Alpha Omega Alpha Honor Medical Society
Founded by William W. Root in 1902

Editor Richard L. Byyny, MD
Editor Emeritus (in memoriam) Robert J. Glaser, MD
Associate Editor and Managing Editor (in memoriam) Helen H. Glaser, MD
Managing Editor Debbie Lancaster
Art Director and Illustrator Jim M’Guinness
Designer Erica Aitken

Editorial Board
Jeremiah A. Barondess, MD New York, New York
David A. Bennahum, MD Albuquerque, New Mexico
John A. Benson, Jr., MD Omaha, Nebraska
Richard Bronson, MD Stony Brook, New York
John C.M. Brust, MD New York, New York
Charles S. Bryan, MD Columbia, South Carolina
Robert A. Chase, MD Stanford, California, and Jaffrey, New Hampshire
Henry N.Ciaman, MD Denver, Colorado
Fredric L. Cee, MD Chicago, Illinois
Jack Coulehan, MD Stony Brook, New York
Ralph Crawshaw, MD Portland, Oregon
Peter E. Danis, MD Baltimore, Maryland
Lawrence L. Faltz, MD Sleepy Hollow, New York
Faith T. Fitzgerald, MD Sacramento, California
Daniel Foster, MD Dallas, Texas
James G. Gamble, MD, PhD Stanford, California
Dean G. Gianakos, MD Lynchburg, Virginia
Jean D. Gray, MD Halifax, Nova Scotia
David B. Hellmann, MD Baltimore, MD
Pascal James Imperato, MD Brooklyn, New York
John A. Kastor, MD Baltimore, Maryland
Michael D. Lockshin, MD New York, New York
Kenneth M. Ludmerer, MD St. Louis, Missouri
Joseph Marr, MD Broomfield, Colorado
Stephen J. McPhee, MD San Francisco, California
Robert H. Moser, MD Madera Reserve, Arizona
Francis A. Neelon, MD Durham, North Carolina
Eric Pfeiffer, MD Tampa, Florida
William M. Roggoway, MD Stanford, California
Shaun V. Ruddy, MD Richmond, Virginia
Bonnie Salomon, MD Deerfield, Illinois
John S. Sergent, MD Nashville, Tennessee
Marjorie S. Sirdridge, MD Kansas City, Missouri
Clement B. Sledge, MD Marblehead, Massachusetts
Jan van Eys, PhD, MD Nashville, Tennessee
Abraham Verghese, MD, DSc Stanford, California
Steven A. Wartman, MD, PhD Stanford, California
Carol A. Aschenbrener, MD Association of American Medical Colleges Washington, DC
Lynn M. Cleary, MD State University of New York Upstate Medical University
Richard B. Gunderman, MD, PhD Indiana University School of Medicine
Alan G. Wasserman, MD George Washington University School of Medicine and Health Sciences
Suzann Pershing, MD Stanford University
Alicia Alcamo, MD The Ohio State University College of Medicine
Christopher Clark University of Mississippi School of Medicine
Tonya Cramer, MD Chicago Medical School at Rosalind Franklin University of Medicine & Science
Richard L. Byyny, MD Executive Director Menlo Park, California

Be Worthy to Serve the Suffering

Officers and Directors at Large
C. Bruce Alexander, MD President Birmingham, Alabama
Ruth-Marie Fincher, MD Immediate Past President Augusta, Georgia
John Tooker, MD, MBA President-Elect Philadelphia, Pennsylvania
Joseph W. Stubbs, MD Secretary-Treasurer Albany, Georgia
Robert G. Atnip, MD Providence, Rhode Island
N. Joseph Espat, MD Seattle, Washington
Douglas S. Pauw, MD Sheryl Pfeifer, MD Columbus, Ohio
Alan G. Robinson, MD Los Angeles, California

Medical Organization Director
Carol A. Aschenbrener, MD Association of American Medical Colleges Washington, DC

Counselor Directors
Lynn M. Cleary, MD State University of New York Upstate Medical University
Richard B. Gunderman, MD, PhD Indiana University School of Medicine
Alan G. Wasserman, MD George Washington University School of Medicine and Health Sciences

Coordinator, Residency Initiatives
Suzann Pershing, MD Stanford University

Student Directors
Alicia Alcamo, MD The Ohio State University College of Medicine
Christopher Clark University of Mississippi School of Medicine
Tonya Cramer, MD Chicago Medical School at Rosalind Franklin University of Medicine & Science

Administrative Office
Richard L. Byyny, MD Executive Director Menlo Park, California

Copyright © 2012, by Alpha Omega Alpha Honor Medical Society. The contents of The Pharos can only be reproduced with the written permission of the editor. (ISSN 0031-7179)

Circulation information: The Pharos is sent to all dues-paying members of Alpha Omega Alpha at no additional cost. All correspondence relating to circulation should be directed to Ms. Debbie Lancaster, 525 Middlefield Road, Suite 130, Menlo Park, California 94025. E-mail: info@alphaomegaalpha.org

POSTMASTER: Change service requested: Alpha Omega Alpha Honor Medical Society, 525 Middlefield Road, Suite 130, Menlo Park, CA 94025.

www.alphaomegaalpha.org
University of Central Florida College of Medicine in Orlando, Florida—Zeta Florida

Florida International University Herbert Wertheim College of Medicine in Miami, Florida—Epsilon Florida

Texas Tech University Health Sciences Center Paul L. Foster School of Medicine in El Paso, Texas—Theta Texas.

![Bar chart showing chapters by decade](chart.png)
New chapters for Alpha Omega Alpha

Richard L. Byyny, MD, FACP

The Board of Directors of Alpha Omega Alpha Honor Medical Society (AΩA) has approved new chapters of the society at three new medical schools that recently received full accreditation from the Liaison Committee on Medical Education (LCME). They are:

- Florida International University Herbert Wertheim College of Medicine in Miami, Florida—Epsilon Florida
- The University of Central Florida College of Medicine in Orlando, Florida—Zeta Florida
- Texas Tech University Health Sciences Center Paul L. Foster School of Medicine in El Paso, Texas—Theta Texas.

These new chapters join the 120 active AΩA chapters in the United States and Lebanon. These are the first newly accredited medical schools in the United States since Florida State University School of Medicine in 2005.

The bar chart illustrates the growth in new AΩA chapters since our society was established by William Root in 1902.

Founding deans John Rock, MD, of Florida International University Wertheim College of Medicine; Deborah German, MD, of University of Central Florida College of Medicine; and J. Manuel de la Rosa, MD, of the Texas Tech University Health Sciences Center Paul L. Foster School of Medicine each requested establishment of an AΩA chapter in their new medical schools. Schools may petition for an AΩA chapter charter once they have received provisional LCME accreditation status, and may be granted charters once the school has been granted full LCME accreditation.

Each of these new medical school deans requested chartering of an AΩA chapter because they felt that their schools’
values align with those of ΑΩΑ: academic achievement, leadership, professionalism, service, teaching, and research. They also wanted their medical schools to be a part of the ΑΩΑ community and to learn from established chapters how to continually evolve and improve their schools. They wanted their students to be recognized as exceptional and qualified students who meet the same high expectations and standards of medical students in other established schools.

The ΑΩΑ board’s Immediate Past President Ruth-Marie Fincher, MD, and I conducted rigorous site visit evaluations of each school. We confirmed that these medical schools had met the society’s constitutional and additional requirements and recommended to the Board of Directors that an ΑΩΑ chapter be chartered in each school. The ΑΩΑ Board of Directors unanimously approved granting each school a charter for an ΑΩΑ chapter once each school had received full LCME accreditation. All three schools have nominated medical students for membership in the inaugural ΑΩΑ class for their schools.

The ΑΩΑ Constitution provides the following guidance for establishing new ΑΩΑ chapters:

**Article IX: New Chapters**

Section 1: A chapter may be chartered at a College or School of Medicine that meets the Society’s requirements and has received LCME accreditation. An application signed by the Dean and by at least six members of the Faculty of Medicine who are members of Alpha Omega Alpha Honor Medical Society shall be sent to the President along with full information about the school’s financial status, admission criteria, curriculum, faculty, and scholarship aid. The President will refer the application to the Committee on New Chapters for evaluation of the application and to make a site visit to the school. Upon receipt of a favorable report from the Committee on New Chapters, the President shall submit the application and recommendation to the full Board of Directors. If the Board of Directors approves the application, the proposed charter shall be granted, and the school may appoint a councilor and nominate junior and senior members after the date of the granting of the charter. The Councilor and the six members signing the application in collaboration with the office of the Dean will make nominations for student membership.

Section 2: Form of Charter. The form of the granting of charters shall be as follows:
The Pharos/Summer 2013

“Alpha Omega Alpha Honor Medical Society, by virtue of the authority granted to it by the State of Illinois, herewith grants to the power to establish a chapter of this Society subject to the Constitution governing said Society. In token of these presents are herewith affixed the signatures of the President and the Secretary, with the corporate seal of the Society.”

Requirements for new medical schools requesting an ΩΑΩ charter consist of:

- Provisional accreditation (to initiate the request) followed by full accreditation (to approve the charter) by the LCME
- A letter of application from the dean of the medical school
- The names of six or more faculty members who are active members of ΩΑΩ, with their CVs
- An estimate of the number of full-time faculty who are members of ΩΑΩ
- A copy of the school’s College of Medicine Bulletin
- The plan for the school’s support of the chapter once established
- A plan for election of students using the criteria of academic achievement to determine eligibility, and documentation of leadership, professionalism, service, teaching, and scholarship
- The names of the founding councilor and secretary-treasurer

The founding Councilors and Secretary-Treasurers of the schools are:

- Florida International University—Councilor J. Patrick O’Leary, MD, and Secretary-Treasurer Robert Dollinger, MD
- University of Central Florida—Councilor Maria Cannarozzi, MD, and Secretary-Treasurer Colleen Moran-Bano, MD
- Texas Tech Paul L. Foster School of Medicine—Councilor Dan Blunk, MD, and Secretary-Treasurer Shaked Laks, MD.

New medical schools

New medical schools are being developed based on the perception that we will be facing a physician shortage by 2020, although the only generally agreed-upon shortage is projected to be in primary care. At the same time, the number of underserved areas and people in the United States is significant, and new medical schools could supply at least part of that need. New medical schools hope to tap the large available pool of highly qualified medical school applicants to meet the increase in the number of physicians needed to serve a growing and aging population. These new schools and current medical schools that are expanding enrollment should provide an increase of about eighteen percent in new physicians over the next ten years. In addition to these recently accredited medical schools there are fifteen additional medical schools that are being developed. They are listed in the table. Some of these schools have initiated the process to establish an ΩΑΩ chapter when they are fully accredited by the LCME.
Most of the new schools are publicly funded; states hope in this way to increase the number of primary care physicians who will provide care to their underserved populations. Some new schools are associated with large research universities, and most are connected to networks of teaching hospitals with established residency programs where they can provide the clinical experiences for the schools and their students.

While there are many skeptics about the perceived need for more doctors, the new schools do appear to be innovative and different from traditional medical schools and seem to be enrolling a cohort of students interested more in primary care and caring for the underserved.

The development of these new medical schools is very interesting. While they certainly must comply with rigorous LCME requirements, new schools are not burdened by historical institutional academic culture and practices that often impede educational innovation. The physical facilities at the schools we visited are very impressive, as are the combination of the longstanding educational concepts and patient-oriented clinical curricula used in successful medical schools with approaches that include extensive simulations and technology. In anatomy, for example, all cadavers have a full body CT scan with the images available during dissection to supplement gross anatomy learning; anatomy is frequently taught in a team with an anatomist, radiologist, and pathologist; cadavers are effectively utilized to teach and evaluate most common medical procedures.

These new medical schools feature excellent problem-based team learning. Ethics, humanities, and professionalism are integrated throughout the curriculum. Students are involved early with the people and communities served by the institution.

Although there are many examples of traditional and innovative curriculum and programs in these new medical schools, I will highlight a few that I found interesting:

- The Florida International University Wertheim College of Medicine’s curriculum requires a longitudinal, interprofessional four-year community health experience starting in the first year, utilizing the Green Family Foundation Neighborhood HELP program. Health care teams made up of medical students, nursing students, law students, and a preceptor meet regularly with a poor family, including children, parents, and grandparents, to understand their health concerns, culture, and expectations. The communities requested
and the school provided a medical van service to supplement the team-based health learning. It appears that this program has not only helped educate the students and families, but has decreased emergency room visits from the communities.

- The Texas Tech Paul L. Foster School of Medicine has made special efforts to enhance the diversity of the class by admitting students from groups in the community that are underrepresented in medicine and/or who come from disadvantaged backgrounds. The school invests four percent of its endowment for student scholarships to minimize student educational indebtedness. The program requires four years of Spanish language, with an emphasis on medical Spanish, to prepare its students to better serve the people of El Paso and southwestern Texas. Many of these students acquired Spanish as their second language; they confirm their communication competence with Spanish-speaking patients.

- The dean of the University of Central Florida College of Medicine recognized the need to enroll outstanding students in the first medical school class to establish the excellence in the student body. She raised private funds from the community to provide full four-year scholarships for all forty-one of the incoming founding class. The medical school is planned as the center of a new medical city in Orlando on 7000 acres that will include the medical school, University Hospital, VA Hospital, Children’s Hospital, Burnett School of Biomedical Sciences, health center library, a satellite Florida State Dental School campus, a biomedical research park, housing and commercial development, and K-12 schools.

In all the medical schools we visited, we found the commitment of the faculty and administration to be outstanding. Although the students at these schools took a calculated risk in choosing to attend a new medical school, they have been rewarded and take part in the process of shaping the curriculum and expectations, as well as setting standards for academic excellence, professionalism, service, and learning. These students have demonstrated exceptional leadership in their roles as the first class in a new medical school with a new curriculum. By national standards of GPA, MCAT, and personal qualities these inaugural students were well prepared academically to enter any medical school. They have demonstrated their competence through NBME standardized exams Part 1 and 2 and in their placements in residencies. Many of them had taken nontraditional routes to enter medical school and most are clearly community oriented. Many are from the communities the new schools hope to serve.

There are currently another fifteen medical schools in the process of receiving full LCME accreditation, as noted in the table. Many of them have requested information on how to apply for chartering an ΩΩA chapter at their institutions.

We welcome the new ΩΩA chapters, their councilors, secretary-treasurers, chapter members, and newly elected medical students. We also look forward to working with the other new medical schools in establishing active chapters of ΩΩA.
The God particle, personalized medicine, and the tragedy of the commons

Kenneth Brigham, MD, and Michael M. E. Johns, MD
Technology can do some very complex and difficult things. Although it has taken almost half a century to track down, the discovery of the boson that Peter Higgs inferred as critical to understanding our world and its contents (so critical that it has been nicknamed the God particle) was announced last year on the fourth of July. Dr. Higgs and his colleagues probably didn’t anticipate in 1964 that discovering the physical evidence for their boson would have to await the dawn of a new millennium and would require construction of the Large Hadron Collider with a price...
You don’t trust me
But you must.
I hold the thread in one
The scissors in the other.
But which to use?
The hands, they know.
Master, disciple, muse
Not always fully mine.
Can I trust them myself?
Your soul cries out
In blood-red tones.
You tell them what to do.
In that place between fear and faith,
Your transference and mine
We meet, clasp hands
And . . . dance.

Fernando Riveron, MD

Dr. Riveron (ΩΩΩ, the Chicago Medical School, 1982) is a cardiothoracic surgeon and chief of cardiothoracic surgery at Aspirus Hospital in Wausau, Wisconsin. His address is: 425 Pine Ridge Boulevard, Wausau, Wisconsin 54401. E-mail: riveron715@gmail.com.
Illustration by Jim McGuinness.
A lot can happen in half a century. That is the span of time that separated my father’s graduation from Jefferson Medical College from my own. He was a product of his time—a young man born in the early 1930s. This was the time of the Great Depression, as the world recovered from World War I and unknowingly was preparing for World War II. He grew up in a working-class suburb of Philadelphia, populated by mostly Irish and German immigrants. He was second-generation Irish, the child of parents who created a life for themselves against great odds. His parents met while working in an armory in Philadelphia during World War I and his father went on to become a judge in the Orphan’s Court of Philadelphia. He lived at home throughout medical school and took the local transit (at that time an above-ground trolley) to and from his parents’ house to center city Philadelphia each day. He entered his residency at Graduate Hospital in Philadelphia, only to have it cut short when he was drafted into the Navy. He served on the USS Franklin Delano Roosevelt and remained a Navy man his entire life. During his medical training at Jefferson, he saw Dr. John Gibbon perform open heart surgery using the newly created heart-lung bypass machine and this event changed the course of his life forever.

In contrast, I was born in the 1970s—a bicentennial baby. I was the child of academics, and the youngest of six overachievers. My father was a cardiothoracic surgeon and my mother an artist. I grew up in a household filled with conversation of medicine and art, a lovely dichotomy. My parents were avid travelers; that element infused my entire childhood. My first memories are of Taiwan, where we spent the summer of my fourth year of life while my father worked at a teaching hospital. Many of the family stories were set in Africa, Taiwan, Vietnam, Haiti, or Guatemala. Our household was alive with conversation, debate, and opportunities for learning. I think
back fondly on my father, who encouraged our many and varied interests. I have stacks of articles he sent me over the years, highlighted and with Post-It notes attached pointing out some idea of interest or another. These articles were drawn from surgical texts, the New York Times travel section, and any other source you could imagine. An article on Iceland sits on top of one on necrotizing fasciitis on top of notes on the latest music trends. He supported all of my interests, but the one he and I shared most deeply was our love of surgery.

I graduated from Jefferson exactly fifty years after he did—we were the classes of 1956 and 2006, both proud members of Alpha Omega Alpha. Our differences reflect both the generations from which we came and the changing tides occurring in medicine. During his time, Jefferson was a male-only school. He spoke of the attendings herding “their boys” through anatomy lab. My class, on the other hand, was the first class in Jefferson history to be half male/female. Even our degrees reflected a shift in perspective. Because I am an MD/PhD he used to tease me that I was a doctor of the new millennium, and he was not entirely wrong.

When he trained, the patient services were smaller and patient stays were longer. There were no outpatient surgeries, no work hour restrictions, and many of our current sub-specialties were still a part of general surgery. His life spanned many historic events, which taught me that history is just your life or the life of others, seen in retrospect.

He went on to obtain specialty training in cardiothoracic surgery at Parkland Hospital in Dallas and was the fellow on call when John F. Kennedy was shot. He remembered seeing Jackie Kennedy entering the hospital carrying a piece of JFK’s skull and the grim looks on the faces of the treating team. He was on the team that treated Governor Connally, the other victim in the shooting. A few days later he was called to put a chest tube in Lee Harvey Oswald when he was taken to the hospital after being shot. Listening to him describe the technology at the time, I found it hard to fathom. Pacemakers were large tow-pers, Pacemakers were large tow-pers, large tow-pers, and had to be wheeled from room to room. Open-heart surgery was in its infancy and laparoscopy did not even exist. Due to his early exposure to cardiothoracic surgery, his fascination with these techniques dominated much of his career despite remaining a general surgeon at heart.

1. My dad in Dallas, where he did fellowship training, in 1963 and where and when he met my mom.
2. Graduate Hospital Philadelphia, circa 1950s.
3. My wedding, 3 weeks before he died, Boston.
5. Graduation from MGH Surgical residency, 2011 (2 months after he died.)
6. Philadelphia, 1950s, again during medical school or early residency.
7. Navy portrait, late 1950s/early 1960s, I think, around the time he served in active duty.
8. Rosebud Reservation, South Dakota — he worked on the Native American (Lakota/Sioux) reservation one summer, 1979.
What I respect the most about my father was that he did not fight change, but instead embraced the evolution of medicine and surgery. He greeted each new discovery with excitement, and he loved to see me growing up in a new system, different from what he had known. As a child of the new millennium, my training was in world of sub-specialization. Open-heart surgery was routine, transplants were common, and laparoscopic surgery was the norm. We characterized cancers from a molecular standpoint and targeted therapies were de rigueur. As an MD/PhD I was training to be a physician scientist, not a pure MD. This approach to medicine in combination with research and clinical trials was also different from his era. My world was dictated by evidence-based medicine gleaned from prospective, randomized trials. The contrasts between our eras were significant, but some things never change. Surgeons love surgery. Physicians love medicine. And doctors love their patients. On these matters, we were exactly the same.

He and I used to talk every few days about life, training, medical personalities, and hospital dynamics. He remained an active physician almost until the day he died. He stopped operating, but still remained administratively active and was a resource to the junior surgeons when they found themselves in uncharted waters. He loved his job—it kept him going every day—and this was a love we shared. As an academic, he was the one person who tirelessly read every article or chapter I ever published, regardless of the topic. He lovingly read (and highlighted) my PhD thesis—perhaps the only person besides me who read it in its entirety. I remember his joy on the day of my graduation: his daughter with two hoods. He listened with great interest as I described the adventure of residency interviews and the match, and he was there with me when I found out I was going to Massachusetts General Hospital for General Surgery. He reassured me that a girl from West Virginia could teach those Harvard folks a thing or two.

He relived his intern year as I described to him my experiences, from my first day in the OR to my first independent chest tube for a tension pneumothorax. He counseled me to remember the feelings of success and accomplishment of saving someone’s life, because they are rare and fleeting, and we will never forget the ones we harmed or could not help. As I progressed through my residency, I described to him my first hand-sewn anastomosis and my first Whipple. He shared in my every step along the way. He was my confidant, my advisor, and my unfailing cheerleader.

During my second year of residency, he was diagnosed with urothelial cancer after noting painless hematuria. This was followed by various procedures and treatments culminating in a cystectomy that was aborted when nodal disease was found intra-operatively. I was in the recovery room with him when he awoke, and I was the one who told him that he had not been resected. I remember vividly his comment that his odds were almost as grim as pancreatic cancer. As usual, even post-anesthesia he had a piercing mind. But he never focused on the negative, we moved on, and he willingly proceeded to chemotherapy as recommended. He did not make it to five years as he had predicted, nor did he make it to my residency graduation—one of his dreams. But he did make it to my wedding, the March of my chief year of residency. He walked me down the aisle, we had our first dance together, and he sent me off on my honeymoon with a hug and a kiss. When I saw him two weeks later, he was in the final stages of dying from liver failure—he deteriorated fast. I was with him for that last week, sitting at his bedside, telling stories, holding hands. And I was there in the room when he died.

I think 2011 was the biggest year of my life to date: I got married, my father died, I completed my chief year of surgical residency at MGH, I moved to Houston, I began my fellowship in Surgical Oncology at MD Anderson, and I got pregnant. I’m not sure there are many other life-changing events I could have crammed into a single year. It was intense, lovely, hard, sad, joyful, and a time of immense growth. In some ways having so many things going at the same time made each of them easier to handle. It is only now, later, with time for reflection that I am able to put all the pieces in their appropriate places. But it is still a work in progress.

When I think of my father, James Pius Boland, I will always see him as a selfless person, one who gave not only to his family, but to his community as well. He was a gentle leader, a quiet soul, a deep and piercing mind, and a sweet loving dad. Our worlds may have been very different, but they were also very much the same. He said watching me live my life helped him relive his own. We shared a common thread and a common set of experiences. He embraced the changing world, he encouraged me to be a part of the new thinking and approaches. He was my most die-hard advocate. He knew that my career, this path, would not have been possible during his time and he was so proud of how the world had changed. He encouraged me to chart my own course, to be true to my soul, and to be an individual. But he also reminded me to use my talents to serve others. I will never forget that his final words to me were a reminder to keep the faith and protect the vulnerable. These are words that I take to heart each and every day. I am certainly my own person, but I am also an outgrowth of the person he was. He made my path and my progress possible. And I am not alone, he played this same role for many trainees during his thirty years as a surgeon and educator in West Virginia, both residents and students alike. He was greatly respected, and also greatly loved. And it gives me consolation to know that his ripples live on, even though he no longer does.

The author's address is:
2601 Westheimer Road C607
Houston, Texas 77098
E-mail: genevieveboland@gmail.com
Slow, lazy day.
Dry heat.
The breeze blows gently.
This is the kind of heat that makes me want to lie in bed inside where it’s cool with a book and a Coke …
not kneel in a ditch as dry weeds poke between my toes next to the 19-year-old boy crying beneath, crushed beneath the heavy red metal.
I wipe his tears and shove a tube into his nose.
Machines work loudly and abrasively until the van is off his legs.
The young man is free and so is his life leaving with the thick warm blood that trickles down his cheek.

Rachel A. Davis, MD

Dr. Davis (A.O.A., University of Colorado, 2005) is a psychiatrist in private practice and attending psychiatrist in Psychiatric Emergency Services at Denver Health Medical Center. Her address is: 815 E. 5 th Avenue, Suite 200, Denver, Colorado 80230. E-mail: racheldavismd@gmail.com. Illustration by Erica Aitken
Improving surgery

The surgery morbidity and mortality conference
The author (AΩA, Harvard Medical School, 1975) is Professor and Chairman of the Department of Surgery at the University of New Mexico School of Medicine.

As both an educational and quality improvement tool, the surgery morbidity and mortality (M&M) conference is, at its core, an affirmation of the American surgical culture and heritage. However, with increased focus on the systematic underpinnings of medical errors, there is now less emphasis in our M&M on the performance of individuals. This shift away from individual accountability—the surgeon as “crew member” rather than “captain” of the ship—has appropriately identified systemic flaws in our clinical care systems as important determinants of adverse patient outcomes. But has the pendulum swung too far?

Origins of the surgery morbidity and mortality conference

The history of the surgery M&M conference has been summarized previously. Beginning with the end results system of Dr. Ernest A. Codman in Boston at the turn of the twentieth century and the Anesthesia Mortality Committee of the Philadelphia Medical Society in 1935, the M&M conference has evolved to become more educational than punitive, and to focus more on the system components of adverse patient outcomes than on the errors of individuals.

Evidence has replaced anecdote in the identification of optimal care pathways and protocols. Data from the medical literature combined with the statistical evaluation of local experience can be used to better assess the potential for institutional improvements in patient outcomes resulting from widespread acceptance of literature recommendations.

In my own institution, the University of New Mexico, the surgery M&M conference (officially called the Practice-Based Learning and Improvement Conference) under the leadership of Dr. Cynthia Reyes has become a kinder, more collegial entity than in the past. Attending surgeons now review the presentations of the residents several days before the conference, then provide specific critique of the identified learning points for each case and suggest classic literature references to supply context to the residents’ presentations. The conference moderators (a position rotated among interested faculty members) make concerted efforts to maintain a supportive, sensitive, and safe environment for the residents and faculty. If follow-up punitive action could result from issues raised in the conference, that discussion occurs in a confidential setting. The purposes of the conference are education and quality improvement rather than faculty peer review or resident disciplinary action.

But in analyzing adverse medical outcomes, how do we strike the right balance between the performance of individuals and the performance of systems (such as information systems, operating room equipment scheduling and staffing, and procedures)?

Residents need to learn to recognize the dynamic tension that exists between system and personal accountability for adverse events, but how do we analyze them in a way that respects their dignity and self-worth? Most importantly, how do we ensure that the lessons learned at M&M conferences are integrated into the daily performance of the conference participants? It is worth noting that residents who tend to ascribe adverse patient events to system deficiencies are less likely to report modification of their subsequent clinical behaviors in response to an adverse clinical event.

Current concepts in patient safety

The most critical change to M&M conferences in recent years is the recognition and discussion of the importance of system contributions to patient safety and, conversely, to adverse patient outcomes. James Reason’s Swiss cheese model of error has largely replaced the former surgeon-centered model. Reason’s model posits that, given the right set of human and system circumstances, the “holes” in each layer of error defense (e.g., protocols, procedures, surgeon and support staff training) can align to let an error pass unimpeded through all the layers. Recognizing these latent flaws in our defenses should help us develop better safety protocols and reduce the vulnerabilities in our defenses.

Unfortunately, the interaction of systemic issues such as operating room equipment and procedures with surgeon performance is even more complex than suggested by the Swiss cheese model. These complex and many times unpredictable interactions among people, protocols, and technology are
studied in human factors analysis and ergonomics, but are far from completely understood. Technology, for example, may sometimes increase, rather than decrease, the potential for adverse outcomes, especially if the users of that technology don’t fully understand its operations and full functionalities.\textsuperscript{9–11}

The analysis of adverse outcomes is, by nature, post-hoc. People strive to do good work and, in the moment and context in which errors occur, apparently illogical actions are generally seen as perfectly logical by the agent.\textsuperscript{12} Understanding why actions appeared reasonable at the time is as important as understanding why they were, in retrospect, unreasonable or unwise.

Communication errors in the clinical setting often contribute significantly to adverse outcomes. The high-stress, high-stakes clinical settings of the operating room and the trauma bay have adapted crew resource management training from the commercial airline industry.\textsuperscript{13–14} In such a setting, all members of the clinical team must be empowered to speak and be heard when anything less than optimal care and practice are observed, so that potential errors can be identified before they occur. If an adverse event does occur in such an environment, it must be more quickly recognized and its effect mitigated. Similarly, greater emphasis is being placed on the technique and documentation of hand-offs of patients among successive health care teams. Each transfer of care holds the potential for information loss. Standardized transfer protocols (e.g., checklists) and the use of information technology to automate the transfer of critical patient information are helping to minimize information loss during transitions in care.\textsuperscript{15}

Atul Gawande and others have promoted checklists as critical to reducing adverse surgical outcomes.\textsuperscript{16} To once again use an aviation analogy, the use of standard preflight procedures—in the OR, the “time-out” before surgery—have been shown to reduce preventable errors such as wrong-sided surgery, the administration of medications to which the patient is allergic, and the inappropriate timing of perioperative antibiotics. As with pilots who can also turn to checklists to guide surgeons through emergency situations, all members of the clinical team must be empowered to speak and be heard when anything less than optimal care and practice are observed, so that potential errors can be identified before they occur. If an adverse event does occur in such an environment, it must be more quickly recognized and its effect mitigated. Similarly, greater emphasis is being placed on the technique and documentation of hand-offs of patients among successive health care teams. Each transfer of care holds the potential for information loss. Standardized transfer protocols (e.g., checklists) and the use of information technology to automate the transfer of critical patient information are helping to minimize information loss during transitions in care.\textsuperscript{15}

Improving surgery

Atul Gawande and others have promoted checklists as critical to reducing adverse surgical outcomes.\textsuperscript{16} To once again use an aviation analogy, the use of standard preflight procedures—in the OR, the “time-out” before surgery—have been shown to reduce preventable errors such as wrong-sided surgery, the administration of medications to which the patient is allergic, and the inappropriate timing of perioperative antibiotics. As with pilots who can also turn to checklists to guide surgeons through emergencies is intriguing. When fully utilized, a 19-item perioperative checklist developed by the World Health Organization has been shown to reduce surgical complications and deaths in hospitals in the United States and abroad.\textsuperscript{17}

However, even with a “perfect” surgical system of standardized protocols, seamless communication, and ideal clinical support systems, adverse surgical outcomes will still occur. A recent paper by Peter Fabri and José Zayas-Castro of the University of South Florida College of Medicine questions the whether system deficiencies, as opposed to human errors, are the prime driver of adverse surgical outcomes.\textsuperscript{18} They analyzed more than 9,000 surgical procedures, with a complication rate of 3.4 percent and 78.3 percent of complications related to a medical error. Among the cases with errors, the ratio of errors classified as “slips” (doing the right thing incorrectly, usually during execution) to errors classified as “mistakes” (doing the wrong thing, generally during patient evaluation) was about three to one. The most frequent errors were “errors in technique” (63.5 percent), followed by errors in judgment, inattention to detail, and incomplete understanding of the problem. System errors (2 percent) and communication errors (2 percent) were infrequently reported as factors contributing to surgical complications.

Improving surgeon performance

Improving the safety of surgery must include high-quality, evidence-based clinical protocols, user-friendly clinical information systems (including decision-support systems), well-functioning (and communicating) clinical teams, surgical checklists, and ergonomically-appropriate and well-understood surgical equipment that makes the physical work of surgery easier and safer. However, in the end, the responsibility for the preoperative medical evaluation of the patient, the selection of a specific operative intervention, the conduct of the surgery, and the oversight of postoperative care all rest with the surgeon. Surgeon performance inevitably is the major determinant of both good and bad patient outcomes.

What can help surgeons improve the safety of surgery?

- Didactic education is important, but generally occurs before or after the fact, and the improvements may not be enduring.
- Peer review is too often punitive rather than supportive.
- The reflective self-review of clinical outcomes is beneficial, especially when outcomes are benchmarked against institutional and national standards. However, unless it is tied to specific corrective action plans and shared documentation, such self-review may not provide sustained improvement for the individual surgeon or for other surgeons committing the same errors or working within the same error-prone system.
- While the multiple checklists used in commercial aviation to guide the response of pilots and co-pilots to in-flight emergencies might seem theoretically ideal for the operative setting, they are difficult to design and implement in operating rooms shared by multiple surgeons doing many different kinds of surgical procedures. Nevertheless, we hope that our careful supervision of surgical trainees helps them to internalize these types of surgical emergency checklists.
- The value of simulation training is well-accepted in surgery for the acquisition of specific technical skills. However, per the sports maxim: practice does not make perfect; it only makes permanent. Only perfect practice makes perfect performance. Repetition with appropriate guidance and feedback is necessary to improve technical, communication, and evaluative skills.
- Surgeon performance in the resuscitation bay and the operating room are important determinants of patient
outcomes. Ideally, high-fidelity trauma bay and operating room simulations should reproduce the personal stress associated with such settings, and include education on techniques for intraoperative stress management. To paraphrase the classic 1970s medical novel, The House of God: in a cardiac arrest, take your own pulse first. The ability to maintain calm, focused activity in the face of an unexpected disaster is a gift few are born with, but one that is critical to surgical disaster-management. Operative team function (e.g., crew resource management) is critical, but only succeeds with a surgeon who is in emotional control. Ideally, this paradigm is consistently role-modeled for trainees by the supervising attending surgeon. It is encouraging to note, however, that these focused problem-solving and personal stress-management skills are readily teachable, and can be explicitly learned through focused simulation exercises.

Closing the loop

The M&M should be regarded by all concerned—students, residents and faculty—as a diagnostic tool to identify and develop both systemic and individual quality improvement plans. If system factors predominate in a specific adverse outcome, that information must be conveyed to the individuals within our institutions who are responsible for maintaining those systems. If individual performance deficiencies predominate, targeted reading assignments with follow-up examinations (written and oral) that focus on clinical problem-solving and mandated participation in individual or group simulation activities, including crew resource management and personal stress-reduction exercises, can be implemented.

In acknowledging the importance of system deficits we must not ignore personal accountability. Flawed surgical decision-making, poorly-applied or inadequate medical knowledge, incomplete medical risk assessment, and the imperfect application of surgical technique to a specific patient remain central to most adverse surgical outcomes.

The overarching goal of the surgery M&M conference, and of all our educational and clinical quality improvement activities, should be to improve the clinical performance of surgeons and to enhance the safety and efficiency of the environment in which they practice. Our trainees and our patients deserve no less.

Acknowledgments:

I wish to thank Dr. Robert H. Glew for his editorial review of this manuscript and Dr. Cynthia Reyes for her continuing improvement of our surgery M&M conference.

References

The physician at the movies

Peter E. Dans, MD

Lincoln

Starring Daniel Day-Lewis, Sally Field, David Strathairn, and Tommy Lee Jones.


Being a critic requires stepping outside a film to maintain some distance. The best films are those that draw one back in to the point between maintaining objectivity and being swept along by the narrative. I had read the excellent book Team of Rivals: The Political Genius of Abraham Lincoln by Doris Kearns Goodwin\(^1\) on which Lincoln was said to be based, so I had great hopes for the film. The DreamWorks logo with a boy fishing off the sliver of the moon and the dramatic Twentieth Century Fox theme by nine-time Academy \(^d\) winning composer Alfred Newman just added to my anticipation of the opening scenes of what had been ballyhooed as the year’s best picture.

Unfortunately, the scenes were so fake and contrived that I was put off and could only reenter the film on a few occasions, all the while wondering how much of the script was believable. Spoiler alert: If you haven’t seen the film stop reading here.

The opening scene resembles a barroom brawl more than a military encounter. It is meant to showcase retaliation by blacks for the massacre by Confederates of their fellow soldiers. The next scene shows Lincoln with a stovepipe hat off to the side of the battle sitting on a dais (think the Lincoln Memorial). He is conversing with four soldiers, two black and two white. The whites are reverential, in contrast to one of the blacks who is preternaturally au courant. While admitting that the conditions are now better for blacks—they can, for example fight and get equal pay—he chides Lincoln because blacks are still ineligible for commissions. He complains that Lincoln has not fulfilled the promise to free all the slaves, essentially accusing him of being more talk than action. This is followed by a reading of the Gettysburg address that the white soldier can’t finish but the black soldier can. Note to screenwriter: Lincoln’s now famous short incidental remarks were overshadowed by the two-hour Gettysburg address of Edward Everett, the day’s main speaker, and did not become well known until after Lincoln’s assassination.\(^2\)
Spielberg’s original concept was to star Liam Neeson and, when he learned of Goodwin’s book, to echo the book’s illustration of how Lincoln created his cabinet. Lincoln included his three rivals in the Republican primary, along with others who represented the spectrum from northern hard-core abolitionists to moderates from Border States who were less opposed to slavery and more concerned with preserving the Union. He melded the team’s disparate opinions into a coherent, politically acceptable policy, maintaining a fragile unity of the states that had not seceded.

As the ten years in the evolution of the film’s conception passed, Neeson withdrew and the decision was made to center the film on the political struggle to pass the bill authorizing the Thirteenth Amendment abolishing slavery, before sending it to the states for ratification. In some respects, Lincoln is not the central figure; the focus is diffused over many characters and would have been better titled *The Thirteenth Amendment*, since it chronicles the efforts to turn the votes of five Democrats by horse-trading and some deception on the part of the president. As for its provenance, the film draws from eight of the 754 pages of *Team of Rivals*. These pages barely correspond to what’s onscreen, leaving ample room for the screenwriter to pepper the film with imagined and hard-to-verify scenes.

William H. Seward (David Strathairn) deserves better than his portrayal as a “pol.” He was the wisest member of the cabinet and has been called Lincoln’s indispensable man. Lots of things are tossed in, such as Sally Field’s portrayal of a Mary Todd Lincoln unhinged in part due to the loss of her son Willie to typhoid fever. Noted for spending a lot of money on furnishings and clothes, she is shown having a hostile encounter with the chairman of the House Ways and Means committee Thaddeus Stevens (Tommy Lee Jones). Even though they were known to be enemies it is still hard to believe that their encounter at a formal presidential reception happened as scripted.

Son Robert, a rather respectful Harvard student, who was itching to join up against his parents’ wishes (especially his mother) is shown being slapped by Lincoln to end the discussion. He was allowed to join before war’s end and assigned to Grant’s staff to minimize the chance of being killed. Robert, who is little known, went on to have an illustrious career. His home Hildene in Vermont is open to visitors and worth seeing. Son Tad is always looking at tintypes of slaves when he is not looking at the president (to Lincoln’s pleasure) or shown in some high-spirited antics.

Some heavy-duty issues are lightly visited, such as the suspension of *habeas corpus* and other constitutional breaches, justified given the fragility of the union. Given the shifting focus, the film can be slow moving and stylistically tedious at times.

Among the things I liked about the film included Daniel Day-Lewis’ performance. He plays and looks the part and well deserved his Academy award. He manages to convey Lincoln’s intrinsic dignity while showing his human side as he tells the folksy stories he was famous for. Most enjoyable was the scenery-eating performance by Tommy Lee Jones as Stevens. However, I found it hard to believe that he took the legislation authorizing the Thirteenth Amendment’s preliminary passage home with him (not allowed) to share in bed with his black...
housemaid. The film ends with Stanton’s line “now he belongs to the ages” and a passage from Lincoln’s second inaugural address.

If you’ve gotten this far, you have seen the film. Now, if you haven’t already done so, I suggest you read the book on which it is “based” or listen to it on tape. It’s worth the time.

**Another viewpoint**

In the interest of being fair and balanced, I thought it would be worthwhile to include an excellent review by a friend who liked the film. Don McClarey is an historian and Illinois lawyer. A Lincoln scholar, he makes an annual pilgrimage with his family on Lincoln’s birthday to Springfield, Illinois, where Lincoln is buried. This review first appeared on his “American Catholic” blog and is reprinted by permission.

On Saturday November 17, 2012, I went with my family to see *Lincoln* at a theater in Kankakee, Illinois. It is definitely one of the finest screen representations I have ever seen of Lincoln, and it is a worthy tribute to the Great Emancipator. The 12:40 PM showing that we attended was completely packed which surprised me. Throughout, the audience was thoroughly engaged in the film, laughing at the stories that Daniel Day-Lewis told as Lincoln and at other humorous points. Some of the Lincoln stories would have made an ox roar with laughter. I especially enjoyed a somewhat scatological tale involving Ethan Allen, a picture of George Washington and the British. As Lincoln himself pointed out, some of his stories might not have been as nice as they could have been, but his stories were part of the man, and it was enjoyable seeing this part of Lincoln’s persona so ably brought out in the film. In an amusing sequence, Secretary of War Stanton (Bruce McGill) yells at Lincoln as he is telling a story while he is waiting for news as to whether Fort Fisher, which guarded Wilmington the last port of the Confederacy, had fallen. This was quite accurate as Stanton, although he came to respect Lincoln, was always quite blunt spoken when dealing with the President and had little tolerance for Lincoln’s habit of telling time-wasting, in Stanton’s opinion, stories.

The vignette with Stanton was only a small sample of how extremely accurate the film is. For example we see Grant followed by his aide, Colonel Ely Parker, a full-blooded Seneca Indian. The character of Parker has no speaking role, and I appreciated the attention to even minor details that his inclusion demonstrated. During the abortive peace negotiations at Hampton Roads, Lincoln refers to Alexander Stephens, Vice President of the Confederacy, as Alex. It is not brought out in the film, but Lincoln and Stephens had both served in Congress as Whigs and had become friends. It is this type of careful attention to historical veracity that makes or breaks a historical film for me.

Daniel Day-Lewis is simply magnificent in the role of Lincoln. He captures well both Lincoln’s role as a far-seeing visionary and a master of mundane nuts and bolts politics. Day-Lewis portrays Lincoln as he was: a very humane man waging the bloodiest war in our nation’s history and trying to lance the boil of slavery that had poisoned and embittered American life for a quarter of a millennium. He conveys well the human toll that all this imposed upon Lincoln.

The film takes place near the end of the War. Lincoln has been reelected and is now attempting to have Congress pass the Thirteenth Amendment. Lincoln is concerned that if the War ends before the Amendment is passed by Congress, the impetus behind it will fade away since it will no longer be regarded as an essential war measure. He is worried that his Emancipation Proclamation, taken as a war measure, might not hold up in peace time, once the former Confederate States are back in the Union, with laws still allowing slavery on their books. The film centers on his efforts to convince enough Democrat Congressmen, by fair means and by foul, to vote for the Amendment.

Tommy Lee Jones is good in the role of Thaddeus Stevens, the grim abolitionist Republican congressman of Pennsylvania, who during the War had butted heads with Lincoln many times and who after Lincoln’s death would destroy Lincoln’s plan for Reconstruction replacing it with his Reconstruction plan intended to punish the South. For now, they are allies seeking to pass the Amendment.

A very amusing sequence is played out between Sally Field, giving a surprisingly good performance as Mary Todd Lincoln, and Stevens, at a reception. Mary Todd Lincoln utterly despised Stevens who had often criticized her expenditures on the White House and who had suggested, in none too subtle terms, that her loyalty to the Union was suspect due to her Southern roots and her kinfolk fighting for the Confederacy. This was a complete canard as Mary Todd Lincoln was whole-heartedly for the Union and was also anti-slavery. Seeing Mary Todd Lincoln and Thaddeus Stevens exchanging elegant insults in a reception line at the White House in the film warmed my historian’s heart!

The film concludes, after Lincoln’s assassination, with a stirring rendition of the closing passage of the Second Inaugural:

“Fondly do we hope, fervently do we pray, that this mighty scourge of war may speedily pass away. Yet, if God wills that it continue until all the wealth piled up by the bondsman’s two hundred and fifty years of unrequited toil shall be sunk, and until every drop of blood drawn with the lash shall be paid by another drawn with the sword, as was said three thousand years ago, so still it must be said ‘the judgments of the Lord are true and righteous altogether’.

“With malice toward none, with charity for all, with firmness in the right as God gives us to see the right, let us strive on to finish the work we are in, to bind up the nation’s wounds, to care for him who shall have borne the battle and for his widow and his orphan, to do all which may achieve
and cherish a just and lasting peace among ourselves and with all nations.”

This is a truly epic film and it should be seen by all Americans.

References
2. Greydanus SD. SDG reviews “Lincoln.” National Catholic Register 11/16/12

Young Mr. Lincoln
Starring Henry Fonda, Alice Brady, Donald Meek, Ward Bond, and Milburn Stone.
Running time: 100 minutes.

Seeing Lincoln made me want to revisit this 1939 classic that I had not appreciated. On the surface, it seems to be a simple anecdotal recounting of events in Lincoln's early life. The score incorporates “The Battle Cry of Freedom,” “Rally Round the Flag,” and “Dixie” into vintage Americana. It’s the kind of film about a simpler America whose citizens shared a common history that spoke to patriotic Americans as they stood on the verge of World War II.

The film opens with an excerpt from “Nancy Hanks,” a poem by Rosemary Benét, who teamed with her husband Stephen Vincent Benét as authors of American history poems. The old-time movie scroll sets the scene and presumes that the audience knew who Nancy Hanks was. Her death when Lincoln was nine, along with the death of his brother when he was three, his sister when he was nineteen and the love of his life, Ann Rutledge, illustrates how frequent and early were Lincoln's losses of loved ones.
If Nancy Hanks
Came back as a ghost,
Seeking news
Of what she loved most,
She’d ask first
“Where’s my son?
What’s happened to Abe?
What’s he done?”

“You wouldn’t know
About my son?
Did he grow tall?
Did he have fun?
Did he learn to read?
Did he get to town?
Do you know his name?
Did he get on?”

The film opens in New Salem, Illinois, in 1832, and ends in 1839 in Springfield, Illinois, with Lincoln (Henry Fonda) walking into the future as ominous storm clouds appear overhead. Lincoln is shown as a candidate for office at the beginning of his political career slouching in his chair and then ambling to the front of the crowd to give a very short speech in his halting and stammering way. He is shown shily “courting” Ann Rutledge and then visiting her grave after she dies of typhoid fever. He asks her whether he should become a lawyer and divines that she favors it. Director John Ford used a similarly touching scene when John Wayne as Captain Brittles makes report to his dead wife in She Wore a Yellow Ribbon.

Later the scene shifts to the State Fair at Springfield where Lincoln judges a pie-eating contest, participates in a tug-of-war in which he cheats a little, and wins a rail-splitting contest. The latter shows a prowess that enables him to defuse a lynch mob intent on hanging a man thought to be guilty of murder by daring anyone to take him on. In the film’s most powerful scene, Fonda draws on his having witnessed an actual lynching of a black man in Omaha from the vantage point of his father’s office. In the film, he comments on how people who are otherwise compassionate and who read the Bible can be hateful and stirred up by a mob to do things they would otherwise condemn.

A novice lawyer—or as he calls himself, a jack-legged lawyer—he defends a young man accused of murder who comes from a family much like his own. The trial looks as if it’s not going in his favor, as the judge dozes off and the crowd is raucous, but he cleverly breaks the key witness’s account. In a foretelling of encounters to come, he receives congratulations from Mary Todd (Marjorie Weaver) and Stephen Douglas (Milburn Stone), who promises not to underestimate him in the future.

Hearing an account of the film, you may still wonder why this film is considered a classic. It’s because the whole is more than the sum of its parts. Don’t take my word; take that of Sergei Eisenstein, one of the great directors of all time. When asked what American film he would like, with the wave of a magic wand, to be made the author of, he chose this film:

There are films that are richer and more effective. There are films that are presented with more entertainment and more charm. Ford himself has made more extraordinary films than this one . . .

Nevertheless of all the American films made up to now [in the 1940s] this is a film I would wish most of all to have made. What is in it that makes me love it so? It has a quality, a wonderful quality that every work of art must have—an astonishing harmony of all its component parts, a really amazing harmony as a whole.

You can read the rest in the booklet that accompanies the Criterion DVD.

The interactions that Lincoln had with people of all socio-economic strata and classes illustrates why he was, along with Washington, our greatest president. He knew and loved America in all its human faces and places. Coming from a log cabin and making it all the way to the White House, he had seen all the people along the way, their virtues, their vices, their hopes, their dreams. He had drunk deeply of the American experience. He had known victories and defeats, joys and many tragedies. Yet he remained humble and kind. He was truly in Edwin Stanton’s words, “A man for the ages.”

Addendum
This was the first of eight films Fonda made with Director John Ford. At first, he refused to do the film saying that “playing Lincoln was like playing God.” Ford retorted that he wasn’t playing the “effing Great Emancipator but a jack-leg lawyer in 1839 Springfield.” This was the first of a series of roles in which he portrayed men who were the soul of integrity and probity. You will get a very interesting analysis of Fonda’s life and career in an excellent book, The Man Who Saw a Ghost: The Life and Work of Henry Fonda, which I heartily recommend.

References
1. Eisenstein S. Mr. Lincoln by Mr. Ford. Criterion booklet accompanying Young Mr. Lincoln DVD.

Dr. Dans (AQA, Columbia University College of Physicians and Surgeons, 1960) is a member of The Pharos’s editorial board and has been its film critic since 1990. His address is:
11 Hickory Hill Road
Cockeysville, Maryland 21030
E-mail: pdans@verizon.net

The Pharos/Summer 2013
Good Morning. This is Annah Vollstedt. The case number is S-12-78462.

Gross description for part A:

Biopsy suggests a look at life, but what’s this on the table—or who is it down here, a day of work, cases so removed from the patient but by orders of magnitude closer viewed than one sees oneself myopia makes it hard to tell who the sample’s from, and what is whose in the distance between the exam room and pathology lab person to specimen, and back again:

Grossed, transcribed, fixed, microscoped and stored on the periphery of some basement hall, stacked in filing cabinets, mausoleums in some unchecked corner adjacent to the boiler room with its harsh mechanical grind awaiting the archivist to page the glass slides for case S-12-78462 to re-search the subtleties of pink and purple, pink and purple acute or chronic inflammation cancer or dysplasia, squamous or columnar epithelium to catch the edge once more of empathetic structure, the pathos in pathology.

This completes the dictation. Thank you.

Annah Vollstedt
Broken Hearts: The Tangled History of Cardiac Care

David S. Jones
Baltimore, Johns Hopkins University Press, 2013

Reviewed by Jack Coulehan, MD (ΦΩΑ, University of Pittsburgh, 1969)

As medical practitioners, we naturally assume that our current approach to diagnosis and treatment is the culmination (at least for the time being) of a long process of steady scientific development. After all, progress in medicine is one of the most characteristic themes in today’s popular culture. If we think about history at all, it is often with condescension: “By George, how did they ever get along with such primitive tools?”

Take, for example, myocardial infarction. Who among us would want to bring back the pre-statin, pre-angioplasty, pre-bypass era? We rarely raise any doubt that medical progress since then has been entirely rational.

David S. Jones, in his compellingly written Broken Hearts: The Tangled History of Cardiac Care, knocks that sense of historical complacency off its rocker. Jones, the A. Bernard Ackerman Professor of the Culture of Medicine at Harvard, is a psychiatrist as well as an historian. His book is essentially a history of decision making in the field of cardiac therapeutics over the last several decades. As the subtitle indicates, the story is intensely “tangled,” rather than the simple and straightforward plot we often imagine.

One sentence best sums up Jones’ argument: “Disease and therapeutics are social processes that reflect the structures and values of our society.”p228 This fact explains the disjuncture that developed over time between the scientific understanding of coronary artery disease and the preferred methods of treating it—e.g., the vast popularity of “plumbing” approaches, like bypass surgery—when it was already clear that they did not address the principal cause of acute myocardial infarction (AMI). These “social processes” also explain why cardiologists and surgeons for so long were guilty of “selective inattention” to the substantial neurological and psychiatric sequelae of bypass surgery.

Jones first considers the etiology of AMI. Soon after William Heberden described the syndrome of angina pectoris in the eighteenth century, autopsies on angina began to reveal thickening and sometimes obstruction of coronary arteries by what were later found to be atherosclerotic plaques. Since angina and infarction were closely related, the belief developed that AMI must result from a gradual process of plaque growth and eventual blockage. However, beginning in the 1930s, careful pathological studies of coronary arteries demonstrated a different mechanism: plaque rupture. Evidence accumulating from the 1940s through 1980s strongly supported this mechanism: plaque rupture led to hemorrhage, which then activated platelets to coagulate and form an acute thrombus. In other words, AMI was caused primarily by plaque instability, which did not necessarily correlate with the extent of atherosclerotic obstruction.

Though many lines of evidence contributed to the plaque rupture model, for a long time it remained controversial. Paradoxically, two major medical developments militated against its acceptance. Selective coronary angiography (early 1960s) and coronary bypass surgery (1967) were both predicated on the plumbing model of heart...
disease, i.e., prevent AMI by cleaning out the pipes. With the later addition of angioplasty and stent placement, revascularization procedures skyrocketed. "Bypass surgery peaked at over 697,000 operations in 1997. Its subsequent decline—to 405,000 operations in 2007—reflected the rise of angioplasty...In 2007 interventional cardiologists performed nearly 1.2 million angioplasty procedures, with balloons alone or with stents in addition." p96

These figures are remarkable since studies showed that anywhere from thirty-one to eighty-five percent of these interventions were unnecessary. p96 When performed to relieve persistent angina, revascularization was effective, although often not more effective than medication alone. When performed immediately after an infarct, angioplasty clearly improved survival. However, revascularization soon became widely used as a "prophylactic" measure in the belief that opening up the arteries could help prevent AMI and sudden death. This practice flew in the face of a scientific consensus that infarcts result from unstable plaques that rupture and result in clot formation.

Two things were clear. First, “bypass surgery and angioplasty certainly made many people rich.” p97 And second, there were enormous geographic, economic, racial, and gender disparities in rates of revascularization, both within the United States and between the United States and other countries with a similar prevalence of coronary disease. Dr. Jones considers the complex and poorly understood issue of disparities in his final chapter, "Puzzles and Prospects.”

A second major historical conundrum concerns the "missing" neurological complications of coronary bypass surgery. At the time Rene Favaloro performed the first bypass operation at the Cleveland Clinic in 1967, surgeons were well aware that heart surgery was often complicated by strokes and other serious neurological sequelae. Decades of experience with valve surgery should have led them to expect serious complications, despite technological advances in heart-lung machines. Yet, surprisingly, "Of the first two hundred articles published about bypass surgery between 1968 and 1973...Only four made more than a passing mention of neurological or psychiatric outcomes." p130

By the early 1980s, large-scale studies began to reveal more frequent adverse events; for example, among 421 bypass procedures at the Cleveland Clinic, patients developed delirium in 11.6 percent and strokes in 5.2 percent. p173 In the late 1980s and 1990s, further studies documented the relatively common occurrence of more subtle complications, such as cognitive deterioration and personality change. The authors of a multicenter study published in the New England Journal of Medicine in 1996 concluded, "Adverse cerebral outcomes following coronary bypass surgery are relatively common and serious; they are associated with substantial increases in mortality, length of hospitalization, and use of intermediate- and long-term care facilities." p177 Yet, despite this evidence, as well as serious questions about its prophylactic value, coronary bypass surgery remains among the most frequently performed surgeries today. Jones considers a number of factors that may contribute to this phenomenon in his chapter on “selective inattention.”

I think most physicians will find Broken Hearts. The Tangled History of Cardiac Care a surprising and sobering book. David Jones combines rigorous research with a clear narrative style to produce a very persuasive historical analysis. I heartily recommend that physicians read Broken Hearts to benefit from a dose of detective work, a dose of insight, and a good dose of humility.

Dr. Coulehan is a book review editor for The Pharos and a member of its editorial board. His address is: Center for Medical Humanities, Compassionate Care, and Bioethics HSC L3-80 State University of New York at Stony Brook Stony Brook, New York 11794-8335 E-mail: john.coulehan@stonybrook-medicine.edu

Ned's Head


Ages 7-10

Reviewed by Diane Hackett

The challenge of writing a nonfiction book for children is to present accurate information that engages and entertains the young reader. Dr. Cargill Alleyne, a neurosurgeon and author of the children’s book, Ned's Head, succeeds in this task by using witty limericks along with funny informative illustrations to describe the structure of the brain and how the brain is the command center to the rest of the body. His limericks and Michael Jensen’s and Karen Bradley’s delightful illustrations will capture the imagination and interest of young children who are perpetually curious.

Writing for an audience aged seven to ten, Dr. Alleyne's story about the brain begins with a young boy named Ned wondering, “What’s inside my head?” Ned’s mother answers his questions with information about the
structure of the brain and its protective covering, the skull. The factual information is presented in an understandable and easy-to-read format, using limericks that contain similes comparing parts of the brain to everyday objects that are part of a child's environment. Here are a few examples:

Brain parts called motor strips
Have grooves and bumps like Ruffles potato chips
Bone is hard, tough and strong like a bull
(about the Skull)
Long nerves to your toe like a train
Nerves on: your toe taps
Nerves off: you take naps

Ned’s curiosity is never quite satisfied by his mother’s information. Despite his mother’s request to refrain from asking further questions, Ned wants to know more about how the brain works.

But mom how do I smile or frown?
Or how do I move my eyes around?
And how do I taste?
Or feel cold on my face
Why, how do I stick out my tongue?

Mother patiently answers Ned’s questions with the help of charming and funny illustrations.

Michael Jensen and Karen Bradley’s colorful illustrations illuminate the facts and aid the reader in understanding the complex information contained in the limericks. The design format is attractive and reader friendly. The illustrations closely accompany the text so that the reader can visualize the parts of the brain that are being presented in each limerick.

The illustrations convey a sense of humor. Many will make the young reader smile and spark an interest in how the brain and the body are related; for example, the vivid drawing that accompanies this text:

**Popping eyeballs and a big wagging tongue**
*Are attached to cranial nerves of the brain*

The use of color in the illustrations also helps clarify and support the medical terms. Vivid colors of the carotid artery and the jugular vein weaving their way to and from the brain are definitely eye-catching. The reader can easily follow the flow of blood through a maze of colorful pumps and gauges.

Dr. Alleyne has also added a very useful glossary at the end of the book. The definitions of medical terms add meaning to the text and serve as a handy reference tool. They are clearly defined and reinforce information presented in the limericks and the text. The book also includes a pronunciation key that will help older children verbalize the scientific names for various parts of the brain. Younger readers will have fun wrapping their tongues around multisyllabic words like “hypoglossal” and “oculomotor.”

Dr. Alleyne clearly has a thorough knowledge of the brain and an appropriate understanding of his target audience. Younger children enjoy rhyme and will want to read this book many times. *Ned’s Head* is a book that will encourage parents, caregivers, and teachers to develop the habit of reading to their children. The information presented in limericks and illustrations will spark an interest in the human body in young minds.

About the author and illustrators: Dr. Alleyne is Professor and Marshall Allen Distinguished Chair of the Department of Neurosurgery at the Medical College of Georgia of Georgia Regents University in Augusta, Georgia. Michael A. Jensen, MS, CMI, is an Assistant Professor of Medical Illustration in the School of Allied Health at Georgia Regents University. He has previously illustrated twelve books in the popular *Curious George* series. Karen Bradley, MS, CMI is founder of KB illustrations and an award-winning medical illustrator.

*Ned’s Head* is the first in a series of educational children’s books to be created by this team.

Ms. Hackett’s e-mail address is: dianeluv@optonline.net.

---

**Prize Fight: The Race and the Rivalry to Be the First in Science**

Morton A. Meyers
New York, Palgrave Macmillan, 2012

Reviewed by Jack Coulehan, MD
(ΩΩA, University of Pittsburgh, 1969)

The summer before entering medical school, I worked at the University of Pittsburgh in Dr. Julius Youngner’s laboratory. Dr. Youngner, one of the world’s leading virologists, was a formidable figure. Naturally, behind the scenes there was scuttlebutt about the boss, especially the story of his work with Jonas Salk in the early 1950s. Youngner’s method of quantifying virus particles had been a major breakthrough that made the polio vaccine possible, or so the story went, but his contribution had never been acknowledged. In fact, Salk had completely “stiffed” his many collaborators, even to the extent of refusing to include their names on articles.

That backroom story came vividly to mind as I read the first chapter.
The Pharos

Summer 2013

of Morton A. Meyers’ splendid new book, Prize Fight: The Race and the Rivalry to Be the First in Science, in which he uses Jonas Salk as an example of a keenly competitive scientist who refused to share credit for his vaccine. Selfish, indeed, but this is only the tip of an iceberg of scientific misbehavior, which Prize Fight illustrates with many instances of data manipulation, plagiarism, falsification, and outright fabrication, in addition to bitter conflicts over priority and recognition. Dr. Meyers introduces the reader to the culture of modern biomedical science with its relentless pressures, cutthroat competition, and outsized egos. He provides numerous examples of scientists behaving badly, like William Summerlin, the dermatologist who fabricated “successful” skin grafts on mice by darkening their backs with a felt-tipped pen; and John Darsee, the cardiologist in Dr. Eugene Braunwald’s lab who simply invented data for many (or most?) of his profusion of abstracts and articles. This is truly the dark side of biomedical science.

Dr. Meyers devotes much of his book to extended analyses of two major scientific disputes. The first involves Dr. Simon Waksman’s “ingenious, systematic, and successful studies of the soil microbes that . . . led to the discovery of streptomycin,” for which he won the Nobel Prize in 1952. Waksman was a soil microbiologist who had noticed that Actinomycetes species seemed to inhibit nearby bacterial growth. He hypothesized that such fungi might produce “antibiotic” chemicals that could be potentially useful in treating human disease. Thus, Waksman developed a systematic research program to identify such substances. The first one he isolated was actinomycin, which proved too toxic for most medical uses. He hired his student, Albert Schatz, as an assistant in 1943. Within a few months, Schatz had identified two strains of Streptomyces that produced an antibiotic substance (streptomycin) that later proved to be a “miracle drug,” effective in treating tuberculosis, as well as a wide array of other infections.

Who was the real discoverer of streptomycin? Waksman had the original idea, set up the research program, and hired Schatz to participate in the systematic search. However, it was Schatz who actually isolated the substance. Waksman shared credit with Schatz on the original patent, but, though he frequently acknowledged the help of his assistants, he never publicly identified Schatz as the discoverer, or co-discoverer. Schatz’s quest for credit (and royalties) eventually led to a rupture in their relationship, a bitter lawsuit, emotional turmoil, the destruction of Schatz’s academic career, and a long shadow over Waksman’s life.

The more recent case of the Nobel Prize awarded in 2003 for the development of the magnetic resonance imaging (MRI) process provides an even more complex example of rivalry and its ramifications. The award was given to Drs. Paul Lauterbur and Peter Mansfield. Lauterbur, a physical chemist at Stony Brook, had developed the mathematics of applying field gradients of known shapes to create images using nuclear magnetic resonance (NMR), while Mansfield had later invented a method of using NMR to create three-dimensional images in living subjects. So far, so good. However, it was the physician Raymond Damadian who had first observed differences in nuclear reaction times between normal and cancerous tissue, a finding that led him to envision NMR’s potential as a medical imaging tool. He published this data in 1971, two years before Lauterbur’s seminal insight. Subsequently, Damadian worked furiously to triumph over Lauterbur in solving the practical problems of MRI development and, in fact, he succeeded in producing the first full-body human MRI machine utilizing a very crude scanning technique.

However, over the years Damadian became increasingly marginalized, as Lauterbur and others generated breakthroughs that made today’s highly accurate MRI machines possible. Being overlooked for the Nobel Prize was the last straw for the irascible and pugnacious Damadian. He began a very public crusade against the Nobel committee, asserting his priority over Lauterbur in a series of full-page advertisements in the New York Times and other major newspapers, proclaiming, “this shameful wrong must be righted.”

To whom should the credit go? Meyers presents a fascinating analysis of this complex case. “While facts can be established,” he observes, “the determination of who merits priority in discovery requires judgment.” He illustrates this by citing a number of historical errors. In a few cases, scientists have won the Nobel Prize for discoveries that were either false or insignificant. In others, major discoveries have gone unrecognized. Meyers also discusses the subtleties of the mentor-student relationship, using Waksman and Schatz as an illustration. In a sense Schatz became a whistleblower by revealing the inner workings of a hierarchical relationship. Likewise, Damadian might be considered a whistleblower because he upset the applecart by publicly challenging the “authorized” story of MRI development. Whistleblowing rarely works to the advantage of the blower.

Prize Fight is a very engaging book. At a superficial level, the reader can enjoy a wealth of interesting stories, well told. At a deeper level, the book presents a provocative investigation into rivalries and the dark side of science. However, at every level, Prize Fight is well worth reading.

Dr. Coulehan is a book review editor for The Pharos and a member of its editorial board. His address is:

Center for Medical Humanities, Compassionate Care, and Bioethics
HSC L3-80
State University of New York at Stony Brook
Stony Brook, New York 11794-8335
E-mail: john.coulehan@stonybrookmedicine.edu
A hairy man with eyebrows as thick as Ernie Kovacks’ kneaded my upper back and murmured in his hypnotic voice, *Relax, let your muscles soften*, while prone on his table I tightened at the scent of gardenias he exuded. The doctor dug his thumbs into my spine, humming like an humongous dwarf, an entity far beyond what I, at fifteen, had ever known. He told me migraines were messages from my body, spoken in a language I could learn if I was sharp. *Sit up,* he said, *and listen.* The first lesson: my profusion of hormones was natural, a state without shame. Second: no masturbation. It would weaken my system. Third: work out. And fourth: avoid entanglement with girls. Is that all? The same messages the priest I had avoided like the plague had taken the boys aside last year to give. I wanted a pill for my headaches. I wanted to get out of his office and take a shower, to hide my shame in a book. A vague craving began to unfold, a thirst to prove the quack completely wrong—my first step toward medicine.

*Jack Coulehan, MD*

Dr. Coulehan (AΩA, University of Pittsburgh, 1969) is a book review editor for *The Pharos* and a member of its editorial board. His address is: Center for Medical Humanities, Compassionate Care, and Bioethics, HSC L3-90, State University of New York at Stony Brook, Stony Brook, New York 11794-8335. E-mail: john.coulehan@stonybrookmedicine.org. Illustration by Jim M’Guinness.
Daily devotion

Physicians are not immune to the medical illnesses they treat and unfortunately are at higher risk for a number of ailments and their consequences ranging from alcoholism, drug dependence, and suicide. The growing stress that physicians incur from the practice of medicine is akin to a psychological plaque that is competing for the soul of medicine and diminishing our age-old mandate of knowing and caring for our patients.

How do we therapeutically address these problems that gnaw away at our cherished position in society and diminish our value as true professionals?

The horrid pace of the practice of medicine has altered the doctor's and the public's perception of what it means to be a doctor. In past years, physicians were viewed in many cases as extended members of the family and, if not that centrally connected, at least as part of the extended family community. With physicians often unable to spend time to build those personal bridges that connect human to human, our worth and society's respect for the physician has waned, much like the recent value of our mutual funds in the stock market. Once again, how did this happen? Some would say that the pressure to see more patients in a time of declining reimbursement and the mountain of paperwork that must be completed each day have created impediments for thoughtful nurturing behavior needed to fully develop the doctor-patient relationship.

In years past, there were visionary medical leaders/writers like Francis Peabody, J. Willis Hurst, Sir William Osler, John H. Stone, and others, whose values and inspirational writings helped to keep us sane and on course. I believe writers like these icons have unique insights and answers on the inner workings of the melancholy physician heart. I would profess that with the challenges medicine faces, we need to revisit the writings of current and past physician/writers for daily inspiration. As some doctors read the scriptures in the morning to find solace in a troubled spiritual world, we need similar “daily devotions” to inspire us to handle the daily stressors and obstructions to better patient care. It is only when we try to exceed the current minimalist expectations and provide patients with knowing and caring treatment that we actually reach the goals and standards that we set for ourselves at the start of the long journey to become competent physicians.

Certainly, there are other forces at play that continue to challenge our ability to stay on the road to physician wellness for the greater good of our patients’ health; but let us not diminish the power of positive thinking and the cogent lessons of self-regulation that are fortified by effort and faith.

In conclusion, it does require a daily devotion of words imbued with the wisdom of Richard Selzer, Eugene Stead, Lewis Thomas, and others who entreat us to exceed the norm and connect to our patients in ways that show that we “know and care.” For it is only by completing the avalanche of paperwork, the elongated phone calls to obtain clearance to perform tests, resolving claim denials, and other seemingly perfunctory tasks, that we can ultimately serve our patients. These obstructions and other challenges to the sanctity of medicine can only then be viewed as a means to an end—the best care for our patients.

André L. Churchwell, MD
(AΩA, Emory University, 1979)
Associate Dean for Diversity
Vanderbilt School of Medicine
Nashville, Tennessee
Transport to Bellevue

They heard her moaning, phoned one night, an intern on ambulance call sent to take her to Bellevue.

Tentatively he touched her, body ancient carved wood, not seeing nor hearing, arms petrified by her side,
moved her past rows of silent sarcophagi gathered from places of disillusion, apartments of abandonment—bed after bed.

Dawn approached. Sallow light seeped in through barred windows, filled the ward as they departed, yet in deep recesses, a darkness lingered.

Richard Bronson, MD

Dr. Bronson (AΩA, New York University, 1965) is Professor of Obstetrics & Gynecology and Pathology, Vice Chairman for Education, and Director of Reproductive Endocrinology at Stony Brook University Medical Center. He is a member of the editorial board of The Pharos. His address is Stony Brook University Medical Center, T9-080, Stony Brook, New York 11794-8091. E-mail: richard.bronson@stonybrookmedicine.edu. Illustration by Erica Aitken.
In 1982, the board of directors of Alpha Omega Alpha established five student research fellowship awards to encourage and support student research. Since then, the awards have grown in number to more than fifty each year. The fellowship emphasizes a student-designed and -initiated project with an academic mentor. Recipients of the fellowship tell us that the awards have helped them to learn about the joys of scientific and scholarly discovery, and increase their critical understanding of scholarship and research in health care and science. Many recipients of the fellowship have followed up their work as student-researchers to become physician-scientists.

The student receives a $5000 award, with $1000 available for travel to a national meeting to present the research results. In 2004, the name of the fellowship program was changed to the Alpha Omega Alpha Carolyn L. Kuckein Student Research Fellowship awards in honor of Carolyn L. Kuckein, AΩA's longtime administrator, who died in January 2004.

Evaluations of the fellowship proposals were made by reviewers: C. Bruce Alexander, MD; Thomas T. Andersen, PhD; Robert G. Atnip, MD; James J. Barbee, MD; Jeremiah Barondess, MD; Syamal K. Bhattacharya, PhD, CLD; Sylvia Brice, MD; Paul A. Bunn, MD; Tim Byers, MD, MPH; R. William Caldwell, PhD; Stephen Y. Chan, MD; Lynn M. Cleary, MD; Philip Cohen, MD; N. Joseph Esapat, MD; Ruth-Marie Fincher, MD; Daniel Foster, MD; James G. Gamble, MD; Richard F. Gillum, MD, MS; Hunter Groninger, MD; Richard B. Gunderman, MD, PhD; Diane Harper, MD, MPH, MS; Eve J. Higginbotham, SM, MD; Joseph A. Hill, MD, PhD; Pascal Imperato, MD, MPH&TM; Marc G. Jeschke, MD, PhD; William M. Lee, MD; Gerald Morris, MD, Lesley Motheral, MD; Douglas S. Pauw, MD; Thoru Pederson, PhD; Suzann Pershing, MD; Sheryl Pfeil, MD; Noah S. Philip, MD; Steven P. Ringel, MD; Alan G. Robinson, MD; Sarah M. Roddy, MD; William M. Rogoway, MD; Shashikumar K. Salgar, PhD; Joseph W. Stubbs, MD; John Tooker, MD, MBA; Kenneth L. Tyler, MD; Alan G. Wasserman, MD; Gerald Weissmann, MD; John A. Zic, MD.

The recipients of the 2013 fellowships are:

Adil Akhtar
Class of 2013, University of Missouri—Kansas City School of Medicine
Assessing Accuracy in Staging in Stage I Non Small Cell Lung Carcinoma (NSCLC): Implications for the Stereotactic Body Radiotherapy Patient
Mentor Renuka Malik, MD
Councilor John Foxworth, PharmD

Ali Alam
Class of 2016, Texas A&M Health Science Center College of Medicine
The Role of Glioblastoma-derived Exosomes in Inducing the Tumor-Supportive M2 Macrophage
Mentor Amy Heinberger, MD
Councilor Mark L. Montgomery, MD

Christie Atchison
Class of 2016, USF Health Morsani College of Medicine
Risk factors for in-hospital venous thromboembolism in children
Mentor Neil Goldenberg, MD, PhD
Councilor Patricia J. Emmanuel, MD

David Ballard
Class of 2015, Louisiana State University School of Medicine in Shreveport
Drainage Catheter Design: From Whimsical to Research Proven
Mentor Horacio D’Agostino, MD
Councilor Geoffrey German, MD

Maureen Beederman
Class of 2014, University of Chicago Division of the Biological Sciences The Pritzker School of Medicine
Further Defining the Role of the RANK/RANKL/OPG Axis in Cranial Suture Biology and Criosynostosis
Mentors Russell Reid, MD; T.-C. He, MD
Councilor Adam Cifu, MD

Thomas Bemenderfer
Class of 2014, Indiana University School of Medicine
Novel Osseous Repair with Second-Generation Thrombopoietic Agents
Mentor Melissa Kacena, PhD
Councilor Richard B. Gunderman, MD, PhD

Danielle Bitterman
Class of 2016, New York University School of Medicine
Epigenetic reprogramming to restore chemosensitivity in cells under-expressing TBLR1 protein: A potential therapeutic target for refractory childhood acute lymphoblastic leukemia
Mentor William L. Carroll, MD
Councilor Steven Abramson, MD

Hillary Braun
Class of 2016, University of California, San Francisco, School of Medicine
Perceptions of Female Surgeons within Academic Medicine
Mentors Nancy L. Ascher, MD, PhD; Patricia O’Sullivan, MS, EdD
Councilor Sue Carlisle, MD

Jorien Breur
Class of 2014, Albert Einstein College of Medicine of Yeshiva University
Evaluation of the feasibility of utilizing the Quantiferon-TB Gold test at an HIV comprehensive care clinic in La Romana, Dominican Republic
Mentors Philip LaRussa, MD; Magdalena Sobieszczuk, MD
Councilor Charles Nordin, MD

The recipients of the 2013 fellowships are:

Adil Akhtar
Class of 2013, University of Missouri—Kansas City School of Medicine
Assessing Accuracy in Staging in Stage I Non Small Cell Lung Carcinoma (NSCLC): Implications for the Stereotactic Body Radiotherapy Patient
Mentor Renuka Malik, MD
Councilor John Foxworth, PharmD

Ali Alam
Class of 2016, Texas A&M Health Science Center College of Medicine
The Role of Glioblastoma-derived Exosomes in Inducing the Tumor-Supportive M2 Macrophage
Mentor Amy Heinberger, MD
Councilor Mark L. Montgomery, MD

Christie Atchison
Class of 2016, USF Health Morsani College of Medicine
Risk factors for in-hospital venous thromboembolism in children
Mentor Neil Goldenberg, MD, PhD
Councilor Patricia J. Emmanuel, MD

David Ballard
Class of 2015, Louisiana State University School of Medicine in Shreveport
Drainage Catheter Design: From Whimsical to Research Proven
Mentor Horacio D’Agostino, MD
Councilor Geoffrey German, MD

Maureen Beederman
Class of 2014, University of Chicago Division of the Biological Sciences The Pritzker School of Medicine
Further Defining the Role of the RANK/RANKL/OPG Axis in Cranial Suture Biology and Criosynostosis
Mentors Russell Reid, MD; T.-C. He, MD
Councilor Adam Cifu, MD

Thomas Bemenderfer
Class of 2014, Indiana University School of Medicine
Novel Osseous Repair with Second-Generation Thrombopoietic Agents
Mentor Melissa Kacena, PhD
Councilor Richard B. Gunderman, MD, PhD

Danielle Bitterman
Class of 2016, New York University School of Medicine
Epigenetic reprogramming to restore chemosensitivity in cells under-expressing TBLR1 protein: A potential therapeutic target for refractory childhood acute lymphoblastic leukemia
Mentor William L. Carroll, MD
Councilor Steven Abramson, MD

Hillary Braun
Class of 2016, University of California, San Francisco, School of Medicine
Perceptions of Female Surgeons within Academic Medicine
Mentors Nancy L. Ascher, MD, PhD; Patricia O’Sullivan, MS, EdD
Councilor Sue Carlisle, MD

Jorien Breur
Class of 2014, Albert Einstein College of Medicine of Yeshiva University
Evaluation of the feasibility of utilizing the Quantiferon-TB Gold test at an HIV comprehensive care clinic in La Romana, Dominican Republic
Mentors Philip LaRussa, MD; Magdalena Sobieszczuk, MD
Councilor Charles Nordin, MD
Margaret Brown  
Class of 2016, Medical University of South Carolina College of Medicine  
Activity of HIF-1α and MMP-2 in Optic Nerve Head Astrocytes during Glaucoma-Related Hypoxic Injury  
Mentor Shahid Husain, PhD  
Councilor Christopher G. Pelic, MD

Virginia Bush  
Class of 2014, University of Louisville School of Medicine  
Study of cutaneous nerve density variation at key superficial anatomic landmarks  
Mentor Bradon Wilhelmi, MD  
Councilor Daniel Danzl, MD

Nicholas Caffes  
Class of 2016, University of Maryland School of Medicine  
Heme-induced chemokine expression and neutrophil recruitment in intracerebral hemorrhage  
Mentor J. Marc Simard, MD, PhD  
Councilors Yvette Rooks, MD; Donna Parker, MD; Gary D. Plotnick, MD

Janet Choi  
Class of 2015, Johns Hopkins University School of Medicine  
Long-term use of cochlear implant in older adults: Results from a large consecutive case series  
Mentor Frank Lin, MD, PhD  
Councilor Charles W. Flexner, MD

Joshua Cornman-Homonoff  
Class of 2014, Raymond and Ruth Perelman School of Medicine at the University of Pennsylvania  
Chromatin occupancy of Sirtuin 7 in human adipose tissue aging  
Mentor Ivona Percec, MD, PhD  
Councilor Jon B. Morris, MD

Max Davis  
Class of 2016, University of Michigan Medical School  
Targeted inactivation of MMP-9 in connective tissue fibroblasts to improve the regeneration of rotator cuff tears  
Mentor Christopher L. Mendias, PhD  
Councilor Cyril M. Grum, MD

Jaden Evans  
Class of 2014, Texas Tech University Health Sciences Center School of Medicine  
Stereotactic Body Radiation Therapy Cardiac Isodose Distributions Associated with Focal \(^{18}\)F-Fluorodeoxyglucose Positron Emission Tomography Uptake  
Mentor James Welsh, MD  
Councilor Lesley Motheral, MD

Charlene Faires  
Class of 2015, Keck School of Medicine of the University of Southern California  
The Role of DNA Methylation in Tumor Maintenance  
Mentor Peter Laird, PhD  
Councilor Paul Holtom, MD

Ryan Gillihan  
Class of 2016, University of Kansas School of Medicine  
Exploring the Impact of Chronic Kidney Disease on Circulating Osteoblast Progenitor Cells  
Mentor Jason Stubbs, MD  
Councilor Steven Simpson, MD

Nancy Glober  
Class of 2014, The University of Texas School of Medicine at San Antonio  
Aquaporin 4 Expression in Astrocytes Subjected to an In Vitro Model for Ischemia  
Mentor Murat Digitaylioglu, MD, PhD  
Councilor Erin Nelson, MD

Shubhi Goyal  
Class of 2016, University of Alabama School of Medicine  
Characterizing Symptoms and Suffering at the End-of-Life in Children with Neurological Conditions  
Mentor Christina K. Ulrich, MD, MPH  
Councilor Stephanie D. Reilly, MD

Lisa Hisaw  
Class of 2014, University of California, Irvine, School of Medicine  
Interaction and Regulation of Ultraviolet B (UVB)-induced Cytokines in Human Keratinocytes  
Mentor Jenny Kim, MD, PhD  
Councilors Michael L. Berman, MD; Ranjan Gupta, MD

Yun Jenny Jiang  
Class of 2016, University of Hawaii, John A. Burns School of Medicine  
Predictors of intraparenchymal hematoma enlargement after moderate-to-severe TBI  
Mentor Matthew Koenig, MD  
Councilor Jill Omori, MD

Karen Kagha  
Class of 2016, Medical College of Georgia at Georgia Regents University  
The Regulation of Aquaporin 3 Expression  
Mentor Rivkah Isseroff, MD  
Councilor Clarence Joe, DMD, MD, FACR

Daniel Katz  
Class of 2014, Northwestern University The Feinberg School of Medicine  
Phenomapping: Hierarchical Cluster Analysis of Phenotypic Data for the Categorization of Systemic Hypertension  
Mentor Sanjiv J. Shah, MD  
Councilor John P. Flaherty, MD

Kartik Kesavabhotla  
Class of 2014, Weill Cornell Medical College  
Intra-arterial chemotherapy with MR-guided ultrasound disruption of the blood-brain-barrier to target the glioma stem cell niche  
Mentor John A. Boockvar, MD  
Councilor O. Wayne Isom, MD

Fakhra Khalid  
Class of 2016, University of California, Davis, School of Medicine  
Wound Repair Optimization Using Stress Modulation of Mesenchymal Stem Cells  
Mentor Rivkah Isseroff, MD  
Councilor Regina Gandour-Edwards, MD

Young Lee  
Class of 2015, Vanderbilt University School of Medicine  
Preoperative Predictors of Complications, Hospital Length of Stay, and Total Cost of Care in Cerebrovascular Neurosurgery  
Mentor Robert J. Singer, MD  
Councilor John A. Zic, MD
Robert Lystrup  
Class of 2015, Uniformed Services University of the Health Sciences  
F. Edward Hébert School of Medicine  
Student Fitness: Pedometry as Incentive?  
Mentor Mark B. Stephens, MD  
Councilor Robert E. Goldstein, MD

Lauren Mamer  
Class of 2015, Ohio State University College of Medicine  
Glutamate Vesicle Filling and Release Probability  
Mentor Christian Rosenmund  
Councilor Sheryl Pfeil, MD

Heather Melville  
Class of 2015, Georgetown University School of Medicine  
Identifying molecular mechanisms of resistance to anti-EGFR therapies through comprehensive phosphoprotein analysis  
Mentor Michael Pishvaian, MD, PhD  
Councilor Allan R. Tunkel, MD, PhD, MACP

Devin Patel  
Class of 2014, George Washington University School of Medicine and Health Sciences  
Mapping Back and Lower Extremity Pain Relief with Percutaneous Spinal Cord Stimulation Placement  
Mentor Mehul Desai, MD, MPH  
Councilor Alan G. Wasserman, MD

Ronak Patel  
Class of 2015, University of Texas Medical Branch School of Medicine  
The Function of Argininosuccinate Lyase in Osteoarthritis  
Mentor Brendan H. Lee, MD, PhD  
Councilor Lisa R. Farmer, MD

Shailee Patel  
Class of 2014, University of Miami Leonard M. Miller School of Medicine  
Predictive Biomarkers for Healing Outcome of Diabetic Foot Ulcers  
Mentor Michael Adams MD, FACP  
Councilor Heidi B. Schwarz, MD

Christopher Perrone  
Class of 2014, University of Massachusetts Medical School  
The role of multiple sclerosis as a risk factor for osteoporosis  
Mentor Carolina Ionete, MD, PhD  
Councilor David A. Drachman, MD

Marc Polacco  
Class of 2014, University of Iowa Roy J. and Lucille A. Carver College of Medicine  
The topological characteristics of micropatterned polymers determine ability to guide spiral ganglion neurite and Schwann cell growth  
Mentor Marlan Hansen, MD  
Councilor Christopher Cooper, MD

Elisa Quiroz  
Class of 2016, Ponce School of Medicine and Health Sciences  
Role of Alternative Lengthening of Telomeres in Lymphoma  
Mentor Rodrigo T. Calado, MD, PhD  
Councilor Gabriel A. Martinez, MD

Kelsey Ripp  
Class of 2016, The Warren Alpert Medical School of Brown University  
The effect of Praziquantel treatment of schistosome-infected pregnant women on maternal anemia risk and infant iron endowment  
Mentor Jennifer Friedman, MD, MPH, PhD  
Councilor Charlotte M. Boney, MD

Lindsey Roeker  
Class of 2014, Mayo Medical School  
Reconsidering the Definition of Plasma Cell Leukemia  
Mentor S. Vincent Rajkumar, MD  
Association chairs Carola Arndt, MD; Judith Kaur, MD; Barbara Westmoreland, MD

Ashwin Shinde  
Class of 2015, Drexel University College of Medicine  
Amelioration of Ionizing Irradiation Damage to the Oral Cavity/Oropharynx of Radiosensitive Fanconi Anemia FancD2-/- Mice by GS-Nitroxide JPs-039  
Mentor Joel Greenberger, MD Michael Epperly, PhD  
Councilor Allan R. Tunkel, MD, PhD, MACP

Sarah Siu  
Class of 2016, State University of New York Downstate Medical Center College of Medicine  
Loss of Laminin γ3 Chain Affects Rates of Corneal Epithelial Cell Proliferation, Differentiation and Apoptosis  
Mentor William Brunken, PhD  
Councilor Douglas R. Lazzaro, MD, FACS, FAAO

John Squiers  
Class of 2016, University of Texas Southwestern Medical Center at Dallas Southwestern Medical School  
Predicting Operative Mortality in Endocarditis  
Mentor J. Michael DiMaio, MD  
Councilor Kevin Klein, MD

Leland Stillman  
Class of 2014, University of Virginia School of Medicine  
Allergic Disease in Neighbors of Concentrated Animal Feeding Operations  
Mentor Larry Borish, MD  
Councilor Mark J. Mendelsohn, MD

Joshua Sumislawski  
Class of 2015, University of Tennessee Health Science Center College of Medicine  
Critical Administrative Thresholds: Redefining Massive Transfusion in Trauma  
Mentors Stephanie A. Savage, MD; Bel L. Zarzaur, MD, MPH  
Councilor Owen Phillips, MD

Sam Sun  
Class of 2016, Washington University in St. Louis School of Medicine  
Risk factors for the recurrence of atypical meningiomas  
Mentor Albert Kim, MD, PhD  
Councilor Morton E. Smith, MD

Daniel Talmasov  
Class of 2015, Stony Brook University School of Medicine  
Study of the radio-protective role of Kruppel-like Factor 4 following gamma-radiation induced gut injury  
Mentors Vincent Yang, MD, PhD; Amr Ghaleb, PhD  
Councilor Jack Fuhrer, MD

Corey Walker  
Class of 2014, University of Rochester School of Medicine and Dentistry  
Outcomes and Risk Factors of Pediatric Shunts at a Single Institution  
Mentor Howard Silverstein, MD  
Councilor Heidi B. Schwarz, MD
2013 Carolyn L. Kuckein Student Research Fellowships

Deva Wells
Class of 2015, University of Washington School of Medicine
The Impact of Socioeconomic Status on Survival from Out-of-Hospital Cardiac Arrest
Mentor Thomas Rea, MD, MPH
Councilor Douglas S. Paauw, MD

Jacob Wilson
Class of 2016, Medical College of Wisconsin
Effects of MK-2206, a novel AKT inhibitor, on cholangiocarcinoma cells
Mentor T. Clark Gamblin, MD, MS
Councilor James L. Sebastian, MD

Stephen Xue
Class of 2016, Louisiana State University School of Medicine in New Orleans
Reversal of nucleoside reverse transcriptase inhibitor-induced endothelial dysfunction by Coenzyme Q
Mentor Tammy Dugas, PhD
Councilor Peter M. C. DeBlieux, MD

Peter H. Yang
Class of 2016, Columbia University College of Physicians and Surgeons
Prediction of Arteriovenous Malformation (AVM) Recurrences in Pediatric Populations Using Characteristics of Vessel Compactness and Presence of Deep Venous Drainage
Mentor Richard C. E. Anderson, MD
Councilor John C.M. Brust, MD

Huayi Zhang
Class of 2014, University of Illinois College of Medicine
Role of T Lymphocytes in Atopic Dermatitis
Mentor Lawrence S. Chan, MD
Councilors Melvin Lopata, MD; Errol Baptist, MD

Rheanne Zimmerman
Class of 2015, Case Western Reserve University School of Medicine
Gene Network Analysis in Childhood Cancer
Mentor Logan Spector, PhD
Councilor Charles Billington, MD

Samantha Zwiebel
Class of 2015, Case Western Reserve University School of Medicine
Creation of a Biocompatible Scaffold Utilizing Growth Factors to Correct for Critical Size Defect in Rat Calvaria
Mentors Arun Gosain, MD; Davood Varghai, MD

2013 Helen H. Glaser Student Essay Awards

The thirty-first annual Alpha Omega Alpha Helen H. Glaser Student Essay Awards were made in April. This year’s winners are:

First prize: Catherine Spaulding of the Class of 2014 at Georgetown University School of Medicine for her essay, “Dennett’s Echo.”

Second prize: Christopher Salib of the Class of 2016 at Meharry Medical College for his essay, “Words Beyond Death: Literary Form and Its Intentions in Paul Zweig’s Last Works.”

Third prize, tie: Stanley Gutionov of the Class of 2015 at Northwestern University The Feinberg School of Medicine for his essay, “‘Vital Amines,’ Purple Smoke: A Select History of Vitamins and Minerals” and YunZu Wang of the Class of 2013 at Washington University in St. Louis School of Medicine for her essay, “Yes, I Can: Learning to Cope with Death.”

Honorable mentions: Peter Daniel of the Class of 2014 at the Medical College of Georgia at Georgia Regents University for his essay, “Wet Dust”; Felipe Fernandez del Castillo of the University of Massachusetts Medical School for his essay, “Healing, Harming, and Hippocrates: Physician-Assisted Suicide in Roman Medicine”; and Matthew Molloy of the Class of 2014 at Johns Hopkins University School of Medicine for his essay, “Food Fight.”

Winning essays will be published in future issues of The Pharos.

2013 Pharos Poetry Competition winners

The Pharos Poetry Competition awards were made in April. This year’s winners are:

First prize: Corinna Iacopetti of the Class of 2014 at Case Western Reserve University School of Medicine for her poem, “Initiation.”

Second prize: Kate Linetzky of the Class of 2015 at Georgetown University School of Medicine for her poem, “what i said.”

Third prize: Anna Vollstedt of the Class of 2015 at the University of Iowa Roy J. and Lucille A. Carver College of Medicine for her poem, “Transcription.”

Honorable mention: Alexander Fortenko of the Class of 2015 at the George Washington University School of Medicine and Health Sciences for his poem, “Negatives.”

Winning poems will be published in issues of The Pharos.
they said to offer a hand
a tissue
a hug
they said to be strong
they said to be quiet
they said to nod
how are you? i said
fine she said
just fine
philadelphia chromosome she said
acute lymphoblastic leukemia
it’s a bad prognosis she said
they don’t know
they just don’t know she said
they just can’t give me time
i’m fine she said again

i said i didn’t know
i said we didn’t know
i said we could just talk
how old are you? she said
twenty-three i said
you’re young she said
like my daughter
what’s she like? i said
is she here?
no she said
i’m alone she said
then she said nothing
they said to offer a hand when they shake
a tissue when they cry
a hug when they hurt
they said to be strong when they’re weak
they said to be quiet when they can’t
they said to nod like i can understand

this is how to help the pain, they said
when medicine gets too tough
when therapy hurts too hard
when disease takes too much
they didn’t say what comes next
what to say when the pain isn’t from us
here’s a tissue i said
because i couldn’t understand
because that’s all i could say

Kate Linetzky

Ms. Linetzky is a member of the Class of 2015 at Georgetown University School of Medicine. This poem won second place in the 2013 Pharos Poetry Competition. Ms. Linetzky’s e-mail address is: klinetzky@gmail.com
William B. Deal, MD

On March 15, 2013 William B. Deal, MD, former president of AΩA and dean of the University of Alabama School of Medicine, passed away. He was a colleague whose life exemplified the motto of Alpha Omega Alpha—“Be worthy to serve the suffering.” He served AΩA as a member of the board of directors from 1989 to 1995, and as its president from 1993 to 1995.

His sudden death was followed by numerous tributes.

William B. Deal grew up in Forest City, North Carolina, and was a Morehead Scholar at the University of North Carolina at Chapel Hill, where he earned a bachelor’s degree in chemistry in 1958 and a medical degree in 1963, specializing in Infectious Diseases.

Upon graduation, he was on active duty as the medical officer aboard the USS Capricornus, U.S. Navy, and was honorably discharged in 1968 as Lieutenant. He spent 25 years at the University of Florida, starting as an intern and rising through the ranks to become dean and vice president of the Main Medical Center and Foundation from 1988 until 1990, and he joined UAB as associate dean and professor of Medicine in 1991. He was named senior associate dean in 1996 and interim dean in 1997, becoming permanent dean October 31, 1997 until October 2004, when he was named senior vice president and dean emeritus. He also served as interim director and CEO of the UAB Health System from December 1998 until October 2000.

Dr. Deal served on the Robert Wood Johnson Foundation National Advisory Committee and was a member of the Alabama Rural Health association, the National Rural Health Association, American Association of Medical Colleges, and many other distinguished professional organizations. He chaired or was a member of many committees of the American Medical Association, and was the recipient of numerous awards and honors.

Dr. Deal is survived by his wife April, daughters Kimberly Wolpert (Jim) and Kathleen Deal; their mother, Elizabeth; and grandsons Matthew, Christopher, and Andrew Wolpert. He is also survived by his siblings, Nancy Weaver, Betsy Smith (Gilbert), Harold Deal (Martha), in-laws Emily and Sam Cooper, and 12 nieces and nephews.

From 1978 on Dr. Deal’s practice was in leadership roles at University of Florida, Maine Medical Center, the AΩA board of directors and most recently at the University of Alabama at Birmingham. Comments about his leadership style during this time focused on his management style and his development of faculty and staff.

His style included attention to all as a counselor, and a keen ability to not only delegate but support those he delegated tasks to as their leader.

The phrase, “We have lost a good one,” was mentioned from a full spectrum of employees at UAB. His support of AΩA and its goals continued long after his presiding of the board.

Will Deal’s legacy included his devotion to the development of careers of many he led at these institutions. We at AΩA salute and celebrate his life.

C. Bruce Alexander, MD
President, Alpha Omega Alpha
Birmingham, Alabama
The collection has been digitized and streaming videos are being posted on the ΛΩΑ web site: http://http://alphaomegaalpha.org/leaders.html. Available now are videos of the following leaders in American medicine.

<table>
<thead>
<tr>
<th>Interview of</th>
<th>Interviewer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raymond Adams, MD</td>
<td>Arthur Asbury, MD</td>
</tr>
<tr>
<td>Mary Ellen Avery, MD</td>
<td>Marcia Angell, MD</td>
</tr>
<tr>
<td>Benjamin M. Baker, MD</td>
<td>Carol J. Johns, MD</td>
</tr>
<tr>
<td>Jeremiah A. Barondess, MD</td>
<td>David E. Rodgers, MD</td>
</tr>
<tr>
<td>Paul B. Beeson &amp; Eugene A. Stead, MD</td>
<td>Beeson and Stead</td>
</tr>
<tr>
<td>John A. Benson, Jr., MD</td>
<td>Daniel D. Federman, MD</td>
</tr>
<tr>
<td>F. Tremaine Billings, Jr., MD</td>
<td>Harvie Branscomb</td>
</tr>
<tr>
<td>Baruch S. Blumberg, MD, PhD</td>
<td>James Sherley, MD, PhD</td>
</tr>
<tr>
<td>Stuart Bondurant, MD</td>
<td>Jeremiah A. Barondess, MD</td>
</tr>
<tr>
<td>John Z. Bowers, MD</td>
<td>Robert J. Glaser, MD</td>
</tr>
<tr>
<td>Eugene Braunwald, MD</td>
<td>Lee Goldman, MD</td>
</tr>
<tr>
<td>George F. Cahill, Jr., MD</td>
<td>Ronald H. Arky, MD</td>
</tr>
<tr>
<td>Benjamin Castleman, MD</td>
<td>Ronald B. Weinstein, MD</td>
</tr>
<tr>
<td>Robert A. Chase, MD</td>
<td>Robert J. Glaser, MD</td>
</tr>
<tr>
<td>W. Montague Cobb, MD</td>
<td>LaSalle D. Leffal, Jr., MD</td>
</tr>
<tr>
<td>Lowell T. Coggleshall, MD</td>
<td>John Z. Bowers, MD</td>
</tr>
<tr>
<td>C. Lockard Conley, MD</td>
<td>Benjamin M. Baker, MD</td>
</tr>
<tr>
<td>Denton A. Cooley, MD</td>
<td>Ron Stone</td>
</tr>
<tr>
<td>George W. Corner, MD</td>
<td>John Z. Bowers, MD</td>
</tr>
<tr>
<td>Martin M. Cummings, MD</td>
<td>Peter D. Olch, MD</td>
</tr>
<tr>
<td>James E. Darnell, Jr., MD</td>
<td>Jeff Friedman</td>
</tr>
<tr>
<td>Michael E. DeBakey, MD</td>
<td>Claude H. Organ, Jr., MD</td>
</tr>
<tr>
<td>Lester R. Dragstedt, MD, PhD</td>
<td>John Landor, MD</td>
</tr>
<tr>
<td>Harriet P. Dustan, MD</td>
<td>Edward Frohlich, MD</td>
</tr>
<tr>
<td>Richard V. Ebert, MD</td>
<td>William W. Stead, MD</td>
</tr>
<tr>
<td>Robert H. Ebert, MD</td>
<td>Richard V. Ebert, MD</td>
</tr>
<tr>
<td>John Eckstein, MD</td>
<td>Francois M. Abboud, MD</td>
</tr>
<tr>
<td>Gertrude B. Elion, DSc</td>
<td>Mary Ellen Avery, MD</td>
</tr>
<tr>
<td>John F. Enders, PhD</td>
<td>Frederick C. Robbins, MD</td>
</tr>
<tr>
<td>George L. Engel, MD</td>
<td>Stanford Meyerowitz</td>
</tr>
<tr>
<td>Robert J. Glaser, MD</td>
<td>Robert A. Chase, MD</td>
</tr>
<tr>
<td>Daniel Nathans, MD</td>
<td>Daniel DiMaio, MD</td>
</tr>
<tr>
<td>David E. Rogers, MD</td>
<td>William Schaffner, MD</td>
</tr>
<tr>
<td>David C. Sabiston, Jr., MD</td>
<td>Paul A. Ebert, MD</td>
</tr>
<tr>
<td>W. D. Barry Wood, Jr., MD</td>
<td>Robert J. Glaser, MD</td>
</tr>
</tbody>
</table>

**Presidents of Alpha Omega Alpha**

<table>
<thead>
<tr>
<th>Name</th>
<th>Years served</th>
</tr>
</thead>
<tbody>
<tr>
<td>William W. Root, founder (1902, University of Illinois)</td>
<td>1902–1904</td>
</tr>
<tr>
<td>Winfield Scott Hall (1903, Northwestern University)</td>
<td>1904–1913</td>
</tr>
<tr>
<td>Russell Burton-Opitz (1907, Columbia University)</td>
<td>1913–1918</td>
</tr>
<tr>
<td>John L. Heffron (1911, Syracuse University)</td>
<td>1918–1924</td>
</tr>
<tr>
<td>Walter L. Biering (1921, University of Iowa)</td>
<td>1924–1960</td>
</tr>
<tr>
<td>Wilbur C. Davison (1931, Duke University)</td>
<td>1960–1963</td>
</tr>
<tr>
<td>Victor Johnson (1936, University of Chicago)</td>
<td>1963–1966</td>
</tr>
<tr>
<td>Sherman M. Mellinkoff (1944, Stanford University)</td>
<td>1980–1984</td>
</tr>
<tr>
<td>Carol J. Johns (1950, Johns Hopkins University)</td>
<td>1986–1987</td>
</tr>
<tr>
<td>Jeremiah A. Barondess (1949, Johns Hopkins University)</td>
<td>1987–1989</td>
</tr>
<tr>
<td>Stuart A. Schneck (1952, University of Pennsylvania)</td>
<td>1990–1993</td>
</tr>
<tr>
<td>Frank C. Arnett (1968, University of Cincinnati)</td>
<td>1995–1996</td>
</tr>
<tr>
<td>Rae-Ellen W. Kavey (1972, McGill University)</td>
<td>2006–2011</td>
</tr>
<tr>
<td>Ruth-Marie E. Fincher (1976, Medical College of Georgia)</td>
<td>2011–2012</td>
</tr>
<tr>
<td>C. Bruce Alexander (1970, University of Virginia)</td>
<td>2012–2013</td>
</tr>
</tbody>
</table>

**Leaders in American Medicine streaming videos**

In 1967, as a result of a generous gift from Drs. David E. and Beatrice C. Seegal, Alpha Omega Alpha initiated a program of one-hour videotapes featuring interviews with distinguished American physicians and medical scientists.

Interviewed by physicians who themselves have achieved distinction in their fields, renowned men and women of American medicine reflect on their formative years, the persons and events that influenced them, the circumstances surrounding their major contributions to medical education and medical science, and the ebb and flow that occurred in their disciplines during their careers. They are a unique resource for those embarking on medical careers, as well as a permanent record of many of the people who helped to shape medicine in the United States in this century.
They don't teach you
the proper pressure to use.
They teach you how to hold the scalpel,
where to make the cut. But
how can anyone teach
the pressure that just barely slips blade
into skin, the strained space
in the room of bright
lights and starched fabrics
and strange smells—
and then,
the sense of absurd normalcy.
This is just what we do.

We peel back the flaps
we've created—as we would draw back
drapes or unveil artwork—
freeing the muscles underneath.
And suddenly I crave
silence, solitude, some means
to feel my own awe—
that feeling
of being unable to speak
because speaking
and feeling
at once
has become impossible.

Only with silence can I hear
our anesthetized language—
rostral, distal, lateral—
describing such a simple place,
maybe the space on his back
always just
out of reach in the shower. Or
the spot by his ear where
his children poked
clumsy hands, climbing up
to kiss his cheek.

Only with silence
I begin to reconcile
what this will be, to separate
the fibers of the body
from the fiber of the person
and yet
to remain in awe
of both.

I never expected muscles
to be beautiful.

Corina Iacopetti
The Board of Directors of Alpha Omega Alpha is pleased to announce the winner of the 2013 Edward D. Harris Professionalism Award. The award emphasizes AΩA’s commitment to its belief that professionalism is a crucial facet of being a physician, a quality that can be both taught and learned. Originally named the AΩA Professionalism Fellowship, the award was renamed in 2010 to honor the late Edward D. Harris, the longtime executive director of the society. Applications were open to medical schools with active AΩA chapters or associations. Faculty who have demonstrated personal dedication to teaching and research in specific aspects of professionalism that could be transferred directly to medical students or resident physicians were encouraged to apply for these funds. The winner of the 2013 Edward D. Harris Professionalism Award is:

Jason Morrow, MD, PhD
Medical Director, Inpatient Palliative Care Consultation Service (LIFE Care), Assistant Professor of Medicine, Howard and Betty Halff Professor of Ethics & Medical Humanities, University of Texas Health Science Center at San Antonio

Burnout is defined as a syndrome of depersonalization, emotional exhaustion, and a sense of low personal accomplishment, with decreased effectiveness in the workplace. Recent studies have shown a high prevalence of burnout among physicians-in-training, with increasing rates of burnout as training progresses. One study of Internal Medicine residents showed that rates of burnout before and after intern year increased from 43 percent to 53 percent.

Evidence among physicians and nurses suggests that burnout correlates with poor provider outcomes—including higher rates of physician depression, substance abuse, medical illness, suicidality, and turnover or withdrawing from the profession—and poor patient care processes—including suboptimal pain management, decreased sensitivity to ethical issues, observable negative team behavior, and lapses in professionalism.

The ACGME recognizes the threat of burnout and has required improved program structures such as duty-hour restrictions. Since humane conditions are more likely to promote humanistic behavior, strategies have focused on work hours. Some programs have augmented ACGME requirements with support groups and robust Employee Assistance Programs. While it is important for residents to have access to counseling and other services outside of their training programs, it is also important for each training program to integrate strategies into the actual residency curriculum. Doing so sends a powerful message that resources are not only available but are considered to be essential elements of professional development—thereby exposing and confronting the hidden curriculum. Formal commitments to supporting residents in the course of clinical practice can also ensure that residents—and the medical students that work with them—possess the coping skills for personal and ethical challenges.

Key features of successful efforts to reduce burnout include a focus on physician resilience, or the ability to withstand and cope with adversity, and physician engagement, or a sense of accountability for and leadership in one’s practice environment.

My project for the Alpha Omega Alpha Edward D. Harris Professionalism Award, “Ethical Lives of Residents: Promoting Professionalism in Graduate Medical Education,” offers an embedded strategy for promoting both resident resilience and engagement, focusing on open dialogue, role modeling, and positive reinforcement.

The young inpatient LIFE Care/Palliative Medicine consultation service at University Health System, the primary teaching partner for University of Texas Health Science Center at San Antonio (UTHSCSA), has created a fertile ground for implementing a humanistic curriculum that allows the coupling of supportive care for patients with the supportive care of medical students and residents. Our faculty and institutional leadership are poised to successfully integrate a curriculum that explores and strengthens the ethical lives of residents.

The content and structure of the intervention are designed to captivate and nurture the moral imagination of residents, to demonstrate organizational transparency and commitment to best practices, and to promote early identification of at-risk attitudes and behaviors. “Ethical Lives of Residents” initiates a longitudinal, interactive, and mentored professionalism curriculum with the Internal Medicine residency program, focusing on humanistic and clinically relevant Entrustable Professional Activities (EPAs). Teaching tools will include a core set of five-to ten-minute multimedia case studies with high-yield information, video, narration, and interactive cases using “choose your own adventure” decision trees. Attending faculty who are on service at the time of the EPA will supervise and evaluate the clinical and teaching activities.

Residents will complete three pilot modules during the eighteen-month initial study period focusing on moral distress, surrogate decision making, and disclosing medical errors. The curriculum will include a set of core didactics emphasizing analytic, reflective, narrative, and empathic techniques. These techniques will prepare residents and participating faculty for EPAs performed during clinical services.

“Ethical Lives of Residents” will study the possible effect of this interactive and collegial curriculum on resident burnout by employing the Maslach Burnout Inventory, a validated fifteen-item assessment tool, to be offered to participating residents twice yearly. With support from UTHSCSA, University Health System, and AΩA, this project promotes best practices in clinical ethics, palliative medicine, self care, and professionalism, while striving to measurably enhance resident engagement and resiliency.
Scarves are 35 x 35 inches, of 12 m/m silk twill with handrolled hems. Four colorways are available as shown: red/black, turquoise/purple, peach/mint, and navy/lavender. Scarf design by J&J Designs of San Francisco (jnjdesigns.biz).

To order, send a check for the appropriate amount to: Alpha Omega Alpha, 525 Middlefield Road, Suite 130, Menlo Park, CA 94025. Or order online at www.alphaomegaalpha.org/store. Price includes shipping and handling.

AΩA's new scarf highlights the society's insignia, based on the shape of the manubrium sterni. The center medallion feature the Pharos lighthouse of Alexandria, one of the seven wonders of the ancient world, for which AΩA's journal is named. The borders are stylized DNA strands.

Alpha Omega Alpha neckties or freestyle bowties are fashioned from fine silk by Vineyard Vines of Martha's Vineyard, Massachusetts.