# The Pharos of Alpha Omega Alpha Honor Medical Society

**Winter 2017**

"Be Worthy to Serve the Suffering"

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

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**Manuscripts** being prepared for The Pharos should be typed double-spaced and conform to the format outlined in the manuscript submission guidelines appearing on our website: www.alphaomegaalpha.org/contributors.html.  
Editorial material should be sent to Richard L. Byyny, MD, Editor, The Pharos, 525 Middlefield Road, Suite 130, Menlo Park, California 94025.  
E-mail: thepharos@alphaomegaalpha.org.

**Requests for reprints of individual articles should be forwarded directly to the authors.**

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Editorial  
Cognitive bias: Recognizing and managing our unconscious bias
Richard L. Byyny, MD, FACP

AΩA 2016 Fellows in Leadership complete successful year and are prepared to serve
Richard L. Byyny, MD, FACP; Cynthia Arndell, MD; Ronald Robinson, MD, MPH, MBA; and Elizabeth Warner, MD

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Clemens Schoenebeck

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Illiteracy
Rahul Banerjee, MD
We all have biases, whether we are aware of them or not. We hold opinions in favor of, or against, a thing, person, or group compared with another. These preconceived opinions are often not based on reason or actual experience.

Cognitive bias refers to the systematic pattern of deviation from norm or rationality in judgment, whereby inferences about other people and situations may be drawn in an illogical fashion. Individuals create their own “subjective social reality” from their perception of the input.

Unconscious or implicit bias refers to biases in judgment or behavior resulting from subtle cognitive processes that we are unaware of, and which happen outside of our regular thought process and control. It occurs automatically and is triggered by the brain making quick judgments and assessments of people and situations that are influenced by personal background, experiences, memories, and cultural environment. Social judgments and inferences, especially those guiding first impressions, are often mediated by unconscious processes. The brain is extracting patterns from inputs and building predictive models that are the basis of the biases.

Biases presumably originated in response to fears, and for the caveman—and cave woman—were helpful for safety, and useful for evolution and survival.

Cognitive stereotyping helps perceive surroundings quickly and efficiently, and unconsciously affect judgment with missing information filled in from unconscious cognition to guide behavior during social interactions and decision-making. Theoretically, this allows for simplification of complex environments to predict and respond to future events, even with incomplete information.

Over time, we intensify and reaffirm our perception that members in a certain category are more homogeneous than they are in reality. We then use personal characteristics—race, gender, etc.—as markers for personality, behaviors, and other traits. This is compounded by media and cultural stereotypes presented by friends, family, colleagues, the news, and social media.

**Biases drive behaviors**

Dr. Wiley Souba (AΩA, University of Texas McGovern Medical School, 1978), states, “Research in neuroscience has made it unambiguously clear that every aspect of our life experience, and every choice we make, is generated by neuronal patterns in our brain. Both genome and experiences shape and mold our way of being at any point in time in our life.”

Most of us believe that our decisions are based on conscious deliberations of the available information about the choice options and deductive or inductive reasoning. However, we often use mental shortcuts, which is a part of being human and is related to self-preservation. We learn to use routinized procedures for social judgment, and may form impressions of people without any conscious awareness of the perceptual cognitive basis.

Unconscious bias may be detrimental without consideration of objective and known facts.

It has been estimated that our brains are capable of processing 11 million bits of information every second. In 2011, Daniel Kahneman described an accepted framework for understanding human cognitive functioning by illustrating mental processing in two parts: System 1 and System 2. System 1 is cognition, and used for information outside of conscious awareness, e.g., having learned to stop for a red light and proceed with a green light without using any conscious thought. System 2 is conscious cognition processing to think and make decisions requiring...
concentration through thoughtfulness, effort, and deliberate concentration. These two systems work together to make sense of the world.

Cognitive processing—System 1—helps us understand that many of the mental associations that affect how we perceive and act are operating implicitly or consciously, and are the source of our unconscious biases.

Since our implicit associations are outside of our conscious awareness, they do not necessarily align and match our explicit beliefs or our stated intentions. They have been learned over time and incorporated functionally in our brains and neurons. Individuals with good intentions can unknowingly act from their unconscious biases, producing unintended negative effects and consequences on decision-making, unaware that these unconscious biases exist.

Unconscious bias can be related to age, race, ethnicity, gender, employment, selection and promotion, health care, religion, disability, nationality, socioeconomic status, law and justice, education, etc. Unconscious bias can be followed by an unconscious tendency to try to relate information that confirms pre-existing beliefs. It becomes a habit of which the person is actually unaware.

A similar phenomenon is implicit stereotype, which is an unconscious attribution of presumed qualities to a certain social group—race or gender—referred to as implicit social cognition and bias. In contrast, explicit stereotypes are the result of intentional, conscious, and controllable thoughts and beliefs resulting in conscious bias, or prejudice. We consciously use information about characteristics, gender, race, ethnicity, age, socioeconomic status, sexual orientation, and other factors to help understand the etiology and epidemiology of diseases and in diagnosis of individual patients. Our unconscious biases can influence every step of this process.

**Becoming aware of the unconscious**

Through self-reflection and personal awareness, people can become aware of their biases. For decades, unconscious bias has been studied and tested in nearly every profession and personal setting.

One study found that fictitious resumes with Caucasian-sounding names sent in reply to help wanted ads were 50 percent more likely to receive callbacks for interviews compared to resumes with African-American sounding names.

In another study, faculty rated male applicants for a laboratory manager position as significantly more competent and employable than female applicants. Faculty selected a higher starting salary, and offered more career mentoring to the male applicants. And, among mentored career K08 or K23 grant recipients, the mean salary for female researchers was about $32,000 less than their male counterparts. In addition, women scientists who are mothers were found to be 79 percent less likely to be hired, and if hired, were offered $11,000 less in salary than women with no children. By contrast, parenthood conferred an advantage for men in the same study. Studies also show that evaluators consistently scored identical curriculum vitae and resumes lower when they are assigned a female name.

In the tech world, 19 percent of software developers are female, and of those, only 19 percent are in technology leadership roles. Eighty-eight percent of all information technology patents filed between 1980 and 2012 have male only invention teams, while two percent have female only teams. A 2008 London Business School study looked at 100 teams from 21 companies and found that work teams with equal numbers of women and men were more innovative and more productive than teams of any other composition.

In 2014, researchers created a fictitious legal memo that contained 22 deliberately planted errors for spelling and grammar, and factual, analytical, and technical writing. The memo was distributed to law firm partners as a writing analysis study. The partners were asked to edit and evaluate the memo. Half of the memos listed the author as African-American, and half as Caucasian. When the author was listed as African-American, the evaluators found more of the embedded errors and rated the memo as lower quality than those who believed the author was Caucasian. They concluded unconscious confirmation bias was present, despite the reviewers’ intention to be unbiased.

Unconscious bias among health care professionals can influence the behaviors and judgments. Since 1997, more than 30 studies have been published relevant to unconscious bias in clinical decision-making. Racial bias was found to be prevalent among health care providers, and race can influence medical decision-making.

In 2006, researchers tested implicit bias among physicians and their prediction of thrombolysis for African-American and Caucasian patients. They used the Implicit Associations Test (IAT), a social psychology measure designed to detect the strength of a person’s automatic association between mental representations of objects (concepts) in memory. They specifically measured implicit race preference and perceptions of cooperativeness. Before taking the test, physicians reported no explicit preference.
for Caucasian versus African-American patients, and stated they didn’t have any preconceived perceptions of cooperativeness.

The IATs revealed otherwise, identifying implicit preference favoring Caucasians, and implicit stereotypes of African-Americans as less cooperative with medical procedures and less cooperative in general. As physicians’ pro-Caucasian implicit bias increased, so did their likelihood of treating Caucasian patients and not treating African-American patients with thrombolysis.17

**Diversity and inclusion**

Decades of work by investigators from myriad disciplines show that socially diverse groups, with a mix of race, ethnicity, gender, and sexual orientation are more innovative than homogeneous groups. Social diversity provides advantages in solving complex, non-routine problems. Interacting with individuals from different backgrounds affects group members’ preparation, evaluation of alternative views, and ability to reach consensus.

Diversity enhances creativity and encourages searching for novel information and perspectives that lead to better decision-making and problem solving, and lead to higher quality scientific research.18 Unconscious assumptions and bias limit the science and technology pool, and undermine scientific innovation.

Studies of the medical and scientific peer-review process have shown that African-Americans and women are held to higher standards to be judged competent, which has resulted in efforts to minimize implicit bias in peer review, including double-blind peer review when authors and peer-reviewers are unaware of each other’s identity.19

Dr. Eve Higginbotham (ΔΩA, Morehouse School of Medicine, 2008, Faculty), notes, “While there has been focus on diversity—the differences among people in a group or community—for decades, there has not been as much attention paid to inclusion, which is the process of respectfully engaging all members of a community, organization, or nation.”20 A limiting factor on inclusivity is unconscious bias. This also is evident in developing effective inter-professional education and patient care where there are often unconscious biases related to professional background and roles.

**Measuring unconscious bias**

Reliable computer-based tests have been developed to measure implicit and unconscious bias. The most commonly used is the IAT, which measures differential association of two target concepts—male or female, black or white, good or bad—and relies on differences in response latency to reveal unconscious bias. The larger the performance difference, the stronger the unconscious bias.

Between 1998 and 2006, more than 4.5 million IAT tests were completed on the IAT website. The project found that:

- Implicit bias is pervasive.
- People are often unaware of their implicit biases.
- Implicit biases predict behavior.
- People differ in levels of implicit bias.21

The IAT is a powerful and useful instrument to explore and document the impact of bias on behavior. It can be used to increase awareness of cognitive bias, and help individuals and groups to compensate and learn about influences on decision-making and social interactions. The IAT is available online at implicit.harvard.edu. It is free and takes about 10 minutes to complete a test.

**Unconscious bias in medicine and leadership**

Because time pressures, fatigue, stress, and information overload impact physicians’ and clinical educators’ cognition, there is a corresponding increase in unconscious cognition resulting in increased implicit biases.

In 1999, Parker J. Palmer, writer and activist, observed:

> Why must we go in and down? Because as we do so, we will meet the darkness that we carry within ourselves—the ultimate source of the shadows that we project onto other people. If we do not understand that the enemy is within, we will find a thousand ways of making someone “out there” into the enemy, becoming leaders who oppress rather than liberate others….Good leadership comes from people who have penetrated their own inner darkness and arrived at the place where we are at one with one another, people who can lead the rest of us to a place of “hidden wholeness” because they have been there and know the way.22

Souba discusses the importance of the inward journey in leadership where biases—overt and unconscious—are critically important:

> We each come to the table with a set of fixed and unchallenged beliefs and assumptions that unconsciously lead us to listen to what we hear in predetermined ways. We each make sense of (interpret) the world through the lenses (contexts) of world views and frames of reference. Context becomes a critical determinant of making sense of a leadership challenge. Change the context and you can shift yourself

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and your sense-making in relationship with it.

Context is always alterable. It is always created by you, and only you, and thus always a matter of choice. However, before creating a new context you must expose the current one and the hidden assumptions that make up the current/reigning context. Once exposed, crafting a new context can alter the occurring such that your correlated ways of being and acting give rise to more of your natural self-expression—you at your best.  

Can we change and be alerted to our unconscious biases? How can we gain awareness of unconscious biases that may be affecting our decisions and resulting outcomes? Even when we believe, and strive to be egalitarian—believing in the principle that all people are equal and deserve equal rights and opportunities—unconscious biases can slip into our thoughts and processes.

Since unconscious biases are not permanent, they are malleable and can be changed by devoting intention, attention, and time to developing new associations. It involves taking the time to consciously think about potential and possible biases prior to acting or making decisions. There is evidence that even minimal interventions in reducing stereotyping and discrimination are efficacious. For example, “simply giving whites instructions to imagine a day in the life of a black person, looking at the world through his/her eyes and walking through the world in his/her shoes led to less implicit stereotyping and in-group favoritism.” Programs testing mental imagery—cognitive therapy—have shown a change in unconscious and automatic stereotyping. People who are made aware of the influence of their stereotypes can be motivated to mentally change their initial biased responses.

**Becoming aware to effect change**

Educate yourself, take action, and be accountable. Work consciously to be aware, and be able to tell the difference between real threats and unconscious bias-driven impulsive actions.

In 2014, thousands of medical students joined the community movement WhiteCoats4BlackLives, and participated in demonstrations across the United States to safeguard the lives and well-being through the elimination of racial bias in the practice of medicine. The group’s three goals are to raise awareness of racism as a public health concern; end racial discrimination in medical care; and prepare future physicians to be advocates for racial justice. The students demanded an examination of racial bias and unconscious bias in academic medical centers, recognizing that in the profession and medical education it is an important issue that must be addressed.

One of the most effective ways to mitigate unconscious bias is “habituation of egalitarian goal pursuit.” Approach every encounter with patients, colleagues, employees, students, and especially those who are members of underprivileged or stereotyped social groups, different genders, races, ethnicities, ages, socioeconomic status as an opportunity to reinforce and act consistently with commitment to egalitarian values. By making egalitarian goals habit, they become unconsciously accessible and automatically activated in the presence of groups different than yourself. Create an inclusive learning environment to build positive associations with others. This is a primary element of medical professionalism and the care of patients.

Skills to abate unconscious bias include:

- Perspective taking which is the cognitive component of empathy;
- Emotional regulation to use more inclusive social categories; and
- Partnership-building for clinicians to create partnerships with patients working as a team toward common goals.

The Joint Commission provides several actions that health care providers can practice to combat unconscious bias:

- Have a basic understanding of the cultures from which your patients come.
- Avoid stereotyping patients; individuate them.
- Understand and respect the magnitude of unconscious bias.
- Recognize situations that magnify stereotyping and bias.
- Assiduously practice evidence-based medicine, by making the most objective evaluation and decisions possible. Consciously gather and assess the evidence for diagnosis, treatment, and caring.
- Participate in techniques to de-bias patient care, including training, intergroup contact, perspective-taking, emotional expression, and counter-stereotypical exemplars.

One of the most important predictors of learning is willingness to recognize and work toward understanding. This is the only way to modify and eradicate our own unconscious biases.

We can all work to educate others—colleagues, students, leaders, managers—that unconscious bias exists, and that it has detrimental unintended consequences.
Unconscious bias

Unconscious biases are pervasive, and everyone is susceptible to them. Sometimes, an unconscious bias may be positive and useful. However, the outcome is more often negative, affecting evaluation, decisions and actions contrary to openly held beliefs and egalitarian commitments.

Unconscious biases can result in prejudice that affects decisions and leads to unintended consequences.

Unconscious biases are not permanent, they are malleable and can be changed by devoting intention, attention, and time to develop and learn new associations.

We need to take action, manage our unconscious biases, and understand how our behavior and decision-making is influenced by our unconscious biases. We can overcome our unconscious biases by becoming aware and being open to change.

**References**


Important AΩA program and award dates

**Fellow in Leadership Award**
**April 1, 2017**—Up to three awards of $25,000 recognize and support the further development of mid-career physicians who provide outstanding leadership within organizations in medicine and health care, including schools of medicine, academic health centers, community hospitals, clinics, agencies, or other organizations. Applications must be received in the National Office by April 1, 2017. For more information visit [http://alphaomegaalpha.org/Leadership.html](http://alphaomegaalpha.org/Leadership.html).

**Robert J. Glaser Distinguished Teacher Award**
**April 7, 2017**—In collaboration with the Association of American Medical Colleges, AΩA presents this award to four outstanding teachers nominated from medical schools in the United States and Canada. AΩA presents $10,000 to each award winner, $2,500 to the winner’s teaching institution, and $1,000 to the associated AΩA Chapter. Each nominee’s application, bibliography, and curriculum vitae must be submitted by 5 p.m., April 7, 2017, to gyoung@aamc.org. For more information visit [http://alphaomegaalpha.org/teacher_award.html](http://alphaomegaalpha.org/teacher_award.html).

**Edward D. Harris Professionalism Award**
**May 1, 2017**—Up to three one-time awards of $10,000 recognize and honor outstanding ongoing programs in medical schools and/or affiliated institutions that represent best practices in the teaching and learning of medical professionalism. One nomination per school, submitted by the AΩA Chapter Councilor to the National Office by May 1, 2017. For more information visit [http://alphaomegaalpha.org/professionalism_award.html](http://alphaomegaalpha.org/professionalism_award.html).

**Postgraduate Award**
**May 30, 2017**—Up to 10 awards of $2,000 to support residents/fellows for a research or scholarly project fulfilling the requirements for scholarly activity by the ACGME. Proposals must be submitted to the AΩA Chapter Councilor before April 30, 2017, and the final application packet must be received in the National Office no later than 11:59 p.m., May 30, 2017. For more information visit [http://alphaomegaalpha.org/postgrad_award.html](http://alphaomegaalpha.org/postgrad_award.html).
Leadership in medicine, medical education, and health care is more complex in the 21st century than ever before. Escalating costs, unequal access, less than ideal outcomes, and political challenges have contributed to an unprecedented level of uncertainty in the delivery of health care and medical education.

The medical profession and the country are in need of leadership that is inspiring, insightful, engaging, and humble; leadership that understands and represents the needs of patients, physicians, medical educators, and trainees. Because of their unique knowledge of the practice of medicine, and understanding of medicine’s core professional values, physicians are ideally prepared to serve as leaders.

Encouraging the development of leaders in academia and the community has been, and continues to be, a core AΩA value, and an important part of AΩA’s mission.

The AΩA Fellow in Leadership Award recognizes and supports the further development of outstanding physician leaders through the tenets of leading from within; upholding AΩA’s values and mission; and a commitment to servant leadership.

The five essential components of the AΩA Fellow in Leadership Award are:

1. Self-examination, the “inward journey,” leading from within;
2. A structured curriculum focused on leadership, including an understanding of the relationship between leadership and management;
3. Mentors and mentoring;
4. Experiential learning to broaden the perspective and understanding of leadership as it relates to medicine and health care; and,
5. Team-based learning, and developing communities of practice.

Nominations for the AΩA Fellow in Leadership Award are made by the senior executive of a medical school, hospital, or health care organization, who agrees to serve as a mentor for the Fellow. The nominating organization and Fellow designate at least one additional mentor who, with the executive leadership mentor, support the completion of a leadership project serve as role models, offer advice as needed, and connect the Fellow with key individuals in leadership positions. At least one mentor is at the senior leadership level, i.e., a Dean, Chief Executive Officer, or the President of an association or organization that has a
These relationships, and leadership opportunities and experiences, are ongoing throughout, and after, the fellowship year.

The Fellows each receive a $25,000 award for further leadership development and project funding.

Although the University of New Mexico Health Sciences Center (UNMHSC) recognizes the value of interprofessional education and prioritized curricular implementation across disciplines, other academic health centers, UNMHSC struggles with the challenges and frustrations in actualizing curricular integration.

In 2012, UNMHSC leadership selected a faculty member representative from each major health profession to create the Interprofessional Education (IPE) leadership team. Because of my background as a nurse and physician, and my experience in interprofessional education and collaborative practice, I was selected as the University of New Mexico School of Medicine (UNMSOM) representative.

Initially, the IPE team functioned well. It had all the right ingredients for success—institutional leadership support to move forward on developing and implementing a required longitudinal curriculum for students across disciplines; an annual budget of $6,000; and four hours to eight hours per week allotted to each team member for IPE work.

We believed IPE was the answer to every flaw in our health care system, and having attended multiple training sessions, we considered ourselves the experts who could recite the national IPE competencies as though they were an oath.

However, once the planning phase of curriculum development was fully under way, and the pressure was on, many things began to fall apart.

Cynthia Arndell, MD—Key Challenges in Interprofessional Education and Collaborative Practice Integration: Making the Case for Collaborative Leadership Development

Research supports the essential role of interprofessional collaborative practice in improving patient and population health outcomes, cost efficiency, and provider satisfaction. However, the socio-historical, economic, and political forces inherent in academic and health care systems continue to thwart efforts toward successful integration of interprofessional education and team-based practice.

Collaborative leadership requires extensive knowledge and skills to not only train educators and clinical providers in interprofessional teamwork, but to also develop strategies for effecting culture change. Without first, and foremost, laying a foundation, institutions will continue to struggle to successfully implement interprofessional education and collaborative practice models.

The University of New Mexico Health Sciences Center (UNMHSC), recognizes the value of interprofessional education and prioritized curricular implementation across health professions and student disciplines. However, like

A rocky start

As educators, we know that reflection is a critical component of adult learning, and is core to professional and personal leadership growth. I use the Experiential Learning Cycle as a reflection tool for describing experiences in collaborative leadership development.

I was 10 minutes late when I entered the room to join the IPE meeting, and said, “Sorry, patient issues...” As usual, the representative from the College of Pharmacy, was taking the lead in facilitating discussion plans for the upcoming community-engaged interprofessional student curriculum. No one acknowledged my presence, and the group conversation addressing the format of the first session continued.

The faculty representative from physical therapy, said, “I really worry about the medical and physician assistant (PA) students presenting their findings from their community experience last summer at the first IPE student session. I think the other student and faculty cohorts will view this as an unfair advantage for the medical and PA students having already been in the assigned communities.” Other group members gave affirming nods.

The College of Nursing faculty member added, “I completely agree, and have heard other faculty in our college
express similar concerns."

I could feel my blood begin to boil, and emphatically stated, “Guys, we agreed that since the medical students and PAs have already been in the assigned communities, and completed community health assessments last summer, they should share their findings with the new student cohorts at the first session. This will inform other student cohorts that haven’t been in the communities so they can move ahead in addressing community-identified health priorities. Otherwise, it would completely minimize medical and PA student work, and create duplication of student group efforts.”

Dead silence. I watched team members exchange glances with each other. The College of Pharmacy representative said, “Cindy, we have to be sensitive to the fact that other student and faculty cohorts will view these community presentations as, once again, the doctors being in full control.”

Like so many of our task force meetings, I left feeling angry, frustrated, hurt, and excluded from the team. I felt that the team had become dysfunctional—unfairly dismissing any of my input and suggestions. I was extremely anxious that curriculum implementation was only two months away, and involved more than 368 students and 54 faculty across disciplines. From my perspective, the team was still very early in the planning phase of the course.

I decided to share my concerns with our IPE team director who responded, “Can I be perfectly honest with you? Several team members have come to me complaining about the way you come into the meetings, often late, and wanting to change plans to accommodate the medical students.”

Feeling even more hurt and excluded, my initial thought was to just quit the team.

Although the individual colleges and schools had worked out schedules to ensure students would be free to participate in each session together, there was great disparity among IPE team members as to the primary focus of course content and goals. It seemed to me that task force members were uncertain about their specific roles and assignments, planning efforts, and timelines. There was unequal participation among team members, and no truly identified leader—some members dominating the meetings, while others never had a voice. This resulted in incongruous and inefficient course development efforts, and imbalanced work assignments.

I felt as though I was doing more than my share of the work, and resented the lack of acknowledgment for my contributions.

Looking back, I realize how my perceptions, and resultant behaviors, negatively influenced task force planning efforts, and contributed to contention among team members.
Embracing the inward journey

Fortuitously, during this time, I was selected for the AΩA Fellow in Leadership Award. My goals for the Fellowship were:

1. Identify the socio-cultural challenges that preempt effective integration of interprofessional student education and collaborative practice;
2. Explore leadership models to enhance our IPE initiatives; and
3. Strengthen my leadership skills in interprofessional collaboration.

A major component of the leadership training program focused on the importance of self-awareness as core to being an effective leader, i.e., the inward journey of deep self-reflection.

The process of taking a hard look at myself, and how my personality, communication style, and behavior could negatively impact team dynamics and reinforce the physician in control stereotype was the most difficult, yet the most crucial, first step in my personal and professional growth.

One of the earliest turning points in my journey of self-reflection, was a session I attended, by Dr. Neil Baker at a National Institute for Health Improvement conference. During “Personal Mastery for Transformational Leadership” session, Dr. Baker described his own failure in working with an interdisciplinary team by pushing his ideas onto team members and then not understanding why no one seemed to embrace them.9 He discussed how the autonomous way we are taught as physicians can impair our ability to effectively collaborate with other disciplines. Referencing the book *Primal Leadership*, he pointed out the real, and perceived, power differentials that exist among physicians and other health care professionals which can further reinforce siloed health care educational and delivery systems:

> The slightest voice inflection, the most innocent remark can land hard on those you have authority over, causing them to make up stories that support increased caution and distort further interaction.


I felt as though Dr. Baker was speaking directly to me. I reflected on the times I had pushed my own ideas onto the IPE team, and how I had been met with resistance, and sometimes, open confrontation. I also reflected on the multiple situations in which I openly expressed my frustration to nurses, medical assistants, and receptionists about the way the clinic was running. Although my comments and behavior were not meant to be personal, other’s reactions seemed that of cowering and avoidance.

Growing as a leader

The AΩA Fellow in Leadership afforded me the opportunity to participate in multiple training sessions on collaborative communication and facilitating effective team dynamics.

Learning the theories foundational to collaborative leadership—authentic and servant leadership which delineate core intrapersonal leadership qualities; and followership, and shared and inclusive leadership, which describe interpersonal skills essential for collaborative leadership—helped me to understand how our education as physicians is, in many ways, antithetical to best practice models, including accepting uncertainty, showing vulnerability, admitting mistakes, and sharing decision-making.9–11

A deep appreciation for my professional identity formation, along with the one-on-one coaching and mentoring from Dr. Dawn Foreman and Dr. Alan Robinson (AΩA, University of Pittsburgh, 1988, Faculty), has enabled me to recognize and undo unproductive behaviors, thereby mobilizing my strengths.

I went back to the IPE team to share my “ah ha” moment, and apologized for reinforcing the stereotypical physician in control. I asked how the team members felt I could best contribute to the upcoming course planning and implementation.

Success! The team members were incredibly supportive, acknowledging how hard it was for me to apologize, and how hard I had worked on the course development. As a result, we moved forward as a team to implement faculty orientation sessions, and the interprofessional student course.

Not surprisingly, the IPE student course sessions reflected the challenges the team had in curriculum development and planning, with many faculty and student participants across disciplines expressing confusion and discontent about expectations. However, instead of feeling as though we had failed, we stood together as a team, sharing accountability for what worked, and what didn't work.
We reviewed student evaluations, and held multiple faculty participant sessions to receive feedback and take action on revising future IPE course sessions.

I came to understand that our team was an IPE microcosm. We experienced the same types of challenges learning to work together as interprofessional students and health care professionals experience working in teams.

I realized that our team was exceptional in many ways—we were courageous and willing to step out of our comfort zone to take on this immense task.

Moving forward
Since my AΩA Fellowship, I accepted a new job as Medical Director for Case Management at the University of New Mexico Hospital. This position has afforded me the opportunity to apply the skills I acquired in interprofessional academia and the AΩA Fellow in Leadership program to advance collaborative practice initiatives.

I entered this new role with a new perspective, skill set, and communication style. I took the time to build relationships with the nurses and social work case managers, and understand what they do and the value they bring to patient-centered care. This has allowed me to advocate for and facilitate face-to-face communication between the case managers and inpatient providers to ensure safe, appropriate patient discharge transitions.

Through my journey in leadership development over this past year, I now understand what it takes to acquire and maintain leadership skills—coaching, mentoring, practice, feedback, and continual self-reflection.

References

Ronald Robinson, MD, MPH, MBA—Physician Leadership in the Community Hospital Setting
I’d like to give my thanks to the AΩA Board of Directors, the Fellowship faculty, my mentor Dr. Page Morahan (AΩA, Drexel University College of Medicine, 2010, Faculty), and the previous cohort of Fellows for their contributions to this vital program. AΩA’s investment in leadership education comes at a turning point in health care, and represents a commitment to remain relevant in the rapidly changing medical landscape.

My project had two major initiatives, both at my home organization Avista Adventist Hospital in Louisville, Colorado:

• To improve the organization’s operational effectiveness in performing gynecologic surgery; and
• To light the leadership path for Avista’s physicians.

Improving operational effectiveness in gynecologic surgery is both complicated and complex in the sense that there are many moving parts, all of which are delicately interrelated. For example, a simple decrease in the number of different laparoscopic tools in use during a case can significantly decrease the surgical time by minimizing the number of times an operator goes through the cycle of deciding to change tools, mentally selecting the next tool, physically removing the prior tool, and then bringing the new tool into action. Operators who choose to have fewer tools in use during their case can decrease their surgical time by up to 25 percent. This, in turn, decreases cost to the system, and time under anesthesia for the patient, thereby
increasing value to both the patient and the hospital.

The complexity of change in medicine is reflected in the fact that the same equipment change or process improvement can be implemented in two different institutions, or at two different times in the same institution, and have completely different results. This can be attributed to the butterfly effect, a chaos theory that posits widely varying outcomes based on a system's strong dependence on initial conditions. Tiny changes in the readiness of the group for change can ultimately alter the path of the group toward sustained success, or failure, and can accelerate, or even prevent, the occurrence of change in another location.

The second initiative in my Fellowship program involved the creation and dissemination of a leadership plan for Avista's medical staff. My intent was to maximally leverage existing resources, and to clearly define a way forward for my colleagues. Many physicians value the concept of leadership, and would like to pursue leadership, but lack the time and resources to create a path for themselves.

Avista's medical staff adopted a Medical Staff Leadership Education Initiative based on self-study and experiential practice, both under the supervision of knowledgeable mentors. The program is best visualized as a nested structure, and is matched to the different responsibility levels within the organization.

**Evaluating outcomes**

I used EvaluLEAD, a leadership program evaluation tool developed by the Population Leadership Program of the Public Health Institute, and funded by the United States Agency for International Development, to measure the outcomes of my project.

EvaluLEAD utilizes three domains (individual, organizational, and societal), each of which is divided into three categories of results (episodic, developmental, and transformative).

Episodic results are time-bound results stimulated by actions of the program or its participants and graduates; for example knowledge gained, or a written proposal.

Developmental results are changes that occur across time, represented as sequences of steps taken by an individual, team, organization, or community that reach toward, and may actually achieve, some challenging outcomes—a sustained change in individual behavior or a new organizational strategy that is used to guide operations.

Transformative results are changes that represent fundamental shifts in individual, organizational, or community values and perspectives, and that seed the emergence of fundamental shifts in behavior or performance, i.e., career shifts.

Intrinsic to the system is the knowledge that the activities it measures are the result of a large number of factors, and thus attributing the results solely to the leadership activity may represent an overly narrow perspective. The converse, due to the butterfly effect, is that seemingly insignificant efforts in one location may induce drastic change in other locations.

The results from my Fellowship are:

**Individual domain**
- Episodic result—Achieved servant leadership certification through the Greenleaf Center for Servant Leadership.
- Developmental result—Elected Chief of Staff at Avista.
- Transformative result—Appointed Chief Medical Officer of Avista.

**Organizational domain**
- Episodic result—Avista recognized as one of only three centers of excellence in minimally invasive gynecology in Colorado.
• Developmental results—Implementation of the Medical Staff Leadership Education Initiative, and Centura value optimization team now active at Avista, with nine promotions of physicians to leadership positions, including two to senior leadership.
• Transformative results—Senior leaders embracing physician leadership education, and Avista’s medical staff solving its own complex problems.

Societal domain
• Episodic—Physicians identified and categorized through multiple means, including self-reporting of readiness to lead, enabling optimal allocation of leadership resources.
• Developmental result—Other operating groups within Centura evaluating the medical staff leadership education initiative, among other tools, for use in developing physicians.
• Transformative result—Centura’s CEO committed to fostering leadership development throughout the system.

ROI
Measuring the return on investment (ROI) for leadership programs is challenging, and not all of the outcomes are immediate. Leaders grow where conditions are right, and I believe Gen. Stanley McChrystal said it best:

I started to think about leaders as gardeners. When you think about what a gardener does, a gardener doesn’t grow flowers or vegetables. A gardener creates the opportunity, shapes the ecosystem so plants have the opportunity to do what they do well. You’ve got to prepare the ground, you’ve got to do all the things that make it work, but you’re not growing anything.2

From a purely monetary perspective, I spent half of the AΩΑ funds ($12,500) on each of the two major initiatives. Conservatively, my project was responsible for direct monetary returns of $550,000 (personal $180,000, group practice $110,000, and hospital $260,000). Based on the $25,000 directly invested, and including an additional $25,000 in indirect expenses, AΩΑ’s ROI is 1,000 percent.

Based on the EvaluLEAD analysis and the ROI calculation, I believe my fellowship was a success. I certainly did not anticipate these outcomes, and feel very fortunate to have returned these results to the program in its second year of operation.

References

Elizabeth Warner, MD—Leaning into Leadership
As I reflect on my year as an AΩΑ Fellow in Leadership, I am humbled by what I have learned, how my thinking has changed, and I understand I am on a lifelong journey. In bestowing this award, the AΩΑ faculty professed their faith in our potential to grow as leaders and as human beings, and I will be forever grateful for this honor. Quantifying the value of this fellowship is impossible (or I can borrow Mastercard’s tag line, and say that it is “priceless”), for it has provided me a context and real content to hone my leadership skills. It has reinforced the need to continually develop my personal awareness and empathy, so I can better foster compassion for myself and others.

My project is to build and deploy a management system using Toyota Lean processing tools, thinking, and leadership behaviors to eliminate waste and add value to the patient experience. It is grounded in the principles of respect for people, continuous improvement, and relentless focus on delivering value to the patient or internal customer—three of the core principles of enduring operational excellence.1

I serve as a physician champion and internal coach for my organization’s Lean transformation. Translating the Lean improvement methodology from manufacturing to health care is deliberate and delicate. It requires respecting all members of the care team, and acknowledging the massive complexity and chaos of the health care system, which sometimes obscures the needs and values of the patient and his/her family.

Sustaining Lean transformation is much more difficult than using a simple tool kit of applications that drive out waste and frustration in the workplace. It is a personal leadership transformation from an autocratic leadership style of telling and demanding to a focus on humble leadership, and supporting and developing others.2 With a commitment to personal change and vulnerability, the Lean leader strengthens interpersonal relationships, teams, and entire organizations. The Lean leader supports and develops...
teams to improve, innovate, and solve real problems. The Lean management system is intended to:

1. Enhance strategic deployment of crucial business strategies to the bedside/exam table;
2. Connect information and problem solving among frontline teams and executives; and,
3. Provide a framework for leaders to support and develop the organization.

A strong management system is about shifting the leadership approach from the command and control style of “manage by objective,” or “get the results by any means” to “manage by process,” or “the process by which we achieve business results is as important as the results.”

Dr. John Toussaint, author, founder, and CEO of Catalysis (formerly known as ThedaCare Center for Healthcare Value) describes the contrast between white coat leadership in comparison to Lean leadership behaviors.3

**Learning how to be Lean**

As a leader of this system development, I regularly check and adjust my personal behaviors, and model my own learning to others, so we can progress and persevere on this improvement journey. These behavioral comparisons help me assess if my behaviors are in, or out, of alignment with the guiding principles for business excellence.

The 10 Shingo Principles of Lean transformation have been a touchstone for my work, and a source of clarity in the fear and fury of health care uncertainty.

Modeling personal behaviors to align with these principles; developing training and coaching sessions to teach them; and building systems to support health care workers with these principles provide a strong framework for repairing and rebuilding the American health care delivery system.4

Our patients need safe, timely, reliable and cost effective health care. Humble leaders, strong Lean improvement methodology, and principled systems that support caregivers to practice ideal behaviors allow healers to care for the populations we have sworn to serve.

My clinical work with the inpatient Advanced Illness Management (AIM) team as a palliative care physician is a microcosm of the organizational work. The patient care team is strong and growing, and continuing to develop as strong patient/family advocates. The AIM team is actively participating in the Lean management system, and team members are learning how to stabilize work flows, and use the strength of the whole team in problem solving.

The list of mentors who supported me continues to grow—Katie Harrelson, COO at Bronson Healthcare Group; John Tooker, MD (ΔΩA, University of Colorado, 1970), my ΔΩA faculty mentor; Dr. John Toussaint; Pascal Dennis, author of several books, and founder of Lean Pathways; and Lani Watson of Lean Pathways.

The construct of the Fellowship encouraged me to gratefully receive the wisdom and guidance provided by these mentors, so that I can be more effective at serving others. Most often, their brilliance shone by a simple question, posed for me to ponder and learn. They modeled for me effective coaching, and humble inquiry skills, which are foundational for highly effective leaders. I will continue to practice and seek coaching from them.

My community has expanded greatly during the Fellowship year. In my Fellowship application, I was thinking of my organization, my city and the Southwest Michigan region. My community now includes all the learners—in and out of my organization—who are striving

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<th>“White Coat” Leadership (Manage by Objectives)</th>
<th>Improvement Leadership (Manage by Process)</th>
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<tr>
<td>Exhibits an “all knowing” attitude</td>
<td>Demonstrates Humility</td>
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<td>Adopts an “in charge” posture</td>
<td>Exhibits curiosity</td>
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<td>Demonstrates autocratic tendencies</td>
<td>Facilitates improvement efforts</td>
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<td>Adopts a “buck stops here” approach</td>
<td>Teaches others</td>
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<td>Shows impatience</td>
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<td>Blames others</td>
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A Comparison of Leadership Styles, Toussaint
for transformation of health care through ideal behaviors grounded in Lean principles.

I am communicating with members of the Healthcare Value Network (Catalysis) and supporting other hospital systems in their Lean transformations and the physicians’ role in learning and practicing Lean. I am part of a learning cohort of executive leaders who gather twice annually to focus on self development and practice.

Conversations with, and coaching from, Danny Friedland, MD (AΩA, University of California, San Francisco, 1992), author of Leading Well From Within, and an integrative medicine leader, have reinforced the necessity of self-care and deep self-awareness to be most effective in leadership and change management.

The inward journey

I know now, more than ever, that leadership begins within oneself. With willingness, curiosity, humility, perseverance, and practicing personal standards I will continue to grow as a leader.5 I have evaluated my strengths, weaknesses, learned volumes—and unlearned as much—read voraciously, meditated intermittently, exercised sporadically, and have honestly and humbly studied all facets of my personal and professional life. The revelations of this practice have changed me, and many of my interpersonal relationships, team roles and organizational influence. Developing a deliberate practice of reflection (PSDA—plan, do, study, act) has helped me understand my sources of motivation and my potential contribution to health care.

I am defining myself as a Lean coach, physician and effective educator with the ability to translate Lean thinking to a variety of learners.

I will continue to write, reflect and coach learners throughout my expanding community of practice, and I hope to pursue a Master’s degree in Applied Positive Psychology at the University of Pennsylvania to learn, and ultimately strengthen Lean transformational work with the power of positive psychology.

At the end of my Fellow in Leadership year, I am comfortable having more questions than answers, confident that daring to be vulnerable is a sign of strength,6 and more clear about my life’s purpose.

Author Simon Sinek suggests that we start with our “why,”7 but I will end with mine—I am here to joyously co-create a community promoting the health and well-being of all.

References

da Vinci sketched his man
with arms and legs flared
in perfect symmetry, his wingspan
a stretched circle, boxed in a square.

Bilaterally mirrored on each side,
paired muscles flex and brace,
propelling movement and easy glide,
upright posture and unforced grace.

Hah! Leonardo's perfect guy
doesn't have it so rough—
he wouldn't fly so high
with a torn rotator cuff!

No fun getting older;
can't do a thing
with a bum shoulder
and the wing in a sling.

Clemens Schoenebeck

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Nothing lasts, and yet nothing passes, either. And nothing passes just because nothing lasts.

Philip Roth

Most of the residents in my neurosurgical training program were sick of hearing about Harvey Cushing. I certainly was. It was 1973, and students—even graduate students well insulated from Vietnam—were in revolt.

Neurosurgical training is nearly military in structure, reporting, and schedule of responsibility. Habits and traditions have evolved since the first trephiner picked up a sharp rock and began to grind away on someone's skull. Cushing transcribed these habits into law.

In most ways, it is now more clear to me, this graduation of authority is reasonable and necessary, but none of us liked it then, and we saw it as part of our repression.

My undergraduate education was meant to produce critical thinking to the point of skepticism: "What you avow absolutely, I absolutely deny. Make your case."

I knew Cushing was too good to be true and lumped him with all the other authority figures of the 1970s. Of course, I didn’t yet know a lot about neurosurgery, but that didn’t seem much of an impediment. I didn’t believe in Cushing in the same way children grow weary of the
fable told about George Washington and the cherry tree, or Santa. I was fed up with hearing that neurosurgery’s father had been a genius. Useful, innovative, and dogged are all adjectives that might be applied to our founder, but not genius. That apotheosis came from Cushing’s disciples who, after all, had a horse in the race.

Cushing, or someone like him, was necessary to get through the barrier of the dura.

Cushing was too clever himself to buy the genius label, though he exploited the idea. He would have known that he was the product of his own genetics, environment, and opportunity, blended with the Puritan ethic that nurtured him. These circumstances created a person best suited to his gifts, and lack of them.

Those disciples who followed Cushing were handed his armor and simply put it on, thereby creating for themselves an instant persona, and, at the same time, expanding the myth. In the end, they floundered under the weight of the armor inherited, but not entirely earned.

One morning during a department meeting, I thought this had happened to our Chairman, the man who had assumed this role at the age of 34.

There is a moment in his monologue when a pitchman leaves describing the product and asks for money. This instant is called “the turn,” and is both quick and clever, so that the listeners don’t notice. In life, there are similar turns, when ones passes from bestowing to requesting.

All of the residents in my program remember the instant when “the turn” came to our Chairman, the only person our department had ever had in this role. None of us realized at the time the full extent of what had really happened. We all recall exactly what he said, not because it was necessarily out of character or aggressive, but because he had never before found it required to suggest any such
thing—not in public.

I met the Chairman before I started my residency. Trained both in neurosurgery and neurophysiology, he was one of a very few program directors who could do basic research. Because he produced his own science, he was a capable judge of experimental work, and of the diligent, ambitious young men who manufactured it. I admired these abilities. Because I could do independent research, he recruited me to join his program after I left the National Institutes of Health (NIH).

We gathered every Monday morning in the department conference room. Although it was called the Monday morning scheduling meeting, the gathering was as much to critique the events of the past week as it was to plan the coming one. It was not an hour any of us wished to share with strangers.

In 1973, computer imaging was a stack of diagrams on an electronics shop workbench at the EMI Corporation in England. There were no CT or MRI scans, no PET or SPECT scans, no digital enhancements or subtractions, no 3-D reconstructions. Our attending physicians had to teach us how to infer where tumors grew, abscesses festered, disc pinched, or hemorrhages collected—not from pictures of the things themselves, but from the displacement of normal structures nearby. It was like hunting fossils; one had to figure out from a distorted image what the thing really looked like.

Although we had journal articles and basic textbooks of neuroanatomy, radiology, and pathology, as well as manuals describing surgical techniques to guide us, there were no new comprehensive textbooks written by American academic neurosurgeons. This was not an oversight; we were still being taught the methods described by Cushing, who years earlier had proclaimed most of what our teachers felt we needed to know about operations on the nervous system.

Our professors had to teach us these diagnostic techniques, do the operations, see new patients in clinic, as well as write grant applications, do research, teach the medical students, and prevent us from killing anyone. As self-assured, successful young men (there were no women in the program) we resented them. Because the process of making our own careers consumed us, we found little of interest in theirs.

On this particular Monday, the Chief Resident—a slick 32-year-old encyclopedia of details with an acid tongue and no sense of boundaries—was prepared for trouble. A patient operated on the previous week had not done well, and the fingers that were likely to be pointed around the table that day were most likely to end up directed at him. He had violated a fundamental principle we all knew, and while making a craniotomy had placed a burr hole in the skull exactly at a point we had been taught to avoid.

In presenting the case, his strategy was to defend what he had done as acceptable by referring to the obscure author of a South American textbook of neurosurgery. Initially, all of the attendings, and even some of the bolder residents, questioned the placement of the burr hole, but said nothing about the authority cited. Not satisfied to escape wounded but not dead, the Chief Resident persisted, and when he had finally exceeded the tolerable by again quoting his source, the Chairman said, “Perhaps you’d like the opportunity to finish your training in Argentina! That can be arranged.”

The conversation was no longer about the schedule or the patient, or even about where the burr hole had been placed. All of the normally assertive residents stared at their shoes and said nothing. Even the attendings were surprised into silence.

The Chief Resident’s blood rose to his tie, then to the bridge of his nose, and finally to the very top of his blond head.

Now, from the advantage of 40 years of experience, I know that this was “the turn” for our Chairman. Assertion of authority over the young, rather than its spontaneous acknowledgment, must be done repeatedly and with increasing force. The only thing we understood about the Chairman was that he was responsible for our training; this was a man we wished so much to admire us, but who never seemed to.

The change showed up in small ways after that—things said or passed over in conferences, or on the phone at night when we talked to him about patients on his service at the county hospital. He had now been the Chairman of the Department of Neurosurgery for more than 30 years, and he had always attended at the county hospital—a spare man in an elegant suit making rounds in the cluttered corridors and wards filled with alcoholics, poor, broken people, and patients with head injuries so severe that all that remained of them was a brainstem.

By 1975, CT scans began to appear, and the Chairman could not accustom himself to a picture of the thing itself, rather than the shadow of the thing. Neither could we, of course, but we knew the language, and could use it well enough to sound as though we understood. Actually doing surgery is a mechanical act with rules and consequences, but talking about doing it is simply vocabulary, a jargon that is easily picked up by the young.
In our savage selfishness, we set traps for our Chairman and led him to claim things in public we knew were coming to be viewed as wrong. It never occurred to us that he might wish for us to admire him.

After six years of training, the teaching position I thought I had been readying myself to begin seemed less possible, but for the Chairman, academic medicine was the only life. He knew a time when faculty members in medical schools did research at the bench with residents and students, and could do that as well as operate and teach. He didn’t see that academic medicine had also undergone “the turn.”

When I thought about him after that, it was usually with resentment. I didn’t really have much to be bitter about, but I somehow had expected more from him—affection or approval, I suppose, or at least acknowledgment that I had learned the trade, and that he considered me able. But he was a man, like Cushing, who did not dispense a compliment.

The Chairman had been born in what was then Ceylon at the end of colonization, the only son of missionaries—a Raj Orphan. He had been sent back to the East Coast to prep school, and then to Yale. That life seems to have produced a certain type of distant person, and the aloofness with which he treated the residents and even the patients was not so much cold as withdrawn. The ambition that had launched him was unseen to us, but ours must have been almost comically wearying to him, one striving resident after another. We were required to phone him each evening when we were on his service, and no matter what time we called, his wife answered and told us he was having dinner. “Please call back in an hour,” she said week after week, year after year. They held a holiday party at their house each Christmas for the residents and staff, and each year it was the same cheerful misery.

Approaching the end of my training, I went to ask his advice about finding a job. He listened as I clumsily explained my plans, but said little to help. I suppose he thought it was my responsibility to find work that suited me. If he helped me at all I never saw it. But the reputation of the program assured job offers, and they came in predictable ways, though each one appeared less satisfying than its predecessor.

My wife and I took a train East for interviews, and at the last stop on a two-week trip spent two days in Boston being examined at a university looking for someone with my skills. They took us to dinner at a fashionable restaurant where the competitiveness of the faculty members mixed with the unhappiness of their wives came so loudly to the surface that we decided to do something completely different than we had planned. We left the country.

When we returned two years later, I heard about the Chairman from time to time. His successor was a hearty younger man without his manners or intellect who delighted in mentioning errors the old man—by then emeritus—sometimes made during neuroradiology conference. The Chairman began to spend more time on his boat. Because he was too old to operate any longer, and without the department to run or research projects to oversee, he finally retired altogether.

There was a gathering of former students and staff, a meeting arranged in his honor and named for him, though...
The turn

really an opportunity for the new chairman to demonstrate that a more modern era had begun and that the old Chairman was gone. And he was, too. No one saw him at rounds or in the hospital; no one even saw him around town, or mentioned him. It wasn't that he'd so much disappeared, but more as if we had not known enough about him in those last years to take him seriously.

When he took “the turn,” we didn’t know how to relate to him, so rather than being able to appreciate what he had done for us, we forgot about him.

We heard the news of his operation after it was over. Ironically, it was a neurological problem that had required surgery. He went to see one of the senior faculty members, a man he had recruited to the department three decades earlier. While the surgery was easily done, sixty years of smoking cigarettes could not be undone, and he developed post-operative pneumonia. He was past 80-years-old then, and in the intensive care unit (ICU) his infection quickly collapsed into respiratory failure, intubation, and mechanical ventilation.

As happens with many elderly patients, his progress was uneven, and though he improved for a while, new complications arose, and he descended through lethargy into coma. Like decades of those patients in the same condition he had attended at the county hospital, he was mute, catheterized, tube-fed, intubated, and helpless.

My partners and I, all of whom had been his residents, discussed the strangeness of this fate, but then heard reports that he was improving. He got better, slowly at first, and then he woke up and was extubated. The physical therapists came to move him around. Soon they sat him up, and his internists finally moved him out of the ICU to a regular medical ward in the university hospital.

“Why don’t we go see him?” I asked my partners. I was surprised when they seemed indifferent. Maybe they had expected less from him, received more, or had no need of a final reconciliation.

I knew I still owed him something.

It was a new room, in the new wing of the hospital where I had learned neurosurgery. The Chairman had occasionally made evening rounds with me in the same building, and showed me how to operate. I walked in to find him waxen, eyes closed, delicate under the stiff white sheet. A clear plastic hose slithered out from under the sheet, down the side-rail, and into a catheter bag that hung from the edge of the bed. I introduced myself to the young nurse, and she called to him softly. “Doctor, you have a visitor,” she said.

He opened his eyes, searching the room for something familiar, tried to focus, found the nurse, and then found me. He seemed to begin sorting through old photographs, trying to put my 55-year-old appearance together with his 20-year-old recollection of me.

I don’t remember ever having seen happiness in his face before that instant, and certainly not what welled up in his eyes, filled the room, and then filled me. Almost 30 years after I first met him at NIH, and drove him down to Capital Hill one summer morning in my Jeep where he spoke before some Senate Committee, we recognized each other.

I sat on the side of his bed, but couldn’t quite bring myself to hold his arm or hand, as I often do when visiting very ill patients. During the few minutes that I talked to him, he didn’t speak. He nodded his head though, and he understood why I had come.

I wanted to thank him for the chance he had given me, and for his patience with a young man who was impatient with him.

On that day, I was about the same age the Chairman had been when I first met him in Bethesda, and I saw him with the eye of a surgeon who had acquired a memory of the best and the worst of thousands of sick people.

I suppose that he had known me all along.

I am now convinced that when “the turn” came for the Chairman he recognized it, and had known what it was. For the young who were there that day, and saw it happen, it was only an awkward moment in the life of a middle-aged man we all thought to displace without a sorrow.

Ten days later, he died.

I don’t remember him now as that mute outline under a sheet pulled up to his chin in the hospital room on a languid winter day. I don’t even think of him as the Chairman, handsome and certain in his perfect suit, leading a collection of scruffy residents in scrubs through the battered halls of the county hospital. I have him in my mind as a 14-year-old boy fluent in Tamal and English boarding a ship alone in Colombo. All the Indians and Europeans who knew his family would have called him a clever lad. I see him in New York boarding a train for Massachusetts, starting out for Deerfield Academy to make something of himself.

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Take the Goldbergs for example: Mrs. would sit by the side of my desk while Mr., the patient, dangled his feet from the end of the exam table, staring north through a shut window. To catch what was going on, I had to swivel back and forth from him to her.

My chair—oak, slat back, had wheels and a spring device that allowed me to lean back for pondering or forward to engage—was crucial for making it through a day of caring.

Now I’m eighty-six and my doctor sits sideways, facing a busy monitor: he checks the labs, the meds, the consultant’s notes, the guidelines for preventive care. Then the hurried history and physical. Then the printout with instructions. He’s roped in by codes and time slots, his left brain in full throttle. How does he get by, I wonder—so little story telling, so little touching.

Look! Without my swivel chair I might have missed Mrs. Goldberg shake her head and mutter, “Only God knows, if even God knows.”

John L. Wright MD
Dr Albert Schweitzer, October 1953.
Credit: Keystone / Stringer
Albert Schweitzer was a great man. In the domain of music he produced influential scholarly works on Johann Sebastian Bach, helped to develop new standards for organ building, and achieved worldwide renown as an organist. As a theologian he authored groundbreaking studies on the historical Jesus, and the mysticism of Saint Paul. As a philosopher he developed the idea that reverence for life should be regarded as humanity’s defining principle. And as a physician he founded, and spent the better part of 50 years working in, a missionary hospital in what is now Gabon in west central Africa.

In recognition of his philosophy of reverence for life as expressed through his work as a medical missionary, Schweitzer received the 1952 Nobel Peace Prize. The story of Schweitzer’s life, and in particular his calling to medical mission work provide deep insight into what it means to be worthy to serve the suffering.

Schweitzer, though a great man, was by his own admission not a perfect one. Some visitors to his African hospital protested that the medical care being provided was not as up-to-date as it should have been, and others argued that the philanthropic donations he received were not being put to the best possible use. And, although Schweitzer spent decades in Africa, he never acquired more than a rudimentary understanding of native languages, did not integrate himself into the local cultures, and did little to train locals to provide their own medical care.

Despite such shortcomings, Schweitzer was perhaps one the best known, and most admired, people of the 20th century, referred to by Winston Churchill as a genius of humanity.

Schweitzer’s life

Born in 1875 in the Alsace-Lorraine region along the long-disputed border between France and Germany, Schweitzer was the son of an evangelical pastor whose medieval church served both Catholic and Protestant congregations. After completing his secondary education, he studied the organ for eight years, followed by theological studies, and a term of compulsory military service. In 1899, he published his dissertation on the religious philosophy of Immanuel Kant.

Schweitzer became the principal of a theological school, and in 1906, he published a work on the historical Jesus, emphasizing Christianity’s origin as a Jewish apocalyptic movement.
At the age of 30, Schweitzer answered a call from Paris for medical missionaries by enrolling in medical school, completing his studies in 1911. In 1912, he and his wife, Helene, used their own money to organize a mission to Africa, where a year later they converted an old henhouse into a hospital.

With the outbreak of World War I, Schweitzer and his wife, who were Germans working in a French colony, were placed under the supervision of the French military. Four years later they were transported to France for health reasons.

In 1918, Schweitzer reclaimed his parents’ French citizenship, and began raising money to return to Africa by giving lectures and organ performances.

In 1924, he had amassed enough funding, and with a small staff of health professionals, returned to Africa and built a new, larger hospital around which the village Lambarene developed and grew.

Except for short visits to Europe and the United States, Schweitzer spent the rest of his life in Africa, including the entirety of World War II. He worked primarily as a physician, but also helped run the village, and continued his scholarly research and writing. When he received the Nobel Prize, he used the award money to start a leprosarium at the hospital in Lambarene.

Schweitzer died in 1965 at the age of 90, and is buried overlooking the river that runs along the village he founded.

**The work of atonement**

In addition to being a great thinker and writer, Schweitzer was also a man of action who put his principles into practice. He turned away from the ease and security of his university post, the lecture circuit, and the concert halls of Europe to serve unknown people in a precarious part of the world, where his health, and that of his wife, suffered badly.

He effected change not by funds from a government or a large multi-national philanthropic organization, but by using his own money. He worked tirelessly to raise funds to support his mission. Schweitzer not only espoused the importance of being worthy to serve the suffering, he actually lived it, day in and day out, for decades.

In the 11th and final chapter of his 1922 book, *On the Edge of the Primeval Forest*, Schweitzer presents his views on service to the suffering. He opens with a vivid image of 1917 when he and his exhausted wife arrived at the mouth of the Ogowe River to spend the warm, rainy months at the seaside. He explored the abandoned huts around the house in which they would be living, when, opening the door of the last one:

I saw a man lying on the ground with his head almost buried in the sand and ants running all over him. It was a victim of sleeping sickness whom his companions had
left there, probably some days before, because they could not take him any further. He was past all help, though he still breathed. While I was busied with him I could see through the door of the hut the bright blue waters of the bay in their frame of green woods, a scene of almost magic beauty, looking still more enchanting in the flood of golden light poured over it by the setting sun. To be shown in a single glance such a paradise and such a helpless, hopeless, misery was overwhelming….But it was a symbol of the condition of Africa.

Schweitzer’s writings are full of such stories from his life. As a child, he modeled his prayers on those of his mother, but instead of just praying for human beings, he included all things that have breath.

Because his father was a Lutheran pastor, he came from more privileged circumstances than many of his classmates, but his sense of justice prevented him from wearing nicer clothes than they. He could not accept privileges for himself that had been denied to others—since others had no over-coat he wore none; since others’ mittens had no fingers, his mittens lacked them as well.

In *Primeval Forest*, one story follows another. Upon his return to the hospital, he found locals being pressed into military service for the Cameroons, many of whom had contracted dysentery. As these unfortunate souls were being loaded on a steamer, the natives began to truly experience war. The vessel’s departure was accompanied by the wailing of women, and it was only after its trail of smoke had disappeared in the distance that the crowd began to disperse. On the river bank sat an old woman whose son had been taken. She was weeping. Schweitzer sat down beside her, taking her hand in an effort to comfort her. She continued to cry as if she did not notice him. “Suddenly,” Schweitzer wrote, “I felt that I was crying with her, silently, toward the setting sun, as she was.”

To be worthy to serve the suffering means being willing to suffer with—not just to minister to—those who suffer.

In his memoirs Schweitzer wrote, “Whoever is spared personal pain must feel himself called to help in diminishing the pain of others. We must all carry our share of the misery that lies upon the world.”
Schweitzer’s time in Gabon included WWI and WWII. He recognized that to the scourges of dysentery, leprosy, malaria, sand fleas, sleeping sickness, yaws, and other endemic diseases he confronted were being added the scourges of warfare. It was not only infectious microorganisms that were killing human beings. Human beings were one of the greatest sources of their own suffering.

Schweitzer could administer medications and apply dressings to treat infections, but when it came to the tide of warfare, he could only stand by and watch as local men were impressed. To the old woman whose son had been conscripted, he could offer little more than his own tears.

Schweitzer once read a magazine article declaring that there will always be wars—a manifestation, so its author claimed, of a noble thirst for glory in every human heart. From Schweitzer’s point of view, such sentiments were born of nothing more than ignorance. The apologists for war, he said:

Would probably reconsider their opinions if they spent a day in one of the African theatres of war, walking along the paths in the virgin forest between lines of corpses of carriers who had sunk under their load and found a solitary death by the roadside, and if, with these innocent and unwilling victims before them, they were to meditate in the gloomy stillness of the forest on war as it really is.

Schweitzer had been told that the primitive people of Africa do not suffer, and do not experience pain, in the same way as Europeans who argued, “They are never so ill as we are, and do not feel so much pain.” But after more than four years living at the edge of the primeval forest, Schweitzer knew otherwise. He wrote, “The child of nature feels them as we do, for to be human means to be subject to the power of that terrible lord whose name is Pain.”

Schweitzer asserted that millions and millions of people suffer every day from conditions that medical science could avert. He argued that coming to the aid of such people is a natural response of the sympathy that Jesus and religion generally call for, but it also dictates our most fundamental ideas and reasonings. It is a matter not just of good work, but of a duty that must not be shirked:

Anything we give them is not benevolence but atonement. For every one who scattered injury someone ought to go out to take help, and when we have done all that is in our power, we shall not have atoned for the thousandth part of our guilt.

This work of atonement cannot be the sole province of governments. Schweitzer argued, because governments can only do what society is already convinced needs to be done. No government alone can discharge the duties of humanitarianism, a responsibility that rests primarily with communities and individuals.

Worthy to serve the suffering
Schweitzer called his most essential and transformative
idea, “the Fellowship of those who bear the Mark of Pain.” Its members include those who have learned firsthand the meaning of physical pain and bodily anguish. Regardless where they happen to be located around the world, these people are united by a “secret bond.” They know “the horrors of suffering to which man can be exposed, and they know the longing to be free from pain.”

Schweitzer proclaimed that those who have been delivered from such pain should not rejoice that they are free from it, but as people whose eyes are now open, they should labor to bring to others the deliverance they have enjoyed. Someone who has, with a doctor’s aid, recovered from a severe illness, should provide such help to another. A mother whose child has been saved should help to ensure that some other mother’s child is spared. Those who have been comforted at the bedside of a dying loved one should ensure that others enjoy the same consolation.

One noteworthy implication of Schweitzer’s perspective concerns the role of the experience of suffering as a precondition for responding to the suffering of others. Schweitzer did not call on everyone, but on those who have known suffering. He called on those whose experience of suffering—either firsthand or through contact with others in pain—has been relieved through the efforts of others. Why? Because before we know the suffering of others, feeling what they are feeling, we must be open to suffering.

Who is worthy to serve the suffering? From Schweitzer’s point of view, the answer is simple: anyone who has known suffering. Perhaps only a doctor can prescribe a curative medicine or perform a life-saving operation, and perhaps only a person of considerable wealth can afford to bankroll a foreign medical mission. But, no one lacks the means to do good. Whether through direct action or by supporting the efforts of others, every person can play some role in the relief of suffering. The limitations are not education and wealth but imagination and conviction.

Truth has no special time of its own. Its hour is now—always, and indeed then most truly, when it seems most unsuitable to actual circumstances. This is not just a new aid program, but an awakening from a kind of thoughtlessness, the calling into life of a new spirit of humanity.

Schweitzer believed that this new awakening could be expressed anywhere. It is not necessary to travel to Africa or a far-flung corner of the globe to serve humanity. The point is not to travel many miles but to touch many lives.

Schweitzer anticipated an objection, and knew some would ask, “What good could it possibly do to cope with the misery of the world simply to send a doctor here and another one there?” Isn’t the effort to banish pain and suffering from the face of the earth an ultimately futile one that can only end in disappointment—itself a kind of suffering? To this, Schweitzer demonstrated that even a single doctor with the most modest equipment means very much for very many.

No one should allow the fact that we cannot do everything to prevent us from attempting to do anything. Schweitzer professed:

The misery I have seen gives me strength, and faith in my fellow men supports my confidence in the future. I do hope that I shall find a sufficient number of people who, because they themselves have been saved from physical suffering, will respond to requests on behalf of those who are in similar need....I do hope that among the doctors of the world there will be several besides myself who will be sent out, here or there, in the world by “the Fellowship of those who bear the Mark of Pain.”

Although the questions Schweitzer raised are eternal, he believed that each generation of human beings must confront them anew. The conversation about life’s purpose must be renewed with each generation, and in the heart of every person. “Just as a tree bears year after year the same fruit, and yet fruit which is each year new, so must all permanently valuable ideas be continually born again in thought.”

For Schweitzer the ultimate question concerned not only worthiness to serve, but the very meaning of life. He said, “In religion, we try to find the answer to the elementary question with which each of us is newly confronted every morning, namely, what meaning and what value is to be ascribed to our life? What am I in the world? What is my purpose in it? What may I hope for in this world?”

It is our answers to these questions, Schweitzer believed, that render us worthy to serve the suffering.

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The role of socioeconomic status in the practice and awareness of female genital mutilation

Reem A. Abdalla

Illustrations by Erica Aitken
The role of socioeconomic status in the practice and awareness of female genital mutilation
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The World Health Organization (WHO) has reported that more than 90 percent of women in Egypt have been circumcised.

I come from an Egyptian background; although I was born and raised in the United States, I frequently visited, and spent my eighth- and ninth-grade years living in Cairo. I first learned of female genital mutilation (FGM), and became aware of the statistics, while planning a FGM workshop for my medical school’s Global Health Conference.

My immediate reaction was one of denial. I thought the data must be incorrect and exaggerated; there’s no way that a terrible act like this could be practiced in a country I consider my second home. And, if it was common, why had I never heard of anyone talking about it?

The practice of FGM

FGM is defined by WHO as “...all procedures that involve partial or total removal of the external female genitalia, or other injury to the female genital organs for non-medical reasons.” The practice is fairly common in 29 African countries, and to a lesser extent in some Middle Eastern countries. It is estimated that 125 million women living in these areas have been “cut.”

The practice is usually performed in tribes in sub-Saharan Africa by a circumciser, without anesthesia, and under life threatening, unsanitary conditions. Some of the equipment used includes knives, thorns, and nails.

In Egypt, midwives, called dayas, traditionally performed these procedures. In recent years, the practice has shifted to the medical realm with more than 60 percent of cases performed by doctors and nurses in an outpatient clinical setting.

There are four types of FGM; the severity of the procedure increasing with each type. The first type—the main type practiced in Egypt—clitoridectomy, involves a partial or total removal of the clitoris.

The second type, excision, removes the labia minora, and possibly the labia majora, in addition to the clitoris.

The third, and most severe type of FGM, is infibulation, which, in addition to all the previously mentioned procedures, narrows the vaginal opening, and seals it by apposition of the labia majora, with only a small opening left for urinary and menstrual flow. This type of FGM is common in sub-Saharan Africa countries such as Ethiopia and Somalia.

The fourth type of FGM is any other harmful procedure to the female genitalia for non-medical purposes, including pricking, piercing, incising, scraping, and cauterization.

Complications from each of the types include hemorrhaging; persistent urinary tract infections; cysts; infertility; an increased risk of childbirth complications and newborn deaths; the need for corrective surgeries; necrotizing fasciitis; tetanus; and sepsis.

Although the actions are traumatizing and torturous, the cultures that practice these procedures believe that it protects the female from sexual urges, and preserves virginity until marriage. The practice is primarily performed on young girls before they reach puberty.

A major problem with this type of procedure is that the sexual urges it is supposed to suppress are actually initiated and controlled by hormonal releases orchestrated by the brain. The long-term physical effect is painful intercourse and loss of sexual satisfaction, which can affect psychological health, and future marital relations.

The predominance of this practice is in lower socioeconomic populations that are less educated regarding women’s health concerns and sexuality. Discussion of the female body is still considered taboo in these societies, and it is difficult
for them to accept that a “simple cut” can lead to physical and emotional sequelae.

FGM performed in Egypt is usually the least aggressive/invasive of the procedures, making it more acceptable as a way to accommodate families’ requests.

**The origins of FGM**

It is believed that female circumcision started in sub-Saharan Africa and later moved to Egypt. Egyptologists and anatomists have studied female mummies for signs of FGM, but nothing was found, which does not eliminate the possibility as checking a mummy’s anatomy can be very complicated.

Writings by the Greek geographer Strabo describe the practice during visits to Egypt around 25 B.C.¹

U.S. historian Mary Knight, author of the paper “Curing Cut or Ritual Mutilation?: Some Remarks on the Practice of Female and Male Circumcision in Graeco-Roman Egypt,” describes how social motivations favored the continuation of a practice that initially may have been narrowly performed, and its original motivation most likely had long been forgotten.² Many Egyptians who have been cut, state that they grew up knowing about this and are doing to their children what their mothers had done to them—a protective procedure. Others claim that it is the Islamic thing to do as a “Sunnah” act, a practice that is commendable but not obligatory, and is based on the teachings and practices of the Prophet Muhammad (PBUH).

There is no indication of female circumcision in the Quran. Azhar University scholars in Cairo, one of the oldest and most prestigious centers for Islamic and Arabic learning in the world, stated that after thorough investigation, female circumcision is not at all an Islamic requirement or recommended practice. Those who believe that it is *Sunnah* base their claims on one story of an encounter the Prophet Muhammad (PBUH) had with a woman who was performing FGM on a little girl in the city of Medina. The Prophet said to the woman, “Do not cut severely as that is better for a woman and more desirable for a husband” (Sunan Abu Dawûd, Book 41, #5251).

However, some Islamic scholars have stated that this is a weak narrative, and should not be taken to mean that the Prophet enforced or recommended female circumcision in any way, and it might not be a correct story.

Taken literally, the only clearly stated prohibition was the severity of the act of circumcision in order to eliminate the risk of potential harm to the woman, and the issues she and her husband might face later. However, the act itself was not completely banned. A fundamental aspect of Islamic law is that what is not prohibited is allowed.

Contrary to some Western beliefs, women are very important and treasured in Islam, and are given many rights. One of these is a woman’s right to sexual enjoyment. A woman has the right to divorce if her husband does not provide sexual satisfaction.³ Therefore, a practice such as FGM, which results in loss of sexual satisfaction and painful intercourse, should not be associated with Islam, and is rarely practiced in largely Islamic countries, other than Egypt. It has been practiced in Christian countries in sub-Saharan Africa, and can also be found in Central America and South America. With written recordings of such practices in ancient Egypt around 25 B.C., this practice cannot be attributed to any religion. It is a practice based on sub-cultural beliefs.

Although the results of the scholarly debate over the religious aspects of female circumcision indicate that this is not an Islamic practice, the majority of Egyptian women persist in citing this reason for performing the ritual. WHO has studied FGM in Egypt, and included a comparison
between governorates of school-aged girls. The study revealed that the majority of cases were performed in rural cities such as Luxor (85.5% of females are circumcised), Assuit (75.5%), Sharkiya (73.9%), and Bani Suif (73.1%). The city with the lowest frequency was Port Said (17.9%). For the largest two cities in Egypt, Cairo and Alexandria, the results showed that 36.5% and 39.2%, respectively, of females were circumcised. The study also showed a correlation between the likelihood of the act and the education level of the girl’s parents, with most cases happening in less educated families.

Disparity among classes
The majority of the population in Egypt makes up the lower class in which many people are illiterate, homeless, and unemployed.

Egypt ranks 16 on a list of the world’s most populated countries with 88.5 million people. There is little mixing of social classes in Egypt.

Although I frequently visited Egypt, and lived there for two years, I associated most closely with the middle/upper class, the minority of the population, who understand that the practice is not religious. Even if I had known this practice existed in Egypt, I wouldn’t have believed that it was prevalent, even in the main cities.

Friends and family members, including my parents, who lived in Egypt for many years, were shocked to hear of the pervasiveness of FGM throughout the country.

Two Middle-Eastern medical school graduates who are from Iraq, lived in Dubai, and went to medical school in Bahrain—and were in attendance at the FGM workshop at my school’s conference—had never heard of this practice.

An illegal act that requires more education
In 1996, FGM was outlawed in Egypt, however, there were loopholes that allowed continued practice of the procedure for certain situations.

In 2007, the Egyptian Ministry of Health issued a ministerial decree banning anyone from performing FGM. Many families use midwives to perform the procedure, skirting the law and making it difficult to obtain data.

Recently, a doctor in Cairo was sentenced to two-years- and-three-months in prison after a 13-year-old girl he performed an FGM procedure on died—two years for manslaughter, and three months for performing FGM. In addition, the doctor’s clinic was suspended for one year, and the father of the girl was given a three-month suspended sentence. This is the first case of FGM to ever make it to court in Egypt.

Physicians and medical students need to understand the practice of FGM, and all the associated complications, in order to correctly treat patients. There is great potential for medical professionals to have a positive influence on their communities, and it is vital that medical schools in Egypt and any country where FGM is prevalent include a section on FGM as part of the curriculum. Medical students in regions of the world where FGM is endemic should participate in direct patient education, and partner with existing community programs. They should talk about the medical and psychological complications associated with the procedure with the younger generation to empower them through education and preventive medicine.

In addition to efforts to educate and eradicate FGM, there must also be organizations that support young females who are forced to get “cut.” The Maasai Education Discovery program in Kenya provides support to young girls hoping to escape the forced procedure. It also promotes open dialogue and discussion of alternatives to FGM, and works to educate young men who are strong believers of marrying only circumcised women.

Other organizations such as UNICEF, the United Nations (UN), Doctors Without Borders, and local organizations in Africa are also working to eradicate FGM.
Eliminating FGM

Social media provides for worldwide communication to reach out to and educate men, women, children, physicians, midwives, and anyone who will listen. It can be especially useful in Egypt where almost everyone, regardless of socioeconomic status, owns a smartphone, has a computer with internet access, or can connect at public cyber offices for a small fee.

Women who have experienced FGM can also be vocal critics of the procedure from a personal perspective. The KMG Ethiopia organization, founded by two sisters, works with Christians and Muslims alike to eradicate FGM. They use the Bible and the Quran to dispel the commonly held belief that FGM is a religious obligation.10

Laws are essential, but without proper education, and enforcement, laws cannot bring about a change in behavior. The incident of the doctor being sentenced to prison, brought more awareness to the topic in Egypt. Media campaigns have been launched, and the UN and ministry of health have undertaken efforts to promote awareness.11

The key is collaboration. Medical professionals and community/religious leaders must join forces and target education for young women and men.

FGM inclusion in medical school curricula should not be exclusive to endemic regions. All medical students should be provided the opportunity to learn about these, and other, cultural medical decisions.

It is illegal in the United States to perform FGM, but this doesn’t stop many people from having it done to their children by sending them to their country of origin.12

In a world where every country has multiple cultures and socioeconomic groups, we can no longer attribute the problem to a select number of countries. FGM is a worldwide issue that needs to be universally addressed.

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References


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The spleen, considered a structural oddity since the time of the Greek physician Aelius Galenus, has long been misunderstood.

For most of medical history its purpose and function was based on folklore. Military surgeons of the 17th century removed spleens that had been eviscerated in battle, as they believed the organ was not necessary for life. This raised the question, why was it there?

In the early 1900s, splenectomy for trauma was established dogma; however, by the end of the century everything was done to preserve the integrity of the spleen. What changed?

A modern understanding of the spleen required the development of two new medical disciplines, hematology and immunology. In the 1940s, its role in sequestration and destruction of blood cells was clarified in hemolytic
diseases and hypersplenism. In the 1950s, its immunological functions were recognized as important in protecting the body against overwhelming bacterial infections. But the traditional view of the spleen as a dispensable organ held until the latter half of the 20th century, when clinicians arrived at a judicious and rational application of splenectomy, saving thousands from iatrogenic infection and death.

**Form and function**

Part of the mystery of the spleen is that its function was not clear from its anatomy, tucked behind the stomach high in the left upper quadrant. Adjacent to the stomach and pancreas, it is not part of the gastrointestinal tract, and has nothing to do with digestion. Antiquity considered it a gland, but it has no secretions that circulate through the body. Sufficient with red cells and white cells, ancient anatomists reasoned that it, and not the bone marrow, was the source of blood.¹

Plump and purple with blood, the organ was thought by ancient anatomists to be the reservoir of anger. One who was “splenetic” was hot-tempered and prone to outbursts called “venting one’s spleen.”¹ In Shakespeare’s play “Richard III,” the Duchess of York deplores the intrigues and murders caused by her villainous son. “O preposterous and frantic outrage,” she says to her widowed daughter-in-law Queen Elizabeth, “end thy damned spleen” (II, iv, 67–8).

The spleen’s dark purple hue also suggested that it was the repository of black bile, one of Galen’s four humors. Not having an identifiable route of efflux, like yellow bile from the liver, black bile in the spleen could build with unpredictable effects on mood and behavior. Its release was thought to cause not only anger, but “mirth and pleasure, of lascivious dreams, of imagination and golden age of life.”¹

Folklore faded with objective study of anatomy and histology. Marcello Malpighi, the 17th century father of microscopic anatomy, histology, physiology, and embryology found lymphoid follicles in the white pulp of the spleen.

Injecting splenic vessels with wax, in 1701, the Dutch botanist and anatomist Frederik Ruysch found a complex vascular meshwork that suggested its role as a filter.

In the early 19th century, the removal of senescent red cells from the circulation in red cords of the spleen began to be discerned. However, the German physician Rudolf Virchow resisted the concept of red cell destruction in the spleen, believing that cell death could not be a normal process.¹

What had been an academic exercise among scholars and anatomists in salons and lecture halls acquired clinical importance when surgeons began to remove the spleen in the late 1800s. Misconceptions arose from lack of knowledge of immunology and hematology—disciplines that were nearly a century away.

**Splenectomy**

In the 16th and 17th centuries, barber-surgeons removed organs that protruded from battle wounds, the victims surviving without apparent ill effects. A 1743 report of a British dragoon who survived a splenectomy showed that ancient notions of the function of the spleen still held:

> The dragoon, tho’ otherwise much wounded, recovered; and I saw him afterwards in good health. He had no stronger inclination for women than before.²

A ruptured spleen from blunt trauma was different from one hanging from a flank wound. It was detected only when bleeding caused physical signs of hemorrhagic shock. The only remedy—if surgeons recognized the problem and operated within hours—was splenectomy. In his 1911 *Textbook of Operative Surgery*, Theodor Kocher made a simple and direct recommendation:

> Injuries of the spleen demand excision of the gland. No evil effects follow its removal, while the danger of hemorrhage is effectively stopped.²

The first successful operation for splenic rupture from blunt trauma was December 9, 1892, on a 14-year-old laborer who fell from a scaffold. Recognizing the boy was close to death, the surgeon decided to operate. He removed the spleen, half of which was already lying free in the abdomen. The boy proved sturdy enough to survive his mishap despite a postoperative regimen that included 300 milliliters of saline administered by clysis, digitalis, and frequent small amounts of wine.²

At the time, surgeons knew that an enlarged spleen was associated with some terminal illnesses, and wondered whether its removal might be lifesaving.

Sir T. Spencer Wells, surgeon to Queen Victoria’s household, during an 1862 meeting of the Pathological Society presented:

> The spleen could be removed very easily in dogs and other animals; they seemed to remain perfectly well without a spleen, and there certainly could not be more difficulty in removing a large spleen from the human body than a large
ovarian tumor....[If] I met with a case where the patient was evidently being killed by a large spleen, where all remedies had proved useless...I would certainly be disposed to remove the tumor.  

He got his chance in 1864. His patient was showing slow but certain recovery from splenectomy when she suddenly died five days after surgery, her pulmonary arteries filled with clots at post-mortem. Despite his disappointment, Wells noted that aside from a small amount of pus around the ligatures, they had held and the operation had been a technical success.  

In 1866, Thomas Bryant, of Guy’s Hospital in London, performed a splenectomy in an attempt to cure leukemia. Because the spleen filled with white cells in cases of leukemia, he reasoned that the organ must be the source of immature white cells in the circulation. His patient died within an hour of surgery. Undaunted, he persisted and performed another 50 splenectomies for leukemia over the next 20 years, his patients suffering an 88 percent mortality rate.  

In 1887, Wells got another chance when he performed the first splenectomy for hematological disease. A socially active woman in her twenties had intermittent episodes of jaundice, abdominal pain, and an enlarging abdominal mass from childhood. After suffering a severe attack, she insisted that a surgeon be called to relieve her of the mass. Wells surmised that the tumor was a uterine fibroid or an ovarian cyst, but upon opening her abdomen he discovered a hugely enlarged spleen. Her uterus and ovaries were normal. His laconic description of delivering the spleen from the abdomen belies the panic that countless surgical residents would later feel, “On attempting to press out the spleen with one hand passed behind it, an accidental rupture was followed by very free bleeding.”  

Without recourse, he removed the organ and the patient recovered. Not only was she relieved of discomfort from the mass, but remained free from jaundice and “seem[ed] to do better without a spleen than with one.”  

More advanced planning was involved in the first splenectomy for immune thrombocytopenic purpura (ITP). In 1916 in Prague, medical student Paul Kaznelson made the connection between platelet destruction in the spleen and thrombocytopenia in cases of purpura simplex. Just as splenectomy ameliorated some cases of hemolytic anemia, he surmised that the procedure might correct platelet counts in certain cases of purpura. He convinced his surgery tutor, Hermann Schloffer, to remove the spleen in a 36-year-old woman who had a history consistent with ITP. The operation successfully returned platelet counts to normal, and her lesions resolved.  

The occasional cures justified surgery for splenomegaly with hope that removal of the spleen would somehow make the patient better, especially in cases complicated by anemia. In a review of the 739 splenectomies in the literature up until 1905, many were performed for non-specific indications such as hypertrophy (176 of 739, 23.8%), anemia, leukemia, and “pseudoleucaemia,” with a mortality of more than 25 percent.  

In 1910, William Mayo (AΩA, University of Michigan, 1927, Honorary) was candid in his assessment:  

Our knowledge of the function of the spleen has been so vague, and our ability accurately to determine its physical proportions so unreliable, that it has been impossible to recognize diseased conditions until they reached a stage so advanced that splenectomy became a necessary consequence....[Many] of the anemias and associated blood states may ultimately be best treated by operative procedures directed to the spleen and other blood-forming organs.  

Over the next two decades, hematology as a discipline...
began to mature, and clinical experience accumulated so that clinicians recognized conditions where the procedure was effective. Although the diagnostic terms were archaic, in 1930, pediatrician Thomas B. Cooley, and his surgical consultant Grover C. Penberthy (AΩA, University of Michigan, 1949, Alumni), identified diseases that responded to splenectomy: hemolytic icterus (a term that today includes hereditary spherocytosis), purpura hemorrhagica (immune thrombocytopenic purpura), and erythrophastic anemia (thalassemia major, a disease defined by Cooley that also bears his name). They determined it was ineffective in aplastic anemia, leukemia, and Banti’s disease (portal hypertension due to cirrhosis of the liver). In sickle cell anemia, it would relieve pain from sequestration crises and splenic infarction, but had no effect on the underlying pathology.\(^8\)

Splenectomy was an option of last resort in conditions that defied treatment, or lacked a precise diagnosis. Not surprisingly, the results were disappointing. Examples included splenic anemia, “the waste basket diagnosis of pediatric hematology,”\(^8\) and erythrophlastic fetalis (hemolytic disease of the newborn from Rh incompatibility). Faced with a baby with profound jaundice and anemia, the infant’s spleen was removed in desperation. Reading Cooley’s and Penberthy’s case report, the baby’s recovery was due to transfusions received after surgery and gradual clearance of maternal antibiotics to fetal red cells. However, they were convinced that splenectomy somehow helped in this case, and speculated that surgery earlier in its course would reverse more aggressive cases.\(^8\) “[T]he vogue for splenectomy in various conditions is undoubtedly increasing,” they noted.\(^8\) For certain diagnoses it worked, and, after all, like the appendix, patients didn’t need their spleen.

**Post-splenectomy sepsis**

Not everyone thought that the spleen was so easily expendable. In 1903, Nicholas Senn, a member of the founding editorial board of *Surgery, Gynecology, and Obstetrics*, was prescient in his caution against unwarranted removal of the spleen:

> The spleen has its important functions to perform, and, although in its absence other organs appear to assume its role in the organism and compensate for its loss, we as yet are not warranted in assuming that its removal is a matter of so little consequence that it is not necessary to limit it to cases in which no other alternative is left.\(^9\)

As splenectomy became commonplace in the 20th century, it often led to post-splenectomy sepsis. Within days, or even years, after splenectomy, patients would develop the sudden onset of a high fever, with vomiting, headache, and confusion. Well and healthy hours before, their condition would rapidly deteriorate despite massive doses of antibiotics. Coma or death often followed in as few as one or two days. Infants appeared to be especially vulnerable.\(^2\)

The illnesses were generally meningitis, pneumonia, or septicemia and shock. Patients suffered a fulminant course that resisted resuscitation and antibiotic therapy. Involved bacteria were pneumococcus in half of cases, followed by meningococcus, *Escherichia coli*, *Haemophilus influenzae*, staphylococcus, and streptococcus, in decreasing frequency. Some cases involved disseminated intravascular coagulation and adrenal necrosis (Waterhouse-Friderichsen syndrome).\(^2\)

In 1919, researchers Dudley Morris and Frederick Bullock injected rats that had undergone splenectomy with plague bacillus. Animals that had lost their spleens had a mortality rate of 81 percent, much higher than the 39 percent in controls with a spleen. They warned surgeons that the spleen might be important in human immune defenses:

> It is not improbable that the human body deprived of its spleen shows a similar increased susceptibility to infection. Bearing this in mind, some of the fatalities following splenectomy, especially where death was attributed to infection, may find a ready explanation and tend to increase our caution in the removal of this organ.\(^10\)

Complete understanding of the problem was hampered by incomplete follow-up of patients. Few reviews followed patients beyond discharge from the hospital.\(^2\)

In 1952, Indianapolis surgeons Harold King and Harris Schumaker, Jr., made a disturbing finding in their review of about 100 cases at the Indiana University Hospitals. Five infants with hereditary spherocytosis suffered severe bacterial infections two-and-a-half months to three years after surgery—four had meningitis, and two died. Splenectomy had left the infants vulnerable to infection.\(^11\)

It was a difficult concept, a beneficial operation was putting patients’ lives at risk. Most susceptible were those with thalassemia major and hereditary spherocytosis, both uncommon diseases rarely encountered outside of referral centers for hematological disorders. A surgeon might see one or two cases in a lifetime.
The injured spleen

Splenectomy was lifesaving when major ruptures led to large amounts of bleeding and shock. Nineteenth century dogma held that spleens with minor injuries also required splenectomy to prevent later blood loss from delayed rupture, a phenomenon where a hematoma would suddenly bleed freely into the peritoneal cavity when the splenic capsule gave way a few days after the initial insult. In 1962, Marcelo Campos Christo of Brazil reported that among patients undergoing surgery for a ruptured spleen, nearly half (19 of 40, 47.5%) had no active bleeding from the organ at the time of laparotomy. In another 12 patients, they made the clinical diagnosis of splenic injury on the basis of history and examination and were able to avoid surgery. Nearly 60 percent of the patients (31 of 52, 59.6%) with the clinical diagnosis of splenic injury did not require an operation.

Surgeons recognized that injured spleens often stopped bleeding without surgical intervention.

Clinicians began to rethink their approach for hematological conditions. They avoided surgery in infants and young children, and in cases where manifestations of the disease were relatively mild. Patients who came to surgery received long-term prophylactic antibiotics directed against the most common organisms implicated in post-splenectomy sepsis, pneumococcus, meningococcus, and H. influenzae. Immunizations against the organisms were added as they became available.

A self-healing organ

Surgeons recognized that injured spleens often stopped bleeding without surgical intervention. In 1965, surgeons at the Hospital for Sick Children in Toronto reported that among patients undergoing surgery for a ruptured spleen, nearly half (19 of 40, 47.5%) had no active bleeding from the organ at the time of laparotomy. In another 12 patients, they made the clinical diagnosis of splenic injury on the basis of history and examination and were able to avoid surgery. Nearly 60 percent of the patients (31 of 52, 59.6%) with the clinical diagnosis of splenic injury did not require an operation.

Not wanting to stray too far from surgical doctrine of total splenectomy for all injuries, the Toronto surgeons concluded that either repair or partial resection for splenic injury would be acceptable approaches to conserve splenic function.

In 1971, at a professional meeting, Haller rose from the audience, and portraying the voice of the surgical establishment, made sure there was no misunderstanding:

I think, however, that some physicians may misinterpret the comments in the abstract, which favor conservative management of patients with splenic trauma. For that reason I think you must be careful not to give the impression that you recommend a non-operative approach to the patient with a ruptured spleen....[There] is no good evidence that a healthy child over 2 yr of age has any increased incidence of serious infection after splenectomy.

Part of the reluctance to completely embrace a non-operative strategy was the difficulty in making the diagnosis of splenic injury. Symptoms often were vague and

Immunological functions

Researchers confirmed the immunological functions of the spleen, finding that tuftsin, a polypeptide produced primarily in the spleen, stimulates maximal phagocytic activity in macrophages and neutrophils. The marginal zone in the white pulp of the spleen was found to be the major site for generation of T cell-independent antibody responses, the immune system's major defense against carbohydrate antigens of bacterial capsules.
non-specific, especially in a frightened child with other injuries. A left-side rib fracture or a shadow on a plain film of the abdomen might suggest the presence of a ruptured spleen, but required additional signs for assuredness.

Advances in imaging technology provided more precision in diagnosis of splenic injury, first with nuclear scans in the 1970s, then computed tomography (CT) in the 1980s. These two advances allowed surgeons to carefully monitor a stable patient without concern that a significant injury had been missed.

Surgeons in children's hospitals began to test a non-operative strategy. Using nuclear scans Dennis King of Columbus, Ohio, in 1981, reported a successful non-operative approach in 30 patients, and successful repairs in 16 more, an overall salvage rate of two-thirds (46 of 68, 67%).

In 1988, Richard Pearl updated the experience at the Hospital for Sick Children where surgeons routinely used nuclear scans and began to apply CT. He reported an overall salvage rate of 95.9 percent (70 of 73), 65 (86.7%) not undergoing laparotomy, and another five undergoing repair or partial splenectomy.

By the 1990s, the non-operative approach to splenic injury had become standard, which also worked with liver injuries. New interventions to manage bleeding from the spleen were introduced—selective angiography, and embolization of the splenic artery—avoiding splenectomy for trauma.

Today's clinical strategy has immensely changed from splenectomy as a primary therapy to finding a safe and effective approach thereby avoiding removal of the spleen.

Over the centuries, the underlying rationale required new disciplines of medicine, hematology and immunology to correct generations of misconceptions, and misunderstanding of the spleen. Surgical practice has evolved prodigiously to reflect scientific and clinical evidence of the true nature of the spleen.

References
3. Wells TS. Excision of enlarged spleen, with a case in which the operation was performed. Med Times Gazette. 1866;Jan 6: 2–5.

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Hidden away for seven decades: The identification and interment of ashes from the Dachau concentration camp

Kevin Alter and Edward C. Halperin, MD, MA

Edward C. Halperin, MD (AΩA, Yale University School of Medicine, 1979), is Chancellor and Chief Executive Officer at New York Medical College/Touro College and University System

The first Nazi concentration camp opened in Dachau, Germany in 1933, and was in operation until 1945. It is estimated that 200,000 to 228,000 prisoners passed through the camp during this 12-year period, and more than 40,000 died.¹ ²

When Allied forces approached Dachau there were 30,000 prisoners in the main camp, and about the same number in satellite work camps.¹ ³ On April 29, 1945 the U.S. Army’s 45th Infantry Division liberated the camp after a brief battle with the guards. At the time of liberation about one-third of the prisoners were Jewish.⁴

An unusual gift

One of the soldiers who visited the camp shortly after its liberation was U.S. Army soldier David Walter Corsbie, Jr., from North Carolina. Corsbie, stationed near Munich, was originally a B-24 bombardier but transferred to courier and clerk service for the 364th Fighter Squadron of the Army Air Corps after a doctor grounded him due to an erratic heartbeat.⁵ Shortly after the U.S. Army liberated Dachau, Corsbie was sent from Munich to visit the camp, a distance of about 28 kilometers (17 miles).

Corsbie met a Jewish prisoner who was stabbed bilaterally in the clavicular regions by the Germans. He was left for dead, but was discovered by U.S. soldiers. This prisoner showed Corsbie the camp and told him that the Nazis had sometimes compacted the crematorium ashes into round, cake-like objects to be sent to the next of kin upon payment of a fee. Family members were told that the prisoner died of an infectious disease, and, therefore, cremation was required. Since the Nazis cremated many thousands of bodies in mass ovens, there was no way of knowing if an individual ashcake contained the cremains of one individual or several people.
Hidden away for seven decades

The prisoner told Corsbie, “Take this, so you will remember what happened here.” Corsbie placed the ashcake in a cigarette case he had been given by a local German family he had befriended.

After the war, Corsbie returned to North Carolina and found work repairing address printing machines. He was deeply scarred by what he saw at Dachau, and cringed whenever the topic was brought up.

Guardians of obeisance

Corsbie was provoked to tell his wartime experiences when his teenage son, Joseph, suggested that he was “just a pencil pusher” during the war, unlike other fathers who were “real soldiers.” This brought the elder Corsbie to impart his wartime experiences and reveal his numerous mementoes, including enlistment and discharge papers, uniform, dog tags, and medals.

Joseph then asked about the ashes in the cigarette case. Corsbie began to shake and cry. Martha, Corsbie’s wife and Joseph’s mother, instructed her son, “Stop it. He doesn’t want to talk about it.” That was the end of the war stories until shortly before Corsbie died in 1986 when he told Joseph the full story of the ashes.

In 2012, following two heart attacks, and facing his own mortality, Joseph knew it was time to do something with the ashes.

“It’s like I became the guardian of memory. I had to make sure they weren’t forgotten. They were innocents,” Joseph explained when he contacted a cousin who took possession of the ashes.

The United States Holocaust Memorial Museum declined to accept the ashes because they do not accept human cremains. The Dachau Concentration Camp Memorial Site did not respond to inquiries. The family then reached out to North Carolina Rabbi Jennifer Feldman who, in turn, contacted Sharon Halperin, Director, The Center for Holocaust, Genocide, & Human Rights Education of North Carolina. Halperin, the daughter of Holocaust survivors, agreed to take possession of the ashcake.

Halperin showed the ashcake to her husband, Edward Halperin, MD, MA, who located a laboratory at the Office of the Chief Medical Examiner of the City of New York to verify if the ashes were human. This laboratory developed techniques to identify human proteins in ashes following the terrorist attacks of September 11, 2001.

Specimen analysis

The white/beige, 34 x 37 millimeters wide and 19 millimeters thick specimen was firm, with a waxy surface (Figures 1 and 2). No bone fragments were identified on inspection or by X-ray imaging.

Specimen samples were ground to a powder which was demineralized with acid, and proteins were extracted with urea. Proteins were digested to peptides with trypsin and then concentrated. Peptides were separated by high performance liquid chromatography and analyzed by mass spectrometry. Abundant cutaneous keratin was viewed as a possible contaminant since it could have been the result of prior handling of the ashcake.

Protein analysis was conducted on samples taken from the surface as well as the middle of the ashcake.

Nine proteins from collagen 1 and alpha 1 were found at 99% confidence on the surface of the specimen. One of the peptides was specific for both human and non-human primates; six were specific to human and non-human primates as well as other animals—one was consistent with Pteropus alecto (black flying fox or bat), and one was consistent with Condylura cristata (star-nosed mole), which is only one amino acid different from human, and could also be a human polymorphism.

There was also evidence of hemoglobin alpha (HBA) peptides that are shared by humans, Pan paniscus (bonobo), Talpa europaea (European mole), and rhinoceros. Hemoglobin beta 1 (HBBs) was also found on the surface consistent with human and non-human primates and other animals.

To rule out surface contamination, and because finding collagen and hemoglobin as surface contaminants is not expected, a second analysis was performed on samples taken from the center of the specimen.

Six peptides of collagen 1 and alpha 1 were found. Five were specific to human and non-human primates and other animals, and one was consistent with Pteropus alecto, similar to the sampling from the surface. One peptide of HBA was also found.

Collagen and hemoglobin would not be expected from simply touching the cake as they are not proteins found on fingers. Although the HBA and HBB1 peptides are shared by several species, the only species common among the peptides identified is human.

Using the contextual evidence (i.e., non-human animals were not cremated at Dachau and several of the species listed above are not native to Europe) we concluded that the cremains came from one or more humans.

A proper interment

Three questions arose regarding the disposition of
the ashes:

1. Should they be displayed in a museum or buried?

2. It is unknown if the ashes contained the cremains of more than one individual, and it is impossible to tell the religion(s) of the cremated individual(s). If the ashes were to be buried, should they be buried in a Jewish cemetery?

3. If they were to be buried in a Jewish cemetery, how would Jewish prohibitions against cremation be handled?

A history professor advised that the story of the ashes could be told as well by photographs and prose as by their physical display. Furthermore, the public display of human cremains would offend the sensibility of some people, as demonstrated by how some Native American groups had demanded the repatriation of human cremains on display in museums for burial on tribal lands.

Joseph had recently been ordained by a nondenominational church movement of ex-Roman Catholics. He wanted the ashes “to be buried with dignity” in “sanctified ground.” But where?

Originally established to hold political prisoners of the Third Reich, Dachau incarcerated a large and diverse population—Communists, Social Democrats, Anarchists, alleged spies, anti-Fascist resistance fighters, Poles, Russians, French, Yugoslavs, Austrians, Germans, Czechs, Jews, and Roman Catholics. Insofar as a significant proportion of Dachau’s inmate population were Jewish, and the Nazis cremated bodies in groups, it is probable that a portion of the ashes were cremains of one or more Jews. The decision was made to propose burial of the ashes in a Jewish cemetery, but how should the issue of burial of ashes, which is contrary to the Jewish tradition of only burying the intact body, be addressed?

Reverent treatment of the body of the deceased is viewed by Jews as a biblically-ordained precept. Cremation of the body of a deceased Jew is a gross desecration strictly forbidden by Jewish law. When a person mandates cremation, the ashes cannot be interred in a Jewish cemetery.

According to Jewish law, a person is only held accountable for his/her actions when they are done willingly and with full cognizance of their implications. The prohibition of cremation does not apply to an individual cremated against his/her will. The justification in the book of Deuteronomy (22:25–27) for parsing this distinction is:

But if the man finds the damsel that is betrothed in the
field and the man take hold of her, and lie with her; then the man only that lay with her shall die. But unto the damsel thou shalt do nothing; there is in the damsel no sin worthy of death...For he found her in the field; the betrothed damsel cried, and there was none to save her.

The role of consent to, and cognizance of, the implications of wrongdoing in determining a violation of Jewish law are commented on in the Talmud.9–11

Since the ashes were the result of cremation done without the consent of the victims, and per the precedents established by the Chief Rabbinate of Israel, two North Carolina Rabbis ruled it permissible to inter the ashes in the Durham Hebrew Cemetery.12

Coincidence or divine intervention?

As the story of the Dachau ashes unfolded, Michael Israel, Chief Executive Officer of the Westchester Medical Center in Valhalla, New York observed:

I do not perceive myself as an overtly religious person, but I cannot help think that, of all the kitchens in the world, why did these ashes end up in Sharon Halperin’s kitchen?

And, of all the women in the world, Sharon just happens to be married to Edward Halperin, the Chancellor and CEO of New York Medical College.

And, Edward Halperin is the only person I know who is strange enough to look at a lump of ash-like material and say, “Okay, let’s take it to the laboratory and run a protein analysis on it,” rather than just look at the ashes and say “Oh my, isn’t that interesting?”

And, Edward Halperin just happens to know someone, who knows someone, who leads him to the Office of the Chief Medical Examiner of the City of New York.

It’s hard for me to believe that this is just a random sequence of events. It sure sounds to me like there was some sort of guiding hand involved in all of this.

A final resting place

The journey of the ashes from Dachau to Durham ended with a funeral on Sunday, May 25, 2014, 69 years after they were given to David Corsbie for safekeeping.

The ashcake was placed in a pine box with the Star of David mounted on its top and lowered into a grave. The Mayor of Durham, two rabbis, several Holocaust survivors and their descendants who never had the opportunity to bury the cremains of family members killed in the Holocaust, veterans, and more than 200 spectators found comfort in the ceremony.13

A sculpture was placed on the burial site of the ashes along with a permanent descriptive marker 11 months after the burial.

Seventy years after David Corsbie received the ashes, the sculpture and marker tell the story and remind visitors of the atrocities of the Holocaust, and the tens of thousands of individuals murdered at Dachau.

Acknowledgments

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References

10. Talmud Bava Kama 28b.
11. Talmud Avodah Zarah 54a.

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The hospital courtyard,
at three a.m.
the same for twenty years.

Even in heat, snow or rain,
only the trees are taller.

Tonight
it’s quiet.
No wind or traffic,
just the slumbering autos
lit by the moon and streetlamp.

A mockingbird calls
from the young live oak,
a dim green island
planted
in the indifferent asphalt sea.

His stolen songs
repeat
in groups of three,
and echo
in the concrete canyon.
His music intended
for a softer realm.

I think of the thin old man
with the wispy white hair,
his dried apple countenance
creased
by a hint of a smile.

I just pronounced him dead.

Did he hear the same song?

It is good
to be alive
right now.

James E. Sutton, MD, FACP

Dr. Sutton (AQA, University of Tennessee Health Science Center, 1989), is Medical Director of a hospitalist group in Garland, Texas. His email address is: jamess@baylorhealth.edu. Illustration by Laura Aitken.
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“Her eyes never opened,” Ms. Williams humbly proclaimed. Paradoxically, my eyes opened more than they ever had before. Destiny, an infant who had been crippled by the force of nature, lay before me nearly flaccid in her mother’s arms.

Her heart would never know the soul of the mesmerizing island of which she is native. Her toes would never sink into the sand of the endless beaches of her homeland. In this boundless universe of infinite possibility she is destined to be locked in a form that renders her
human experience finite, impossible.

Destiny is two-years-old, and suffers from trisomy 18—Edward’s syndrome, caused by a presence of all, or part, of a third copy of chromosome 18. Babies with Edward’s syndrome are not expected to live past the first few weeks of life, let alone the first few years.

I had only encountered Edward’s syndrome in my studies, never in reality. With shame, I stood before her, only recollecting a mere glimpse of my previous course notes with which I was able to associate her suffering—rocker bottom feet, microcephaly. I recalled learning these terms for class, but would the brevity of my knowledge ever appreciably encompass the depth of complexity this disease entailed?

I feebly attempted to identify with her presumed anguish. As if it were not enough that every one of Destiny’s breaths possessed the risk of life-threatening aspiration, her mother’s most herculean efforts would never successfully negate the will of genetics.

As Destiny squirmed restlessly, drool dripped down her face and onto Ms. Williams’ lap, but Ms. Williams remained unscathed. I recalled how, not hours before I whined about the inconvenience that the weather would have on my ability to make it into the hospital without soaking my white coat. I couldn’t help but wonder what Ms. Williams would give to watch her daughter jump in a puddle.

Did Ms. Williams feel aggravated that she sought help from the hospital, her daughter in distress, only to be pestered by students who cannot directly help her? Did she think we immediately typified Destiny, reducing her to a scientific specimen? Do the words “get well soon” resonate to a mother who loses more of her baby as every passing moment drifts away?

As most medical students would, my peers and I went through the motions, asking “What brings you in today?” “Was there anything significant about your pregnancy?” Yet, asking the question that we have unceasingly been taught to ask seemed to be the most arduous task of all, “How has giving birth to Destiny affected your life?” Would she be reluctant to respond? Would she welcome the question, as responding may be a potential outlet for her to drain her modestly kept sorrow? Must we remind her of the hand she was dealt?

For the first time in my minimal clinical experience, I was frozen.

The interview continued and then ceased, as all things do; the day went on just as any other. Still, an unshakeable residual aura lingered among the background noise.

How long does Ms. Williams have before she loses her daughter?

A profound sense of admiration for Ms. Williams began to stir inside me. Against all odds, she fights for her daughter who cannot fight for herself. I also admire the physicians who, knowing the chances of her survival, continue to support and care for Destiny with enthusiasm. How their dedication must seem in the mind of a mother who probably feels as though she is losing everything.

It perplexes me to consider the meaning that my presence will carry in the lives of those individuals that I have yet to encounter. Who am I to become in the years ahead?

A concrete reflection of the significance of this experience and the impact that it has had on my life has been difficult to grasp. The lone tangible aspect of my feelings on the matter is manifest in my knowing that if I remain faithfully absorbed in my work, that if I channel my effort to best preparing myself for any of the countless scenarios that may present, then I may, one day, possess the ability to help someone surmount the apparently insurmountable.

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Reviews and reflections

David A. Bennahum, MD, and Jack Coulehan, MD, Book Review Editors

Let Me Heal: The Opportunity to Preserve Excellence in American Medicine
Kenneth M. Ludmerer, MD (AΩA, Washington University in St. Louis School of Medicine, 1986, Faculty)
Oxford University Press, Oxford (UK), 2014, 456 pages

Reviewed by Paul B. Roth, MD, MS (AΩA, University of New Mexico, 1998, Faculty) and David A. Bennahum, MD (AΩA, University of New Mexico, 1984, Faculty)

There is likely no greater strategic question before the American people than coming to grips with the determinants of a healthy future. As the cornerstone of this conversation is not only whether the country will be able to afford safe, high-quality health care, but also how to best train the physicians of the future.

Medical schools are graduating more students, but there is a growing bottleneck in the “capped” number of entry-level graduate medical education (GME) slots. This crisis regarding how many and what kind of residency programs should exist—and the economic and political influences—is not unique. It is the most recent in a series of challenges that have faced GME in this country over the past 150 years.

In Let Me Heal: The Opportunity to Preserve Excellence in American Medicine, medical historian and physician Kenneth Ludmerer provides an insightful account of this crucial aspect of medical education and the medical profession.

Until the later part of the 19th century, there was no formal training in the medical or surgical specialties in the United States. Most individuals expanded their understanding of medicine after medical school by volunteering in indigent hospitals and practicing on the poor. This rudimentary and often inadequate training was brought to light during and following the Civil War, when the quality of a surgeon was measured by the speed with which he was able to amputate a limb.

As Ludmerer notes, “In 1878 John Shaw Billings, who played a seminal role in planning the Johns Hopkins Medical School and Hospital, which opened in 1893, wrote that medical specialization could not be avoided ‘because it is no longer possible for any one man to grasp and retain a knowledge of all the branches of medical science.’”

It was not until Abraham Flexner’s (AΩA, Raymond and Ruth Perelman School of Medicine at the University of Pennsylvania, 1946, Honorary) famous report in 1910 that a standardized science-based curriculum was implemented along with the beginning of post-graduate medical
educational models. The first models entailed the creation of advanced learning experiences—usually in a hospital setting—in which a physician-in-training worked to develop an expertise in one of the new medical specialties. The most popular venues for this additional training were general hospitals, mostly on the East Coast.

Trainees were required to work long hours in the hospital, and live there. It was expected that interns would not marry until the completion of their training.

Johns Hopkins University was the country’s first research university when it was established in 1876. The medical school opened in 1893 after the heiress to the Baltimore and Ohio Railroad agreed to a large donation with the proviso that women be admitted to the school of medicine.

The idea of combining a medical school with a teaching hospital took root when Johns Hopkins Hospital opened in 1889, and the first modern residency program was launched. Physicians who had trained in France or Germany had returned as the founding faculty of this stellar institution, including Sir William Osler.

The next phase of GME evolution occurred following World War II with new advances in the science of medicine, and the need to provide high-quality care for returning veterans.

Ludmerer, an internist and professor of history and biostatistics at Washington University in St. Louis, has not only captured the facts of past eras but the tone and style as well. He draws from personal letters and self-described accounts from physicians who described the day-to-day realities and drama of learning and practicing medicine from the early history of this country to modern times. He describes how societal pressures influenced the manner in which would-be doctors acquired their education and credentials in America. He explains how throughout the past two centuries, economics, politics, and advances in science helped shape the pedagogy and structure of medical education.

This book is a must for readers interested in the historical facts associated with GME, and for those who hope to gain insight into the lives of the forefathers of medicine and medical education, as well as the needs of the young physicians being trained today.

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**Rights Come to Mind: Brain Injury, Ethics, and the Struggle for Consciousness**
Joseph J. Fins, MD (AΩA, Weill Cornell Medical College, 2011, Faculty)
Cambridge University Press, Cambridge (UK), 2015, 394 pages

Reviewed by Michael Roess, PhD

Broad cultural conflicts often receive preliminary hearings in the court of medicine. This is, in part, because medicine deals intimately and regularly with cultural taboos typically kept behind closed doors. In 1973, decades before the conflict over same-sex marriage, the American Psychiatric Association removed homosexuality as a pathology from the 2nd edition of the Diagnostic and Statistical Manual of Mental Disorders. In part, this is because technological developments in medicine unearth flashpoints for cultural conflict that medicine must deal with on a practical level.

In Rights Come to Mind, Joseph Fins makes the case that the medical community is in the midst of another such preliminary hearing over the rights of those in a minimally conscious state (MCS). He aims to persuade us that we must establish more robust rights for members of this group.

If anyone is qualified to make this case it is Fins, who brings decades of experience in medical ethics, work with those who have suffered a traumatic brain injury (TBI) and their families, and tireless pushing the medical community to recognize the distinction between persistent vegetative state (PVS) and MCS.
Minimally conscious state

Fins explains our current understanding of MCS with admirable clarity. Although we know little about the underlying physiology of traumatic brain injury, careful clinical observation and modern imaging techniques have allowed for significant strides, especially in distinguishing between PVS and MCS. Until recently, the standard model of TBI outcome, after an initial coma lasting up to 14 days, was either a return to consciousness or the development of PVS, which could persist indefinitely. The PVS patient was said to have a functioning brain stem (e.g., sleep-wake cycles, open eyes that appear to track), but a nonfunctioning or “dead” cerebral cortex.

In updating this model, Fins tells a compelling story about the discovery of certain PVS patients who demonstrated transient and minimal “but definite behavioral evidence of environmental awareness.” In individual cases, this might include the intermittent occurrence of smiling or crying in response to appropriate stimuli, following simple commands, reaching for objects, and intelligible verbalizations. These patients evidently had some—even if only minimal and transient—cortical activity.

These observations led to the development of the Aspen Criteria for diagnosing MCS, and a contentious uphill battle getting these criteria recognized by the medical community. We now believe that there is a window of up to 12 months after brain injury in which a patient may transition from PVS to MCS, and that at least a few of those who do attain MCS can ultimately regain full consciousness. Those who do not transition to MCS are considered to be in a permanent (as opposed to persistent) vegetative state, from which recovery is thought impossible.

Moral judgment with imperfect knowledge

While the historical and technical virtues alone would make this a worthwhile read for those interested in TBI, the work also shines with Fins’ moral arguments. He interviewed nearly 40 former MCS patients and families, and his use of their voices is one of this work’s most effective features.

Too often, discussions in biomedical ethics speak of patient interest as if the issue were merely a rational calculus of utility maximization, or an abstract application of principles. Such an approach is necessary, but rarely sufficient to capture the full moral weight of the issue. This high level of abstraction occludes the very real and dramatically high emotional stakes for the families and patients involved. The hopes and joys as well as the frustrations and anxieties these families voice provide a helpful corrective to the jargon-laden technical terms in which we often view such conversations.

When employing grief-stricken voices to make a moral argument there is always a temptation to oversimplify the issue, to rely on the emotional appeal of the family to stand in for moral argument. To his great credit, Fins avoids this temptation and is careful to convey that the burden of caring long-term for an MCS patient is not one that all families would choose, or should be compelled to choose. Moments of triumph are balanced with stark acknowledgments of limited recoveries.

Throughout, Fins remains a strong advocate for patient (and proxy) autonomy. While careful not to denigrate the importance or appropriateness of organ donation, Fins cites numerous examples of well-meaning overreach by those who do not want to see organs go to waste. From neurologists telling a mother that her son “doesn’t have the reflexes of a frog” in an effort to elicit consent for donation, to a mother’s observation that a social worker had to block the efforts of a representative of the organ procurement organization, Fins shows how our failure to grapple with the moral status of TBI sufferers can lead some to coerce family members into a choice they would not have made on their own.

Fins is wary of an inappropriate expansion of the “right to die” movement that conflates respecting the clearly expressed autonomous decisions of patients (or health care agents) with a zeal to prematurely end perceived suffering. He insists throughout that while respecting a patient’s right to die we must also “affirm the right to care.”

Civil rights for TBI sufferers

Fins ends his work with an impassioned call for advocacy. He sees the plight of those suffering a TBI as the next frontier in the civil rights movement. Too often, the families of TBI sufferers are forced to prematurely transfer their loved ones to facilities ill equipped to distinguish MCS from PVS, without physical therapies essential for recovery, all while being treated as though the hope they harbor for their loved one’s recovery is a delusional burden they are imposing on others.

While the civil rights frame does help make a strong moral case for his argument, placing it in a thriving and effective tradition of social change in the United States, it occludes some serious concerns. I would have liked to see Fins address the inevitable economic consequences of making what he rightly argues as appropriate and effective long-term care for MCS patients.

It is unfair to ask any one book to do all things. Fins
provides a fair and comprehensive overview of the historical, biological, technological, social, and political contexts surrounding TBI and MCS patients, while also acting as an advocate for patients and their families.

Michael Roess, PhD, is a Research Assistant Professor, Department of Family, Population and Preventive Medicine, Center for Medical Humanities, Compassionate Care and Bioethics, Stony Brook University. His email address is: michael.roess2@stonybrookmedicine.edu.

American Pain: How a Young Felon and His Ring of Doctors Unleashed America’s Deadliest Drug Epidemic

John Temple
Lyons Press, Boulder (CO), 2016, 320 pages

Review by Cindy Bitter, MD, MA, MPH

America is in the throes of an opioid epidemic. Opioid overdoses now exceed motor vehicle collisions as the leading cause of accidental deaths. Combining investigative journalism, character studies, policy analysis, and social commentary, John Temple’s American Pain describes the factors that led to the development of Florida’s pill mill industry and the epidemic of prescription drug abuse it fostered.

The book starts in 2008 with the Georges, twin brothers who ran a “rejuvenation” clinic that sold steroids to bodybuilders. A physician convinced them that pain pills would have a bigger potential market, and they partnered to open South Florida Pain Clinic. Soon, people were lining up to receive their prescriptions. The clinic expanded, hiring clinic manager-bouncer Derik Nolan and additional doctors, whom they found by posting job announcements on the Internet.

The clinic changed names and moved several times, but its patient base had been established, including a large number of people from other states. During the two years the clinic was in operation, its doctors prescribed nearly 20 million pills. Four of the physicians were among the top 10 physician-purchasers of oxycodone in the United States, and one of the doctors was linked to more than 50 overdose deaths.

Narratives from families affected by opioid abuse give context to the human suffering caused by the clinic. Temple also explains the larger forces that played into the growth of such irresponsible pain clinics, including a lack of regulatory oversight in Florida that allowed pill mills to flourish. Despite a prior felony drug conviction, Chris George was able to obtain a license for the pain clinic. Florida allowed clinics to dispense medications directly, a practice that increased profits and evaded monitoring by outside pharmacies. Also, the lack of a prescription drug monitoring database made it easy for patients to doctor-shop. While the State Board of Healing Arts or the Drug Enforcement Agency (DEA) oversaw physicians, it was very difficult to pursue non-physician owners of pain clinics, like the Georges.

The story actually begins more than a decade earlier, in the 1990s. Legitimate concerns about inadequate treatment of pain at the end of life, and racial disparities in pain management led to the concept of “oligoanalgesia.” In addition, drug companies seeking to expand their market share misrepresented safety data, flooded medical journals with articles by ghostwriters and editorials, funded patient advocacy groups, and aggressively pressured physicians to prescribe narcotics for a long list of ever-increasing indications. In addition, the American Pain Society started the “Pain as the 5th Vital Sign” initiative, which was adopted by the Veterans Health Administration and The Joint Commission.

Professional norms around narcotic analgesics for chronic pain became more permissive. Patient satisfaction surveys included questions on pain relief which reinforced the perception that liberal prescribing was good business practice.

Temple provides insight into the fight against
prescription drug abuse. The DEA set quotas for drug manufacturing, and successfully ended prior outbreaks of amphetamine and methaqualone abuse by restricting quotas. In 1993, before the release of long acting formulations, there were 3,520 kilograms of oxycodone produced. Production peaked at 149,375 kilograms in 2014, with small reductions in 2015 and 2016. Reversing the epidemic will require increased use of adjunctive treatments, prescribers who are better informed about risk factors for opioid misuse, and effective treatment for those addicted, including medication-assisted treatment.

Temple’s writing is engaging and insightful, and will appeal to the general population as well as a medical audience. Some readers will find descriptions of the riotous clinic atmosphere and owners’ callous attitude toward the patients they called “junkies” to be disturbing, albeit effective.

*American Pain* is a worthy read for anyone seeking a deeper understanding of the opioid crisis in America.

Cindy Bitter is Assistant Professor of Surgery at the Saint Louis University School of Medicine. Her email address is drcyn@prodigy.net.

**Brief reviews**

*The Pharos* receives many more books than we can possibly review. A number of these books are by members of AΩA. In addition to the regular book reviews, we are beginning a new section with abbreviated reviews of other interesting books and a list of recent books by AΩA members. As always, we welcome suggestions of books to review in future issues.

**Death of a Scholar**

Constance Shames, MD (AΩA, State University of New York, Downstate Medical Center, 2007, Alumnus)

AuthorHouse, 2011, 190 pages

This is an unusual book by a retired internist and former Chief of Service at Kings County Hospital, Brooklyn. She reflects on the hospital; her own career; the difficulties that existed in medicine for women of her generation; the extraordinary mix of cultures and people that make up Brooklyn; and the tragic 1991 case of Yankel Rosenbaum whose care and death was much criticized in the New York press.

**Internal Medicine: A Doctor’s Stories**

Terence Holt, MD

Liveright, New York, 2015, 288 pages

This book is an autobiographical reflection on the life, work, and experience of an internist. Good stories worth the reader’s time.
Seven Brief Lessons on Physics
Transcribed from Italian by Simon Carnell and Erica Segre
Carlo Rovelli

Rovelli is a wonderful writer and Director of the Quantum Gravity Group of the Centre de Physique Theorique de Luminy, Aix-Marseilles University. In a short 96 pages he explores and explains fundamental concepts such as heat, quanta, cosmology, probability, time, and black holes in lucid and playful prose that seeks to reassure the importance of science, and the scientific process to the rigorous search for truth. One should also look at his biography of Anaximander the sixth century philosopher who first postulated that the Earth exists in a void surrounded by the sun and stars. Rovelli credits Anaximander as the founder of modern scientific thinking.

More AΩA member books

In the Crucible of Chronic Lyme Disease: Collected Writings & Associated Materials, by Kenneth B. Liegner, MD (AΩA, New York Medical College, 1975), Xlibris, Bloomington (IN), 2015, 892 pages

In-Training: Stories from Tomorrow's Physicians, by Ajay Major, MD, and Aleena Paul, MD (AΩA, Albany Medical College, 2016), Pager Publications, Inc., 2016, 372 pages


Physicians' Untold Stories: Miraculous experiences doctors are hesitant to share with their patients, or ANYONE!, by Scott J. Kolbaba, MD (AΩA, University of Illinois, 1976), CreateSpace Independent Publishing Platform, Charleston (SC), 2016, 240 pages

The Death of Cancer: After Fifty Years on the Front Lines of Medicine, a Pioneering Oncologist Reveals Why the War on Cancer is Winnable—and How We Can Get There, by Vincent T. DeVita, Jr., MD (AΩA, George Washington University, 1961), and Elizabeth DeVita-Raeburn, Sarah Crichton Books, New York, 2015, 336 pages

Your Health, Your Decisions: How to Work with Your Doctor to Become a Knowledge-Powered Patient, by Robert Alan McNutt, MD (AΩA, Michigan State University College of Human Medicine, 1992, Alumnus), The University of North Carolina Press, Chapel Hill (NC), 2016, 168 pages
The tragedy of medical ethics

The difficulty with current day medical practice is that it allows—indeed, makes morally obligatory—practices and behaviors that increase health care spending without regard to other public priorities, which get crowded out by the incessant demands of health care. To the extent medicine drives resource use it does not give adequate moral guidance to the larger distributional decisions faced by government and other third-party payers. Ironically, to the extent that medical ethics drive marginal spending, they actually lower both the quality of life and well-being of the community.

Key tenants of medicine drive marginal spending for some while ignoring others and their associated, much needed social goods. However well meaning, medical decision-makers assume that we can afford—and should pay—what they demand. They focus on a particular patient to the near exclusion of others. They do not take into consideration how health care needs are to be weighed and balanced against other national civic needs. They neither guide nor allow a sense of proportion among total community needs.

“Justice” is one of the four principles of medical ethics, but it is not operational. We can’t even agree on what it is supposed to mean. Perhaps, if we could give it meaning we would not have a system that over-delivers to some, while ignoring so many others. When dealing with individuals “beneficence, nonmaleficence and autonomy” are always on guard, and “justice” is seldom heard from. How do we place on the scale of justice our deteriorating roads and bridges while we give health care almost twice what other developed nations see fit to allocate?

The moral life of the community includes, but cannot be defined by, medical ethics. Medical ethics may be useful in dealing with individual patients, but not for the broader allocation issues all nations face. Karen Ann Quinlan was kept alive in a persistent vegetative state in a community where women gave birth without prenatal care, kids went without vaccinations, and large numbers of people had unmet medical needs. E. Haavi Morreim, PhD, professor, Department of Human Value and Ethics, College of Medicine, University of Tennessee, says it so well:

We cannot fairly insist that physicians owe to patient resources [what] they neither own nor control...we should neither expect nor permit the medical profession unilaterally to choose the values that will set the amounts and purposes for which other people must spend their money.¹

A doctor may not have to “ration” medicine, but public policy always rations for it must decide among the total needs of its jurisdiction. Governors ration taxpayers’ money in a process called budgeting. Public policy deals with broad goals that maximize the broad public interest. Public policy can never maximize individual goals in a system, for there is too often a conflict between the individual good and the good of the group. We do not build police, fire, roads, or any other governmental system around individuals.

Some thoughtful scholars claim our current practice and ethics actually decrease the overall health of the nation. Robert Evans, author of Strained Mercy: The Economics of Canadian Health Care, warns:

A society that would spend so much on health care that it cannot, or will not, spend adequately on other health enhancing activities may be actually reducing the health of its population through increased health spending.²

We cannot hope to solve the problems facing health care until we first get our ethical theories straight. This will require us to rethink the nature and assumptions of important parts of the health care culture and associated ethics. Setting ethical standards and practices in a world of common resources must be thought of as an empiric process. Ethical beliefs are theories or suggestions about how human beings can live in a just society. They are human constructs not written in stone. They cannot be morally obligatory. They must be tested by trial and error, tempered with reality, and evaluated by what they cause to happen in the total social world.

Ethical beliefs are successful when they promote moral behavior that fosters the integrity and moral well-being of the total society. Any ethical practice which decreases the overall well-being of the community, or doesn’t recognize its specific relationship to the total public good, disqualifies itself as a guide for public policy. If it decreases the moral life of the community, it repudiates what ethics is all about.

Good public policy is not the domain of abstract thought developed unrelated to available resources. It is not purely hypothetical or theoretical like physics, geometry, or mathematics. Ethical principles of the public budget

Letters to the editor

The tragedy of medical ethics

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Good public policy is not the domain of abstract thought developed unrelated to available resources. It is not purely hypothetical or theoretical like physics, geometry, or mathematics. Ethical principles of the public budget
cannot be independent of fiscal realities. They cannot assume that a priori criteria—reason, conscience, and the great moral traditions—justify unconditional moral behavior. It is not theological, but a painful process of practical trade-offs with winners and losers.

Public policy has no obligation to fund social policy that conforms to medical ethics or maximizes every service that is, or may be, “beneficial” to every patient. On the contrary. Public policy must look at the total battlefield of social need and justice. There should be no unexamined demands on the public purse, no mega-priorities, no blank checks.

Present ethical principles both reward and require behavior that maximizes medical care spending at the expense of all other social goods. They look at the moral health and well-being of the community with only one eye. They too often ignore the law of diminishing returns. If every American would get all the “beneficial” health care demanded by the current medical culture and practice, we would have an unethical society where medical care trumps most other important social goods. Medical ethics provide no mechanism to weigh and balance health needs with other social needs. No matter how elegantly reasoned, they cannot control the practical allocation of pooled funds.

Richard D. Lamm, former Governor, State of Colorado
Denver, Colorado

References

Advice to Old Patients

As an 84-year-old retired cardiologist who has enjoyed a relatively healthy life I was not prepared for critical care in an intensive care unit. A major cardiac arrhythmia complicated by acute renal failure was the culprit. During the event I required vasopressors and a respirator. During this episode I had a dream I will never forget.

I was in a coronary care unit. There were no windows. In the dream, though, I was in the Sunday school room in my childhood Episcopal church. Outside was the family graveyard where my father, grandparents, and great-grandparents are buried. It was dark inside the school room, but I could see my son sitting in front, on the left side, and my wife in a similar position on the right. They both spoke encouraging words to me, “Hang in there, this is not the end.” There was a window to my left in the room. I looked out the window. Everything was dark.

Random thoughts ran through my mind. Lines from a John Mellencamp song, “Oh, yeah, life goes on, long after the thrill of living is gone.”

My family’s voices were fading. I was aware of the weakness of their hopeful words, yet there was a strange absence of sadness. For some reason, I had imagined dying would be more special. I was feeling weaker and more desperate. My persistent thought was that I did not want to die.

I kept looking out the window, searching for light. A building next door was dark, but as I kept looking at it I saw a steel pipe, and light reflecting off the pipe. Behind the light was an orange colored windsock tossing in the wind. At that moment there suddenly was light all around me. I felt I would survive.

After I regained consciousness I was transferred to a progressive care unit where I had a bed next to a window, through which I saw the orange windsock. It was in front of a heliport. The hospital helicopter, Life Flight, was preparing to take off. Life Flight. It was an appropriate name. I cannot explain the mystery of the window, or that I dreamed it before I saw it. I was close to dying, and sought life. I moved from darkness to light. I remembered the strange absence of sadness as I grew weaker, the temptation to close my eyes and sleep.

Now, as I remember each moment, I hasten to record it as best I can. It was such an extraordinary experience I do not want it to be forgotten. Albeit an obvious message to patients in a critical state, it pleads one should never give up seeking the light no matter how vast the darkness, which brings to mind Dylan Thomas’ plea to his dying father:

Do not go gentle into that good night,
Old age should burn and rave at close of day;
Rage, rage against the dying of the light.

Henry Langhorne, MD
(AΩA, Tulane University, 1957)
Pensacola, Florida
The Alpha Omega Alpha Honor Medical Society held its annual Board of Directors meeting October 1 in Chicago. At the conclusion of the meeting the Board installed its new officers for 2017, and welcomed two new Board members.

**Officers**

President—**Joseph W. Stubbs MD, MACP** (AΩA, Emory University, 1978) joined the AΩA Board of Directors in 2008 as a Member at Large. In 2011, he became the Board Treasurer, and served in that role until being elected President Elect in 2016. Dr. Stubbs is a private physician in Albany, Georgia. He is past president of the American College of Physicians (2009-2010), and currently the Medical Director of South Georgia Accountable Care Organization. His specialty is internal medicine/geriatrics.

President Elect—**Eve Higginbotham, SM, MD** (AΩA, Morehouse School of Medicine, 2011, Faculty) is the inaugural Vice Dean for Inclusion and Diversity at the University of Pennsylvania, Senior Fellow of the Leonard Davis Institute for Health Economics, and Professor of Ophthalmology at the University of Pennsylvania. She is Secretary of the Ascension Board. Dr. Higginbotham is a member of the National Academy of Medicine, the American Academy of Arts and Sciences, the Defense Health Board, and Visiting Committee of the Institute of Medical Engineering and Science at the Massachusetts Institute of Technology. She is an Associate Editor of the American Journal of Ophthalmology, and Vice Chair of the Ocular Hypertension Treatment Study. She serves as the AΩA Leadership Committee Chair, and was active in developing the new Fellow in Leadership Award. Her specialty is ophthalmology, and glaucoma.

Immediate Past President—**Robert G. Atnip, MD, FACS, RPVI** (AΩA, University of Alabama at Birmingham School of Medicine, 1976) has served on the AΩA Board of Directors since 2006, first as a Councilor Director, and most recently as a Member at Large. He has been the Councilor at the Eta Pennsylvania Chapter at the Pennsylvania State University Milton S. Hershey Medical Center since 2002, and is a Professor of Surgery and Radiology. He is a Test Development consultant for the National Board of Medical Examiners, and a long-standing member of his hospital’s Ethics Committee. He is American Board of Surgery certified in surgery, vascular surgery, and surgical critical care. His specialties are vascular surgery, vascular ultrasound, wound care, and hyperbaric medicine.

Secretary Treasurer—**Wiley “Chip” Souba, MD, ScD, MBA** (AΩA, University of Texas Medical School at Houston, 1978) joined the AΩA Board of Directors as a Member at Large in 2013. He has most recently served as Vice-President for Health Affairs, and Dean of the Geisel School of Medicine at Dartmouth, where he maintains a faculty appointment as Professor in the Department of Surgery. He is nationally known for his innovative approaches to developing leaders and leadership. His specialty is surgical oncology.

**New members**

Councilor Director—**Kathleen Ryan, MD** (AΩA, Hahnemann University, 1994, Resident) has served as the AΩA Councilor at Drexel University College of Medicine since 2012. She is the Associate Dean for Medical Education-Simulation, and directs the simulation center at the College of Medicine. In January 2015, she was awarded the EMS Advocate Award in recognition of her role in advocating learning through simulation. In 2011, she was awarded the Christian R. and Mary F. Lindback Foundation Award for Distinguished Teaching. She was the Associate Editor for Postgraduate Medicine from 2008-2015. She has served on many national committees assessing performance at the National Board of Medical examiners, and developing...
In recognition of faculty members who have distinguished themselves in medical education, the Robert J. Glaser Distinguished Teacher Awards are presented annually to two basic sciences teachers and two clinical studies teachers. AΩA partners with the American Association of Medical Colleges (AAMC) in the selection of each year’s award recipients.

This year’s awards were presented during the AAMC 2016 Awards Dinner, Sunday, November 13, in Seattle, Washington.

The 2016 AΩA Distinguished Teachers are:

**F. Stanford Massie Jr., MD, FACP**—As a professor of medicine, Dr. Massie has helped thousands of medical students find their passion for clinical care. He also assists those who teach, and in 2011, he co-founded the professional organization Directors of Clinical Skills Courses, which has participants from nearly every U.S. medical school. Dr. Massie’s commitment to students is evident in his scholarship, which has served as a framework to identify interventions that can mitigate medical student burnout.

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This year’s awards were presented during the AAMC 2016 Awards Dinner, Sunday, November 13, in Seattle, Washington.

The 2016 AΩA Distinguished Teachers are:

**F. Stanford Massie Jr., MD, FACP**—As a professor of medicine, Dr. Massie has helped thousands of medical students find their passion for clinical care. He also assists those who teach, and in 2011, he co-founded the professional organization Directors of Clinical Skills Courses, which has participants from nearly every U.S. medical school. Dr. Massie’s commitment to students is evident in his scholarship, which has served as a framework to identify interventions that can mitigate medical student burnout.

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Karl Patrick Ober, MD (ΩΑ, Wake Forest School of Medicine, 1995)—For more than 38 years, Dr. Ober has influenced the lives of thousands of medical and physician assistant students, residents, and fellows. In return, learners at Wake Forest School of Medicine have honored the professor of internal medicine with more than 30 teaching awards, including establishing a leadership award that bears his name. In addition to his proficiency as a clinical educator, Dr. Ober is an internationally recognized expert on Mark Twain, with a focus on the author’s commentaries on medicine. Like Twain, Dr. Ober relies on storytelling to make the most complex material understandable.

Dean X. Parmelee, MD (ΩΑ, Wright State University Boonshoft School of Medicine, 2008, Faculty)—Dr. Parmelee has been an early pioneer of team-based learning and medical education innovation for more than three decades. In 2001, he joined Wright State University Boonshoft School of Medicine as Associate Dean for Medical Education, where he partnered with colleagues to transform the passive curriculum into one that engages learners. Dr. Parmelee has advanced active learning techniques nationally and globally, has served as the inaugural president of the national Team-Based Learning Collaborative, and was instrumental in establishing a medical school in Saudi Arabia.

Thomas L. Pazdernik, PhD—Dr. Pazdernik has developed a reputation as an educational innovator at the University of Kansas School of Medicine. More than four decades ago, Dr. Pazdernik led the creation of a computer-assisted teaching system for pharmacology, coordinating efforts with dozens of domestic and foreign medical schools. Upgraded as technology advances, the system continues to aid students today. Dr. Pazdernik has received many honors for exceptional teaching and mentoring, including the Lifetime Achievement in Mentoring Award, and selection as a University of Kansas Chancellor’s Club Teaching Professor.

Past ΩΑ Robert J. Glaser Distinguished Teachers

2015
Gurpreet Dhaliwal, MD (ΩΑ, Northwestern University, 1998), Professor of Medicine, University of California, San Francisco, School of Medicine
Jonathan Kibble, PhD, Professor, Assistant Dean for Medical Education, University of Central Florida College of Medicine
Thomas KwasiGroch, PhD (ΩΑ, James H. Quillen College of Medicine of East Tennessee State University, 1988, Faculty), Professor, Biomedical Sciences/Anatomy, James H. Quillen College of Medicine at East Tennessee State University
David Muller, MD (ΩΑ, Icahn School of Medicine at Mount Sinai, 1995, Resident), Professor, Dean for Medical Education, the Icahn School of Medicine at Mount Sinai

2014
Charles L. Bardes, MD (ΩΑ, University of Pennsylvania, 1986), Associate Dean of Admissions, Professor, Clinical Medicine, Department of Internal Medicine, Weill Cornell Medical College
Bernard Karnath, MD (ΩΑ, University of Texas Medical Branch, 2007, Alumnus), Professor of Medicine, Department of Internal Medicine, University of Texas Medical Branch at Galveston
Randall King, MD, PhD, Harry C. McKenzie Professor, Department of Cell Biology, Harvard Medical School
Emma A. Meagher, MBChb, BAO (MD), Associate Professor, Department of Medicine, Perelman School of Medicine at the University of Pennsylvania

2013
Cynthia Lance-Jones, MA, PhD, Assistant Dean for Medical Student Research, Associate Professor, Department of Neurobiology, University of Pittsburgh School of Medicine
Stuart Slavin, MD, MEd (ΩΑ, Saint Louis University, 1984), Associate Dean for Curriculum, Professor, Department of Pediatrics, Saint Louis University School of Medicine
Mikel Snow, PhD (ΩΑ, University of Southern California, 1988), Director, Medical Education, Professor and Chair, Department of Cell and Neurobiology, Keck School of Medicine of the University of Southern California
Roy Ziegelstein, MD, MACP (ΩΑ, Boston University School of Medicine, 1986), Vice Dean for Education, Sarah Miller Coulson and Frank L. Coulson, Jr., Professor of Medicine, Executive Vice Chairman, Department of Medicine, the Johns Hopkins University School of Medicine

2012
Bruce F. Giffin, PhD, MS, Field Service Professor, University of Cincinnati College of Medicine
Richard B. Gunderman, MD, PhD (ΩΑ, University of Chicago, 1992), Professor of Radiology, Pediatrics, Medical Education, Philosophy, Liberal Arts, Philanthropy, Indiana University School of Medicine
Brian Hodges, MD, PhD, FRCPc, Professor, Department of Psychiatry, University of Toronto Faculty of Medicine
Amy Leigh Wilson-Delfosse, PhD, Associate Professor, Department of Pharmacology, Case Western Reserve University School of Medicine
2011
Gerald D. Abrams, MD (ΩΩΑ, University of Michigan, 1953), Professor Emeritus, Pathology, University of Michigan Medical School

Dennis H. Novack, MD (ΩΩΑ, Drexel University College of Medicine, 2001, Alumnus), Professor of Medicine, Associate Dean, Medical Education, Drexel University College of Medicine

Mark T. O’Connell, MD (ΩΩΑ, University of Miami, 1995, Faculty), Senior Associate Dean for Educational Development, Senior Advisor to the Dean, Bernard J. Fogel, MD, Endowed Chair in Medical Education, Associate Professor of Medicine, University of Miami Leonard M. Miller School of Medicine

LuAnn Wilkerson, EdD, Professor of Medicine, Senior Associate Dean for Medical Education, University of California, Los Angeles David Geffen School of Medicine

2010
Gary L. Dunnington, MD, (ΩΩΑ, University of Southern California, 1994, Faculty), J. Roland Fosse Professor, Chair of Surgery, Southern Illinois University School of Medicine

Duane E. Haines, PhD, Professor, Chairman, Department of Anatomy, University of Mississippi Medical Center School of Medicine

John W. Pelley, PhD, Associate Professor, Cell Biology and Biochemistry, Texas Tech Health Sciences Center School of Medicine

James R. Stallworth, MD (ΩΩΑ, University of South Carolina, 1987, Faculty), Associate Professor, Department of Pediatrics, University of South Carolina School of Medicine

2009
Ronald A. Arky, MD (ΩΩΑ, Weill Cornell Medical College, 1954), Charles S. Davidson Distinguished Professor of Medicine, Dean of Curriculum, Harvard Medical School

David A. Asch, MD (ΩΩΑ, Weill Cornell Medical College, 1984), Robert D. Eilers Professor of Medicine and Health Care Management and Economics, University of Pennsylvania School of Medicine and the Wharton School

Eugene C. Corbett Jr., MD (ΩΩΑ, University of Virginia, 2001, Faculty), Anne L. and Bernard B. Brodie Professor of Medicine, University of Virginia School of Medicine

Erika A. Goldstein, MD, MPH (ΩΩΑ, University of Rochester School of Medicine and Dentistry, 1981), Professor, Internal Medicine, University of Washington School of Medicine

2008
Peter G. Anderson, DVM, PhD, Professor, Pathology, University of Alabama School of Medicine

Daniel W. Foster, MD, MACP (ΩΩΑ, University of Texas Southwestern Medical Center at Dallas, 1954), John Denis McGarry, PhD, Distinguished Chair in Diabetes and Metabolic Research, University of Texas Southwestern Medical School

David W. Nierenberg, MD (ΩΩΑ, Harvard Medical School, 1976), Edward Tuloh Krumm Professor of Medicine and Pharmacology/Toxicology, Senior Associate Dean for Medical Education, Dartmouth Medical School

Paul L. Rogers, MD (ΩΩΑ, University of Arkansas, 1972), Professor, Critical Care Medicine, University of Pittsburgh School of Medicine

2007
Robert M. Klein, PhD (ΩΩΑ, Honorary Member, 2010), Associate Dean, Professional Development and Faculty Affairs, Professor Anatomy and Cell Biology, University of Kansas Medical Center School of Medicine

John (Jack) Nolte, PhD, Professor, Cell Biology and Anatomy, University of Arizona College of Medicine

Richard M. Schwartzstein, MD, Faculty Associate Dean for Medical Education, Associate Professor of Medicine, Harvard Medical School; Executive Director, Shapiro Institute for Education and Research, Vice President for Education, Beth Israel Deaconess Medical Center

James Sebastian, MD (ΩΩΑ, Medical College of Wisconsin, 1992, Faculty), Professor, General Internal Medicine, Medical College of Wisconsin

2006
Carmine D. Clemente, PhD (ΩΩΑ, University of California, Los Angeles, 1998, Faculty), Emeritus Professor, Anatomy and Neurobiology, University of California, Los Angeles School of Medicine

Molly Cooke, MD, William G. Irwin Endowed Chair of the Division of General Internal Medicine, University of California, San Francisco, School of Medicine

Helen Conrad Davies, PhD, Professor, Microbiology, University of Pennsylvania School of Medicine

Jeffrey G. Wiese, MD (ΩΩΑ, University of California, San Francisco, 1999), Chief of Medicine, President of the Medical Faculty, Charity Hospital, New Orleans; Associate Professor, Medicine, Tulane University School of Medicine

2005
Paul F. Aravich, PhD (ΩΩΑ, Eastern Virginia Medical School, 2011, Faculty), Associate Professor, Pathology/Anatomy and Medicine, Eastern Virginia Medical School

David Eric Golan, MD, PhD, Professor, Biological Chemistry and Molecular Pharmacology, Harvard Medical School; Professor, Medicine, Brigham and Women’s Hospital

Louis N. Pargaro, MD (ΩΩΑ, Georgetown University, 1994, Alumnus), Professor, Vice-Chair, Department of Medicine, Uniformed Services University of the Health Sciences F. Edward Hébert School of Medicine

Robert T. Watson, MD (ΩΩΑ, University of Florida, 1969), Senior Associate Dean, Educational Affairs, Professor of Neurology, University of Florida College of Medicine

2004
Linda S. Costanzo, PhD (ΩΩΑ, Virginia Commonwealth University, 2002, Faculty), Professor, Physiology, Virginia Commonwealth University School of Medicine

Arthur F. Dalley II, PhD (ΩΩΑ, Vanderbilt University, 2003, Faculty), Professor, Cell Biology, Vanderbilt University School of Medicine

Steven L. Galetta, MD, Van Meter Professor, Department of Neurology, University of Pennsylvania School of Medicine

Charles H. Griffith III, MD, MSPH (ΩΩΑ, University of Kentucky, 2000, Faculty), Associate Professor, Medicine, University of Kentucky College of Medicine
Chapter and national news

2003

Joel M. Felner, MD (AΩA, Emory University, 1980, Faculty), Professor, Cardiology, Associate Dean for Clinical Education, Emory University School of Medicine

Barry D. Mann, MD (AΩA, Drexel University College of Medicine, 1999, Faculty), Associate Professor, Surgery, Drexel University College of Medicine

Gabriel T. Virella, MD, PhD (AΩA, Medical University of South Carolina, 1989, Faculty), Professor, Department of Microbiology and Immunology, Medical University of South Carolina

Lawrence D.H. Wood, MD, PhD (AΩA, University of Chicago, 1993, Faculty), Dean of Medical Education, University of Chicago Pritzker School of Medicine

2002

Lewis R. First, MD (AΩA, University of Vermont, 1997, Faculty), Professor and Chair, Department of Pediatrics, University of Vermont College of Medicine

Faith T. Fitzgerald, MD (AΩA, University of California, San Francisco, 1969), Professor of Medicine, University of California, Davis School of Medicine

Aviad Haramati, PhD, Professor of Physiology and Biophysics, Georgetown University School of Medicine

Ralph F. Jozelewicz, MD (AΩA, Columbia University, 1979), Professor of Neurology and Medicine, Associate Chair for Education, University of Rochester School of Medicine and Dentistry

2001

Walter J. Bo, PhD, Professor, Neurobiology and Anatomy, Wake Forest University School of Medicine

J. John Cohen, MD, PhD (AΩA, University of Colorado, 1992, Faculty), Professor, Immunology, University of Colorado School of Medicine

Douglas S. Paauw, MD (AΩA, University of Michigan, 1983), Associate Professor, Medicine, University of Washington School of Medicine

Steven E. Weinberger, MD (AΩA, Harvard Medical School, 1973), Professor of Medicine, Harvard Medical School

2000

Frank M. Calia, MD (AΩA, Tufts University School of Medicine, 1961), Professor, Medicine, University of Maryland School of Medicine

Cyril M. Grum, MD (AΩA, University of Michigan, 1998, Faculty), Professor, Medicine, University of Michigan School of Medicine

Ronald J. Markert, PhD, Robert J. Kergueris Distinguished Professor of Teaching, Wright State University School of Medicine

Jeanette J. Norden, PhD (AΩA, Vanderbilt University, 1998, Alumnus), Professor, Cell Biology and Neuroscience, Vanderbilt University School of Medicine

1999

Susan Billings-Gagliardi, PhD (AΩA, University of Massachusetts Medical School, 2001, Faculty), Professor, Cell Biology, University of Massachusetts Medical School

L.D. Britt, MD (AΩA, Eastern Virginia Medical School, 1993, Faculty), Henry Ford Professor, Edward Brickhouse Chairman, Department of Surgery, Eastern Virginia Medical School

Patrick Duff, MD, Professor, Obstetrics and Gynecology, University of Florida College of Medicine

John Theodore Hansen, PhD, Professor, Neurobiology and Anatomy, University of Rochester School of Medicine and Dentistry

1998

Bruce M. Koeppen, MD, PhD (AΩA, University of Chicago, 1977), University of Connecticut School of Medicine

Daniel H. Lowenstein, MD (AΩA, University of California, San Francisco, 1983), University of California, San Francisco School of Medicine

Hugo Rudolf Seibel, PhD (AΩA, Virginia Commonwealth University, 1990, Faculty), Medical College of Virginia at Virginia Commonwealth University

Mark H. Swartz, MD (AΩA, Icahn School of Medicine at Mount Sinai, 1972), Mount Sinai School of Medicine

1997

George Libman Engel, MD (AΩA, Johns Hopkins University, 1938), University of Rochester School of Medicine and Dentistry

William H. Frishman, MD (AΩA, Albert Einstein College of Medicine of Yeshiva University, 1978, Faculty), Albert Einstein College of Medicine

Carlos Pestana, MD, PhD (AΩA, University of Texas Health Science Center at San Antonio, 1975), University of Texas Medical School at San Antonio

Michael S. Wilkes, MD, PhD, University of California, Los Angeles School of Medicine

1996

Ruth-Marie Fincher, MD (AΩA, Medical College of Georgia at Georgia Regents University, 1976, Faculty), Medical College of Georgia

Edward C. Klatt, MD (AΩA, Loma Linda University, 1976), University of Utah School of Medicine

Steven R. McGee, MD (AΩA, Washington University in St. Louis School of Medicine, 1980), University of Washington School of Medicine

1995

Pamela C. Champe, PhD (AΩA, Rutgers Robert Wood Johnson Medical School, 1996, Faculty), University of Medicine and Dentistry of New Jersey-Robert Wood Johnson Medical School

Phyllis A. Guze, MD, University of California, Los Angeles

1994

Jose I. Choca, MD, PhD, University of Illinois College of Medicine

Jane F. Desforges, MD (AΩA, Tufts University School of Medicine, 1945), Tufts University School of Medicine and the New England Medical Center

William E. Erkonen, MD, University of Iowa College of Medicine

Guido Majno, MD, Massachusetts Medical School

1993

Kelley M. Skeff, MD (AΩA, University of Colorado, 1970), Stanford University School of Medicine

Parker A. Small Jr., MD (AΩA, University of Florida, 2001, Faculty), University of Florida College of Medicine
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