes

The Osler Fund

These students matched to begin the Osler medical training program in July 2012

Jose Arun

Johns Hopkins University School of Medicine

Janhavi Athale

Duke University School of Medicine

Kwame Atsina

Yale University School of Medicine

William Bain

Columbia University College of Physicians and Surgeons

Aneesh Bapat

New York University School of Medicine

Nikita Bari

Indiana University School of Medicine

Jasmine Barrow

Harvard Medical School

Leah Blank

Johns Hopkins University School of Medicine

Carolyn Bramante

University of Minnesota Medical School

Jordan Chaisson

Louisiana State University School of Medicine

Henry Cheng

UCLA David Geffen School of Medicine

Daniel Cruz

Weill Cornell Medical College

Dhaval Desai

University of Wisconsin School of Medicine and Public Health

Matthew Frigault

University of Pennsylvania School of Medicine

Ravindra Ganesh

University of Wisconsin School of Medicine and Public Health

Matthew Gonzalez

Boston University School of Medicine

Catherine Handy

Johns Hopkins University School of Medicine

John Harrington

State University of New York Upstate Medical University

Khalil Ibrahim

University of Arkansas for Medical Sciences College of Medicine

Neha Jakhete

George Washington University School of Medicine and Health Sciences

Rohan Kalathiya

University of Kentucky College of Medicine

Wassim Labaki

Georgetown University School of Medicine

Iris Leviner

Georgetown University School of Medicine

Sabra Lewsey

Columbia University College of Physicians and Surgeons

Colin Massey

University of Texas Medical School at Houston

Matthew McConnell

Weill Cornell Medical College

Julia McHugh

Vanderbilt University School of Medicine

Shazia Mehmood

University of Medicine & Dentistry of New Jersey

Paul Miller

Georgetown University School of Medicine

Steven Moyo

Michigan State University College of Human Medicine

Michael Mueller

Case Western Reserve University School of Medicine

Mark Munoz

Oregon Health & Science University School of Medicine

Kelly Nakamura

Mayo Medical School

Shady Nakhla

Weill Cornell Medical College in Qatar

Benjamin Oldfield

Harvard Medical School

Frances Onyimba

Columbia University College of Physicians and Surgeons

Isabel Pimenta

Universidade de Sao Paulo

Carolyn Plescia

Case Western Reserve University School of Medicine

Helen Prevas

Johns Hopkins University School of Medicine

Sarath Raju

Rush Medical College

Sathyadeepak Ramesh

University of Texas Southwestern Medical Center at Dallas Southwestern

Tara Robinson

Jefferson Medical College of Thomas Jefferson University

Joseph Sabatino

Emory University School of Medicine

Eric Scholten

Johns Hopkins University School of Medicine

Adam Shpigel

Vanderbilt University School of Medicine

Catherine Simpson

Louisiana State University School of Medicine in New Orleans

Alan Tieu

Howard University College of Medicine

Trang Vu

Johns Hopkins University School of Medicine

John Werner

Johns Hopkins University School of Medicine

The Importance of Supporting the Osler Housestaff Program

Among the themes in this issue of *Aequanimitas* is the application of strategies from other industries to adapt to the changes to the Osler Housestaff Training Program. Being able to tap new technologies like the iPad often depend on the generosity of loyal alumni and friends who support the Osler Fund for Scholarship.

These funds also allow housestaff to participate in activities that are crucial to building the foundation of a successful career in medicine. Between 2009 and 2011, contributions were directed toward 130 research and career development experiences for trainees, including poster and podium presentations at the American College of Cardiology, American Hospital Association, American Thoracic Society, Society for General Internal Medicine, American Academy of Hospice and Palliative Medicine and the American Federation for Medical Research. Additionally, contributions helped underwrite the costs of statistical, administrative and equipment support for housestaff-initiated research projects, many of which were presented at national conferences.

As these examples reflect, investing in the housestaff program is vital to enriching and perpetuating its tradition of excellence and innovation. To learn more about how you can support the Osler Fund for Scholarship, please contact Anne Kennan in the Department of Medicine at 410-550-9890 or akennan1@jhmi.edu. You can also donate online at <http://hopkinsmedicine.org/Medicine/hstrainingprogram/philanthropy.html>

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