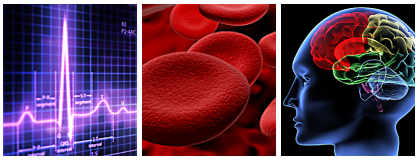
http://medicine.stanford.edu/ Issue 3 • Spring 2009

# Newsmakers In Medicine

## *Inside the Stanford DOM*



# Better Care, Better Health, Lower Cost

What was true once isn't anymore. American health care is not the best in the world. The US spends almost double that of any westernized nation. Yet most of the population experiences less than optimum quality and poor access to health care services. During a recent visit to Stanford, Don Berwick, MD, President and CEO of the Institute for Healthcare Improvement (IHI), and a leading authority on health care quality, described what he and like minded individuals are doing to change a system, which too often benefits its stakeholders, rather than the people it serves.

> *"The sickest 10% of the population accounts for 64% of US health care expenses."*

## A Political Nightmare

"We're trying to understand the configuration for an integrated system that cares for people with real reliability, high efficiency, and great dignity and responsiveness," says Berwick. Within the current system, stakeholders, hospitals, physician offices, clinics, laboratories, medical offices, and other health care providers share a vested interest in maintaining autonomy, revenue sources, and defending the status quo.

Instead of the current fragmented system, Berwick proposes a population based redesign concept IHI defines as the Triple Aim: a simultaneous pursuit of better care, better health, at lower per capita cost. He admits that implementing the Triple Aim requires major change, reorganization, and sacrifice. Even presidential leadership, says Berwick, is needed to put the wheels in motion. "Socially this is extremely difficult to engineer. The latent majority coalition of self-interest around a better health care system isn't mobilized. So we're not likely to see people taking to the streets for a better system."

## Lean Manufacturing and Health Care

Delivering good health care involves humanism and the art of healing. But on a technical level, it's a series of interdependent interactions—an intricate assembly of people, processes, and money. It's a mistake, Berwick believes, to think that health care has nothing in common with, or shouldn't adopt production principles from, other complex systems.

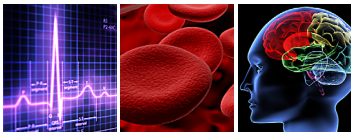
Donald Berwick, MD, MPP, FRCP

"We would be far better off to manage an operating room, the emergency department, or the care of a chronically ill patient with the same precision, care, and reliability that Toyota uses to manage complex flows. People fear it would make us into widgets but not at all; it would free us to care for patients as we need to do."

The Institute for Healthcare Improvement is an independent, not-for-profit organization helping to lead the improvement of health care throughout the world. Efforts are underway to help hospital governing systems and trustees better understand their role. IHI is involved in patient safety and has a virtual school for students in the health professions.

All these efforts reflect Berwick's overall vision and commitment to health care as a human right, for each and every individual. For more information, visit: www.ihi.org and www.ihi.org/IHIOpenSchool. Dr. Berwick was a guest speaker at the DOM 2009 Symposium: Physician Accountability.

## Featured in this Issue



## Chairman's Corner

Spring came quietly this year, but its unmistakable hopefulness is felt throughout our department of medicine (DOM).

Our residency program experienced another enviable match. In welcoming Michele Barry as director of global health programs, we deepen our commitment to leadership in global health and socially responsible programs of medical care and education. Not coincidentally, Mark Cullen will become chief of general internal medicine on May 1 at an auspicious moment in health care planning when general medicine and primary care have greater salience in national debates.

Hopefulness washes over in other ways that promise to reinvigorate existing programs and start new ones. Our faculty is caught up in the frenzied process of applying for many new grant opportunities created by the $8 billion supplement to NIH. The DOM continues to recruit new faculty at senior and junior ranks. Although economic stresses have required us to scale back our plans, we remain committed to strategic hires of superb new faculty. These efforts will help our department move toward intellectual leadership in American medicine.

Hope abounds. In this period of economic uncertainty, we rededicate ourselves to our fundamental mission: to improve the health and health care of people across the globe through our creative science, rigorous education, and innovative clinical programs. All of you, our staff, students, residents, fellows, and faculty are the wellspring of hope and the strength of our community. Thanks to you we can say that hope does swell the purpose of the DOM.

**Ralph Horwitz**

# Cardiovascular Surgery of Tomorrow

A small number of people with aortic valve stenosis are being treated at Stanford as part of a randomized, controlled, clinical trial evaluating the safety and effectiveness of percutaneous aortic valve replacement. The technique, taking only a few hours, involves inserting a replacement stent and valve into the patient's native aortic valve, without opening up the chest.

**Left to right: D. Craig Miller, MD (hidden) Alan Yeung, MD, William Fearon, MD and Michael Fischbein, MD, PhD**

Typical patients are poor operable candidates for traditional valve surgery. There are no specific age criteria; however, patients are generally elderly, suffering from a degenerative age-related condition, high risk, with other health issues, which make them unable to tolerate conventional valve replacement.

Undergoing this procedure eliminates the need for cardio-pulmonary bypass to stop the heart and lungs, which poses a risk of neuro-cognitive changes, memory loss, and even stroke. Thus far, nine percutaneous aortic valve procedures have been performed at Stanford, with an end goal of enrolling 50 patients. Members of the clinical trial cardiovascular team include physicians Alan Yeung, William Fearon, Craig Miller, Michael Fischbein, David Liang, Peter van der Starre, Charles Hill, and nurse coordinator Martina Speight, RN.

### New Approach to an Old Problem

Professor of medicine and team leader Alan Yeung, MD, explains, "We go in through the groin femoral artery and go backwards into the valve. Open it with a balloon first and put the stent valve system over the balloon, expand the stent, and place it in the aortic valve position." Although the larger 21-23 millimeters valve and stent can be manipulated down to eight millimeters, even that is often too bulky for many patients' leg arteries. In that case, an alternative method is used; the surgeon makes a small incision in the side of the chest, opens up the left ventricle, and puts the valve in while the patient's heart is still beating.

The breakthrough technology is already saving lives. And as professor of bioengineering and surgery, Charles Taylor, PhD, explains, "Percutaneous aortic valve replacement presents new engineering challenges to create safe and efficacious devices that mimic a complex biological structure." Taylor believes the clinical study at Stanford may bring the engineers who design the next generation of percutaneous valves one step closer to understanding the conditions the devices will experience when implanted and lead to further advances.

### Better Quality of Life

"After the procedure, patients function at a much higher level, but whether you can increase longevity is unknown, since many individuals in the trial are over 90 years old," adds Yeung. Once the FDA approves, the procedure could eventually replace some of the more traditional surgery and be made more widely available. And eventually,

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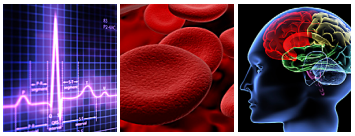


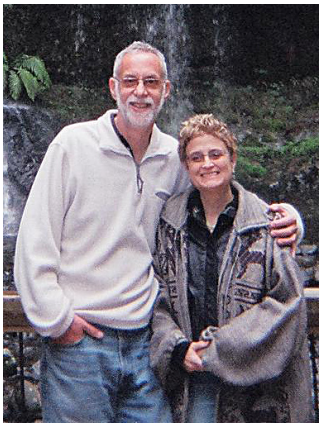
# Power Couple Move Careers in a New Direction

When Ralph Horwitz MD approached Michele Barry, MD, to lead international activities at Stanford, recruiting her husband Mark Cullen, MD, was a natural part of the equation.

Cullen and Barry got together when he was a resident and she was an intern. They got married, joined the faculty in internal medicine at Yale, and are the parents of two daughters. And although their noted careers morphed in dramatically different directions, they have managed to balance family and career, even collaborating at times. "We have a paper or two together as well," adds Cullen. "But we keep our distance professionally. It's just close enough for comfort. We talk all the time and know what each other does. It's fun."

## A Multifaceted Approach to Global Health

Michele Barry's passion for global health is contagious; it's energy she will share as the new director of global health for the department. Barry will also serve as senior associate dean of global health in the medical school.



Mark Cullen, MD, and Michele Barry, MD.

### Capacity Building

Recently, Barry, MD, has shifted her focus from sending U.S. physicians overseas to capacity partnering and training people in their actual settings because, she explains, "Twenty-five percent of physicians in the US have been "brain drained" due to globalization and economics. These foreign graduates mostly come from the Philippines, or English speaking sub-Saharan countries like Nigeria, Kenya, or Ghana. I feel like we need to give back."

That philosophy includes working with the Institute of Medicine on legislation to implement a Global Health Service Corps. A medical arm of the Peace Corps, this program would send U.S. medical experts abroad to help respond to the health problems in developing countries and to provide needed education and training.

In addition, Barry travels to Washington several times a year to advocate for global health research as a Paul Rogers/Research America ambassador and served on President Obama's global health subcommittee.

To broaden her vision, Barry will include other components of the university as part of her effort to develop an interdisciplinary program. "I realize now that you can't send a physician overseas without thinking about the human rights aspect, the anthropological aspects, and environmental aspects of health," says Barry. "I want to add additional components to create meaningful relationships for Stanford with programs overseas."

## Innovations in General Internal Medicine

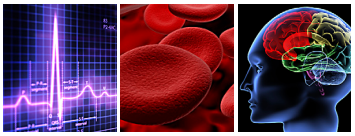
Under the leadership of Mark Cullen, MD, general internal medicine will take its place as a premier division, notable for research on the social determinants of health and advancements in new forms of primary care.

GIM differs from organ-based divisions in its broad focus on health, not just disease, but also on the social and environmental factors that create vulnerability in patients and populations. Says Cullen, "All that range of social and related practice factors and the organization of medicine are what the research will include." As he recruits, Cullen hopes to have a continuum of people interested in the different aspects of the relationship among individuals, population, and society.

### Faculty Development

GIM faculty consists of a diverse group in research and educational programs with strong ties to the clinical enterprise. Cullen explains, "Our faculty spends more time than others in the practice of medicine. That won't change; however, we can create a collective view of what people contribute to each other, to make academics a bigger part of what clinicians get out of their careers and practice." Additionally, Cullen and faculty in the Stanford Medical Group intend to redefine and create a national model practice.

Cullen was a professor of medicine and public health and director of occupational and environmental medicine at Yale. He plans to continue his research at Stanford and looks forward to working with collaborators on campus. "I've already got a few and hope to recruit some fabulous younger colleagues."



# Super Bowl Champion of Kidney Transplant Programs

John Scandling, MD

According to a recent report from the Scientific Registry of Transplant Recipients (SRTR), Stanford is the only kidney transplant center in the nation to lead in both patient and graft (transplant kidney) survival rates at both 1 and 3 years following transplantation.

## Why the Program Works

Coupled with dedication is attention to detail, which starts with the careful evaluation of the patient and organ to maximize the outcome. Says program medical director John Scandling, MD, "It's a balancing act between justice and utility. You want to put the transplant organ in the best possible recipient, but you also want to give every patient possible a reasonable chance at transplantation." Organ quality is another issue and a research focus of team members Jane Tan, MD, PhD, Stephan Busque, MD, and Bryan Myers, MD. The studies of renal senescence in kidney donors and recipients will hopefully improve the odds.

With more than 800 patients, Stanford's program is the thirteenth in size in the country. Of the eleven U.S. programs with the lowest mortality on the waiting list, the Stanford program has the largest list. "The need for transplantation in the Bay Area is so great that the waiting time to transplantation seems interminable. Preparing patients who have been awaiting transplantation so long and caring for them after transplantation is challenging. "Our transplant coordinators are essential to these tasks," says Scandling.

One way to decrease the wait time is with a transplant from a living donor. Stanford's volume of living donor transplantation should increase as the program expands its efforts in living donor transplantation, including desensitization, paired donor exchange and donor chains, and tolerance induction. The desensitization program of Dolly Tyan, PhD, Marc Melcher, MD, PhD—who is leading the paired donor exchange and donor chain program—and the continued collaboration with Sam Strober, MD, in his pursuit of tolerance induction in organ transplantation will continue to set the Stanford program apart from others.

## After the Transplant

As many as 10 to 15% of heart, lung, or liver transplant patients lose their native kidney function to immunosuppressive drug toxicity and may become candidates for kidney transplantation. These sobering outcomes make all the more urgent the need to induce a patient's tolerance to a transplanted organ and discover drugs that are not toxic to the kidney.

"When I started in transplantation over 25 years ago, if we could get the kidney to last one year it was a victory," recalls Scandling. The team hopes to maintain its current level of success in the years ahead. But as John Scandling tells the coordinators, "It's like the Super Bowl. You may not be back; once may be all you get. But we're going to try."

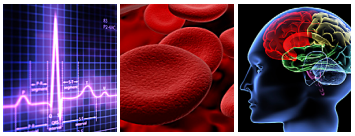
## DOM Appoints First Master Clinician

Gary Schoolnik, MD

Gary Schoolnik, MD, remembers the master clinicians he observed as a student and house officer. In his role as Internal Medicine Master Clinician, Schoolnik, a professor of medicine in infectious disease and microbiology and immunology, hopes to pass what he learned on to a new generation. He also views the position as an opportunity to represent the many other excellent clinicians on the faculty.

"This role will allow me to advocate for traditional values that represent the best in Internal Medicine," says Schoolnik. "Superb bedside skills, the physical exam, and the capacity to obtain a comprehensive narrative from the patient provide vital diagnostic information. When students and house staff gather at the bedside, it's an opportunity to convey our respect, dedication, and empathy. And as a working scientist, I hope to be provoked by what we see at the bedside to explore possible pathogenic mechanisms for our patients' illnesses."

The Master Clinician is appointed for two-year term and will have an annual lectureship, oversee several grand rounds, and participate in bedside teaching rounds and seminars. According to Department Chair Ralph Horwitz, "Gary Schoolnik, as Master Clinician, will set an example of an ideal that house staff, students, and faculty can aspire to when trying to set goals for their own clinical development."



## Noteworthy Mentions

**Oncology Chief Receives International Tribute**
Ronald Levy, MD, professor of medicine was honored with the King Faisal Award for Medicine. Levy was recognized for his work in molecular targeted therapy. At the recent presentation ceremony in Riyadh, Saudi Arabia, Levy thanked the king and the foundation, "Our studies, our efforts and our treatment are for all humanity irrespective of color and religion."

**Internal Medicine Residency Redesign Colloquium**
On April 9-10, 2009, approximately 35 health care leaders gathered to discuss redesigning the internal medicine residency program.

The objective was to stimulate fresh thinking and create a platform to design innovative "experiments" in resident education. In follow-up meetings, a working committee will take the best ideas of the group and propose a newly designed educational structure that meets the goals and emphasizes the values fundamental to the discipline of internal medicine.

**Physician Writes a Best Seller**
Author and professor of medicine Abraham Verghese, MD, recently returned from a major leg of coast-to coast-appearances for his first novel, *Cutting for Stone*. He will embark on a European tour in November. Verghese is the author of two highly acclaimed nonfiction books, *My Country* and *The Tennis Partner*. *Cutting for Stone* became a *New York Times* Best Seller in February and has also been on the *San Francisco Chronicle* Best Seller List, among others.

# Spring Awards and Promotions

### Appointments and Promotions

- **Valerie Berry, MD,** appointed clinical assistant professor of family and community medicine
- **Paul Wang, MD,** appointed professor of cardiovascular medicine

### Awards and Honors

- **Steven Artandi, MD,** associate professor of medicine, hematology, was elected to the American Society for Clinical Investigation
- **Euen Ashley MRCP,** assistant professor of cardiovascular medicine: American Heart Association, Innovative Research Award
- **Jacques Van Dam, MD, PhD,** was elected the next President of the American Society of Gastrointestinal Endoscopy, the professional organization dedicated to promoting patient care and digestive health
- **Evaleen Jones, MD,** clinical associate professor of medicine, family, and community medicine, was named one of the "2009 Women of Influence in Silicon Valley" by the San Jose Business Journal
- **Paul Yock, MD,** became one of 65 new members elected to the National Academy of Engineering

*Looking at the Future of Cardiovascular Surgery cont'd. from page 2*

with longer lasting valves, better stents, and smaller catheters, it would be possible to perform without general anesthesia. People would be able to get up, walk around, and go home in a day or two, says Yeung.

***Newsmakers in Medicine*** **is written and produced by Rita Kennen, DOM Public Relations Officer.**
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