School of Medicine University of Maryland School of Medicine Control of Medicine Control of Maryland School of Medicine



JANUARY 2010 Vol.11 No.5

DEAN'S MESSAGE: What's On My Mind

hat's on my mind this month is our new strategic plan, "Soaring to Greater Heights, Together." In November nearly 100 leaders from the School of Medicine and University of Maryland Medical Center/System gathered at the new University of Maryland Southern Management Campus Center for a day-long retreat. The goal of this brainstorming session was to identify opportunities and to generate new ideas to help us take a "quantum leap" within the next five years.

Committees have been working for over a year to develop roadmaps in the following areas: education, research, clinical care, community service and outreach and finance/philanthropy. Committee members met regularly to discuss, strategize and develop measurable goals and objectives for their specific areas. The resulting roadmaps formed the basis of the November retreat and were used as a starting point to identify opportunities, ideas and approaches to assist in the development of a strategic plan that is bold, catalytic and ambitious.

At the retreat, I charged all participants to:

- review and identify changes to the roadmaps to include opportunities within and across the university and medical system,
- increase their personal commitment to the direction and success of the school, and
- become a supportive community of leaders and stakeholders that will facilitate the plan implementation.

These roadmaps are "living" documents, and work remains to be done to finalize these documents into one cohesive strategic plan. Small groups are being formed to update each roadmap based upon the discussion and feedback from the retreat. A final plan will be published next spring, and all board members, faculty, staff, fellows, residents and students will receive a copy. The University of Maryland School of Medicine's 2010–2015 Strategic Plan, "Soaring to Greater Heights, Together," is OUR strategic plan.

The School of Medicine has enormous opportunities to continue the momentum we have developed together. The retreat was an important step in our common understanding about the road ahead, but it was just one step. The remaining steps must be taken by all of us. Competition will be even stiffer as the school's recognition continues to rise. We will have to be smarter and even more focused to sustain our accomplishments and growth.

The University of Maryland School of Medicine has already secured a place in the top-tier of US medical schools through our creativity and the hard work of our faculty, staff and ardent supporters. We must continue at our strong pace, especially in these challenging times. Setting priorities and staying on the right track will help us to continue to strengthen our mission areas. The School of Medicine's 2010–2015 strategic plan will be instrumental in elevating this medical school to the next level of achievement in research, education, clinical care and community service and outreach.

In the relentless pursuit of excellence, I am

Sincerely yours,

E. allett Ruce

E. Albert Reece, MD, PhD, MBA Vice President for Medical Affairs, University of

Vice President for Medical Affairs, University of Maryland John Z. and Akiko K. Bowers Distinguished Professor and Dean, University of Maryland School of Medicine

The committee co-chairs are:

Education: David B. Mallott, MD, Associate Dean for Medical Education, and John A. Talbott, MD, Clinical Professor of Psychiatry

Research: Bruce E. Jarrell, MD, Executive Vice Dean, and Curt I. Civin, MD, Associate Dean for Research, and Director, Center for Stem Cell Biology & Regenerative Medicine

Clinical Care: Frank M. Calia, MD, MACP, Vice Dean for Clinical Affairs, and William Tucker, Chief Corporate Officer, University Physicians, Inc.

Community Outreach & Service: Claudia R. Baquet, MD, MPH, Associate Dean for Policy & Planning, and Director, Program in Minority Health & Health Disparities Education & Research, and Jennifer B. Litchman, MA, Assistant Dean for Public Affairs

Finance/Philanthropy: Gregory F. Handlir, MBA, Senior Associate Dean for Resource Management, and Dennis Narango, MA, Associate Dean for Development

Photo by Tom Jenski



School of Medicine Board of Visitors Welcomes Six New Members at Fall 2009 Meeting

School of Medicine Board of Visitor (BOV) members attended their annual fall meeting on October 29, 2009. The meeting took place at the BioPark II Building, where the members were able to tour the Institute for Genome Sciences and hear a presentation from the institute's director, Claire Fraser-Liggett, PhD, as well as meet and greet the six new members who recently joined the BOV. Melvin Sharoky, MD, chaired his last meeting as he stepped down from his position as chair in December. He will remain active on the board for the remainder of his term. Michael Cryor is the new chair.

New Members:



ROBERT C. EMBRY, JR., ESQ.—Mr. Embry has been the president of The Abell Foundation for 22 years. He has worked in public service at the city and state levels in education and urban planning and was assistant secretary of the federal Department of Housing and Urban Development from 1977 to 1981.



ROBERT E.
FISCHELL, ScD—
Dr. Fischell, president of Fischell
Biomedical, LLC, is a physicist, inventor and holder of more

than 200 US and foreign medical patents. He invented the implantable insulin pump, numerous coronary stents and two extraordinary feedback systems that provide early warning of epileptic seizures and heart attacks. Dr. Fischell and his wife, Susan, served as the chairs of the School of Medicine's 2009 Fund for Medicine Gala.

HARRY C. KNIPP, MD, FACR—Dr. Knipp is a 1976 graduate of the University of Maryland School of Medicine and repre-



sents four straight generations of Maryland medical graduates, dating back to his great grandfather of the Class of 1887. He is the

founding member of Advanced Radiology, PA, the largest private medical practice in the state.

MARTIN I. PASSEN,
MD—Dr. Passen, the current
president of the
University of
Maryland Medical Alumni Association, graduated



from the University of Maryland School of Medicine in 1990. He served as clinical assistant professor of medicine from 1994 to 2004. He is founder and director of the Center for Medical Weight Loss.

TIMOTHY J. REGAN—Mr. Regan is a senior vice president with The Whiting-Turner Contracting Company. He helped

expand Whiting-Turner's presence in the life sciences industries, including biotechnology, pharmaceutical processing and

processing and various federal laboratory clients.





he served as a board member for ten years, including five years as treasurer. Dr. Taylor graduated with honors from the University of Maryland School of Medicine in 1975. He is the founder and president of Taylor Medical Group, a single specialty neurology group medical practice dedicated to providing quality neurological care to people in central Maryland.



BOV Members at the Fall 2009 Meeting

(L-R) Top: Daniel Wagner, Ronald Goldner, MD, Ronald Geesey; Middle: Harry Knipp, MD, FACR, Robert Fischell, ScD, Martin Passen, MD, William Davidow, Esq., and Richard Taylor, MD, FAAN; Bottom: John Kelly, Robert Embry, Jr., Esq., Edward Magruder Passano, Jr., Melvin Sharoky, MD, Dean E. Albert Reece, MD, PhD, MBA, Timothy Regan, Frank Carlucci, Ill. Not pictured: Peter Angelos, Esq., Morton Bogdonoff, MD, Joy Bramble, Michael Cryor, Stewart Greenebaum, Willard Hackerman and Carolyn McGuire

Photo by Tom Jenski

Tobacco Smoke Exposure Before Heart Transplantation May Increase the Risk of Transplant Failure

Study provides first direct evidence of cigarette smoke's role in the death of transplanted hearts

A study conducted at the School of Medicine provides the first direct evidence that cigarette smoke exposure prior to a heart transplant in the donor, recipient, or both, accelerates the death of a transplanted heart. The study, published this month in the journal *Circulation*, showed that tobacco smoke leads to accelerated immune system rejection of the transplanted heart, heightened vascular inflammation and increased oxidative stress, and a reduction in the transplanted organ's chance of survival by 33 to 57 percent.

The study, conducted in rats, involved exposure to levels of tobacco equivalent to that of a habitual, light-to-moderate-range smoker and included comparisons

between smoking and non-smoking donors and recipients. "Our research shows that if a heart donor has been a habitual smoker, and you put that heart in a non-smoking recipient, that heart won't work, it will be rejected," said the study's senior author, Mandeep R. Mehra, MBBS, professor, Department of Medicine, and head of the Division of Cardiology. "This study shows beyond a shadow of a doubt how smoking affects transplantation."

This is the first study to look at the impact of smoking in heart donors, according to the principal investigator, Ashwani K. Khanna, PhD, associate professor, Department of Medicine. "There are already many risk factors that physicians and surgeons must consider when they try to match a donor with a recipient. This study makes clear that smoking in both the donor and the recipient should also become a part of the risk calculus in organ donation," said Dr. Khanna.

Studies from the mid-1990s have shown a connection between cigarette smoking and cardiovascular diseases. More recent studies have found a connection between smoking and the outcome of heart and other organ transplantation in recipients who resumed smoking after their transplants.

"The effects of smoking on heart health are well known and no surprise," said Dean E. Albert Reece, MD, PhD, MBA. "The surprise in this study is the extent of the deleterious effects of smoking on the transplanted heart. Our researchers have discovered a significant connection that may lead to new ways to help patients with heart transplants live longer."



Mandeep R. Mehra, MBBS



Ashwani K. Khanna, PhD

In this study, groups of donor and recipient rats were exposed to tobacco smoke while a control group of donors and recipients did not undergo any tobacco smoke exposure. Drugs are routinely used to prevent the body's immune system from attacking a transplanted organ. To better isolate the effect of smoking exposure from such factors as immunosuppression, the recipient rats in this study were not given medications to suppress their immune systems.

Transplanted hearts not exposed to tobacco were rejected an average of eight days after transplantation. Donor hearts exposed to cigarette smoke were rejected at

five days, while recipient smoke exposure elicited rejection at four days. Hearts in which both the donor and recipient were exposed to tobacco smoke lasted just three days before the immune response began destroying the transplant.

The researchers underscore that reduced survival occurred regardless of whether the heart donor or recipient smoked. "This accelerated trajectory of organ loss is similar whether tobacco smoke exposure occurred in donors, recipients, or both before cardiac transplantation," said Dr. Mehra, who is also assistant dean for Clinical Services. Further, this reduced survival occurs in the midst of a cascade of processes that add up to a poor outcome: increased inflammation, immune system activation and the resulting destruction of the heart's muscular and vascular systems.

The researchers speculate that this cascade could be interrupted at the time of transplantation with focused drug intervention in the anti-inflammatory and antioxidant pathways. They suggest that an antioxidant such as n-acetyl cysteine or widely prescribed statins (anti-inflammatory drugs) could prove useful in inhibiting these adverse responses. Dr. Khanna says a study of these interventions is being planned.

This work was supported by a grant from the University of Maryland Statewide Health Network and a Tobacco-Related Diseases Research Grant through the Maryland Cigarette Restitution Fund Program. 📶



Michael Terrin, MD, CM, MPH

SOM Receives \$30 Million Grant to Coordinate a Consortium of National Stem Cell Experts

University of Maryland School of Medicine researcher will lead the coordinating center of our nation's most prominent scientists in the field of stem cell research. Michael L. Terrin, MD, CM, MPH, professor, Department of Epidemiology & Preventive Medicine, was chosen by the National Heart, Lung and Blood Institute (NHLBI) to coordinate the research of this consortium of national experts,

which will be called the NHLBI Progenitor Cell Biology Consortium. The coordinating center will be funded by a \$30 million grant over seven years.

"This consortium was developed to bring together the best and brightest researchers from around the country, in the new and rapidly advancing field of stem and progenitor cell biology. They come from several specialties—cardiology, hematology and pulmonary medicine. All are doing cutting edge research in this exciting new field," said Dr. Terrin.

Dean E. Albert Reece, MD, PhD, MBA, stated, "We have the full resources of the University of Maryland School of Medicine available for the benefit of this project, including a world-class Center for Stem Cell Biology and Regenerative Medicine."

Stem cells are uncommitted cells that can change into many types of mature functional cells and can divide indefinitely. Progenitor cells, on the other hand, are partially committed as far as the kinds of cell they can

become and how many times they can divide. Once stem cells start to commit to a cell type, they create progenitor cells. One major goal of this research consortium is to use these stem and progenitor cells as regenerative therapy to replace damaged tissues and organs.

"The resources here are wonderful. I know of no other university or medical school that I would rather have behind my efforts on behalf of this important project."

The researchers will share their strategies and techniques to identify and characterize how these cells differentiate. Together they will address the challenges of discovering new potential therapies. The NHLBI believes that by sharing information and working together across traditional boundaries, consortium members will advance the field of stem cell and progenitor cell biology at a faster pace and realize the potential for new clinical therapies even sooner.

Dr. Terrin and his colleagues on campus have the formidable task of organizing the collaborative efforts of the nine different research hubs in the consortium. Dr. Terrin divides the responsibilities into three areas: general administration, computer systems and biological information science. "Our team of nationally known experts and the facilities at the University of Maryland School of Medicine made our proposal to coordinate this consortium unique," Dr. Terrin said. "The resources here are wonderful. I know of no other university or medical school that I would rather have behind my efforts on behalf of this important project."

The consortium investigators will need to communicate by voice, video-conference and digital media, as well as have 24-7 access to highly secure computer facilities to work on their

projects together. The research coordination team led by Dr. Terrin is composed of individuals who can ensure that the information they put on the system, as well as records of samples and tissues they put in registries (physical and virtual), will be maintained. They will ensure that important information from sources outside the consortium is continually updated. Dr. Terrin's team will seamlessly coordinate conference calls, meetings and funding for their research projects and help the investigators publicize their results of their research.

Curt Civin, MD, associate dean for Research, professor, Department of Pediatrics, and director of the Center for Stem Cell Biology and Regenerative Medicine stated, "Our team is responsible for computer systems that operate at the highest level of regulatory standards, has doctoral level expertise in biological sciences and decades of experience in the administration of multi-center collaborations as well as an Oscar-winning production company, MedSchool Maryland Productions, which will help researchers with video presentations for the public."

Dr. Reece added, "Running the consortiums coordinating center here is ideal since the state of Maryland provides the perfect supportive environment for stem cell research through the Maryland Stem Cell Research Fund."

Doctors Perform Four-Way Kidney Transplant Surgery

ransplant surgeons at the University of Maryland have successfully completed a four-way kidney exchange involving eight patients from four states, with the youngest recipient a 10-year-old Catonsville boy and the oldest a 74-year-old man from Virginia Beach, Virginia.

All four of the living donors had a kidney removed through a single incision through their navel, which speeds recovery and leaves virtually no scar. Univer-

sity of Maryland surgeons have performed

more of these single-incision laparoscopic

surgeries than any hospital in the country, and this is the first time that the technique has been used in a multiple kidney exchange. All of the donors and recipients are recovering well following the surgeries, which took place on Nov. 2 and Nov. 3, 2009.

Stephen T. Bartlett, MD, professor and chair, Department of Surgery, who performed two of the transplants, said, "This large living donor kidney exchange requires extensive planning and coordination, but it provides great benefits to people with kidney failure who do not have a compatible living donor. We've been a national leader in kidney transplantation and laparoscopic donor kidney removal for many years, and our singular focus has always been on providing the highest quality care and the best outcomes for patients." Dr. Bartlett also is surgeon-in-chief at the Uiversity of Maryland Medical Center (UMMC).

Kidney exchanges, or swaps as they are sometimes called, allow living donors and their intended recipients to proceed with surgery, even if their blood and tissue types don't match. They are paired with other donors and recipients who are incompatible with each other but are a match with others in the group. "Four people who otherwise would not have had matching donors now have lifesaving kidneys—from people they've never met. This transplant chain was set in motion by a man who simply wanted to donate a kidney to someone in need," said Matthew Cooper, MD, associate professor, Department of Surgery, and director of kidney transplantation at UMMC, who oversaw the series of surgeries.

Only a handful of hospitals in the country have performed large kidney transplant exchanges such as this one. The procedures, which took place over two days in four operating suites at the medical center, required extensive coordination and planning. The kidney exchange started with a 59-year-old man from a

Edward Behn, 59
WESTBORO, MA

Anonymous Woman
MARYLAND

FAMILY FRIEND

Anonymous Man
MARYLAND

FAMILY FRIEND

Sean Menard, 10
CATONSVILLE, MD

Carl Lichtman, 64
LAKE WORTH, FL

Bob Loudermilk, 74
VIGGINA BEACH, VA

suburb of Boston, who offered to donate a kidney to someone in need. His kidney was given to a Maryland man who was not a match with his intended donor, a woman who is also from Maryland. The woman was matched with a 10-year-boy from Catonsville whose kidneys were failing because of a congenital abnormality. A friend of the boy's family, a 50-year-old lawyer from Catonsville, gave his kidney to a 64-year-old Florida man, whose wife was a donor for 74-year-old man from Virginia Beach. The Virginia man's son-in-law will be a "bridge" donor, who will give his kidney to a yet-undetermined recipient at a later date, which will allow the chain of transplants to continue.

About one third of patients who have a relative or friend willing to donate are not able to receive the kidney because of blood type or tissue-type incompatibility. Kidney exchanges increase the pool of donors and allow incompatible pairs to be matched with

other pairs in the same situation.

Benjamin Philosophe, MD, PhD, associate professor, Department of Surgery, notes that patients who receive kidneys transplanted from living donors fare better than those who receive kidneys from deceased donors. "There is a significant difference in outcomes with living-donor kidney transplants. There is also a severe shortage of kidneys from deceased donors, with people waiting three to five years to get a kidney. So, living donor transplants are often the best option for patients. With these types of kidney exchanges, we can dramatically increase the availability of donor kidneys and help many more people who need a transplant," he stated. Dr. Philosophe also is director of the Division of Transplantation at UMMC.

In April 2009, University of Maryland surgeons began to remove donor kidneys through an opening in the navel, becoming the first hospital in Maryland and only the third hospital in the United States to use this approach. Since then, about 30 of these single-incision surgeries have been performed at the University of Maryland. In the procedure, surgeons insert a camera and two instruments into the specially designed port in order to separate the kidney from its attachments in the abdomen. The kidney is removed through the same opening, which is covered with a tiny bandage. Donors are discharged in a day or two.

More than 82,000 people waiting for kidneys are on the official list maintained by the United Network for Organ Sharing. Last year, 16,517 received transplants—5,967 from living donors.

University of Maryland Medical System Celebrates 25th Anniversary as a Private, Non-Profit Health System

The University of Maryland Medical System (UMMS) celebrated the 25th anniversary of its transformation from an aging, state-run hospital in 1984 to a successful private, non-profit network of 11 academic, community and specialty hospitals throughout Maryland with more than 15,000 employees and almost \$2.5 billion in annual revenue.

The celebration included a dinner gala and concert, featuring Sheena Easton, at the Hippodrome's France-Merrick Performing Arts Center on November 14, 2009.

"The transformation and growth of our medical system is an amazing success story," said Robert A. Chrencik, president and CEO of UMMS. "Privatization gave us the flexibility to be innovative, the ability to reinvest cash flow from hospital operations into clinical programs and access to additional sources of funding, such as the bond market, so that we could revitalize our facilities and technology."

Mr. Chrencik, who has been with the medical system during its entire 25-year history, added, "Today we have some of the most sophisticated hospital facilities and advanced technology in the region and we have been able to build a world-class workforce, including some of the finest physicians anywhere, due to our strong partnership with the University of Maryland School of Medicine, which is ably led by Dean E. Albert Reece."

The transformation took place when the Maryland General Assembly and then-Governor Harry Hughes enacted a law in 1984 enabling the University of Maryland Hospital to change its governance from the state to a private, non-profit corporation led by a board of directors comprised of top area business, legislative and community leaders.



(L-R) Ellen & Bob Chrencik and Al & Sharon Reece celebrate together at UMMS' 25th Anniversary event.

At that time, the hospital, one of America's oldest teaching hospitals, faced constant financial challenges, had outdated facilities and struggled to keep up with innovations in patient care and technology. Still, this was a bold idea since only one other teaching hospital, Shands Hospital in Florida, had ever made the switch from state governance to a privately run entity.

Today, the former University Hospital is the University of Maryland Medical Center—the academic centerpiece of the medical system. It is a state-of-theart, 731-bed hospital with almost 37,000 annual admissions and more than 6,000 employees. It is known for innovation and excellence in many specialties, including trauma and critical care, cancer care, cardiac care and women's and children's services. Since 1984, ten more hospitals have joined the system to create a coordinated network of facilities, each with specific niches and strengths, devoted to providing the highest quality of care. "We touch the lives of Marylanders

every day—in the Baltimore metropolitan area, on the Eastern Shore, in Anne Arundel and Harford Counties and across the state," said Mr. Chrencik.

"I am very grateful for what we were able to accomplish with our dedicated team, superior clinical programs, and strong partnerships with government, corporate and community leaders," said Morton I. Rapoport, MD, UMMS' first president who led the organization until 2003. He added, "The fundamental challenge in the early days was to change the culture of the hospital into an enterprising, competitive and innovative institution and to have enthusiastic physicians, nurses and staff who would support and become committed to that vision. I believe that vision was achieved."

"The University of Maryland Medical System is a treasured resource for the state, providing excellent health care and generating \$3.5 billion in economic activity. We are very proud of the organization's accomplishments and dedication to the health of our citizens," stated Maryland Gov. Martin O'Malley.

Mr. Chrencik says he expects UMMS to continue to grow statewide, beyond its current 11-hospital system, to continue to enhance its capabilities and ultimately to be recognized as one of the top academically centered hospital systems in the United States. "I want to thank all the people who have made a difference in getting us to where we are today—our board, our employees, our patients, the community and the physicians who provide the outstanding care at all of our hospitals, including those on the School of Medicine faculty. They are the people who deserve credit for our success and will be central to our continued success moving forward."

SOM Students Served Up a Happy Thanksgiving to Their Hungry Neighbors

tudents from the University of Maryland School of Medicine held their 20th annual "Project Feast" on Thursday, November 26, 2009. The Thanksgiving Day event provided a hot holiday meal to 400 homeless and disadvantaged persons in the West Baltimore neighborhood near campus.

Project Feast is a Thanksgiving tradition sponsored by the University of Maryland, Baltimore, the University Student Government Association, the Medical Alumni Association and the School of Medicine Student Council. Students, faculty, staff and friends of all six University of Maryland, Baltimore schools gathered at Booker T. Washington Middle School to assist with the event. As in recent years, a line of people waited outside to receive a hot meal. In addition to serving the Thanksgiving meal, students also collected clothing, toiletries and non-perishable goods to be distributed after dinner.

"It's exciting to see how many students get involved either beforehand by collecting donations, or on the day of Thanksgiving to help serve the meal," said Project Feast coorganizer Beth Lidinsky, a second-year med student. "Plus many students and staff bring along family members, so it really is a large group of people giving back to our local community."

Co-organizer Katie Duncan, Ms. Lidinsky's classmate in the Class of 2012, added, "Project Feast is such an exciting opportunity, because it allows students from all of the University of Maryland graduate schools to work together to make sure no one in our community is left without a place to go on Thanksgiving."

Overall, more than 100 people participated in organizing the event, serving the meals and distributing the clothing and canned food to the 400 attendees.



(L-R) Beth Lidinsky and Katie Duncan, medical students from the Class of 2012, organized this year's Project Feast.



A happy Project Feast recipient waits in line for his hot

{STUDENT PROFILE}

Serving the Underserved is the Highlight of Med School for Nidhi Goel

Among the many opportunities available for students at the School of Medicine is the chance to study internationally. Fourth-year Nidhi Goel took advantage of this opportunity in between her first and second year of medical school when she was awarded the Doris Duke Clinical Research Fellowship, which enabled her to work with Christopher Plowe, MD, professor of medicine. She spent four weeks in Dr. Plowe's laboratory in Baltimore, followed by another four weeks working with him and his team in Mali, West Africa.



"I spent the entire time at the rural clinic site where Dr. Plowe and his group were conducting a Phase-2 clinical trial of a malaria vaccine," Ms. Goel remembered. "All of the physicians, pharmacists, laboratory staff and data analysts were Malian. I worked alongside them to help conduct the trial. Although the clinic was built only for the purpose of research, it was the only site for hours in any direction where people had access to doctors and was, thus, the main provider of medical care in the area. So I also had the chance to work with the physicians treating patients who came to the door."

The experience had a profound effect on her. "It gave me a new appreciation for the art of medicine, and for the provision of medical care in a desperately resource-poor setting," she said. "Those doctors make a significant sacrifice to practice in that setting, but do so because they believe in what they are doing. They practice without the benefit of even basic imaging. History and physicals were of paramount importance. I watched two children die in front of me, due to ailments that would have been easily treated in another setting. That image is forever burned in my memory. It makes me realize how much power we have in the US with resources at our disposal, and drives my desire to bring those resources to underserved populations, both here and abroad."

In between raising funds so she can take another trip to Mali in the spring, and applying and interviewing for residencies in her chosen specialty of Med-Peds, Ms. Goel worked in rural medicine again this year. It was part of her AHEC rotation, eight weeks during which fourth-year students practice in underserved areas. Four of her weeks were spent in Western Maryland; the other four weeks at the Crow/Northern Cheyenne Indian Health Service Hospital in southeastern Montana, which in many ways was reminiscent of her time in Mali.

"Again I encountered physicians who were sacrificing of themselves to practice in a much more resource-poor environment than I had ever encountered," said Ms. Goel. "As in Mali, we had patients with no running water, no electricity and extremely limited means. We didn't charge for any of the services provided at our facility, but the flip-side was that the patient population was largely limited to getting the only kind of care that could be provided directly at our hospital. Any other services were often out of reach, unless a medical issue was going to imminently cost them life, limb or vision. It astounds me that there are so many striking similarities between a rural clinic in West Africa and a site here in the United States."

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ave the D NEW WAVES IN MEDICINE 2010 FUND FOR MEDICINE Saturday, March 27, 2010 0:30 pm until 12 midnight The Baltimore Marriott Waterfront FOR MORE INFORMATION, PLEASE CONTACT MARY CAIN AT MCAIN@SOM.UMARYLAND.EDU.