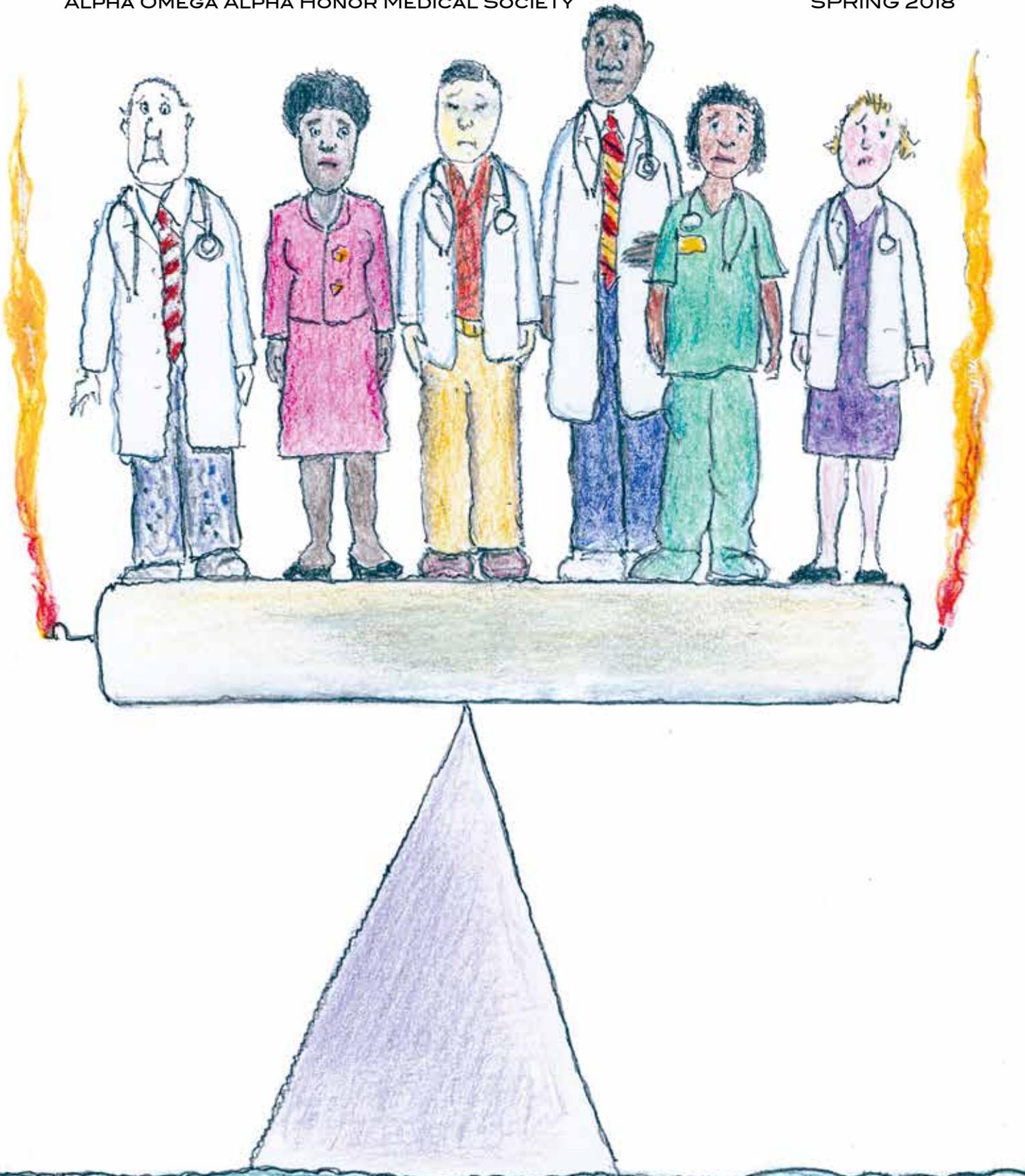


THE
PHAROS

ALPHA OMEGA ALPHA HONOR MEDICAL SOCIETY

SPRING 2018



THE PHAROS

OF ALPHA OMEGA ALPHA HONOR MEDICAL SOCIETY

SPRING 2018



"Be Worthy to Serve the Suffering"

Alpha Omega Alpha Honor Medical Society

Founded by William W. Root in 1902

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Corrections

In the Autumn 2017 issue, the article "Astonished Harvest" incorrectly identified Dr. William Carlos Williams as being AQA. This was incorrect. We apologize for any confusion or inconvenience this may have caused.

In the Winter 2018 issue, the article "Update on the Aliko Initiative at year 10: Changing the culture of medicine to know our patients as individuals," should have listed Drs. Laura Hanyok and Janet Record as co-first authors.

The joy in caring

Richard L. Byyny, MD, FACP

Time, sympathy, and understanding must be lavishly dispensed, but the reward is to be found in that personal bond which forms the greatest satisfaction of the practice of medicine. One of the essential qualities of the clinician is interest in humanity, for the secret of the care of the patient is in caring for the patient.

—Dr. Francis W. Peabody
(AΩA, Harvard Medical School, 1906)¹

The joy in the care of the patient is in caring for the patient. Jack Coulehan, MD (AΩA, Emory University, 1974), wrote:

The rapid progress in medicine has indeed yielded an astonishing harvest of improvements in our patients' health...Medical practice provides a rich opportunity to experience empathy, hope, solidarity, compassion, and self-healing. Our profession gives us privileged access to deep bonds of humanity we share with our patients. Traditionally, physicians have considered this fulfillment one of the chief rewards of our profession.²

And, Sir William Osler said:

Nothing will sustain you more potently than the power to recognize in your humdrum routine...the poetry of the ordinary man, of the plain, toil-worn woman, with their loves and their joys, their sorrows, and their griefs.³

Medicine continues to make tremendous improvements in science, diagnostics, technology, and treatments, which clearly are better for patient care and outcomes. However, more physicians report dissatisfaction with the profession, and many report suffering from burnout. Perhaps all physicians who have given of themselves for their patients and society with empathy, hope, and compassion have wondered why they continue in the profession. For many, their focus on healing and caring can be met with frustration formed by an uncaring profit-driven system with myriad barriers. Some physicians may feel ignored, misunderstood, criticized, and devalued. However, nearly every physician has memories of the joy of medicine, caring for their patients, and one particular patient who reminds them of why they entered the profession of medicine.

Burnout is important to patients as well as to physicians and the profession of medicine. Job-related burnout

is characterized by emotional exhaustion, depersonalization (treating patients, students, and colleagues in a cynical way), and reduced feelings of work-related personal and professional accomplishment. It has been associated with reduced or poor job performance, clinical illness, cognitive impairment, mental errors, lack of attention and concentration, absenteeism, and thoughts of quitting or changing one's job and/or occupation. The total cost of recruiting a physician can be \$90,000, with the lost revenue for that physician between \$500,000 and \$1 million. Turnover begets more turnover, and those left behind are managing increased stress.⁴

It is estimated that more than 50 percent of physicians in the United States have at least one symptom of burnout.¹⁵ Typical symptoms include headaches, insomnia, tension, anger, and closed thinking. Symptoms of depression with altered mood, distorted behavior, and sleep disturbance can be experienced during extreme instances of burnout. Cognitive impairments in memory and attention can occur as well as behavioral effects associated with absences, time missed from work, and thoughts of quitting. The ICD-10 includes burnout under problems related to life-management difficulty with clinical manifestations similar to, and often consistent with, clinical depression.

A gratifying profession

I presented a lecture on hypertension to community physicians in the 1980s, and at the evening's dinner most of the older men were commiserating about the negative changes in medicine, medical care, hospitals, and patients. One younger woman was eating and not participating in the conversation, so I engaged her and asked what she thought about the current state of medicine. She was a 32-year-old obstetrician/gynecologist, and said, "You know, I don't remember the good old days. I am an excellent physician and surgeon, and provide excellent care for my patients. I have professional obligations to fulfill. I learned what form to complete, how to complete it, and how to negotiate the system on behalf of my patients. It is hard, but gratifying, and that's why I am a doctor."

Although burnout has probably existed for generations, the businessification and commercialization of medicine have brought it to the forefront for today's physicians. Medicine is now, and always has been, a demanding profession with immense responsibility to patients and society. However, as physicians, we must remember why we became physicians, why we care, and why we strive to "be worthy to serve the suffering."

Burnout and resilience

Burnout and a lack of resilience are often associated with stress. In 1997, Leiter and Maslach identified six major influences on burnout:

- Workload and its intensity, time demands, and complexity;
- Lack of control of establishing and following day-to-day priorities;
- Insufficient reward and the accompanying feelings of continually having to do more with less;
- The feeling of community in which relationships become impersonal, and teamwork is undermined;
- The absence of fairness in which trust, openness, and respect are not present; and/or
- Conflicting values, in which choices that are made by management often conflict with their mission and core values.⁵

Each of these influences are external to the individual, and typical of most medical environments today. Physician performance is often related to how many relative value units (RVUs) are billed, financial accomplishments to increase organizational revenue, and Press Ganey patient satisfaction survey scores. These performance factors are expected to be accomplished via reduced patient contact time, and diminished collegial interactions and consultation time, in an environment of demanding regulatory and legal requirements.

Little or no evaluation of care of the patient, patient outcomes, the doctor-patient relationship, medical professionalism, physician satisfaction and accomplishments are considered in the “business of medicine.” Physician output and success is often related to high volumes of work—RVUs, strict deadlines, an unyielding focus on technology, and the electronic health record (EHR). It is estimated that for every one hour spent with patients, nearly two hours are spent on the EHR, with another hour or two during personal time entering information in the EHR.⁴

Burnout can also be influenced by societal factors, individualized factors, a loss of support systems, changing values, and a lack of personal and/or professional recognition. While it is experienced by the individual, it can also affect coworkers, family, social networks, colleagues, and patients.

There are many screening tests used for burnout, but the most common and validated is the Maslach Burnout Inventory (MBI).⁶

The problems we are currently encountering that contribute to burnout were anticipated by sociologists who posed that bureaucratic and professional forms of

organizing work are fundamentally antagonistic.⁷ Medical schools have not yet prepared graduates as practitioners who can best resist the bureaucratic and market forces shaping health care and the care of the patient.

Burnout in medicine was anticipated by Relman’s concerns about the emergent medical industrial complex, and by Starr’s concerns about medicine’s sovereignty. Physicians experience conflict between what they aspire and should do, and what they have been educated and socialized to do. They have been professionalized for acquiescence, docility, and orthodoxy. They are taught to be more like sheep than cats—ultra-obedient following the rules. They are not taught to be cats—independent activists defending and advocating for medical values.

Bureaucracies are good at identifying and implementing common solutions to common problems; e.g., a profit and loss system based on consistent products with limited variability, but not very good in situations with variable contingencies and complexities as they attempt to apply standard solutions to non-standard circumstances. We have prepared physicians to follow the rules; however, whose rules? The rules generated by the profession? Or the rules generated by the organization with different values, and objectives?

As a result, physicians see professionalism more about conformity. This creates a conflict in the current health care system and organizations. Physicians seem to be perverting core principles of the profession to a just-follow-the-rules framing and practice of medical professionalism. We are essentially responsible for the problems we now encounter.

The impact of business, corporations, industry, markets, and finance for profit is real and appreciable. All these influence and exert pressure on how care is provided, and how work is carried out and valued. The rules are not being set by professionals, but by organizational priorities related to finances and the concept of profit. A professionalism that fails to dissect and distinguish itself from its two counterparts is a professionalism that is conformist and does not resist the pernicious elements of markets and bureaucracy.

We need cats who will resist conformity in service of extra-professional forces. The mission and resistance is about saving health care for patients and society, and enabling our profession and colleagues to care for patients and not face burnout.

Professional identity formation

The emphasis on professional identity formation resulted from the recognition by medical educators that an individual's identity begins to emerge at birth and proceeds in stages throughout life with the period beginning in the late teens and stretching into early adulthood being particularly important. The process of professional education in medicine is superimposed on this development, and has a profound impact on the identities that emerge.⁸⁻¹¹

Individuals, at a particularly formative stage of their lives, enter medical school with preexisting identities that have been shaped by both nature and nurture. Each of us is different based on our personal identity shaped throughout life by our experiences, role models, family, education, and reflection. During the long period of undergraduate and postgraduate education, each learner must come to terms with the norms of the community of practice that they are entering. These norms are outlined in the definition of profession and professionalism, as well as its list of characteristics and attributes.^{12,13} Each learner must cope with these norms. Many will be accepted outright, some will require compromises, and some norms may be rejected.

Through medical school, residency, and practice we have developed a new personal identity that was shaped by our prior pre-medical identity and our medical education and experiences. We started as medical novices and learned a new language of medicine, learned about basic and clinical science, developed clinical skills, and professional attitudes. Initially we learned from teachers, text books, lectures, laboratories, and simulations as we pretended to be doctors. We then advanced to mostly experiential learning from patients, colleagues, role models, and teachers, and received our certification as a doctor of medicine. We continued our learning and identity formation as residents and fellows, becoming experts in medicine and perhaps a specialty.

During this journey, we also developed as medical professionals with ethics and values basic to our profession. We became healers and medical professionals, and joined the community of practice of medicine as doctors/physicians. We retained much of our earlier personal identity, but combined it with our identity as a physician. We had our own models of reasoning.

We learned to construct small-scale mental models of reality to use in anticipating events, to reason, and explain things and events. We use deeply ingrained and internalized assumptions, generalizations, and images that influence our understanding of what we see, what

is happening, and how to take action. This organizes our lives, and provides options, direction, and guidance on how to deal with problems and get things done. However, this also reflects our developed biases.⁴ The major factors impacting identity formation in medicine are role models, mentors, and both clinical and nonclinical experiences. All have a profound impact and work through both conscious and unconscious mechanisms, leading to explicit and tacit knowledge. All are amenable to educational interventions that ensure a positive impact on identity formation, and are implemented in ways that are specific to the desired end result. Physicians should be individuals whose behavior is professional because of who they have become. One way to achieve this essential objective is to specifically design educational programs that support individuals as they develop the professional identity necessary for the practice of medicine, so that each practitioner has come to think, act, and feel like a physician. Seeley and Duguid said, "The central issue with learning is becoming a practitioner, not learning about practice."¹⁴

The hidden curriculum, lessons that are learned but not openly intended – transmission of norms, values, beliefs, and attitudes conveyed during learning experiences – teach unintended lessons that have an effect on professional and personal identity formation. These lessons may have a negative impact on the way a physician responds and reacts to difficult situations with which they are frequently confronted.

Social media can aggravate the hidden curriculum by embroiling students, physicians, and other health professionals in campaigns of backlash with an exponential number of adversaries. These social media interactions often contain strong opinions and inflame contentious issues thereby creating anger, antagonism, and hostilities. Mundane and theoretically non-contentious issues when brought into the work and/or personal environment can create highly volatile moral and emotional conflicts that are often unresolvable and can lead to burnout.

The development of a professional identity of a physician—how to think, act, perform, feel, and be a doctor—along with a well-defined set of expectations of the profession—The Physician Charter¹⁵—are the first steps toward resiliency.

Generational differences

Whether the situation involves work hours, social media, or digital devices, a shared understanding of professional comportment is essential. Generational differences

can lead to different interpretations of professionalism, and communication is the key to avoiding misunderstanding. Professionalism disconnects can arise from different personal and generational viewpoints, and can cause stressful situations for all involved. Professionalism can be contextual and situationally nuanced. Establishing safe spaces for direct communication and educating faculty and learners about the ways to communicate and navigate professionalism differences will help reduce the generational angst, allowing for healthy environments, and collegial teams.

Adhering to a medical professional code of conduct and values can create professional conflicts. Physicians often may need to develop “work arounds” on behalf of patients, and colleagues, in order to ensure the patient’s medical and personal necessities are fulfilled. Often, when a work around is needed, it is because what is best for the patient is lost in the superimposed, non-professional businessification of medicine. The physician and patient face the conflict and emotional consequences of doing the right thing for the patient while working around the systems and processes instituted to create a revenue-driven business model. Work arounds are undertaken so that the physician can continue to do what’s necessary to take care of patients, but often at a personal and professional toll; i.e., burnout.

Defining appropriate and inappropriate behaviors, reviewing expectations, encouraging and responding to questions, and establishing a shared understanding of rules and consequences provides safe environments, and can help reduce generational conflicts that can lead to burnout. Modeling professional behavior; being aware of inadvertent lapses in professionalism and acknowledging them when they occur; and communicating directly, in a timely way, and in an appropriate environment are crucial for older generations when communicating with students and new physicians who are neophytes in the profession.

In 1902, Osler told members of a medical society, “The times have changed, conditions of practice have altered and are altering rapidly, but...we find that the ideals which inspired [our predecessors] are ours today—ideals which are ever old, yet always fresh and new, and we can truly say in Kipling’s words:

The men bulk big on the old trail, our own trail, the out trail,
They’re god’s own guides on the Long Trail, the trail that is always new.”¹⁶

A community of practice

Physicians are part of a community of practice of healers and medical professionals. Over the last several decades, the medical community of practice has changed resulting in an isolated role for the physician with silos and unintended consequences.

Traditionally, physicians cared for patients in a clinical community setting where they consulted with each other regarding difficult patient cases and diagnoses, shared the joys and tragedies of medical care, and enjoyed a collegial relationship. Time required for the care of the patient was provided, and opportunities to learn and share experiences and knowledge were readily available. Physicians could teach and learn from each other, and from their patients. Social functions were organized for physicians, their families, and their medical community. They shared empathy, commiserated, and supported each other. With the advent of RVUs, and the commercialization and businessification of medicine, these communities of practice have diminished, and in many instances become extinct. In many cases, dialogue among colleagues is through email. Every order, every lab request and result must pass through this electronic portal, even if the person whose inbox you are about to overload is seated next to you.¹⁵

The re-establishment of medical communities of practice is one defense against burnout. Physicians need to have an opportunity to join a community of practice with other medical professionals who are educated and trained as healers.

In the community of practice I joined as an internist, we scheduled one-hour appointments for new patients and 30 minutes for follow up. If needed, I could schedule more time for a complex patient with special needs. We had a paper medical record that was only available for 50%–60% of visits. However, we knew our patients quite well. Most of the visit was directly involved with the patient – no computer screen. We took notes on the history or examination, and handwrote the clinical notes in the patient’s record during or after the patient visit. We completed documents of the visit with diagnoses and level of service, largely without awareness of associated relative value units. We checked boxes on a single page to order tests, referrals, follow up, etc.

The clinic library was small and limited with no online resources. Between patients we would go to the corridor, conference room, or charting room to have a conversation with colleagues, team members, and staff. Sometimes we commiserated about problems, barriers, or system limitations, but often we would take joy in the care of the patient

by presenting a great case and sharing what we had done and learned. We had an opportunity to discuss difficult cases, share reasoning, and learn from a colleague.

These short intervals were collegial and provided an opportunity for education and reflection. On Fridays, before going home we would often share a short “Thank God It’s Friday” event to share stories from the week. Once a week, we would have organized clinical practice teaching conferences. Once a month, we would organize an evening together with colleagues, spouses, and significant others to socialize. We often went to the gym with colleagues to workout, and had organized recreational sports teams. At least twice a year we would have an entire group social event with families for an afternoon picnic or evening dinner. Many of these events were open to other specialties so that we would have an opportunity for cross-discipline collegiality.

This was our community of practice.

In medicine today, patients are scheduled for 30 minute to 40 minute new patient visits, and 15 minute to 20 minute follow-up visits. Patient visits are booked from 8 a.m. to 5 p.m., Monday through Friday. There may be a scheduled lunch break though it is often used to catch up when extended patient visits muddle the schedule. Physicians have no flexibility in allocating time dependent on patient complexity, and other needs of the patients. Today, more than one-half of each patient visit is spent facing a computer screen. There is no time allocated to reflecting on the joy of caring for the patient, or sharing that joy with colleagues for educational purposes. There is no time between patients to share or commiserate.

When time permits, which is infrequent, sharing joys and complaints with colleagues, students, or residents is done with antipathy by those suffering burnout. This creates self-doubt, stress, and unhappiness. Reflection is often on too many bureaucratic tasks; too many hours at work; a lack of respect; problems with the electronic health record; a lack of control; no autonomy; an emphasis on profits and revenue over patients and care giving; administrative burdens; a lack of professionalism; and/or a lack of collegiality.

Colleagues may not know others within the practice, and seldom know physicians in other disciplines. There may be few community of practice social events.

All of this contributes to physician burnout and depression when the joy of caring, and learning and teaching, are diminished or lost. This is a tragedy for our profession, and for the care of patients.

Medical professionalism

Medical professionalism should strive to achieve a level of caring in which service transcends self-interests. By achieving this level of caring, physicians can care for individual patients, and also for the greater good. The ability to focus outward and attain great joy from caring for others will overcome the feelings of burnout.

Bureaucratic and market forces will continue to battle for the hearts and minds of 21st century professionals essentially unopposed by the ethos, ethics, and practice of professionalism. In the end, none of this is about saving the world for professionals; rather it is about saving health care for patients and the public in a world where mission increasingly is defined in terms of margins.

Medical educators and leaders of health systems have enormous opportunities to shape the professional development of learners, thereby reducing the propensity to burnout. It is crucial to identify and build sustainable models to ensure that learners and new physicians are exposed to positive role models, and introduced to how professionals self-regulate, and why. Curricula and experiential learning approaches are unlikely to have a lasting impact if organizations fail to put in place the right people, processes, and technology to address unprofessional behaviors among senior team members, as well as learners.

We accept our mental models as external reality or truth, and we act since it makes sense to us and our identity. Our thinking, behaviors, actions, and performance are all affected by our way of thinking and being derived from our personal and professional identity. We do what makes sense to us. We usually don’t realize and recognize that it is our unique construct of reality for us.¹⁷

This often results in selective perceptions. We have stored in our memories those experiences we ascribe meaning to because of positive or negative feelings that were evoked when they happened. They tell us a constructed story, not necessarily a true story. We consult our story, consciously or unconsciously, in everything we do and experience with easy-to-recall “interpretation-based” truths that inform our thinking and determine our choices and behaviors. These storied interpretations question our work, competence, professionalism, adequacy, and acceptance. This translates into a belief that says, “I am not good enough,” or someone or something external is to blame. Analysis, sense-making, and interpretation of inputs are always after the fact and represent hindsight. In cases of not so pleasant or unpleasant, difficult experiences, our interpretation is invariably different from what really happened or is happening.

Our cognitive mental associations affect how we perceive and act, are generated implicitly or unconsciously, and are the source of how we perceive events and develop thoughts and responses. We develop ways of responding that are often biased, and become habitual cognitive responses and beliefs of which we are not even aware. These habitual unconscious thoughts often create our inner voice that speaks with negative thoughts and beliefs, and creates stress and misconceptions.

Conscious cognition processing allows us to think, respond, and make decisions requiring concentration and thoughtfulness, effort, and deliberate concentration.

Because of time pressure, fatigue, stress, and information overload, physicians' cognition is impacted, and they often use unconscious cognition to make sense of experiences in work and life. This results in implicit responses that are not helpful, and can create negative or non-valid thoughts and perceptions.

After a 20-minute visit with a patient, unconscious cognition might be telling you that you are not good enough for this job and the responsibility. In contrast, thoughtfulness and conscious cognition might conclude that the patient is really suffering, and while it is difficult with only 20 minutes to learn and understand from her, her medications are helping her and you can make her life better by refilling the prescriptions for her chronic condition. These cognitive inputs shape attitude and beliefs.

We all have empowering and disempowering stories in our memories which, when positive, are powerful and are useful for living our lives and doing our work. However, when they are unhealthy dysfunctional stories and memories, they hold us back. These negative chapters in our life stories that question our competence and adequacy create doubt, and unhappiness, and we may become defensive, controlling, manipulative, judgmental, and/or disrespectful, with behaviors that are dysfunctional and/or negative. This, coupled with stress, results in emotional turmoil and negative responses and may lead to burnout.

Resilience is the ability to consciously rethink the story and interpretation of what happened, or is happening, and reshape it to an empowering life story. Our inner voice must remind us, "I have much to be grateful for; the work I do makes contributions to others; my caring makes a difference to me and my patients; I am worthy to serve the suffering; I am part of something larger than myself; I appreciate what others do for me; I seek out the best in others; I commit to professional behaviors; I will work to heal and care for others and be a responsible member of my profession and community of practice; I will work

positively to contribute to changes that will support the best care for our patients."

Resiliency

Burnout is a common problem for physicians. They need to self-evaluate, and watch for signs in themselves and their colleagues. Self-reflection and honesty are useful in self-evaluation. Commitment to work, self-efficacy, learned resourcefulness, and hope may help with resiliency, and increased job control.

Cognitive-behavioral therapy improves coping and mental health by development of personal coping strategies that target solving problems and changing unhelpful patterns in thoughts, beliefs, attitudes, behaviors, and emotional regulation. This uses mindfulness-based approaches and therapies that are problem focused and oriented to actions that are helpful in treatment and prevention.

Distortions and maladaptive behaviors can be reduced by learning processing skills and coping mechanisms. This helps by challenging patterns and beliefs to utilize new ways of mindfulness and conscious thinking. Replacing magnified negatives by thinking more positively and optimistically with realistic and effective thoughts can help return the joy of caring for patients, while at the same time coping with the systems and barriers. This is a way to become more open, mindful, and aware of cognitive distortions, and can lead to the ability to think differently. It replaces the maladaptive cognition, coping, emotions and behaviors with adaptive successful ones.

While physicians and their colleagues can learn to cope with dysfunctional health care systems that don't truly value the patient and the care of the patient, the only way to truly prevent and enable physicians to care for patients and avoid burnout and dysfunction in practice is with organizational change and reinstatement of the community of practice. Medical organizations need to re-evaluate the care of the patient and the needs of the patient and physician. Physicians and organizations must collaboratively create and support a culture of caring that emphasizes compassion, respect, values, and principles to serve the suffering. This will allow physicians and the care teams to be committed.

Organizational change includes realistic workloads and supportive systems. This means encouraging mentoring and mentors, recognizing role models, providing control for those providing the care, compassion, and appreciation. This is the heart of medicine's contract with society.

Organizations must recognize that the care of the whole patient is more than a commodity or a business. Caring

for a patient and the well-being of the physician is more than RVUs. They must eliminate barriers and decrease administrative burdens.

The care of the patient is more than understanding and treatment of disease. Health care systems and physicians must be prepared and supported to address the needs of the whole patient as a person. Professionalism combined with the ethics of doing the right thing for the right reason, and a commitment to reflection and evaluation of what is being done and why it is being done are paramount to the success of our health care system. There must be a preparatory culture of caring in teaching and learning.

We must create and nourish a new community of practice in medicine with greater collegiality and support. These must be mindful organizations that create opportunities and responsibility to meet and have conversations about the virtues and challenges of being a physician and providing care for the whole person.

All of this will require that physicians demonstrate and exert leadership. For example, organize a retreat of the physician practice and team to discuss how to develop a community of practice, including teaching and learning activities, social and family events, celebratory recognition ceremonies, opportunities to tell stories, and time to commiserate.

Caring and providing for patients also involves caring for each other and our profession, and contributing even more to the community in which we work and live. When the organization and system do not enable us to care for our patients and colleagues, we must be assertive to demand application of our ethics and values in the care of our patients.

Resiliency begins with changing our thinking and opening the door to constructive change and finding the joy in caring for patients. Don't allow burnout to take over your professional life. Find who you really are as a physician and medical professional. Know you are the one who makes authentic commitments and helps others. Be the one who improves the human condition. Move your work, life, and community forward. Be worthy to serve the suffering.

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feathers and files

i wonder what a memory looks like
not the hazy images that we hold on to
but the actual memory itself.

is it like a feather floating in the air among its countless brethren
after a pillow fight?
or maybe like a file in a slightly disorganized office cabinet
ready to be plucked?

and when we recount our memories to others
when they slip out between our lips
and into their ears
do they look different in their brains?

what is the weight of them?

are some light
like the memory of a kiss?
and others heavy heavy
like the memory of a heartbreak?

and how about when we forget?

when the feather is lost
the file misplaced
the brain searches
and aches for it

where did i put it?

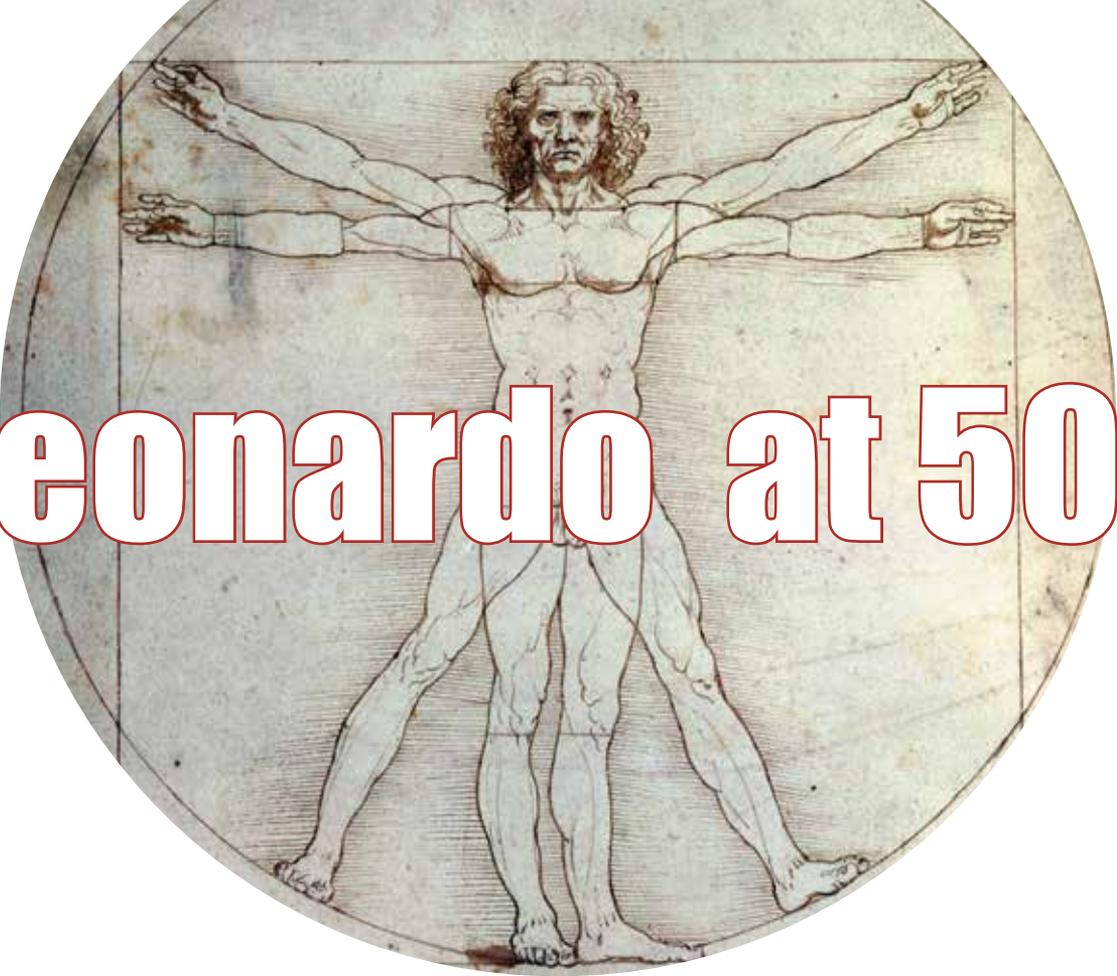
what did it feel like?

i miss it.

Slavena Salve Nissan

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Illustration by Laura Aitken



Leonardo at 500

A lesson in creativity

Salvatore Mangione, MD

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Leonardo da Vinci was exquisitely gifted in both the arts and science, and he practiced them as a “scientist of art and an artist of science.”¹ Five hundred years after his death, his anatomical drawings remain testimony to his unique way of engaging the world both artistically and scientifically. From pioneering the injection of molten wax into ventricles, to multiple views of specimens, to the recurrent use of cross-sections and cutouts, his drawings remind us of a brain that always thought in pictures. They also challenge us to understand what made Leonardo so creative. This may be especially worthwhile in times when medical education has been accused of hindering creativity.

The acquisition of any knowledge is always of use to the intellect.¹

—Leonardo da Vinci

Barred by the church from entering the Ospedale di Santo Spirito under accusations of “heresy and cynical dissection of cadavers,”² Leonardo quit his studies in 1516, left Italy and retired to France. He would never dissect again. Within a year, he would suffer a disabling stroke, and within three days he died. He was 67 years old.

Five hundred years later, there is still much that medicine can learn from this extraordinary man. His 40-year-long exploration of the “*meravigliosa macchina umana*,” the wonderful human machine, provided hundreds of anatomical drawings that are not only breathtakingly beautiful, but also scientifically sound. From the groundbreaking idea of exploded views, to the reliance on guidelines to demonstrate the three-dimensional location of various parts, and the frequent use of strings and wires

to mimic the function and position of muscles, Leonardo consistently mesmerizes us with his unique visual-spatial perception of reality.

As art historian Kenneth Clark said, "It is often said that Leonardo drew so well because he knew about things; it is truer to say that he knew about things because he drew so well."³ Artist and surgeon Frederick Franck agreed, "What I have not drawn, I have never really seen."⁴

Many physical findings were first described by artists, and many great physicians were artists. Jean-Martin Charcot, who invented neurology,⁵ drew and sketched throughout his life to the point that, "Charcot the artist is

inseparable from Charcot the physician."⁶

Leonardo's drawings challenge the viewer to understand his mind. What was so special about it? Was he a unique genetic fluke, or was it all in his upbringing? If we could unlock his secrets and nurture those traits in educational practices, we might be able to produce more creative physicians.^{7,8,9}

The outsider

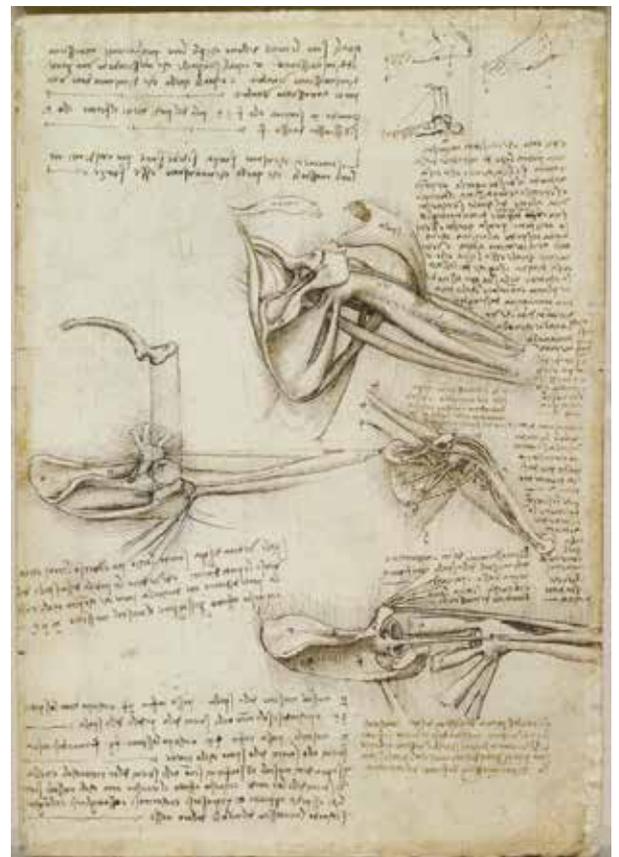
From a genetic standpoint, there was nothing in Leonardo's family that predicted genius. The son of a peasant girl and a young notary, Leonardo was born out of wedlock, taken from his mother, and raised as a bastard child. He was discriminated against by his legitimate siblings, and cut out of the paternal inheritance.

Major adversities are not uncommon in the life of geniuses,¹⁰ yet, for Leonardo they might



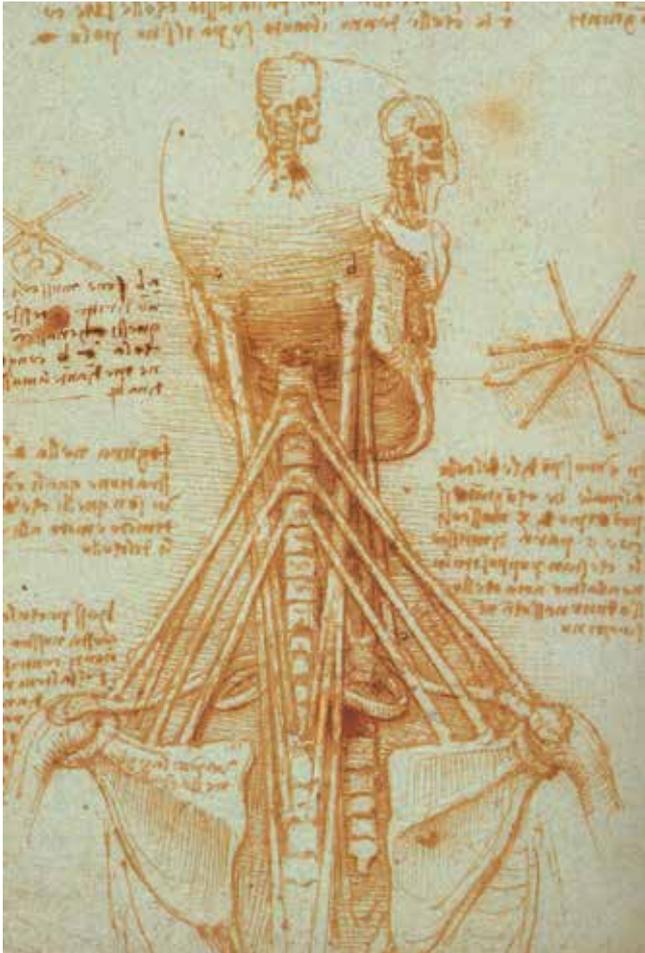
Leonardo da Vinci, *The Foetus in the Womb*. Pen and ink over red chalk, circa 1510-1513.

Royal Collection, The Windsor Castle



Leonardo da Vinci, *The Bones and Muscles of the Shoulder*. Pen and ink with wash over black chalk, circa 1510-1511.

Royal Collection, The Windsor Castle



Leonardo da Vinci, *Anatomy of the Neck*. Pen and ink on blue paper, circa 1512-1513.

Royal Collection, The Windsor Castle

have contributed to much more than character—they might have made him an outsider. Leonardo considered it a strength. He wrote, “While you are alone you are entirely your own...if you have one companion you are but half your own,”¹ and “*salvadeo è colui che si salva*,”¹¹ only the loner survives.

He was a bastard in a culture that favored legitimate sons; a left-handed man in a nation that believed that the left is the hand of the devil; a self-educated know-nothing shunned by the intelligentsia for his limited knowledge of Latin and lack of Greek knowledge; a vegetarian in a country of gluttons; and a gay man in a macho culture. Yet, alienation probably increased Leonardo’s creativity.

As intuited by Colin Wilson,¹² and recently tested,¹³ social rejection may lead to independent-thinking. Or, as

the lay press put it, “don’t get mad, get creative!”¹⁴ Another creative mind that relished being a “lone traveler”¹⁵ was Albert Einstein, who wrote in *The World as I See It*, “I have never belonged to my country, my home, my friends, or even my immediate family, with my whole heart.”¹⁵

The rebel

Creativity is, by definition, rebellious. The old must be torn down before the new can be created. Creators defy dogma and shift paradigms which requires daring. “Creativity,” said Matisse, “takes courage.”¹³ Leonardo relished going against the grain. When mainstream painters were relying on egg tempera, he had moved to oil. When mainstream medicine was following Galen, he was paying attention to what he actually saw.

He met resistance, and inevitably, he resented it. “I am fully conscious that, not being a literary man, certain presumptuous persons will think that they may reasonably blame me; alleging that I am not a man of letters. Fools!”¹

William Manchester wrote, “of all the great Renaissance artists, Da Vinci alone was destined to fall from Papal grace...like Copernicus [he] threatened the certitude that knowledge had been forever fixed by God, the rigid mind-set that left no role for curiosity or innovation.”¹⁶

Nobel laureate Rita Levi-Montalcini (AQA, 1970, Honorary) said, “We need to nurture the courage to rebel.”¹⁷ That may be difficult in today’s medicine, where algorithms, guidelines, and electronic medical records provide a procrustean bed that seems cunningly designed to curtail both rebellion and independent thinking.¹⁸

The self-educated

Leonardo had very little formal education. Like Benjamin Franklin and Thomas Edison, he was self-educated, which often translates into an omnivorous curiosity. He was “the most relentlessly curious man in history,”¹⁹ and he saw that as an asset.¹

Creativity means taking seemingly disconnected pieces of information from fields as far apart as possible and repackaging them into new and better forms.²⁰ This requires a multifaceted mind, and a broad, self-directed education—not necessarily what is encouraged in today’s hyperspecialized and regimented medicine.²¹ Nobel laureates in science are often polymaths: 22 times more likely to perform as actors, dancers or magicians; 12 times more likely to write poetry, plays or novels; seven times more likely to dabble in arts and crafts; and twice as likely to play an instrument or compose music.^{22,23}

The musician

Leonardo loved music. He played a horsehead-shaped silver lyre, composed songs, built instruments, and sang beautifully. Art historian Giorgio Vasari described him as an excellent musician.²⁴ One of his portraits may even represent him as musician.²⁵

Einstein also loved music because it helped him professionally. As his son, Hans, reported, “Whenever he felt that he had come to the end of the road or into a difficult situation in his work he would take refuge in music, and that would usually resolve all his difficulties.”²⁶ His sister, Maja, said that after playing the piano he would often get up saying, “There, now I’ve got it!”²⁷ And, Einstein told the great pioneer of musical education Shinichi Suzuki, “The theory of relativity occurred to me by intuition, and music is the driving force behind this intuition.”²⁸

Playing a musical instrument prompts a reorganization

of the brain,²⁹ which, in turn, might help creativity. For instance, the corpus callosum of musicians is larger and more complex, thus allowing for greater inter-hemispheric exchange.³⁰ Einstein’s brain sported a larger and richer corpus callosum.³¹

Well-known musician-physicians have included Theodor Billroth, Alexander Borodin, and Albert Schweitzer.

German schools used to encourage medical students to play a musical instrument, and lamented music’s demise.³² Should that encouragement be reinstated? Would it spark creativity?

The visual thinker

Leonardo was a visual thinker, a trait that has been linked to innovation.³³ Visualization was also key for Einstein, who relied on “thought experiments:” ideas that twirled around his head rather than in a lab. The centerpiece of these *Gedankenexperimente* was visual imagination—daydreaming.³⁴

Rote memorization is anathema to this way of thinking, and Einstein hated it. He wrote about his experience in German schools, “One had to cram all this stuff into one’s mind for the examinations, whether one liked it or not. This coercion had such a deterring effect [on me] that, after I had passed the final examination I found the consideration of any scientific problems distasteful to me for an entire year.”³⁵ It was visualization of the unseen that allowed him to unlock the secrets of relativity: he imagined himself as a light beam. He said, “Imagination is more important than knowledge.”³⁴

Leonardo was also convinced of the superiority of the visual. Next to a magnificent picture of the heart, he wrote, “Writer, what kinds of words will you fetch to awkwardly describe what drawing can instead perfectly represent? Don’t bother with words unless you are speaking to the blind...you will always be overruled by the painter.”³⁶

Seeing with a better eye is crucial in medicine. “The whole art of medicine,” remarked Sir William Osler, “is in observation.”³⁷ He added, there is “no more difficult art to acquire than the art of observation.”³⁸ This is becoming ever more difficult when physicians spend 12 percent of their time observing patients, and 40 percent observing computers.¹⁸



Leonardo da Vinci, *Portrait of Unknown Musician*. Oil on wood panel, circa 1490.

The comedian

“Laughter is good for thinking,” said the Dalai Lama, “because when people laugh it is easier for them to admit new ideas into their minds.”³⁹ Creativity is a playful way of engaging the world, one that is more right-brained and less linear, more visual and less verbal, and a fresh shortcut to new associations and ideas.

In a brainstorming study of professional designers and improvisational comedians, the comedians generated 20 percent more ideas, and were rated 25 percent more creative.⁴⁰ Like wisdom, humor thrives on paradox, and Leonardo loved humor, especially paradoxes, puns, and pranks.²⁴ He created 171 rebus puzzles;⁴¹ devoted an entire section of his notebooks to jokes and pleasantries, *facezie*;⁴² and crafted tongue-in-cheek essays that could bring down the house in today’s stand-up comedy (his ruminations on the penis as a “creature with a mind of its own” serves as good example).⁴³ One of his responsibilities in Milan was to entertain the court.

Leonardo also had a fascination with the grotesque, which eventually led him to pioneer caricatures. As Vasari reports, “Leonardo was so delighted when he saw curious heads, whether bearded or hairy, that he would follow anyone who had thus attracted his attention for a whole day, acquiring such a clear idea of him that when he went home he would draw the head as well as if the man had been present.”²⁴ Once again, it was his penchant for paradox: the pursuit of the beautiful through the ugly.^{44,45}

Humor is creative since it takes seemingly extraneous material and forges it into a new reality, thus providing a new way to see the world. Sudden bursts of laughter imply recognition. Hence, humor can prompt creative solutions by making it easier to think more broadly and by fostering new associations and relationships.⁴⁶ Humor can also serve as a balm against hardship. Osler, whose sense of humor famously delighted patients, was known to quip that he whistled so that he might not weep.⁴⁷ Thus, as a tool for catharsis and wisdom, humor is a fundamental component of the physician’s skillset.^{48,49} It may even be a sort of cure-it-all elixir. There is an entire body of literature supporting its role as promoter of well-being and even healing.⁵⁰ Many Hippocratic Greek centers mandated patients to watch comedies as part of their therapeutic regimen, and Norman Cousins wrote a book on his own healing via humor.⁵¹

Adults seem to lose their capacity for mirth,⁵² and in medicine, humor may actually be discouraged.⁵³ As the five-year-old said to her family doctor, “You’re too funny to be a doctor.”⁴⁹ This is unfortunate since it may impact not only on physicians’ well-being, but also on their creativity.

The idler

Leonardo writes, “men of lofty genius when they are doing the least work are most active.”⁵⁴ Agatha Christie agreed, “Invention, in my opinion, arises directly from idleness.”⁵⁵ And, Virginia Woolf put it well, “It is in our idleness, in our dreams, that the submerged truth sometimes comes to the top.”⁵⁶ Insights may appear in dreams like Mendeleev’s table, Kekulé’s benzene ring, and Coleridge’s poem of Kubla Khan.¹⁰ They appear like accidental flashes, but are not. As Leonardo put it, the creative mind is always subliminally churning before an idea finally sparks. It just takes time. To paraphrase Nathaniel Hawthorne, creativity is a butterfly, which “when pursued, is always just beyond your grasp, but which, if you will sit down quietly, may alight upon you.”⁵⁵

Easy to say in times when physicians are always pressed for time, and relative value units determine how they get compensated.

The nuancer

A follower of no dogmas, even spiritual, Leonardo was comfortable in a nuanced world. From pioneering his hallmark *sfumato* in landscapes he typically portrayed at twilight, to his distaste for sharp lines and stark black-and-white contrasts, he loved the ambiguous. He was fascinated by androgyny, almost as if he believed the soul to be both male and female. The two paintings he had at his bedside when he died were the androgynous figures of a woman and a man—both sporting perplexing smiles, and both challenging the viewer to accept the gray. And, his preparatory drawing for the Saint John portrayed him as a hermaphrodite.⁵⁷

Tolerance for the nuanced might have been important for Leonardo’s creativity. Individuals who are comfortable with ambiguity are typically more receptive to new ideas, can look at concepts from different perspectives, and often cope better with difficult situations.^{58,59}

Tolerance for ambiguity is a desirable trait in physicians, since it translates to an open mind, greater empathy, less authoritarianism, and conservation of resources.^{60,61,62} Yet, many physicians experience anxiety when confronted with the inevitable uncertainties of daily practice.⁶³ Since intolerance for ambiguity may worsen as a result of training, it has been suggested to screen for it, and then protect against it, in medical school.⁶⁴ There may be an additional benefit from nurturing the nuanced: it might help creativity.



Leonardo da Vinci, *Mona Lisa*. Oil on poplar wood, circa 1503–1506.

The dyslexic/adhd'er

Leonardo's peculiar orthography along with his unique right-to-left mirror writing have prompted scholars to suggest he was dyslexic.^{65,66} Others have theorized that this was his way to protect his thoughts, or simply the ruse of a left-handed man trying to prevent ink-smearing.

Mirror writing has been reported in dyslexia,⁶⁷ and dyslexics are typically intelligent, creative visual thinkers.^{68,69,70} Several are artists,⁷¹ although one wonders how many dyslexics would do well on the Medical College Admission Test.

If not dyslexic, Leonardo might have had attention

deficit hyperactivity disorder. His restlessness was legendary, forcing him to move through many cities and many pursuits, and he had problems with deadlines. Vasari states, "he began many things, but never finished one of them."²⁴ Part of the reason was possibly the breadth of his interests, which caused him to always carry more than one project at a time. Another might have been his need for "incubating," since some degree of delay can foster creativity.⁷² As screenwriter Aaron Sorkin put it, "You call it procrastination, I call it thinking."⁷³

Art and science can coexist

In the end, the most important lesson Leonardo teaches is that art and science can coexist: scientific creativity is not any different from artistic creativity.⁷⁴ Leonardo would have laughed at the idea of an art/science split since he considered himself a humanist who happened to be both an artist and a scientist. Curiously, what mostly impressed the people who met Leonardo was his wisdom. He was invited by the King to visit France for the pleasure of his conversation and philosophy.⁷⁵

Rekindling philosophy and other humanities, a growing movement in medical schools, might help to return some wisdom to medicine.⁷⁶ A recent survey of five medical schools found that interest in the humanities is strongly associated with wisdom.⁷⁷

If medical schools aspire to develop new Leonardos, they should admit more artists, musicians, dyslexics, and visual thinkers; nurture a sense of rebellion and distrust for authority; encourage visualization over rote memorization; avoid medicating restless and day-dreaming students; stop relying on single answer black-and-white multiple-choice tests; encourage breadth rather than depth of knowledge; foster humor and the humanities; and allow for downtime.

In the meantime, we can derive great pleasure from reacquainting ourselves with Leonardo da Vinci. He makes us proud of belonging to the same animal species. Yet, Leonardo might not have returned the compliment, since he was known to quip that most human beings are only "transit for food and fillers of toilets."⁷⁸



Leonardo da Vinci, *St. John the Baptist*. Oil on walnut wood, circa 1513–1516. Royal Collection, The Windsor Castle

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Endnote

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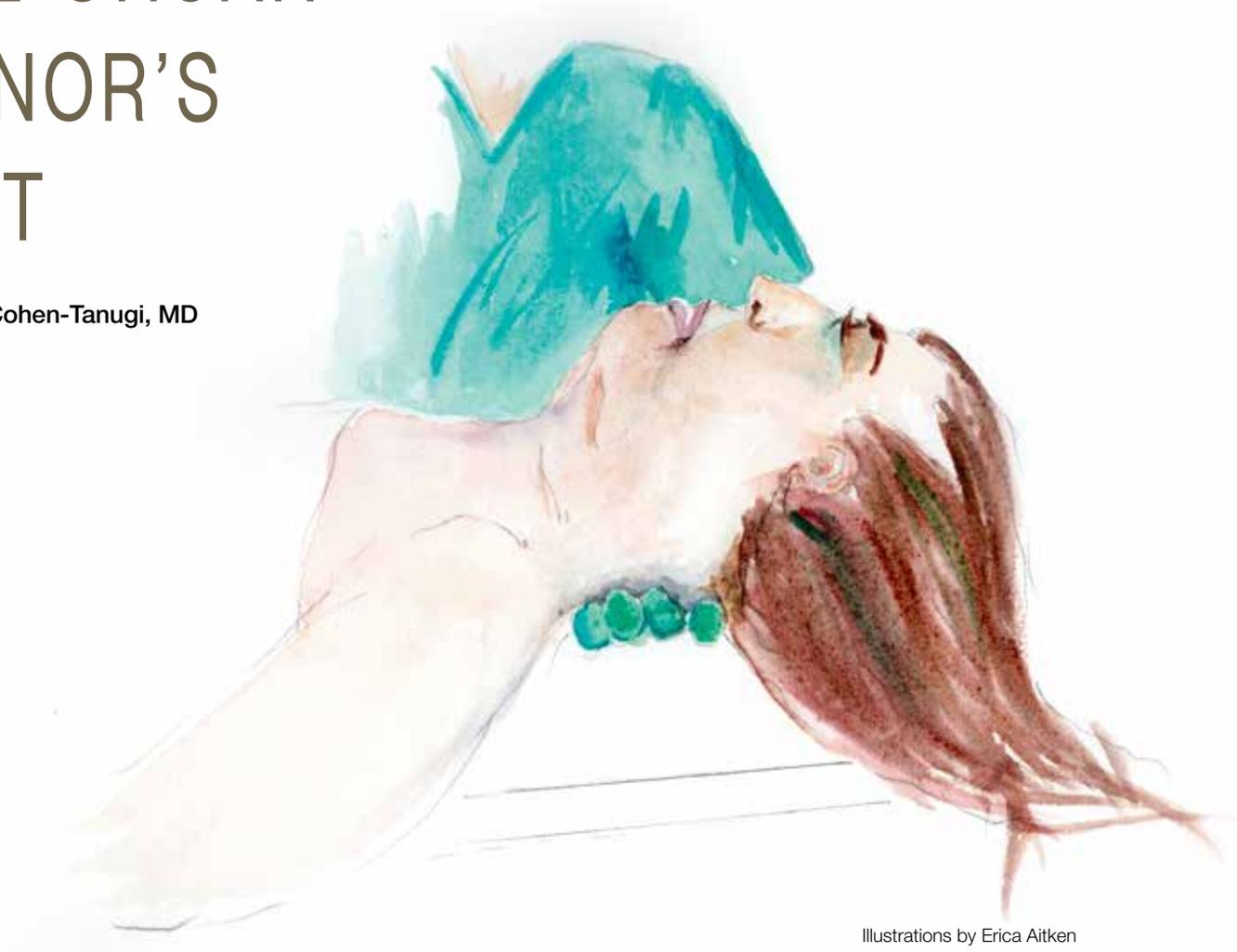
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THE ORGAN DONOR'S GIFT

Samuel Cohen-Tanugi, MD



Illustrations by Erica Aitken

Dr. Cohen-Tanugi is a recent graduate of the College of Physicians and Surgeons of Columbia University in New York, NY.

Early one June afternoon, in the final weeks of my first year of medical school, the transplant pager I was carrying went off. The team—a transplant fellow, a surgery intern, and me—was flown by private plane to a distant hospital.

Upon arrival, we were told that the patient was being transported to Operating Room 10. The word patient made me pause. Was this really the right term? Wasn't the woman dead? Describing her as a patient felt deceitful; we weren't doing anything to help her. The brain was dead, which meant the person was dead too. But using the word

body sounded shady, like she was the victim of an underground organ-trafficking operation. I turned to the intern: "What do you call it? The body? The patient?"

"The donor," she said.

"The donor," I repeated. I liked it. Donor emphasized neither living nor dead. It implied intentionality and respect. Something was being given. The donor was a person who, while alive, had decided to donate their organs. Now, they were dead—brain dead, that which constituted their person was gone.

They were no longer a patient, yet more than just a body. This, I would soon realize viscerally, was the paradox of organ recovery—the donor must be dead, but their body is still full of life, and that is their great gift.

A young woman, hooked up to a ventilator, was rolled

into the OR. I knew that she had committed suicide as a prison inmate, and had hepatitis C. Lying there, she could have been a woman under anesthesia, her chest rising and falling with each mechanically-induced breath, her limbs flushed with blood. "Push her shoulder up," the fellow told me, as he prepared to slide her onto the operating table.

As I lifted her up, I reflexively placed a hand under her neck for support, as if I were worried I might jar her out of sleep. I looked up, wondering if anybody had noticed my overly gentle gesture, thinking it foolish. She was quickly undraped, her body fully uncovered, and her arms were strapped to her side to keep them from flailing around lifelessly. I took in the contours of her body. She was an obese woman. Her breasts were large and drooped to either side. Her pubic hair was untrimmed. Does she need to be so exposed? I wondered.

I was soon caught in the whirlwind of preparatory activities—a ritual of cleaning the donor's body, preparing the sterile field, and scrubbing in. The first incision was pronounced, and I was handed a suction instrument and retractor.

We burrowed through layer after layer of fat, creating a topological landscape not unlike a canyon, from the highest peaks of her breasts, down the precipitous walls of fat to the thin layers of abdominal muscle, which we cut through along the midline.

"Bone saw for the sternum," called the fellow.

The fellow cut through the sternum, from the bottom up. This was when I realized we were doing permanent damage to this body, that preserving it was not part of our mission, that we were operating on, and for, the organs, and whatever was in the way had to go.

The open rib cage revealed its precious contents. I was struck by the perfect shape of the organs and their vivid colors. The shift from my cadaver's organs back in the anatomy laboratory to those of the donor was like moving from the black-and-white world of Kansas to a technicolor Oz. My cadaver's lungs had been gray, his blood vessels white, what remaining fat hadn't already liquefied into pools of greasy fluid was a dull cream color, and his muscles were a faded brown. The firm layer of fat around the donor's heart was yellow, the highly vascularized lung tissue was pink, and her liver was burgundy red.

After exposing the liver, the team was faced with the decision of whether to proceed with the retrieval. Was this liver in good enough condition? Would a surgeon be willing to transplant it? Biopsy samples were collected and analyzed, pictures were taken, and the fellow called his attending.

I listened to the conversation, which did not sound promising. A hepatitis-C-infected liver, abnormally large and fatty. Biopsy shows early signs of cirrhosis and fibrosis...All the while, my eyes remained fixed on the donor's pulsing heart.

"You can touch the organs if you want," said the intern.

I began by tentatively placing my fingers just below the heart, to feel its pulse. I closed my eyes and let my fingers slide up onto the heart's surface, and around the pulsing ventricles. Nobody had ever held this woman's heart quite like I was, I thought to myself, feeling its powerful beat right against my palm. I wondered whether her heart was the place she had felt the unbearable pain that had driven her to take her own life.

Next, I explored her right lung, the way the slightest of pressures depressed the tissue like a moist sponge, how each breath compressed the fingers I had slid in the fissure between lobes. I moved down the abdomen. As I manipulated parts of the bowel, the intern stepped beside me to engage me in an anatomy lesson. As we worked our way through the GI tract she showed me a trick to differentiate healthy from ischemic bowel—a sharp flick of the finger on healthy intestinal tissue would cause it to contract like a sea anemone. The bowel is alive, I thought, which reminded me that brain death does not include the enteric nervous system.

The fellow and attending decided to proceed with the recovery of the liver and kidneys. The dissection resumed as I held the intestines out of the way.

Suddenly, slushy ice was poured into the abdominal cavity, signaling that the end was near. The aorta was clamped above and below the abdominal organs and tubes were inserted into vessels.

"This is when it can spray," warned the fellow. "Be careful. She's HepC positive." He then severed one of the large vessels. A gush of blood spurted in the air. He repositioned himself and made a second cut. More blood sprayed. I was out of the way but both the fellow and intern were splattered bright red. The heart was exsanguinating with every beat, and I continued to suction the blood now pooling at an alarming rate.

I kept my eyes on the donor's heart, watching it beat wildly, irregularly, with decreasing vigor. Colors changed before my eyes. As blood drained away, organs lost their vivid sheen, replaced with a dull, gray tone.

When the heart's pulse was no more than a twitch, I reached out, and again rested my hand on its surface to feel the last, disorganized, contractions that had beat the rhythm of this woman's life from before her birth to the

moment she was found and proclaimed dead, and kept beating even after that.

This, I thought, is the death of the body. I had to remind myself that she was dead long before entering the OR. It was hard not to see the people standing around, the calm urgency, and the gushes of blood as elements of a ritualistic sacrifice.

The liver was collected and placed in a bag of ice, followed by the kidneys. The fellow went to scrub out, and instructed the intern and me to close. After the last suture, the intern left the room. I looked at the organs in their ice bags being placed into a blue box. Our work was done.

It was 1 a.m. by the time we boarded the four-seater plane, blue box in hand. The flight crew greeted us with a late dinner of bar-b-qued ribs. I looked at the charred meat and my mind jumped to the human flesh and bones we had just cut through.

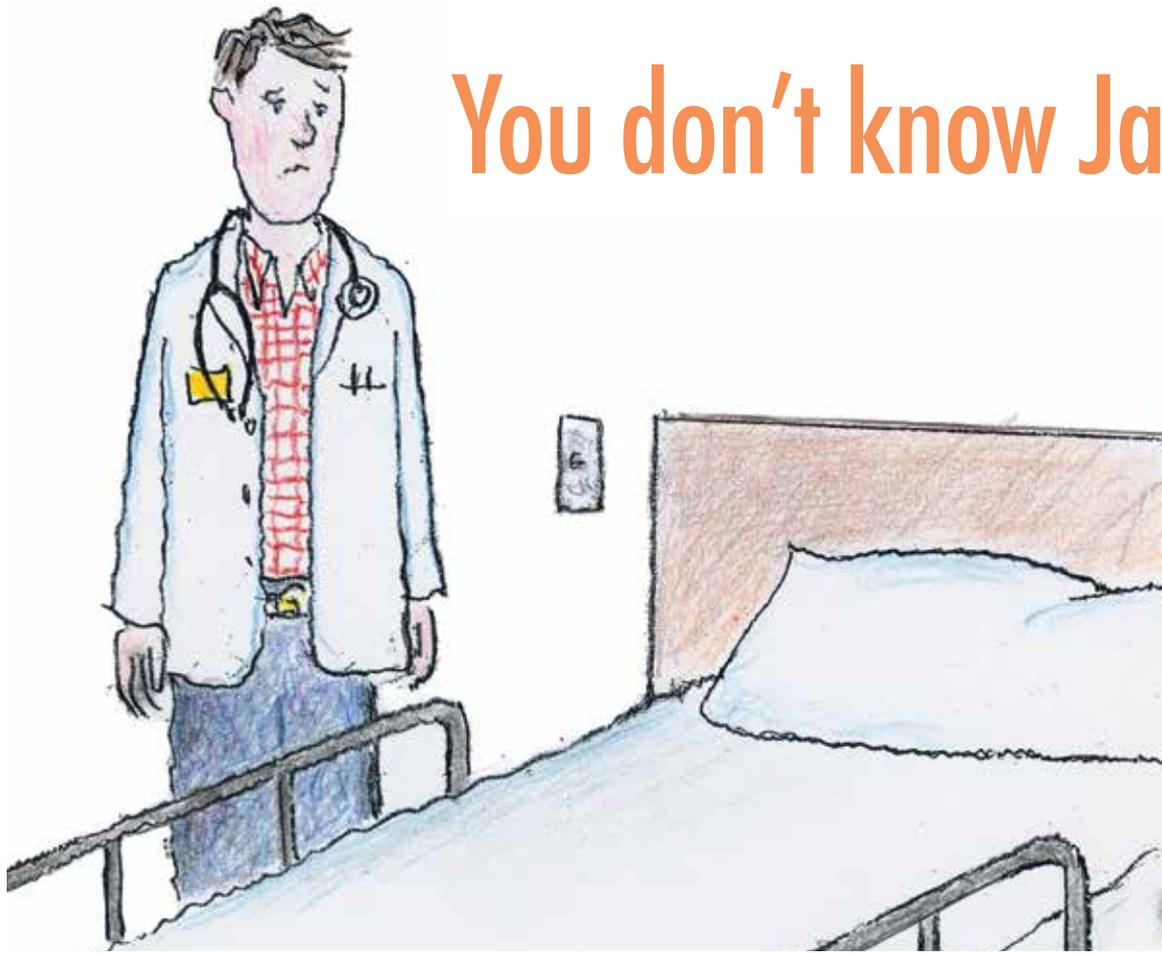
After take-off, the fellow and intern fell asleep, leaving me on my own to make sense of the entire experience. I had been part of a team assigned to recover organs from a recently deceased person. That we have learned to integrate organ recovery and transplantation into our medical arsenal in the endless quest to cure disease and alleviate suffering is a testimony to the miraculous progress of medical science. Yet, few medical interventions lend themselves to dystopic scenarios as disturbing as organ recovery.

It is our responsibility to never forget the donor, to never trivialize their gift or the beautiful, and at times uncomfortable, process by which it is given.

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You don't know Jack



Jonathan M. Bekisz, MD

Dr. Bekisz is a recent graduate of New York University School of Medicine.

April 6, 2015

You don't know Jack, I realized as I walked into the four-bed patient room on the afternoon of my first day on the pediatric hematology-oncology service. You don't know anything about him, and yet you know so very much more than he knows and would likely ever want to know, I thought to myself.

I knew his differential diagnosis, Glioblastoma multiforme (GBM) of the spinal cord with possible metastasis to the cerebral cortex.

As I caught my first glimpse of the young man confined to the hospital bed, he was completely oblivious to the terrible predicament in which he found himself. He sat there, nearly fully paralyzed from the waist down, intensely and understandably frustrated, knowing full well that something was not right, yet totally unaware of the unbelievably

cruel hand he had been dealt.

We didn't speak much that first day, little more than simple introductions and my offer to spend some time hanging out, talking about sports, food, and other things that might interest a 15-year-old boy.

Day in and day out, Jack sat alone as tests were done, surgeries were performed, and discussions about his condition were held among myriad physicians responsible for his treatment. I wasn't directly involved in his care, but it was a quiet afternoon on our unit and his story stuck with me from the moment I heard him presented during that morning's sign-out.

During our initial conversation, I felt myself walking on eggshells, so much so that I could almost hear an audible crunch with every word that came out of my mouth. I knew this dark and horrible secret, and yet there I stood, a smile on my face, asking him what hockey team he liked. In my short white coat, symbolic of my status as a second-year medical student, I was fully aware of the fact that I could do virtually nothing of any real therapeutic benefit

for Jack. Don't talk about his diagnosis, I told myself over and over again as I awkwardly sat down in a chair at his bedside. I tried to initiate a conversation, but Jack politely refused. He had physical therapy coming up soon, and he simply wanted to get it over with. Still, he thanked me for the offer.

Encouraged that he hadn't completely shut me out, I told him I might stop by again the next day.

April 7, 2015

When I found myself with some free time before rounds began the following morning I went to visit Jack. It was impossible to drive his story, with all its horrible, inequitable tragedy, from my mind.

My introduction was less awkward the second time, and Jack was in a remarkably upbeat mood for someone facing such adverse circumstances. We eased into a conversation, and before long were sharing thoughts and opinions on everything from local pizza, on which I offered a rousing endorsement of my favorite parlor, to pastimes, passions, and his thoughts and feelings about his current medical condition.

He hated the hospital food, excelled in biology, loved the Montreal Canadiens, and wanted nothing more than to walk out of the hospital and go back to his home in New Jersey. Jack played goalie for the junior varsity ice hockey team at his high school, which won the most recent state championship. He was also an avid and skilled scuba diver, and on his 16th birthday, coming up in October, he was planning to become a licensed pilot.

He was a regular teenage kid, a high school athlete from New Jersey much like I had once been, with regular teenage interests and dreams. It was this realization that made confronting him exponentially more difficult. Jack was no longer the "15 yo M s/p laminoplasty w/no significant PMH who presents w/a suspected GBM of the spinal cord w/cortical mets discovered after workup for several weeks of difficulty ambulating." He was Jack the high school freshman, A+ student, hockey player, and soon-to-be pilot who could very well have his bright future cut irreconcilably short by some rare and horrible disease that would ruthlessly run its course while paying no mind to who, when, or how it hurts in the process.

April 8, 2015

After two days by his bedside, I felt myself becoming very invested in Jack's case, despite the fact that when it came to his actual medical care I was little more than a spectator. I wanted to help him by doing anything I could to brighten his day.

The gravity of his diagnosis would hit me from time to time. As I dwelled on the inescapable reality that was his prognosis, I would recall the fact that he still had no idea what was wrong with him. I'm sure he had suspicions, perhaps even fears. But if he did, they were repressed by an absence of any desire to accept the impossibility of facing his own mortality, and manifest instead as a steely resolve to fight back against this invisible specter that had the audacity to interfere in his life.

I struggled to imagine what it would be like for Jack when he learned about his diagnosis. He clearly had the intelligence to understand the gravity of his condition. Yet, with so many things happening at a rapid rate, and such a great deal still to be learned, his parents, knowing their son far better than anyone else, decided to wait for what they felt was the most appropriate moment to broach the topic with him.

It hurt to listen to him talk about walking again, about going home, about getting his pilot's license. I vacillated between wanting to rally behind his resolve and determination, and worrying that in doing so I would be setting him up for even greater emotional trauma when he eventually learned his diagnosis—trauma that I would no doubt attribute to by encouraging him to prop himself up on dreams that in all statistical likelihood were nothing more than fantasies birthed from ignorance.

It was anything but fair for Jack, a theme that had become all too common in his life.

Jack had been in the hospital for several days, and his care team was actively working to get him transferred to a specialized children's hospital in New Jersey where he could receive daily rehab as well as transportation to the proton therapy center where he would be treated. For some unknown reason securing a bed for Jack was proving difficult. When a bed was finally reserved, it was a two-day wait, and conditional in that it could be given to someone else. My frustration grew exponentially with each hour that Jack remained with us. Was there any patient out there more deserving of that hospital bed?

April 9, 2015

When I arrived on the morning of my fourth day on the service, I learned Jack was to get a bed at the new facility one day early. He was set to be discharged within the hour. Before I could stop by to see him, Jack's father came to the nursing station to find me. Jack not only wanted to say goodbye, but was hoping I could give him my cell phone number so we could stay in touch.

I had spent much of my time on the service attempting

You don't know Jack

to bring some small sliver of joy to Jack's life, but by asking to stay in touch he had given me what was without question the most rewarding moment of my medical career.

I happily wrote it down for him, wished him all the best, and asked him to keep in touch. Several hours later, Jack texted me to say he had arrived at the new hospital, and was extremely excited to start his rehab. I would be hard pressed to recall a time in my life when I have ever received a more meaningful text message.

Late April, 2015

Jack and I had kept in touch periodically since April 9. His rehab was progressing, and he was undergoing proton therapy to treat the tumor.

I didn't know how much he had learned about his diagnosis, if anything, and I dreaded the day he would finally learn the whole story.

I sometimes hesitated to reach out to him, because I worried about how learning of his diagnosis would affect his perception of the medical profession, his care team, and me. Would he hate me for keeping this from him? Should he? Am I selfish for even worrying about his perception of me given the dire straits in which he finds himself?

The gravity of his diagnosis still hits me from time to time. I wonder how his parents put on brave faces each day, sit by his bedside, and provide nothing but love, encouragement, and positivity with the weight of the world perched squarely on their shoulders. How can they listen to him talk about walking again, about going home, about getting his pilot's license without their hearts breaking to the point where they can no longer stand to even remain in their son's presence? To place myself in their shoes is quite simply an impossible task.

I am not an emotional individual; I never have been. However, Jack's story is one that will never cease to affect me in ways I would otherwise consider uncharacteristic of myself. I recognize the danger in becoming too involved with a patient, of investing too much, and running the risk of getting hurt. But, I believe there is value in that.

I believe there is value in caring so much that you make yourself vulnerable. I believe that these types of experiences provide the most poignant reminders of why I pursued a career in medicine. They keep me humble, they keep me compassionate, and they keep me human.

February 10, 2016

Jack passed away January 16, 2016, after a nearly year-long battle with what is arguably the deadliest and most aggressive cancer known to man.

In the months since my pediatrics rotation, Jack and I remained close, and I was fortunate enough to be able to visit him several times. We traded stories, and talked about all the city had to offer; with his treatment Jack was healthy enough to enjoy some of its sights and attractions. I tried to convince him to try my favorite pizza place.

We never spoke of his desire to get his pilot's license. Instead, we talked about how, through remarkable grit and determination, Jack regained the ability to walk near the end of the summer!

Despite the fact that the majority of our interactions played out in various hospitals, our conversations had a way of almost never touching on the gritty medical details of his disease. Jack eventually used the word cancer when speaking of his illness, but never with any fear or trepidation. His courage was a testament to his character.

One evening in the middle of January, I received an email from Jack's father asking me to call him. It was late by the time I received the message, so I opted to phone him the next day. The following morning, as I sat at my desk studying about T-cells and B-cells, Michaelis-Menten, and Krebs, something about that e-mail just didn't sit right. I typed Jack's name into my web browser and found myself staring at his obituary.

His funeral was later that very morning. I caught the next train out of Penn Station, and arrived just as the procession was making its way out of the church. I joined the group traveling to the cemetery for his interment.

The outpouring of support for Jack during his battle with cancer and the crowds of people who attended his funeral services was testament to the impact he had on the lives of so many.

When I got back to New York later in the evening, I ate at the pizza shop about which I had so often pestered Jack.

I am now nearing the end of my third-year of medical school and beginning to prepare for the next phase of my career. While I have had many meaningful and fulfilling experiences during my time on various clinical rotations, the relationship I was fortunate enough to form with Jack will forever stand out, singular in its poignancy, tragedy, and ability to leave me feeling so very grateful. Grateful for everything that he taught me. Grateful for the chance to have had an impact on his life. Grateful for the even larger one he had on mine and grateful for the opportunity to be able to say I know Jack.

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Back in the day: *A roman á clef*

Gordon Green, MD, MPH

Dr. Green (AQA, University of Texas Southwestern Medical School, 1968) is Professor Emeritus at University of Texas Southwestern Medical School. He was Director of the Dallas County Health Department, and Health Authority for the City and County of Dallas until 1991.

There was a time, back in the early days of the AIDS epidemic in the United States, when Donn Stone, MD, was attending two or three memorial services a week. Stone, the local health authority for Dallas County and the City of Dallas, knew the deceased personally, and professionally—they were co-workers, friends, and sometimes seeming adversaries who had succumbed after grappling with AIDS in ways that were both individual and community-based.

Stone's city and region had been an early focus of AIDS, and the prevalence of infection in the population was thought to be high. The effective work of the county epidemiologist Albert Rainier, MD, identified the extent of the AIDS burden locally. Without a cure, the outlook, both for individual patients and infected communities, was bleak: the case fatality rate approached 100 percent.

The traditional answer to a life-threatening disease in the absence of a cure was prevention. Epidemiological data from the U.S. Centers for Disease Control and Prevention (CDC) showed that levels of what some called "gay-related immune deficiency" (GRID) were found to be high in specific groups—sometimes called "the Four Hs:" homosexuals, Haitians, heroin-users, and hemophiliacs who required blood transfusion. Prevention efforts were developed with particular attention to these groups.

Groups led by Robert Gallo, MD (AQA, Sidney Kimmel Medical College, 1962), and Luc Montagnier, MD, announced the discovery of the Human Immunodeficiency Virus (HIV). With knowledge of the virus came the development of serological tests for antibodies, allowing for the identification of those who had been infected.

Many people were deathly afraid of the disease, now known as AIDS (acquired immunodeficiency syndrome), and there was widespread concern that casual exposure might spread the infection. A degree of panic led to those who were infected being shunned. Epidemiological evidence was demonstrating that the disease was spread only in a limited number of very specific ways, but the fears of the general public were not calmed. Infected individuals suffered from the ravages of the disease, and discrimination in employment and association.

The Food and Drug Administration set new procedures for safety regulation of blood transfusions, and one of the Four Hs dropped out of discussion as it was understood that Haitians were infected only through sexual activity or illicit drug use, and not through nationality. This left sexual transmission, mother-to-baby transmission, and drug abuse as the major contributors to the growing epidemic in the U.S.

A multipronged approach in Dallas

Stone and Rainier approached the problems of health and society through a multipronged program of information and education in Dallas and its suburbs. To lead the Dallas AIDS Prevention Project, they recruited Linda Freebairn, an experienced health services researcher, educator, and disease control program manager to assist with education and prevention efforts.

As was common with programs related to other sexually-transmitted diseases (e.g., syphilis and gonorrhea), the Dallas AIDS Prevention Project was met with resistance as it required a degree of sexually- and behaviorally-explicit language and presentations that made some people, including Dallas County elected officials, anxious.

Based on the new knowledge of HIV and development of a test for antibodies against HIV, it became possible to test an individual for exposure to the infection, and to identify infected individuals.

Some advocates for potentially-affected groups, like



Poster, Dallas County Health Department, circa 1980s. U.S. National Library of Medicine

college math teacher Doug Herring, chairman of the Lesbian & Gay Public Policy Arm, and Aldiss Escobedo, founder of Cottonwood Counseling Center (CCC), were outspoken in support of AIDS prevention efforts. They helped Stone and Rainier design and distribute materials, provided venues for educational activities, and spoke about safer sex practices in the gay community.

Other leaders such as Earl Sinclair and Harold Manor of GUD (Gay Union of Dallas), and Walter “Red” O’Neill, director of AAF (AIDS Assistance Focus), proclaimed discrimination and persecution. Through public pronouncements, printing and distribution of flyers, and community outreach, these groups advocated to contain the county’s education programs, citing invasion of privacy and malicious intent.

Their major issue was the ability to identify infected individuals well before the disease became manifest. The possibilities of personal identification of infected individuals, and the consequent shunning and discrimination, were too terrifying to contemplate.

Getting out ahead of the disease with free, voluntary testing

Rainier felt it was imperative to offer free, voluntary testing before the blood banks started the testing protocols. He wanted to avoid having at-risk individuals donating blood for the purpose of determining their own status.

Stone, Rainier, and a team of educators, outreach workers, and epidemiologists developed a system to offer free anonymous HIV antibody testing and counseling. No names, no numbers, no way to identify the person being tested, no discrimination. Those who tested positive would be offered counseling about avoiding further transmission of the infection.

The protections offered were not enough for Earl Sinclair, O’Neill, and their colleagues at GUD and AAF. Their outspoken opposition to the county’s testing and counseling program was loud and aggressive. GUD sponsored an advertising campaign urging people to refuse testing.

Sinclair advised testing “Only for people with symptoms, not for those at risk.” He argued, “Widespread testing is a waste of money.”

Rainier responded:

AIDS isn’t just a gay man’s disease. We must educate others, as well. There’s a five-year lag between virus transmission until we see the cases. Consider intravenous drug users often sharing needles. Prostitutes, others. Most gay men already know about AIDS, but other groups aren’t aware. Testing is the way to prevent disease!

In the first weeks of the county’s testing program, every afternoon after the last patient had left the clinic, Rainier gathered the clinic staff in his office for an informal debriefing. In those early days, the patient counseling sessions involving an invariably fatal disease were extremely stressful for the nurses and counselors. Freebairn reported that clinic staff were telling one out of four patients they were HIV-positive. The group debriefing sessions helped to create a strong camaraderie among the staff. While stress was high for these care providers, so was morale.

Rainier noted that communicable diseases nurse Nelda Munford, RN, played a critical role in building relations with the gay community. Outgoing, warm, and frank, she had what Rainier described as “a knack for finding information on the grapevine, and for communicating difficult or stressful information to some of the frightened individuals.”

Meanwhile, County Commissioner Filene Franks, an advocate for the County Health Department, was outspoken



Poster, Dallas County Health Department, circa 1980s.
U.S. National Library of Medicine

in her support for testing, even going so far as to ask for mandatory AIDS screening (blood testing) for doctors, nurses, and dentists. Stone reminded her that the current county testing program was voluntary, and that the county did not have the authority to require screening.

Commissioner Franks's colleague, Commissioner Robert Logan, was not satisfied with the

county's program. He told Stone and Rainier, "You've got too much emphasis on education, and not enough on testing. Be active!"

A growing caseload, a survey, and free testing

As the battle against AIDS became more politicized, Dallas County was 10th in the nation in the number of reported AIDS cases, with more than 600 cases.

As the numbers of infected and affected individuals increased across the country, the CDC concluded that more precise data were needed on the magnitude of the infection in the general population. With the newly-developed serologic tests, it was theoretically possible to determine a national seroprevalence rate through random sample testing. With the collaboration of the National Center for Health Statistics (NCHS) and the private, non-profit Research Triangle Institute, the U.S. government prepared to move forward with a national survey, beginning with one or two small pilot tests. The goals of the pre-tests were to determine how widespread the distribution was, and to assess the general public's willingness to be tested.

Political opposition shot down a proposed pilot survey in Washington, DC. A small scale preliminary survey was conducted in Allegheny County, Pennsylvania, but a larger pre-test of the national protocol was needed.

The cooperating federal agencies, taking note of the rigorous local epidemiologic and community work by Rainier and Freebairn, and the pledge of support from Stone, chose Dallas County for a pilot test.

Federal authorities presented a plan to conduct a

house-to-house survey, with in-home blood testing of individuals selected through a stratified probability sampling process. Teams consisting of a trained interviewer and a technician to draw blood would visit 3,400 households in Dallas County, interview 2,200 people, draw small blood specimens, and offer a \$50 cash incentive for participation. There would be no identification of participants, and no communication of individual results. Participants who were interested in their results would be referred to a clinic for re-testing.

When the Dallas County survey was announced, GUD's Manor was quick to proclaim, "We live in a state where there are no protections for people who are infected. We'd have to be assured that this is truly an anonymous study and that people would not be hurt if they agree to cooperate."

To maximize community acceptance and participation, the County Commissioners appointed a 29-person Community Advisory Panel to review the plans and procedures. The panel included school officials, representatives of gay organizations (Herring and Manor), religious groups, and others. The president of Dallas's public hospital, which carried much of the medical load of AIDS patients, pointed out that there were no physicians on the panel.

County and federal officials, including Rainier, Stone and Freebairn, worked long hours over several months, developing a plan that they hoped would be both scientifically valid and widely accepted. After receiving input and discussion from across the county as well as volunteer speakers and consultants, the Community Advisory Panel voted to proceed with the study. Only one member voted in opposition: Manor, who vowed to "campaign to refuse participation!"

As interviewers and technicians were trained in the prescriptive study protocol, the public relations battle intensified. *Adweek's* headline read "AIDS Study Prompts PSA Duel," with print and broadcast advertising both supporting the survey and opposing it.

A letter from Surgeon General C. Everett Koop (ΑΩΑ, Weill Cornell Medical College, 1989, Alumnus) urged participation. Local advertising agency Knappe & Knappe developed commercial spots, ads, and lapel pins asking people to "Be Part of the Solution!"

In opposition, GUD offered a campaign including mailings, posters, "Just Say NO!" buttons, and radio and television ads encouraging a boycott of the survey. It was reported that there were efforts to urge sabotage of the survey through the falsifying of participant presentations.

One of the survey designers from Research Triangle



Poster, AIDS Resource Center, Dallas, Texas, circa 1980s.
U.S. National Library of Medicine

Institute expressed concern that strident public expressions of opposition “may encourage people to grab survey materials away from the teams,” and there were rumors that bounties were offered for such materials.

While federal authorities had authorized a \$50 incentive to encourage participation, Manor announced, “We’ll pay \$100 for the first person who can prove that they rejected this test. After that, we’ll donate \$50 to AIDS research for anyone who turns it down.” GUD continued to challenge the need for the study, citing invasion of privacy and a waste of tax dollars.

The anti-study campaign peaked when a loud commotion was heard outside the front entrance to the health department. Hearing the clamor, Stone rushed down the stairs from his office to find a perplexed security officer Joe Schuster scratching his head as he looked through the glass door entrance at a panoramic scene of mass disaster. There at the entryway to the building were 90 human-like bodies—shirts and trousers stuffed with rags and old newspapers to simulate dead bodies. Standing behind the ersatz corpses was a crowd of 40 to 60 people of the Gay Action Squad chanting, “These studies are killing us!”

News media had been alerted, and newspaper, television, and radio reporters were on the scene as Stone came out to view the spectacle. (When a clean-up crew came later to remove the dummies, it was noted that some were dressed in fine designer clothes. Several not-so-well-paid county employees were quick to assist with removal of the exhibit.)

The survey continued through all of the publicity. Strong support for the study came from courageous gay leaders including Escobedo and Herring.

Survey results

When it was done, Nathan Cordray from NCHS provided a report and analysis at a press conference in Dallas. More than 1,000 Dallas County residents had participated, at an overall rate of about 80 percent, enough to call the study a modest success. The data analysis allowed a statistical inference that between 4,000 and 7,500 people in Dallas County were infected with HIV. Stone said, “We’re eight years into the epidemic. We’ve been looking at the tip of the iceberg. Now we have an idea of the general size of the iceberg itself, and we can develop appropriate ways to deal with it.”

We’re all in this together

Several months after the survey, a group of interested parties from throughout Texas came together in the State Capital to discuss the HIV/AIDS problem. O’Neill, an ever-present outspoken critic of the Dallas County Health Department’s HIV testing and counseling program, and vocal opponent of the now-completed survey was also at the meeting. During a break in the meeting, Stone asked O’Neill, “How’s it going, my friend? Can I buy you a cup of coffee?” O’Neill looked up, flashed a tentative smile, and said, “Sure thing!”

The two men spoke casually about the conference, then O’Neill remarked, “Ya know, I was absolutely amazed that you came over and talked to me. After all we’ve both done and said over the last couple of years, I was completely bowled over that you would even speak to me!”

Stone smiled, and after a brief pause said, “I do my job the best that I can. You do your job the best that you can. But, ultimately, we’re all in this together.”

A few months later, Stone attended a memorial service for O’Neill, who had died of AIDS.

Editor’s note: This story is based on Dr. Green’s personal recollections and conversations from his time as Director of the Dallas County Health Department and Health Authority for the City and County of Dallas. Most names, characters, agencies, and incidents are used fictitiously and represent composites.

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Secondary intention

First wounds
Inflicted sharply and quickly
Without warning or malice
Can be repaired.
With care they heal
With good cosmetic result.

But when your love leaves without a word
Taking everything
It dawns that the tunnel was dug
By the spoonful, for months,
And every nuance must be reconsidered.

If tissue is lost
And the gap too great to bridge,
Or if the wound has been neglected and allowed to fester,
It cannot be closed primarily.
Patching the surface would only allow infection to progress
Beneath the skin.

There are ancient ways of healing,
Not skin deep, but bottom up.
The pebbled, scarlet proudflesh
Takes its own time and
Crafts a new portion of being,
Smoothing the surface
With scar.



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Portrait of Arthur Conan Doyle (Edinburgh, 1859 - Crowborough, 1930). Oil on canvas by Henry Gates. Detail.

Sir Arthur Conan Doyle:

The physician behind Sherlock Holmes

Stacy J. Kim, MD

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Sherlock Holmes is one of history's most famous and beloved literary figures. For more than a century, readers have been enthralled by tales of the brilliant detective as he strides along the fog and shadow-laden streets of Victorian London, unraveling mysteries with his remarkable powers of observation.

Holmes is often accompanied by Dr. John Watson, the retired army surgeon, who was Holmes' dearest friend and the chronicler of their adventures (with a flair for drama that Holmes sometimes bemoans). The 56 short stories and four novels composing the Sherlock Holmes canon have been translated into dozens of languages, and inspired countless movies, television shows, and pastiches.

As Watson walks beside Holmes in their myriad incarnations, another physician stands behind both men—Sir Arthur Conan Doyle, their creator, who became one of the most celebrated authors of his time.

Arthur Ignatius Conan Doyle was born in Edinburgh, in 1859, when Queen Victoria ruled the British Empire.

He was the first-born son in an Irish Catholic family. His father, Charles, was an artist who struggled with alcoholism, and could not provide a steady income. Charles eventually became institutionalized and died in an asylum.

Conan Doyle's mother, Mary, with whom he had a close relationship, enchanted her children with tales of history and adventure. She sparked her son's imagination and life-long love of books. "My real love for letters, my instinct for storytelling, springs from my mother,"¹ said Conan Doyle.

At the age of eight years, Conan Doyle left home to obtain an education at a series of boarding schools. During these years, he founded and wrote for a school magazine, and later a school newspaper. He continued to indulge his love of literature and history by reading voraciously, and was also a talented athlete.

When he returned home, Conan Doyle decided to pursue a medical education at Edinburgh University, which was held in high regard as one of the Victorian world's best medical schools. He became a medical student there in 1876, and met Joseph Lister, MD, the father of antiseptic surgery, and William Rutherford, MD, who served as the model for Professor Challenger from Conan Doyle's science fiction novel *The Lost World*.

The most important person he met at medical school was Joseph Bell, MD, the professor who was the inspiration for Sherlock Holmes. Bell used the same logical methods that Holmes would later be known for, often correctly deducing the occupations or medical histories of his patients



Joseph Bell FRCSE (1837–1911) was a Scottish surgeon and lecturer at the medical school of the University of Edinburgh in the 19th century. He is best known as an inspiration for the literary character Sherlock Holmes.

to the awe and delight of his students. Bell taught his pupils to do the same.

Conan Doyle acknowledged his mentor's role by dedicating *The Adventures of Sherlock Holmes* to him, and writing, "It is most certainly to you that I owe Sherlock Holmes."² Bell later said, "Conan Doyle was one of the best students I ever had."¹

While in medical school, Conan Doyle was well regarded for his compassion. One of his classmates said that he had a "very kind and considerate manner toward poor people."²

Conan Doyle was cognizant of his family's strained finances, and tried to make money for his educational and day-to-day expenses by condensing his medical education and using the extra time to work as a physician's assistant. While still a medical student in 1880, he joined the crew of a whaling ship as a surgeon, and sailed to the Arctic.

He graduated from Edinburgh University in 1881 with Bachelor of Medicine and Master of Surgery degrees.

After a rather disappointing trip to Africa as a ship medical officer, and a failed attempt at sharing a medical practice with a friend, Conan Doyle moved to Portsmouth in 1882, and opened his own practice as a general practitioner.



Edinburgh University, circa 1880.



Conan Doyle's wife, Louisa Hawkins.

New to the professional world of medicine, and lacking patients as well as personal funds, Conan Doyle was unable to afford staff and new furniture for his practice, and sometimes even food. In his free time, he wrote short stories and novels, submitting some of them to magazines in the hopes of getting them published and earning some money. During this time, he also wrote his medical thesis on *tabes dorsalis* (a complication of untreated syphilis involving the spinal cord).

In 1885, Conan Doyle married Louisa Hawkins, his first wife. The following year, he wrote *A Study in Scarlet*, the first story featuring Sherlock Holmes. It was published in 1887 to favorable reviews.

Despite receiving many rejection letters regarding his other works, Conan Doyle continued to write, and in 1889 was invited to dinner with Oscar Wilde and a publisher. The two authors were asked to each write a story for publication. Conan Doyle produced *The Sign of Four* (the second Sherlock Holmes novel), and Wilde submitted *The Picture of Dorian Gray*.

Literature consumed increasing amounts of Conan Doyle's time, but he was still practicing medicine, and decided to specialize rather than continue as a general



practitioner. He and his wife traveled to Vienna in 1891 so that he could train in ophthalmology. Upon their return to Britain a few weeks later, Conan Doyle opened a practice in London, but was disappointed by the lack of patients.

The Strand magazine, founded in 1891, offered him a contract for more stories featuring Sherlock Holmes. After suffering a severe bout of influenza, Conan Doyle

decided to close his medical practice and devote himself to his literary career.

The British public responded enthusiastically to the tales of Sherlock Holmes and Dr. Watson. Published every month in *The Strand*, Conan Doyle's stories were eagerly awaited and ravenously devoured by readers, many of whom believed Holmes and Watson were real people.

While he was surprised and amused by the popularity of his creations, Conan Doyle grew worried that his other works, both fiction and non-fiction, would not be taken seriously. He grew tired of his most famous character, and in 1893 wrote *The Final Problem*, the story in which Holmes apparently dies at Reichenbach Falls while battling the nefarious Professor Moriarty.

The reading public was as devastated at Holmes' death as was Watson. In the streets, people wore black bands on their arms as a sign of mourning. One upset female reader wrote Conan Doyle a letter, addressing him as "You brute."³

Beyond Sherlock Holmes

Conan Doyle wrote a play about the Napoleonic Wars that he sent to actor Henry Irving and his friend Bram Stoker, the author of *Dracula*. He also struck up a friendship with J.M. Barrie, the author of *Peter Pan*.

His family life was tainted by tragedy when his wife was diagnosed with tuberculosis, which at the time was incurable, and considered a death sentence. Between trips to Switzerland for his wife's health and a literary tour of the United States and Canada where readers embraced Sherlock Holmes with as much warmth as the British, Conan Doyle exchanged letters with Rudyard Kipling (*The Jungle Book*), and Robert Louis Stevenson (*Treasure Island* and *The Strange Case of Dr. Jekyll and Mr. Hyde*).

An ardent patriot, Conan Doyle was eager to serve the

British Empire. In 1895, while visiting Egypt with his wife, he volunteered as a British war correspondent during the Mahdist War.

In 1900, he joined the British war effort in the Boer War in South Africa as a physician in a privately funded medical unit. "I rather felt it was a duty," he wrote to his mother.¹ He encountered appalling conditions at the hospital in Blomfontein, where a typhoid epidemic ravaged the city. Hospital staff risked their lives to save as many patients as possible with limited supplies and the specter of war. More than a few physicians, nurses, and orderlies succumbed to the disease. "We lived in the midst of death—and death in its vilest, filthiest form,"¹ Conan Doyle said.

Even though it had been years since he practiced medicine, a war artist visiting the hospital said of Conan Doyle, "He was a doctor pure and simple...I never saw a man throw himself into duty so thoroughly, heart-and-soul."¹

Conan Doyle used the influence of his pen on behalf of patients, writing to the *British Medical Journal* in support of vaccines that could prevent the death of thousands of British troops.²

Conan Doyle returned home several months later and began writing again, this time producing *The Great Boer War* in which he provided his thoughts on the British military and the need for reforms. He also wrote the pamphlet *The War in South Africa*, which defended the British cause in the Boer War.



In 1902, the year after Queen Victoria died, King Edward VII knighted Conan Doyle for his actions during the Boer War—not for his literary works, although the king was a fan of Sherlock Holmes. Conan Doyle was determined to decline this great honor as he believed he did nothing more than his duty. "All my work for the State would seem tainted if I took a so-called reward," he said.¹ However, he accepted when his mother pointed out that to decline was disrespectful to the King.

In 1901, he wrote *The Hound of the Baskervilles*, which takes place before Holmes' apparent death in *The Final Problem*. The story was so popular that Conan Doyle was persuaded to bring Holmes back to life in the 1903 short story *The Adventure of the Empty House*.



Sir Arthur Conan Doyle and his family, April 1922.

Photo by Topical Press Agency/Getty Images

His wife died of tuberculosis in 1906, after years of travel in an attempt to delay the inevitable. The following year, he married Jean Leckie, a woman whom he had known for years.

A champion for social justice and human rights

Conan Doyle continued to champion causes he believed in, and took up the case of George Edalji, a man who had been imprisoned for mutilating livestock. The evidence in the case was questionable, and many believed Edalji had been wrongfully charged with the crime because he was of Indian heritage. When Edalji reached out to Conan Doyle for help, the author conducted his own investigation, and raised public awareness about the possible injustice of the case. Edalji was released from prison.



George Edalji on the day of his release from prison.

Several years later, Conan Doyle took up the case of Oscar Slater, who had been charged with the murder of an elderly woman with what some believed

to be insufficient evidence. Due to the tireless efforts of Conan Doyle, Slater was also released from prison.

Conan Doyle also spoke out for social justice and human rights. He called for reforming divorce laws so that they were more fair to women, as Victorian and Edwardian divorce rights significantly favored husbands over wives. He was outraged by the horrific violation of human rights occurring in the Congo, at the time under Belgian control, and wrote the pamphlet *The Crime in the Congo*.²

His feelings on such injustices are echoed by one of the characters in his novel *The Lost World*, "There are times... when every one of us must make a stand for human rights and justice."⁴

Although he no longer practiced medicine, Conan Doyle retained a deep and abiding respect for the medical profession. In 1910, he gave the speech "The Romance

of Medicine" at London's St. Mary's Hospital, in which he conveyed to the medical students the "noble and humane" nature of the medical profession:¹

I can testify how great a privilege and how valuable a possession it is to be a medical man. The moral training to keep a confidence inviolate, to act promptly on a sudden call, to keep your head in critical moments, to be kind and yet strong—where can you, outside medicine, get such a training as that? To the man who has mastered *Grey's Anatomy*, life holds no further terrors.¹

When World War I erupted in 1914, Conan Doyle tried to enlist in the British military but was rejected because he was 55-years-old. Undeterred, he wrote war pamphlets and called for the use of life rings on military ships to prevent sailors from drowning in the event of the ship sinking. The life rings became standard issue, and years later, a sailor wrote to him saying, "How thankful we were to receive them."²

Conan Doyle toured France, Flanders, and Italy to collect material to chronicle the war for posterity.

After World War I, much of Conan Doyle's time and literary efforts were devoted to spiritualism, which made him a controversial figure. Spiritualism, the belief that the dead can communicate with the living, was particularly influential at a time when the world was still reeling from the horrors of the war. Most could not remember a war of such carnage and barbarity, and there were few people who had not lost a family member, friend, or neighbor in battle.

The Spanish flu pandemic of 1918 swept across much of the globe, and between the war and the flu, millions of people died, many of them healthy young adults. Conan Doyle lost a son and a brother in the flu pandemic.

The war served as a trigger for Conan Doyle to share his spirituality beliefs with the world. He felt it would bring comfort to those grieving, and that it was his duty to open the eyes of others to the possibility of existence beyond death. He wrote about, and gave lectures on, spiritualist topics such as ghosts, and held séances in his home.

He became embroiled in the Cottingley Fairies affair, in which two girls produced photographs of fairies and started a worldwide controversy over whether the photographs were real. Conan Doyle believed the photographs were genuine, and championed that side of the debate. His friends and readers had difficulty believing that the creator of a character as devoted to logic as Holmes could believe in fairies. However bewildering his beliefs regarding the supernatural, he stood by them. It was not until decades after his death that one of the girls admitted the photographs had been faked.

In the later years of his life, the indefatigable author and spiritualist advocate continued to tour. He became friends



Alice and leaping fairy, August 1920.

with Harry Houdini. They disagreed over spiritualism, but respected each other's point of view.

Conan Doyle continued to write Sherlock Holmes stories, although some critics remarked that his later stories are not written with the same enthusiasm and attention to detail as the earlier ones.

He toured Africa, and despite having increasingly severe chest pains which he must have known likely indicated advanced coronary artery disease, returned home and traveled around Britain to give speeches and lectures. Conan Doyle died at home, surrounded by his family, in 1930 at the age of 71 years.

Despite his reputation being marred in his later years by his devotion to spiritualism, his friends, colleagues, literary fans, and countless others whose lives he had touched did not forget his character. Barrie, who remained Conan Doyle's friend to the end, wrote that he was "one of the best men I have ever known. There can never have been a more honourable."² Those who knew him well thought of him as more than the creator of Sherlock Holmes. His colleague wrote, "It is of him as a man, even above all his triumphs of the pen, that we feel his going most," and "he will be remembered no less as a defender of the defenceless."² His funeral was held at his home, where family and friends gathered to celebrate his life, more than to mourn his death.

Conan Doyle wrote of himself, "I have had a life which, for variety and romance, could, I think, hardly be exceeded."³ His life was full of adventure and travel. He interacted with many of the luminaries of medicine, literature, theater, and politics of the Victorian and Edwardian worlds.

Born into poverty and obscurity, he rose to the heights of literary fame; a fame that lasted not only during his own lifetime but lives on well into the present day. His writing resonates with readers from a variety of ages, cultures, and backgrounds, a hallmark of a gifted author.

Conan Doyle ceaselessly used his influence to serve his country, champion justice, and defend human rights. He spoke for those who could not speak for themselves, and strove to right wrongs when he encountered them. When he believed in someone or something he did so with passion and determination. His life was not merely one of thrill and success, it was also one rich with purpose.

It is only right to acknowledge that Conan Doyle was more than the creator of Sherlock Holmes and Dr. Watson; his legacy should not only be a literary one. He made no lasting contributions to the field of medicine, but he believed that being a physician was an honor, and "a precious heritage for life."¹ He understood the tremendous responsibility, and potential for harm, that accompany that honor. "When a doctor does go wrong he is the first of criminals. He has nerve and he has knowledge,"⁵ Conan Doyle said.

He dedicated his life to medicine, partly in practice and entirely in spirit. And to those who have the privilege of following in his footsteps as members of the medical profession, Sir Arthur Conan Doyle left these words:

Unselfishness, fearlessness, humanity, self-effacement, professional honor—these are the proud qualities which medicine has ever demanded...it is for you...to see that they shall not decline during the generation to come.¹

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The Sick Child, Eugene Carrière, 1885.

The Sick Child

Artistic perceptions of mortal illness in children

Don K. Nakayama, MD, MBA

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A number of artists have explored illness and death in children through works of art titled *The Sick Child*, each an emotionally powerful scene that arouses deep sympathy. As conventions of art evolved, each portrayal reveals an aspect of how people of the time felt about the loss of a child to illness.

Genre art arose as part of the Renaissance in Northern Europe in the 15th and 16th centuries, distinct from the Renaissance in Italy, but equally vigorous. The emergence of Antwerp as the world's center of trade led to the development of a market for art among wealthy burghers and tradesmen accustomed to the rough-and-tumble world of commerce and less concerned with aesthetic conventions.

In the same era, the Reformation challenged whether religious images had any place in art. In contrast to the holy figures in the grand murals of Giotto and Michelangelo, the subjects displayed the daily lives of common folk in familiar settings—work in the fields, a simple meal, and frolicking in a tavern or at a festival. Often portrait-sized and smaller, and finely detailed, the works engaged the viewer, and invited close inspection. Dutch and Flemish painters Pieter Breugel the Elder (1525–1569), and Johannes Vermeer (1632–1675) produced masterpieces of genre art that dominated the field.¹

Genre art

Genre art was well suited for the Realism movement in the latter half of the 19th century, which emerged in mid 19th century France. With a society roiled for more than a half century by revolution, political turmoil, and social unrest, French artist Gustave Courbet (1819–1877) declared that he did not paint angels because he had never seen one.² Other artists closely identified with the movement included Jean-Francois Millet (1824–1875), and Honore Daumier (1808–1879).

Genre artists' subjects during the Realism movement were real people living in cities, villages, and on farms. Instead of nudes and figures in robes painted in classic poses and settings, genre art subjects were clothed in the rags of peasants and the urban poor, and the simple dress of the working class. The scenes challenged viewers with uncompromising images of filth, poverty, hunger, disease,



The Sick Child, Gabriël Metsu, circa 1664–1666.
Tate Gallery, London, Great Britain

death, and the desperation of the working poor.³

The sick child was a natural subject for genre art. A subject that evoked sympathy, the sick child presented several artistic challenges. How do you present the child, too young to comprehend religion and the meaning of salvation? How does one show the profound emotions of the mother, full of concern, worry, and ultimately grief?

As genre art developed, other elements of the drama were considered: the doctor, a purported healer with woefully limited abilities; and siblings, innocent onlookers confronted with the imminent death of a playmate, and his/her own mortality.

As art evolved from Realism at the end of the 19th century, Symbolism attempted to express emotions without the settings of genre art. Symbolists considered this shallow and trite. Nineteenth century history art scholar Michelle Facos saw the purpose of the symbolist “as not to educate or describe, but to express ideas truthfully.”³ French artists Odilon Redon (1840–1916) and Gustave Moreau (1850–1926) led the movement, but the best known symbolist painter was Norwegian artist Edvard

The Sick Child

Munch (1863–1944).⁴ These artists' works provide powerful images of the heart-rending emotions that surround a child with mortal illness.

The blessed child

Gabriel Metsu (1629–1667), a popular genre artist in 17th century Amsterdam, was a master painter in the artists' guild by his late teens. His works covered a variety of genre scenes including urban markets, the daily lives of the working class, and his patrons among the urban bourgeoisie. With the portrayal of human emotion and drama, he turned to religious themes in the years preceding his own death at age 38 years. *The Sick Child* (1664–1666), one of his last paintings, shows a listless child limp in his mother's lap. The composition of mother and child evokes Michelangelo's Vatican Pieta, the mother presenting the child's sanctity, suggesting a holy connection.⁵ Metsu's composition reflects the attitude of the time, that children held a special status as being blessed before God.

In the 17th century, any childhood illness carried the threat of death, with one-third of children dying before age 15 years.⁶ Death in early childhood precluded a meaningful religious education and not much of a chance to indulge in sin, therefore the young had a natural holiness conferred on them.

Hannah Newton, a British historian who has studied childhood illness in 17th century England notes, "Children enjoyed a special religious status at this time: they were

thought to be especially beloved by God and capable of extraordinary faith."⁶

The child is an angel in Edward Bird's (1772–1819) *The Sick Child*. He/she rests on a cloud formed by white pillows and wearing a white cap that serves as a halo. The setting is a typical indoor genre scene with walls of dark hewn wood and the figures' clothes and blankets on the bed drab and shabby. An old woman sits vigil at the bedside. The relationship of the old woman to the child is not clear. In her lap is not the child but an open book. This juxtaposition suggests that the sick child had an innate blessedness, as adults require the Bible as a guide to salvation.⁷

Despite the inherent drama of the scene, emotion is not a prominent feature of either work. Metsu shows the mother's concern with a turn of her head, a furrow in her brow, and a bend of her body toward the child. The child is too weak to respond, his limbs slack, his gaze without focus. Bird's child is also drained of energy, mouth slack and eyes closed in a stupor more than sleep. The old woman is an onlooker, disconnected from the child. She keeps watch, but without evidence of love or concern. The figures in both paintings fail to display the deep emotions that are aroused when a cherished child falls mortally ill. Instead, the viewer brings emotionality when viewing the scene.

A mother's care and concern

In the attitude and placement of his figures, Arturo



The Sick Child, Edward Bird, date unknown.
Wolverhampton Art Gallery



El Niño Enfermo, Arturo Michelena, 1882.
Galería de Arte Nacional, Caracas, Venezuela

Michelena (1863–1898) introduces more drama in his *L'Enfant Malade* (1882). A sick-room that is squarely a realist scene, the setting is a home that is modest, clean, and bathed in light from an uncovered window. Some religious elements remain: the child is still a holy being, resting on a white cloud, and wearing a compress that serves as a soft halo. However, despite the suggestion of religiosity, there is no overt message of the power of faith, or promise of a child's salvation.

With no religious figure in the painting, the mother looks to a secular authority, the doctor, and seeks reassurance that the child will recover. She is seated protectively on the child's

bed, her body turned away from the viewer and toward her child. Her face in profile shows her sadness and concern. In shadow, behind the head of the bed, the father's intent expression is visible. The physician's stance and central position in the painting reflect his status.

Following symbolist principles in his version of *The Sick Child* (1885), Eugène Carrière (1849–1906) took the mother and child out of the sickroom, and focused on the intensity of maternal love. The artist places the bright triangle of the child directly on top of the dark triangular mass of the mother, who holds the child against her body. The child responds, with just enough strength to press a hand against the mother's face; the other arm hangs limp. Carrière emphasizes the feeling of a mother's love through her slightly pursed lips, as if she were kissing the child's forehead. Like Metsu's mother, her gaze is downcast and her brow slightly furrowed, but her expression reveals her private thoughts of worry and foreboding. The overall theme turns from salvation to protection. The suffering child is reassured that mother will be present, and the mother hopes to shield her child from harm.⁸

The doctor

A sick child provided Samuel Luke Fildes (1843–1927) a chance to portray the most famous doctor in art history in his iconic work *The Doctor* (1891). The doctor's posture conveys full absorption in the fate of the stricken child. His



The Doctor, Sir Luke Fildes, circa 1891. Tate Gallery, London, Great Britain

expression and his hand at his chin convey concern. The spoon in the cup, and the half empty bottle on the table show that he has administered medication, and has done what he can. The darkness of the room and the lamp suggest that he has worked through the night, the daylight visible behind the shuttered window to the right confirms the nightlong watch and suggests hope for the child's recovery. Medical ethicist Y. Michael Barilan observes "the painting [is] an emblem of virtuous and ethical care-giving."⁹

Fildes wanted to honor the medical profession with a figure of dignity, specifically the physician who attended the illness and death of his first son on Christmas Day 1877.⁹ On the threshold of success as one of England's foremost painters, Fildes was able to afford individualized care and attention for his son. He was so impressed with his son's physician that he made the doctor the central figure of his most important commission to that point. The piece was considered a new "English painting of importance" on the occasion of its donation to the art collection of sugar trader Henry Tate, who opened a national gallery that bears his name.⁹

To achieve the drama that he desired in his work, Fildes created a number of fictions, summarized in Barilan's informative article on the artist's life and the painting. Instead of Fildes' own comfortable London home, the setting is a fisherman's shack that the artist happened to explore during a trip to Devon some years before.⁹ The

The Sick Child

doctor's grooming and dress identify him as a consultant physician who would likely charge a princely sum of £30 for an overnight home call of the kind depicted in the work. Barilan notes:

Although all these dignitaries provided free care in voluntary hospitals for the poor, they never called in at their homes. Moreover, they usually did not think it was worth the effort.⁹

The painting suggests with daybreak the child will survive. But the reality was that a sick child faced death no matter what the physician did, as occurred with the artist's child years before. Barilan observes:

The Doctor has a fairy-tale dimension to it: a common child being treated like royalty by an agent of modern magic, the Doctor of Medicine.⁹

But such artistic devices imbue the painting with heroism, as Barilan later notes:

By shifting the sickbed scene from his own affluent house to a country cottage, Fildes follows the pre-modern iconography and hagiography of medical miracles, in which the hero cures a poor child. *The Doctor* is Fildes' only painting where the well off confronts the common.⁹

It is an image from which many physicians receive inspiration.

The sick child

Edvard Munch (1863–1944) was a keen observer of extreme emotion. He delved into the child's awareness of mortality in a series of paintings, lithographs, and etchings collectively called *The Sick Child* (multiple versions 1886–1926). Munch was not yet of school age when his mother died, and later, as a teen, the death of Sophie, a favorite sister, devastated him. Munch was consumed by these memories that likely contributed to the themes of grief, loneliness, and despair that haunted his art.⁴

Munch's first painting of *The Sick Child*, completed when he was 23-years-old, was the work that established his reputation. It shows Symbolist principles by blurring details of the sickroom, and focuses on the tranquil expression of the child and the emotional bond between the child and her attendant at the bedside. The bold colors and the nervous energy of the strokes of the child's red hair, as well as the hands, pillow, and surrounding room convey

Munch's strong emotions associated with his sister's death. The child, clearly an adolescent, has a serenity that belies the inherent sadness of the scene. She gazes over the bowed head of an older woman, as if her mind was on a realm beyond death, and not of the living. The woman is the girl's aunt.

In contrast to other renditions of *The Sick Child*, we do not see the woman's face. Her body, while at the bedside, keeps a distance. The girl displays a gesture that suggests offering her hand to kiss, thus introducing an element of religiosity to the scene. The aunt's attitude is supplication more than sorrow. The girl's placid expression assures the viewer that she has accepted her fate.

From her study of diaries of 17th century England, Newton found that parents included children in visits to relatives and friends who were near death. Their explanations were truthful: children died; they might too. Children needed to develop an understanding of death, including their own. She notes, "Making mortality familiar to children, they hoped to take the fear out of the unknown."⁶

As death neared, parents comforted their children by emphasizing faith and salvation. Society was deeply religious during the era, and even children were "preoccupied with the Christian doctrine of salvation."⁶ Often, children



The Sick Child, Edvard Munch, multiple versions 1886–1926. Kunstmuseum

accepted their own deaths, with some expressing joy at the prospect of death and the opportunity to join deceased parents and siblings in Heaven.

Today, the approach to the emotional support of families with dying children is more secular. Elizabeth Whittam, a nurse who works closely with children with cancer, and their families, at Memorial Sloan-Kettering Cancer Center, notes the difficulty in discussing death with children, and the impulse to protect them from the tragic end they face. Professionals who work with dying children see them develop an awareness of their illness. Often, they know of their fatal prognosis even when it is deliberately kept from them by their parents and doctors. They become concerned with the well-being of their parents and those close to them. Dying children may not overtly express fear and anxiety. Such feelings certainly will develop and deserve honest communication that will help both child and family.¹⁰



Death in the Sickroom, Edvard Munch, 1895. Kunstmuseum

Children, like adults, are concerned that they will be comfortable, safe, and not alone. They should always be assured that they will not be abandoned emotionally or physically.¹⁰

The healthy sibling

Michelena's painting has a figure not seen in most versions of *The Sick Child*: a little girl stands in shadow, to the right side of the painting, separate from the drama.

She has a stare that troubles the viewer. She knows what is going on, yet makes the viewer wonder how her brother's struggle is affecting her young mind.

Children who visit dying family members often do not receive words of explanation and comfort. Parents, absorbed in grief, are often too overwhelmed to address the worry and grief of a surviving child. Adults often decide to shield children from uncomfortable topics such as death, grief, loss, and suffering. Clancy Martin, professor of philosophy at the University of Missouri at Kansas City, says, "Deception and self-deception, particularly powerful forces when dealing with the death of children, further complicate our ability to know and tell the truth."¹¹

In a 2015 study, 70 percent of siblings of children dying of cancer observed their brother's or sister's suffering during the terminal stages of his/her illness. Despite their proximity, the surviving children reported poor communication and lack of knowledge about the event.¹² And a 2005 survey noted that surviving siblings experienced strong feelings of loneliness, anxiety, anger, and jealousy for years after their sibling's death.¹³

Ensuring that children develop mature levels of understanding requires a considerable amount of engagement with parents and caregivers. The dissatisfaction and possibly negative memories of surviving children might be reduced if information and support are continuously supplied.¹³ Pediatric palliative care specialists provide compassionate and honest discussions of death, and acknowledge siblings' unique reactions to a child's death.¹⁰

It can be inferred that Munch did not receive the benefit of such candid and sustained engagement during the deaths of his mother and sister. Despite the calm demeanor of the girl in his *The Sick Child*, the artwork has a jitteriness that reflects an unsettled emotional state.

In a later work by Munch, *Death in the Sickroom* (1895), all family members are turned away, with no connection to the terminally ill sister, in the background, seen only behind the back of the chair.

The overwhelming grief of the surviving child is shown in Munch's *The Dead Mother and the Child* (painting 1897–1899; etching 1901). The surviving child, now in the foreground, faces the viewer, the dead mother in bed immediately behind. The child brings her hands to each side of her contorted face, a gesture of agonized grief that recalls Munch's most famous work, *The Scream* (1893–1910).¹⁴



The Dead Mother and the Child, Edvard Munch, circa 1897–1899.
Kunstmuseum

Unrestrained grief

The sick child theme devolves into *Woman with Dead Child* (1903) by Kathe Kollwitz (1867–1945). Seated cross legged, a naked woman envelops a dead child in her arms. She buries her face into his body, her dishevelled hair and muscular arms and legs expressing her anguish.

So striking was the image that one of Kollwitz's friends was concerned that tragedy had befallen the artist, but it hadn't. However, the artist and mother understood the depth of a parent's love for his/her child, and the grief that is felt if the child dies. In a cruel coda to the work, the artist's son Peter, who served as the model for the work when he was young, died in battle as a soldier in World War I. And, Peter's son, the artist's grandson, died in battle in World War II.¹⁵

The depth of a mother's loss recalls lines from the movie version of Tennessee Williams's play, *Suddenly Last Summer* (Joseph L. Mankiewicz, Columbia Pictures, 1959). Reflecting on the painful memory of the death of her beloved son, matriarch Mrs. Violet Venable says:

A malady of living. After all, I buried a husband and a son, I'm a widow and a...[She pauses and looks off into the distance] Funny, there's no word. Lose your parents, you're an orphan. Lose your only son, and you are...[she pauses as sadness comes over her face like a shadow] Nothing.¹⁶

Many artists have brought their experiences and world-views to their work, and many had experienced the death of a child, sibling and/or parent. Their feelings emerge in their paintings: religious hope for recovery or salvation; worry and concern during long nights at a bedside; and despair. Guided by the artistic principles of their time,

each expressed the profound and timeless love parents have for their child.

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Developing foundational principles for teaching and education for a school of medicine

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In business, high performing organizations define and distribute foundational principles to define their “True North,” and to guide individuals in the organization in their day-to-day activities. These principles should be derived from the organization’s mission and vision. They must be fundamental to the organization, and the organization must be willing to retain them even if they don’t result in financial reward, and they must be timeless.

In his book *Good to Great*, Jim Collins suggests that achieving alignment around foundational principles is a critical element of great organizations, and that alignment is not possible without making these principles

clear to all.¹ Collins notes, “...there is a big difference between being an organization with a vision statement and becoming a truly visionary organization. The difference lies in creating alignment—alignment to preserve an organization’s core values, to reinforce its purpose, and to stimulate continued progress toward its aspirations. When you have superb alignment, a visitor could drop into your organization from another planet and infer the vision without having to read it on paper.”²

Schools of medicine should espouse their foundational principles. Medical education is the foundation of academic medicine, with a core mission to prepare the next generation of physicians, scientists, and leaders. The educational mission can be jeopardized by ever-intensifying financial pressures; increasing focus on regulatory requirements across undergraduate and graduate medical education; biomedical and postdoctoral students and continuing medical education; and competing faculty demands.^{3,4} It is under times of external stress that fundamental principles become most important to an organization to clearly drive decision-making and align performance.

Johns Hopkins has made many contributions to medical and biomedical education throughout its history. In 1910, the Flexner Report⁵ highlighted the Johns Hopkins University School of Medicine as an exemplar of medical education. As medical historian Kenneth Ludmerer, MD, (AQA, Washington University in St. Louis School of Medicine, 1986, Faculty) observed, Johns Hopkins “...became the model by which all other medical schools were measured...”⁶

More than a century after the Flexner Report, Johns Hopkins engaged in a comprehensive strategic planning process with medical education as a key priority. One of five goals of the education strategic priority addressed the importance of cutting-edge science, and novel approaches

in medical and biomedical education. However, foundational principles that guide educational activities and programs were not specifically addressed, because they were generally assumed to be part of the “institutional DNA.” Most Johns Hopkins leaders believed that these principles had been articulated and disseminated decades ago, and were, therefore, surprised to learn that this was not the case. The school’s foundational educational principles had never been formally stated or recorded.

Collins suggests a process of defining core values that starts by engaging a small group of high-performing, well respected individuals who really understand the organization.¹ They define the first draft of such principles. Then, the principles are expanded using consensus strategy.

Johns Hopkins used Collins’ modified Mars group exercise to develop foundational principles for teaching and education.¹ The process began in March 2015, and in October, three of the institution’s leaders in medical education met over a casual dinner to begin the process of creating a document. The institution’s mission and vision statements were reviewed, as were the strategic plan, and available materials from undergraduate medical education; graduate medical education; continuing medical education; Master’s and PhD committees; and post-doctoral offices. A first draft was completed after several additional conversations.

Independently, the Managing Board of the Johns Hopkins Institute for Excellence in Education (IEE) drafted a separate version. The IEE director did not show or discuss the draft document that resulted from the dinner meeting. There was significant overlap in the two documents.

A collated and refined version was circulated among all Johns Hopkins department directors/chairs, vice deans, and the Dean for review and input. The evolving version was refined by the IEE Board of Directors, Faculty Senate, and Advisory Board of the Medical Faculty (the Dean’s committee). Ten principles emerged from this process. (see table)

Each of these principles addresses an important theme of the educational mission and reflects an essential part of the Johns Hopkins culture. It is no accident that the first principle states that “an educator embraces science and instills this passion in learners.” It is as critical today as it was at the time of the Flexner Report, which suggested that physicians practice with “A professional habit definitely formed upon the scientific method,”⁵ and that scientific knowledge, inquiry, and discovery are the foundation of medical and biomedical education.

Some of the principles, such as the importance of being a role model (Principle 3), and educators’ responsibility to develop the next generation (Principle 6) are more self-evident than others. Other principles reflect concepts that have always been important, but have more recently been stressed. These include the importance of diversity and teamwork.⁷

An emerging aspect of teaching and learning is the importance of the learning environment, as noted by the Association of American Medical Colleges,⁸ as well as by the National Institute of General Medical Sciences,⁷ both of which support training programs to develop the next generation of research scientists. Principle 5 states the importance of having a learning environment that is diverse, respectful, inclusive, and collegial. This is coupled with the importance of collaboration across disciplines (Principle 9), whether interprofessional education and practice in medicine,⁹ or collaboration and team-based science in basic research.

Principle 4 emphasizes the importance of individual variability in human biology, genetics, behavior, and environment, a concept that is central to precision medicine, and to the philosophy of the Johns Hopkins Genes to Society curriculum.¹⁰ This concept is taking on greater importance with the emergence of various “omics” and other advances in science that allow for better characterization of individual patients and individualized treatments.

As Francis S. Collins, MD, PhD (AQA, University of North Carolina, 1976), and Harold Varmus, MD (AQA, Columbia University, 1964) stated in their commentary on precision medicine, “The concept of precision medicine... is not new...But, the prospect of applying this concept broadly has been dramatically improved by the recent development of large-scale biologic databases (such as the human genome sequence), powerful methods for characterizing patients (such as proteomics, metabolomics, genomics, diverse cellular assays, and even mobile health technology), and computational tools for analyzing large sets of data.”¹¹ And, as Sir William Osler stated, “Care more particularly for the individual patient than for the special features of the disease.”¹²

Principle 7 specifically states that an educator always strives for excellence. The explicit mention of the importance of wanting to always do better implies a degree of humility important for teachers and educators.

The Johns Hopkins University School of Medicine Foundational Principles for Teaching and Education

1. A Johns Hopkins SOM educator embraces science and instills this passion in learners. Scientific knowledge, inquiry and discovery are the foundation of medical and biomedical education.
2. A Johns Hopkins SOM educator demonstrates integrity and thoroughness, and expects this from learners. Educators must emphasize to learners that outstanding discovery and patient care require a total commitment to careful, complete, and comprehensive inquiry and examination.
3. A Johns Hopkins SOM educator is a role model. The actions of SOM educators must always model honesty, integrity and kindness; and fair, equitable and respectful treatment of others.
4. A Johns Hopkins SOM educator instills in learners an appreciation for the importance of individual variability in human biology, genetics, behavior, and environment. Educators must always emphasize to learners that under most circumstances, knowledge of the patient as an individual is necessary to provide the best patient care. In the same vein, biomedical research should, in most circumstances, address fundamental biological processes that have the potential to provide insights into the precise genetic, biological, environmental, and behavioral factors that influence human health and disease.
5. A Johns Hopkins SOM educator fosters a positive learning environment that is diverse, respectful, inclusive and collegial. Educators must recognize, respect and support the needs of our diverse student body, faculty, patients and community. Learners must understand their responsibility to the learning process.
6. A Johns Hopkins SOM educator develops the next generation. Every individual should pass on knowledge, skills and attitudes to learners.
7. A Johns Hopkins SOM educator always strives for excellence and aspires to continually do better. Educators must demonstrate in their teaching, and in their personal behaviors and actions that a commitment to lifelong learning and self-improvement is critical to being an outstanding scientist and physician.
8. A Johns Hopkins SOM educator teaches and serves as a role model for the wise use of society's resources. Learners must understand that medicine is a public trust. The trust placed in physicians and scientists by the public mandates that physicians always strive to deliver the highest quality care at the lowest cost, and that scientists in the pursuit of new knowledge always strive to use public support of biomedical research in the most judicious manner possible.
9. A Johns Hopkins SOM educator helps learners understand and appreciate the value of collaboration across disciplines. Educators teach that the scale and complexity of high quality health care and scientific research requires a broad range of ideas, knowledge and perspective. Educators demonstrate deliberate and intentional interaction, knowledge sharing, and collaboration among professionals with different knowledge, skills, and attitudes.
10. A Johns Hopkins SOM educator demonstrates to learners a focus on the public good. All of our actions as physicians and scientists must reflect a commitment to the public and to the health of all members of society.

Principles 8 and 10 speak to the conviction that medicine and biomedical science are public trusts. The public provides considerable support for medicine and biomedical science, not for the benefit of physicians and scientists, but to promote the public good (Principle 10). This focus on the public's interests is central to professionalism in both medicine and biomedical science. Educators should be expected to teach and serve as role models for the wise use of society's resources (Principle 8), while the actions of physicians and scientists must reflect a commitment to the public, and to the health of all members of society. Principle 8 is particularly important in the context of rising expenditures for health care and biomedical research, increasing National Institutes of Health funding,⁴ and health care spending as a percentage of gross domestic product. Although schools of medicine understandably argue for more funding for medicine and biomedical science, support cannot go unbridled, and it is imperative that educators reinforce the importance of wisely using available resources that fund the organization's mission.

Although the number of foundational principles was not predetermined, the process resulted in the establishment of 10, which prompted many to think about other top 10 lists in popular culture and, not surprisingly, to the Ten Commandments. While other academic institutions have unwritten standards for medical and biomedical education, much as other societies almost certainly had codes of conduct before the Old Testament, in both instances a written record serves to preserve and disseminate guiding principles to individuals throughout time.

Those involved in medical and biomedical education in the 21st century face challenges to teaching and education unimagined in the times of the Flexner Report, making it more difficult to maintain a focus on core principles and values if they are not clearly documented.

The hope is that the Foundational Principles for Teaching and Education will be inspiring to Johns Hopkins educators, and help them align their teaching and educational efforts. These ideas are shared with faculty, learners, and leadership throughout the organization, and are posted on the IEE website.

While many of these principles will ring true across schools of medical and biomedical sciences, it is recognized that each school of medicine and biomedical science has a unique mission and vision, along with its own history and institutional culture.

On a national level, much can be learned from these and other principles, which can help to advance teaching, learning, and education across all schools of medical and biomedical sciences.

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The living dead:

Interactions between the living and the dead in clinical practice



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During my 42 years as a general internist, I occasionally came across what the Anglican priest and philosopher John Mbiti called “the living dead.”¹ To some of my patients, the dead were alive in ways that were benign and to be enjoyed. To others, the living dead were flat out terrifying.

Fresh out of internal medicine residency at Cleveland Metropolitan General Hospital in the late 1960s, my family and I headed to the United States Public Health Service Hospital in Shiprock, NM. Clinical interactions at Shiprock frequently involved interpreters. I learned that terms such as allergy, that I’d heretofore taken for granted, not only had no Navajo equivalent, but that the bilingual aides were being asked to undertake the complex task of interpreting without training. Over time, I began to recognize commonly used Navajo terms. As I was about to start intravenous antibiotics on an elderly woman, I had the following exchange:

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MD: Would you ask her if she is allergic to any medications?

Aide (in Navajo): Does white man’s medicine make you vomit?

Patient (in Navajo): No.

MD: Did you just ask her if white man’s medicine makes her vomit?

Aide: Yes.

MD: That’s not quite what I need to know, I have to know about allergies to medications...

Aide: Well I don’t know about those things...what’s allergy mean anyway? If you know so much Navajo, why don’t you ask her?²

My education about the language and culture grew as bilingual staff members became teachers and informants. Patients often recounted Navajo therapies that lacked readily available English equivalents; these occasionally required a lengthy explanation. A nursing aide at Shiprock, Daisy Descheenie, was interpreting for an elderly Navajo speaker:

Aide: She says she’s had a Wind Way ceremony done. Her family thinks she might need another sing.

MD: Wind Way? Another sing?

Aide: Yeah, we call the one she had Chíshíjí, it's actually got a longer name than that. It's a four-day sing, but it's not as long as the Navajo Wind Way—that one takes nine days.

Chíshíjí? I was clueless but curious. One thing seemed clear. Many bilingual patients were best interviewed in their first language. Additionally, I began to realize the frequency with which my patients were also using one of the three major healing systems then active on the reservation: traditional Navajo religion and its ceremonies; the Native American Church; and Navajo Christian charismatic healing. Years later, anthropologist Thomas Csordas studied and commented on the ways in “which religion and spirituality are intimately entwined with health care and healing” in Navajo life.³

The contamination of the dead, Ch'íídií

The patient who first taught me about the troubles that the living may have with the dead came in for an employment-related physical exam. A seasonal ranger at Mesa Verde National Park, he mentioned that he needed to have at least two ceremonies done each year. He and his family were concerned that his work involved exposure to human remains. “There’s bones in the ruins,” he explained, “even the visitor’s center has bones...and after a rain or a windstorm we may find a piece of bone sticking out of the sand or clay, one we’ve never seen before.” While he didn’t complain, or editorialize about this, he made it clear that getting along in his life and getting along with his relatives worked better if he had Hózhóǫ́jí in the Spring and ‘Anaa’jí in the Fall.

Hózhóǫ́jí, the Blessing Way, is a ceremony that’s often used for protection, to prevent misfortune and illness. ‘Anaa’jí, the Enemy Way, is meant to dispel the influence of ‘ghosts.’ In 1963, Frank Mitchell, a traditional healer who served on the Navajo Tribal Council in the 1930s, talked about ‘Anaa’jí:

Enemy Way really has to do with whether you have killed or hurt somebody...if you hurt them in any way... their ghost is going to come back and bother you...If we have not been treating someone’s spirit right during our lives...it can come back and punish us.⁴

Speaking Navajo when recording his autobiography, Frank Mitchell used the word ch'íídií, translated as ‘ghost’ in the above quote. Key authorities on the Navajo language suggest that ch'íídií, has broader meanings.

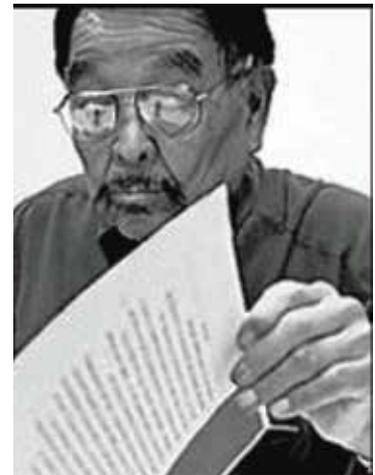
Writing about Navaho (old spelling, 1943) soul concepts, the Franciscan Priest Berard Haile described ch'íídií as “something which manifests itself even after the ‘wind soul’ has left the human body...and can hardly be identified with that part of an individual’s self which after his death...is called...‘his ghost.’”⁵ Anthropologist Gladys Reichard (1950) wrote that ch'íídií “may in fact mean ‘the contamination of the dead,’”⁶ in its broadest sense.

Slim Curly, a Navajo ceremonialist, recorded ‘Anaa’jí, the Enemy Way ceremony, and Berard Haile published the Navaho text with an English translation. During the ceremony, the men chant about the dead enemy and about the scavengers:

Now the bent bow of the Ute enemy, of the enemy man, is scattered abroad...his excrement is scattered, bones are scattered abroad, his corpse lies there, Rah, Rah...The big crow really spreads his feathers, his own young are eating all the flesh, Rah, Rah...Slim coyote... drags the corpse...to a suitable place, Rah, Rah...⁷

Taylor MacKenzie, MD, a Baylor-trained Navajo surgeon and colleague at Shiprock, and I were struck by the gruesome imagery, especially the coyote and crow chewing on the corpse. Concerned that the ceremony portrayed a bad image of the Navajos, MacKenzie said, “See? That’s why this stuff shouldn’t be published!”

Over the ensuing years, listening to patients’ stories in multiple sites changed my early view of the Enemy Way. The graphic images chanted in the Enemy Way could just as easily portray a century filled with warfare, ethnic cleansing, and genocide with “more than 50 million people...systematically murdered in the past 100 years.”⁸ By this measure, the Enemy Way chant merges into current realities. It’s a precursor to the instantaneously transmitted media that enter our homes. The violence is there for all to see.



Taylor McKenzie, MD (1931–2007), the first Navajo medical doctor, Vice President of the Navajo Nation, and the first Navajo Nation Chief Medical Officer.

The Navajos stirred my interest in working across boundaries of language and culture. When I took a position at the University of Colorado Medical Center as Director of Medical Clinical Services (1970–1976) I had the good fortune of working with Sydney Margolin, a psychoanalyst and professor of psychiatry who was engaged in extensive cross-cultural health care. We recorded, studied, and treated patients with firmly held traditional/folk explanations for their illnesses in his Human Behavior Laboratory.⁹

Margolin's teachings and patients, like the Mesa Verde park ranger, led to my reporting three cases of Ghost Illness in tribal patients (Navajo, Salish, and Hmong) in an issue of *American Indian and Alaskan Native Mental Health Research*.¹⁰

The emergence of PTSD as a diagnosis

In my view, post-traumatic stress disorder, PTSD, tops the diagnostic categories in which the dead are likely to play a role. In 1978, a healthy man with vague stroke-like symptoms was hospitalized in the U.S. Public Health Service Hospital in Seattle. I was ward attending that month on its 12-bed open medical wards. The patient, who bitterly referred to himself as a "Vietnam Graduate," turned out to be the first full-blown PTSD case we'd seen, at a time before the diagnosis existed.

Our team was faced with a diagnostic puzzle. At times, the patient would lose it and disrupt the entire ward. I had an urgent page one afternoon, "You'd better come up here right now, your patient is going nuts!" He'd awakened from a nap crying out, and was yelling at the nursing staff, ward aides, and house officers when they approached him. As he eventually told us, he'd experienced a recurrent terrifying dream that involved an air strike. He saw body bags and the faces of the men lying there. "But it's more than just a dream," he said, "I often see them after I wake up, sometimes it happens when I'm wide awake."

During his last tour of duty in Vietnam he was calling in air strikes. "They kept giving me coordinates closer and closer to their own position. They were screaming at me to 'DO IT!' I yelled, 'That's right where you are!' 'You got it asshole, call it in, we're dead meat anyway.'"

He called the air strike. There were no American survivors. His commander blamed him for the deaths, "The son-of-a-bitch made me put them in body bags."

His stroke-like neurological symptoms cleared quickly, and his toxicology screen came back negative. Unsure what to think, our team called for help. The consulting psychiatrists' diagnosis of gross stress reaction came from the first *Diagnostic and Statistical Manual of Mental*

Disorders of the American Psychiatric Association (DSM-I, 1952). The DSM-I made reference to stress caused by combat or civilian catastrophe. The second published manual, DSM-II in 1968, omitted any such diagnostic category.

Our consultant suggested a tricyclic, and commented, "I've followed a number of the World War II and Korean War vets with combat-related troubles that last for years." While he didn't use the term "flashbacks," he spoke of vets experiencing intrusive, frightening memories, and interactions with the dead. He explained, "It's a kind of stress-induced hallucinosis." He cited a long list of prior names for the syndrome including combat fatigue, war neurosis, and shell shock.

No official diagnosis for war-related stress disorders was available between 1968 and 1980¹¹ when PTSD became an official part of psychiatric lexicon (DSM-III, 1980). Since the hospital had a contract to care for active duty military and retirees, the patient continued to see us in the clinic for nearly 20 years. He acquired the new diagnosis of PTSD in the early 1980s.

Questions about the diagnosis have continued.^{11,12} Anthropologist/ethnographer Allan Young argued in 1995 that PTSD is an invented, culture-bound diagnosis, tied to the 20th century:

The disorder is not timeless....Rather it is glued together by the practices, technologies, and narratives with which it is diagnosed, studied, treated, and represented by the various interests, institutions, and moral arguments that mobilized these efforts and resources.¹³

Both PTSD, and 'Anaa'jí appear to be culture-bound. The literature reveals that the definition of PTSD was impacted by conflicting societal conventions—legal issues/definitions, military recruitment issues, the terrible cost of the illness to veterans and their families, the fiscal cost to the health care system, etc.

Nonetheless, interactions between the living and the dead are a commonality shared by PTSD and 'Anaa'jí. The Veterans Administration has incorporated 'Anaa'jí in therapeutic efforts to treat Native American veterans.¹⁴

A 1964 commentary about Navajo ghost sickness/illness, "speculated that since in fact there is no ghost, the symptoms derive from the patients' own beliefs and attitudes."¹⁵

My own ghost illness article was written after a Welsh general practitioner, Dewi Rees, reported that nearly 50 percent of Welsh widows and widowers reported auditory, visual and even tactile interactions with their deceased spouse while in a waking state. He disallowed experiences

that occurred lying down, napping, or excused as in seeing “the deceased in their mind’s eye.”¹⁶

Many of my widowed patients were delighted, even relieved to talk about similar experiences. One was a recently widowed woman recovering from a pulmonary embolus. I first met her while making rounds on a weekend. She appeared startled when I entered her room. While she assured me that she was well prepared to go home and described excellent family support, she continued to look uneasy. Sensing that something was troubling her, I shared brief stories told by some of my widowed patients. She spontaneously explained, “My husband was standing at the end of my bed when you walked in.”

When I presented her case at grand rounds, in 1993, about one-half the internists in attendance thought she needed a psychiatric consult. None had heard their own widowed patients report similar experiences. However, the patient reported that she and her widowed friends enjoyed talking about these experiences finding them pleasant and helpful.

Rees reported that while his widowed patients freely discussed their experiences with friends, none had reported the events to their physicians. Rees’ findings have subsequently been documented in multiple studies and cultures.

Dealing with trauma across language barriers

My patient revealed the presence of her husband in the room only after I’d engaged in telling stories about other widows. Storytelling played a major role in cross-cultural counseling carried out in multiple languages at Asian Counseling and Referral Clinic in Seattle (ACRS) where I saw patients once a week for more than 25 years. Interpreter case managers provided the language interface as well as the continuity critical to dealing with traumatized patients. And some of the interpreters had experienced traumas similar to their patients.

An elderly Mien woman, referencing the source of some of her nightmares, described her escape from Laos across the Mekong:

It was dark when we crossed, we were afraid the soldiers on the Lao side would spot us. We thought we were safe



Navajo medicine man teaching his daughters.

when we made it to the Thai side, but the Thai soldiers came with guns. They forced us into deep mud along the riverbank. No one could run. The women started screaming, “Help us, they’re robbing us...” We had our jewelry and earrings torn off. The soldiers beat some of the people and robbed us all.

She was silent for a moment, then continued:

One young woman was taken away. She had a bad leg all her life and she limped, but she was very beautiful. She was raped by the soldiers.

There were long pauses throughout in her story. Then the interpreter spoke up, “I know I’m not supposed to speak for myself but I was there, my family crossed in the same boat.”

He pointed to his knees and said, “The mud was up to here, we could barely move, people were screaming. I thought they might kill us. It was still dark and I remember looking back at the lights on the Lao side and thinking: ‘What did we come here for?’ I couldn’t believe what was happening.”

Witness, victim, patient, interpreter—roles are sometimes blurred in the clinic.

Stories are the key

Traumatized patients are often reluctant to disclose. I first met a Cambodian woman referred by a family physician for a variety of somatic complaints, and presumed

depression. Severe, recurrent headaches were the most consistent symptom. Her records revealed multiple visits to clinics and local emergency departments. She had undergone major medical and specialty evaluations and treatments. Nothing was found, and nothing seemed to work including a variety of medications.

This was her second mental health clinic referral. Her unhappiness, she said, was entirely due to the daily experience of unrelenting physical symptoms, especially while alone in her apartment with her two young children, and when it was quiet. In an effort to distract herself she spent her days wheeling the children around a mall. She rejected the notion that what happened to her during the Pol Pot regime could be related to her current troubles.

It was storytelling and talk about dreams involving the dead that broke the ice of this Cambodian woman's previously undisclosed history.

Sometime before she reached the age of 11 years, her entire family was taken out to be killed. She witnessed the deaths of her mother and father, and then she was struck on the head and thrown into a trench. She got up and ran. She was shot in the thigh, beaten, and thrown back into the trench. She thinks that she was unconscious because she woke up underneath a body and remembers that it was nighttime. She crawled out of the trench and was found, helped, and hidden by an elderly couple.

Thinking about what happened gave her nightmares and made her feel sick. Talking about it was worse. "That's why I wander about in the mall with my children, that way I don't hear people calling out, I don't hear the screaming, the pleading, and sounds of people being killed."

Years later, Devon Hinton, MD, and his colleagues focused on dreams of the dead among Cambodian refugees with PTSD.¹⁷

Dreams and interactions with the dead can be used to help resolve a diagnostic dilemma.

I had an urgent request to see a 58-year-old Iñupiat trapper from a North Slope Alaskan village, initially admitted two months earlier for unrelenting right upper quadrant and flank pain. The house officer who called me held the phone aside saying, "Can you hear him? That's him shouting in the background!"

Extensive inpatient evaluations in three different hospitals, including a university referral center, failed to reveal a diagnosis. He was being managed as a chronic pain problem, and had been placed on methadone. When the gastroenterologists proposed yet another test, a liver biopsy, this heretofore mild mannered, polite man became disruptive, threatened to leave the hospital, and demanded increased medication.

Prior to the onset of his pain, the patient had been an active hunter and trapper in a remote village accessible only by boat or float plane. He was born and had lived in times when storytelling dominated Iñupiat households, and dreams were discussed extensively, especially dreams of the dead.¹⁸

Because he was agitated, upset, and likely frightened, I decided to avoid asking questions and to undertake an interview based on storytelling and dreams, a strategy that I outlined in a chapter on cross-cultural methodology.¹⁹

I introduced myself, sat down, and mentioned that I'd taken care of a man from a village near his home who was such a powerful dreamer that dreaming helped him decide where to hunt. The patient discontinued moaning and holding his side, sat up, and with great animation shared a story about going hunting with his brother:

We had set a fire and gone to sleep...it was still light, you know, the time of the midnight sun. I dreamed the caribou were standing in a long line in a valley. I walked down the line in front of them. You could even see the smoke coming out of their noses. Then the big one at the end stepped right out in front of me!

This dramatic dream was told with energy, gestures, and detail, "I knew exactly where the caribou were, woke my brother up, and we went down there and shot some Caribou!"

Acknowledging the dream, I opted for a declarative statement, "I think you've been dreaming the dead...I'm not certain who, but that's what I think." He paused, and then described two dreams of deceased relatives—his parents and another brother:

My mother and father were sitting on the ice with wet clothing...they asked me to help them change their clothes...I noticed that my socks were wet so I sat down and changed my own socks...

My brother was in a skin boat setting a seal net, he asked me to help...I sat down on the shore and told him what to do...but I didn't touch the net.¹⁹

The dreams were frightening. Each led to a long-distance radiophone call to his wife from the hospital. She shared his fears: "You didn't touch their clothes, did you?"

When asked what would have happened if he had touched the seal net or his parents' boots or clothes, he quickly stated, "Then I would have been like them."¹⁹

The patient went on to reveal a complex story of events

in the village that began in the preceding August when as a village elder and minister, he witnessed a fight in the schoolyard in which a boy punched a younger girl in the face knocking her down. He upbraided the boy, and gave him a stern lecture about his behavior. This led to a village dispute of major proportions in which nearly one-half of the congregation left his church. Over the next few months the boy's grandfather (a well-known shaman) accused the elder/minister of flying at night, and reported seeing a ring of light visible around his home at night—accusations which imply that he was dangerous, working evil in the community, and not a Christian minister who could be trusted.

Later that fall, the patient and his wife began to think that they might have to leave the village. In January, when he slipped and fell down a snow bank he concluded that it was not an accident. He'd injured his right side, and felt that the boy's grandfather was responsible. He felt trapped, unable to seek traditional Inupiat treatment due to his position as a minister, "If I had gone to a healer, they would have said that I don't believe...that Jesus isn't strong enough." He had relied on prayer, and began sleeping with his Bible under his pillow.

Once his history was revealed, I assured him that the physicians were not withholding dangerous information, and that there was no evidence that he had a serious or potentially lethal illness. Relieved of his story and dreaded fears, he rapidly improved, was weaned off of methadone, and became pain free.

Before discharge from the hospital, he dreamed of his deceased brother, and this time, was delighted. The dream implied that he had good years and good hunting ahead.

An ancestral shrine

While our minister/patient relied on Christian beliefs to handle his fears, some patients rely on family shrines to seek help. One Cambodian patient with severe PTSD experienced recurrent abdominal pain whenever she had nightmares and sleepless nights. To deal with her pain, nightmares, and flashbacks, she prayed to a favorite grandmother who died before the "bad times." It was during the process of talking about her prayers that her care providers learned about the pictures of her husband and son. She kept them in an ancestral shrine at home.

Her eight-year-old son, who had wandered home from a re-education camp to see his mother, was killed right in front of her. He wasn't supposed to be there, a soldier caught the child and bayoneted him.

The mother had already lost her husband during the Pol Pot regime. He'd been declared to be revolutionary trash

and was beaten to death in front of their house. People weren't supposed to mourn for trash. If you did, you might be killed yourself. Her husband's body lay in front of the house for a day-and-a-half before she dared move him.

Believing she would be killed for having pictures of her husband and son, she buried the pictures in a can, and later sewed them into her clothes.

She showed the photos to us during a visit her case manager and I made to her home. Later, she brought them to clinic and shared them with others in her therapy group. Her action opened the floodgates encouraging other patients who then brought in mementos and stories of their families, of their lives, and of their dead relatives. The group was overwhelmed by everyone's need to talk, and had to increase the frequency of its meetings.

However, talking about violence doesn't prevent flashbacks. On one of her clinic visits she appeared with a cast on her right arm. She'd been leaving Safeway with groceries in her arms when she suddenly saw the soldiers in the act of bayoneting her son. She screamed, ran, tripped over a parking barrier and broke her arm.

Reburial of the dead

More than one traumatized patient has said, "I don't want to talk about it. What do you want to dig up that old rotten stinking stuff for? We buried it long ago."

Since there are no words in many Southeast Asian languages for mental health, counseling, or psychology, a Lao coworker/interpreter responded by first agreeing with the patient, "You're right, we do dig it up, and it's hard to talk about." Then he added in Lao, "but after we dig it up, we help clean the bones and then we help re-bury them."

He called upon a long-standing traditional healing practice—reburial of the dead which is occasionally used as a therapy for the living. It is also practiced on ancestral days when burial pots are reopened, ancestral meals prepared and offered, and the bones are cleansed, re-interred and the pot is closed once again. As a metaphor for talk therapy or counseling, cleaning up the bones provides rich meaning in Lao. Reburial of the dead also speaks to the central question, can memories of the dead ever be put to rest?

PTSD and interactions with the dead

PTSD, a diagnosis that has been challenged as having political, social, and non-psychiatric overtones,^{11,20} has become a catchword in medical and popular vernacular. Omitting a diagnostic category for war trauma from the official psychiatric nomenclature between 1962 and 1980



Eskimo (Inuit) hunting reindeer, illustration by Le Breton, from *L'Illustration*, Journal Universel, No 529, Volume XXI, April 16, 1853

puzzled observers.²¹ As neuroscientist and neuropsychiatrist Nancy Andreasen, PhD, MD (AΩA, University of Iowa, 2001, Faculty), points out, “the existence of a valid syndrome occurring as a consequence of severe stress cannot be questioned.”¹¹

It is likely that the descriptive details that define the diagnosis of PTSD will continue to evolve. A new language to describe the reality of the frequent interactions with the dead that occur in PTSD, bereavement, and other clinical circumstances may need to be developed.

Rees, who described the hallucinations of widowhood in 1971, and established the normalcy of human interactions with the dead, wrote in a chapter entitled “The Bereaved and the Living Dead:”

There will always be problems with words like ghosts, apparitions, hallucinations, after-death communications, illusions, pseudo hallucinations and a sense of presence, all of which have been used in reference to the subject matter of this chapter. I had hoped to circumvent this dilemma by not using any of these words but this I have been unable to do. In fact, I have added to the confusion by introducing the term ‘living dead’ which Mbiti says is the African way of referring to people who have died.¹

In many ways, the term “living dead” captures the reality of these encounters for individuals who’ve experienced trauma, loss, or have been threatened with death.

Over the last 25 years, psychiatrists have cut back on time spent with patients while relying heavily on medications. During that same time, primary care providers, pressured to increase productivity, have shortened visits. All the while, to me, it seemed that spending time talking with patients not only revealed undisclosed life histories, but occasionally solved diagnostic dilemmas.

Waitzkin and Magaña writing about traumatized patients, began their article with a quote from Leslie Marmon Silko’s book *Ceremony*, wherein an older shaman says:

I will tell you something about stories...
they aren’t just entertainment.
Don’t be fooled.
They are all we have you see,
all we have to fight off
illness and death.

You don’t have anything if you don’t have the stories.²²

I’ve often wondered: Is Silko’s shaman talking about the story behind the ceremony, like the rich myths that support Hózhóǵǵí and ‘Anaa’jí, or the story of the patient?

Sometimes I think I'm being too linear, that my professional language, which refers to flashbacks and to ghosts as hallucinations, doesn't quite get it. Then I think about what my patients have experienced, and what they have to say. You don't have anything if you don't have the stories.

Author's Note:

Taylor McKenzie, MD, was the first Navajo medical doctor. He also served as Vice President of the Navajo Nation, and was the Navajo Nation's first Chief Medical Officer.

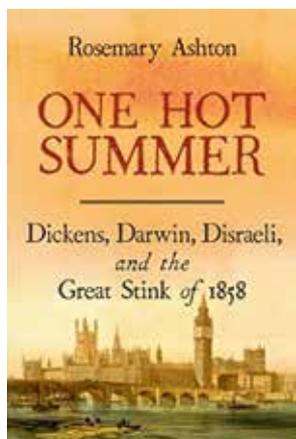
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Book reviews

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



One Hot Summer: Dickens, Darwin, Disraeli, and the Great Stink of 1858

Rosemary Ashton
Yale University Press,
July 18, 2017, 352 pages

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

You may not be able to tell a book by its cover, but sometimes a book's subtitle is irresistible. In this case, "*Dickens, Darwin, Disraeli, and the Great Stink of 1858*" immediately caught my attention. What was this mysterious "great stink?" And, how did these three historical characters get involved with it?

By 1858, London's population had topped 2.5 million, and its sewers dumped all of their excrement into the Thames River. Much of the untreated feces settled on river banks and around the bases of bridges. The stench in central London had become almost unbearable. In *Little Dorrit* (1857) Charles Dickens wrote that the Thames is "a deadly sewer...not a fine, fresh river." During the exceptionally hot and dry summer of 1858, the odor became so bad that many businesses closed, and at one point Parliament had to shut down because members could no longer tolerate the atmosphere.

At the time, the miasma theory of disease transmission prevailed. It was thought that an accumulation of polluted vapors caused diseases like cholera and dysentery. Although John Snow had published his paper on cholera and the Broad Street pump in 1854, his work was almost completely ignored. Pasteur, Koch, and confirmation of the germ theory were decades in the future. Consequently, the primary cause of alarm in London, aside from olfactory trauma, was that the great stink—not floating feces—constituted a dangerous miasma. Joseph Bazalgette, the city's chief engineer, developed a plan to extensively reconfigure the sewage system, but until the summer of 1858, Parliament refused to adopt it because of the £5.4 million price tag.

Benjamin Disraeli was Chancellor of the Exchequer, and leader of the House of Commons in Lord Derby's

government during that stinky summer. He marshaled a number of important pieces of legislation through Parliament in 1858—the India Act, which transferred governance of India from the privately-owned East India Company to the British state; the Divorce and Matrimonial Causes Act, which made divorce available to the middle class, and for the first time allowed women to sue for divorce; and the Medical Practitioners Act, which standardized medical education and examinations. *One Hot Summer* tells the story of his wheeling and dealing to push through the Thames Purification Act.

Disraeli argued that experts who had studied the problem were in a better position to accomplish the goal than members of Parliament. The bill did not propose a specific remedy for the sewage problem other than to ensure the effluent was outside the city limits. However, it did give the independent Metropolitan Board of Works authority to choose which plan to implement, and to borrow the necessary funds. The Board of Works adopted Bazalgette's system, which began construction in 1859. It involved 82 miles of new interconnecting sewers, and more than 1,100 miles of street sewers.

Meanwhile, Dickens was suffering more from a personal crisis than from the Great Stink. In 1857, he met an 18-year-old aspiring actress Ellen Ternan, and suddenly developed "acute restlessness." Later that year, he came to the conclusion that his marriage to Catherine Hogarth had been a tragic mistake despite their 22 years of a presumably happy life together and 10 children. During the summer of the Great Stink, Dickens resolved to separate permanently from Catherine, and he embarked on the first of his famous reading tours which occupied much of his time and energy during the final 12 years of his life. The drama surrounding these developments makes lively reading.

Charles Darwin did not set foot in London during the summer of 1858. In fact, he rarely left his home in Kent. He was working on his theory of evolution by natural selection for more than a decade, but avoided publishing it because of his obsessive drive to get every detail right, as well as anxiety over causing his religious wife to suffer.

On June 18, 1858, Darwin received a letter from his naturalist friend Alfred Russel Wallace. Writing from the East Indies, Wallace described his theory of evolution by natural selection, and attached a short paper. By that time, Darwin had partially completed *The Origin of Species*, but was proceeding in a very slow and cautious fashion. What should he do? He neither wanted to minimize

Russel's contribution, nor abandon his rightful claim to precedence.

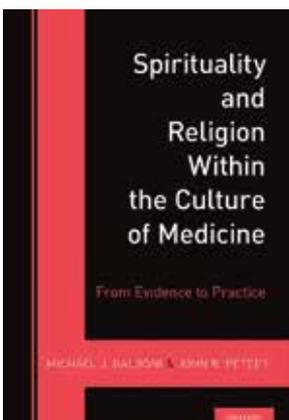
Darwin's friends, Joseph Hooker and Charles Lyell, offered a solution. They arranged for a joint presentation at the Linnean Society on July 1, even though Darwin could not be present. They read two short pieces by Darwin (dated 1844 and 1857) describing natural selection, then followed with Wallace's paper.

Meanwhile, Darwin completed *The Origin of Species*, which was finally published in 1859.

The stories of Disraeli, Dickens, and Darwin are fascinating, and are supplemented by numerous minor characters who share the summer of the Great Stink. Nonetheless, the central literary conceit of *One Hot Summer* is rather strained. While Disraeli was intimately involved with the social and political consequences of the sewage catastrophe, Dickens and Darwin had no impact on the situation. Dickens smelled it, but was otherwise occupied. Darwin spent his summer far from the scene. Likewise, minor characters, like Wilkie Collins and Karl Marx, have nothing to say about the stink. However, none of this detracts from the enjoyment of reading *One Hot Summer*. Rosemary Ashton is a fine storyteller, and she has engrossing stories to tell.

Dr. Coulehan is a member of *The Pharos* Editorial Board, and one of its Book Review Editors. He is also Emeritus Director of the Center for Medical Humanities, Compassionate Care, and Bioethics at Stony Brook University in New York. His E-mail address is:

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Spirituality and Religion Within the Culture of Medicine: From Evidence to Practice

Edited by Michael J. Balboni, and John R. Peteet, MD (AQA, Columbia University, 1973), Oxford University Press, New York, 2017, 432 pages

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

As far as I'm aware, *Spirituality and Religion Within the Culture of Medicine* is the first text for physicians that provides a systemic and comprehensive survey of the role of spirituality in medical practice, from research findings to clinical interventions. As such, it should have considerable impact among the growing number of physicians who believe that patients' religious or spiritual beliefs have an important bearing on their experiences of illness and healing.

Editors Michael J. Balboni and John R. Peteet begin their introduction by observing that an academic text on this topic would have been unthinkable 40 years or 50 years ago. However, since then, at least three factors have reduced the traditional gap between academic medicine and religion. One is the persistence of the existential pain and suffering of illness despite remarkable progress in diagnosis and treatment. The second is the impact of women and minority practitioners on the culture of medicine. And third, is the accumulation of sophisticated studies demonstrating associations between religious affiliation/practice and positive health outcomes.

The editors make clear that their book is designed to be of practical use in managing patient encounters. Religion and spirituality have important implications for good medical care, and are not exclusively the province of chaplains and other clergy.

Part I contains chapters on obstetrics/gynecology, pediatrics, family medicine, psychiatry, internal medicine, surgery, gerontology, oncology, palliative medicine, and other specialties. Part II chapters summarize spirituality and medicine from the perspectives of psychology, sociology, anthropology, law, history, philosophy, and theology. Part III presents a summary and synthesis.

Balboni and Peteet instructed the authors of each chapter to address research findings regarding religion or spirituality pertinent to their field; areas for future research; issues that commonly arise in patient encounters; and best practices in their specialty as they pertain to religion or spirituality. Most chapters include case examples.

Nearly every chapter is informative, well-organized, and competently-written. Categorization by specialty allows the authors to emphasize issues relatively specific to their field, e.g., contraception and abortion in obstetrics/gynecology, or mental disorders in psychiatry. The book serves as a unique clinical resource.

However, compartmentalization by specialty and discipline does lead to weaknesses, both of repetition and fragmentation. Repetition is particularly evident in sections dealing with best practices, where items like active

listening, careful assessment, respect, supportive engagement, and becoming aware of one's own biases and beliefs recur again and again. Fragmentation also occurs. For example, only five of 10 specialty chapters explicitly discuss spiritual assessment or screening tools, like FICA (Faith, Importance, Community, Action), a well-validated four question screening instrument developed by Christina Puchalski, MD (ΑΩΑ, George Washington University, 2009, Faculty), and her colleagues at Georgetown.^{pp285-6}

The volume, variety, and increasing sophistication of research on the association between religion/spirituality and mortality, morbidity, and medical care are striking. The best place to get a handle on the meaning of this literature is Tyler VanderVeele's final chapter, "Religion and Health: A Synthesis." Numerous well-controlled studies have shown that active participation in religion (attendance at services, etc.) is associated with significantly lower all-cause mortality, fewer episodes of depression, and less suicide. Evidence links religious participation with a protective effect against hypertension, cardiovascular and endocrine disease, and lowered immune function. However, there is little evidence that self-reported spirituality, in the absence of actual practice, affects health outcomes. The observed associations between religion and health have been attributed to a variety of factors, including social support, healthy lifestyle, access to social and religious resources, positive emotional experiences, and caring role models.

There is less evidence regarding the possible effect of integrating religion or spirituality into medical care. For example, psychiatric interventions, like cognitive behavioral therapy (CBT), modified to reflect the patient's religious beliefs may yield higher recovery rates than standard CBT. Research has been focused on spiritual care at the end-of-life, where it has been associated with better quality of life and patient satisfaction, as well as less aggressive treatment and lower costs.

VanderVeele also summarizes the results of randomized studies of prayer as therapy, a controversial area of investigation. The results of numerous blinded studies (the patients didn't know they were being prayed for) are mixed. Two sequential meta-analyses performed by the Cochrane Collaboration showed a significant protective effect of prayer on mortality in the first analysis, but not in the second.

There is a chapter on medical education written by Marta Hershkopf, Najmeh Jafari, and Puchalski. The general content of this chapter is to be applauded, however, the practicality of the comprehensive list of competencies

and behavioral objectives (National Initiative to Develop Competencies in Spirituality for Medical Education, Table 13-1)^{pp198-200} is questionable. The list consists of 59 specific behaviors by which spiritual care competence may be assessed. The items range from "Describe methods of reimbursement for spiritual care," to "Demonstrate the ability to be engaged and fully 'present' with patients." Such lists are useful for provoking reflection and discussion, but attempts to implement them as items required to be checked-off by preceptors tends to reduce them to busywork.

In the chapter on surgery, the authors raise the question, "How should you respond when a patient asks you to pray with him?"^{p99} There is a session on spirituality in the Medicine in Society course for first year medical students at Stony Brook, and this question makes for spirited discussion in small groups. While many students are comfortable with the idea of praying with patients, or at least maintaining a respectful silence, some claim that it would be inauthentic for them to pray because they are non-believers. Others feel that prayer at the bedside is somehow unprofessional, or simply impractical because of time constraints. The authors contend that a refusal "should be worded in such a manner as to honor the request....And if the physician does agree to participate in prayer, there appear to be no boundaries violated..."^{p99}

Spirituality and Religion Within the Culture of Medicine is an up-to-date resource for practitioners and medical educators. The book's organization by medical specialty or academic discipline leads to some repetition and fragmentation of material, but overall, its strengths far outweigh its weaknesses.

Dr. Coulehan is a member of the Editorial Board of *The Pharos*, and one of its Book Review Editors. He is also Emeritus Director of the Center for Medical Humanities, Compassionate Care, and Bioethics at Stony Brook University, in New York. His E-mail address is:

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Medicine on the big and small screen: **Grief observed: *Manchester By the Sea* and *Three Billboards Outside of Ebbing, Missouri***

Therese Jones, PhD, and Les Friedman, PhD, Movie Review Editors



Casey Affleck and Lucas Hedges in *Manchester by the Sea*.

© Roadside Attractions/Amazon Studios



Frances McDormand in *Three Billboards Outside Ebbing, Missouri*.

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Reviewed by Therese Jones, PhD

Manchester By the Sea

Starring Casey Affleck, Michelle Williams, Lucas Hedges, Kyle Chandler, Gretchen Mol.

Written and directed by Kenneth Lonergan. Film release January 2016; DVD release February 2017. Rated R. Running time 137 minutes.

Three Billboards Outside of Ebbing, Missouri

Starring Frances McDormand, Sam Rockwell, Woody Harrelson, Lucas Hedges, Caleb Landry Jones.

Written and directed by Martin McDonagh. Film release December 2017; DVD release February 2018. Rated R. Running time 115 minutes.

Philosophers, theologians, artists, and mental health professionals have struggled with how to express and endure the ineffable and intractable human experience of grief. C.S. Lewis chronicles his emotional and spiritual journey following the death of his wife, Joy, in *A Grief Observed*. Lewis was tortured by her death and by his loss of faith in a God whom he refers to as a “cosmic sadist.” He writes of the disorientation and helplessness of grief in which “nothing stays put. One keeps emerging from a phase, but it always recurs. Round and round. Am I going in circles, or dare I hope I am on a spiral? But if a spiral, am I going up or down it?”¹

In *The Year of Magical Thinking*, Joan Didion’s account of loss and her “attempt to make sense” of it, she begins with her husband’s sudden death, “Life changes in the instant. You sit down to dinner and life as you know it ends.”² She turns to literary works, studies on mourning, and even books of etiquette to understand what is happening to her.

Literary scholar Sandra M. Gilbert also turns to the humanities and the arts—history, memoir, poetry, and photography—to explore what she learns is the changelessness of grief across cultures despite indigenous customs and idiosyncratic rituals around mourning. *Death's Door: Modern Dying and the Ways We Grieve* was prompted by the unexpected death of her husband after a surgical error. Gilbert records the shock and disbelief of the event, “Nothing to do because once the calamity has happened, it is, of course, inexorable; it will always have happened.”³ However, she does do something, channeling her personal experience of grief and the search for meaning into a major work that is part literary criticism, instruction manual, and comfort book.

Recently, health professionals have been compelled to think more intentionally about the complexity of the grief experience since the publication of the *Diagnostic Statistical Manual of Mental Disorders, Version 5* (DSM-5) in 2013. What was known as the bereavement exclusion was eliminated by the diagnostic criteria for a Major Depressive Episode, leaving it to clinicians to differentiate between clinical depression and depression in the context of grief. The removal of the bereavement exclusion has been one of the most controversial changes in the DSM-5 with critics arguing that it will medicalize ordinary grief and encourage over-prescription of antidepressants. Supporters argue that there is no clinical or scientific basis for excluding patients from a diagnosis of major depression simply because the condition occurs shortly after the death of a loved one.⁴

The persistence of grief, the hope of respite from it, and redemption because of it, is a theme as timeless as poetic lament and dramatic tragedy. It is also the focus of two recent Academy Award-winning films, *Manchester By the Sea* (2016), and *Three Billboards Outside of Ebbing, Missouri* (2017). In both, it is an especially cruel and particularly devastating kind of loss that precipitates grief: the tragic and violent deaths of children. The various responses of the parent characters, Lee Chandler (Casey Affleck) in *Manchester By the Sea*, and Mildred Hayes (Frances McDormand) in *Three Billboards*, are recognizable touch points along the range of human emotions in such situations—sorrow, guilt, bitterness, anger, exhaustion, confusion, and resignation. However, each character eventually stakes a claim to a singular emotional construct and coping mechanism. For Lee it is a shame so painful that he is effectively mute and nearly paralyzed; for Mildred it is a thirst for vengeance so extreme that she crackles in fury and stomps in rage.

Both films share other similarities including a supporting performance by Lucas Hedges, the nephew of Lee in *Manchester By the Sea*, and the surviving son of Mildred in *Three Billboards*. The writer-directors of both films are playwrights by training, and Irish in ethnicity. *Manchester By the Sea* creator Kenneth Lonergan grew up in the Bronx with a mother who is Jewish and a psychiatrist, and a father who is Irish and a physician. Lonergan jokes about spending his childhood listening to dinner table stories about patients, their personalities, motivations, and psychopathologies.

McDonagh holds dual British and Irish citizenship, and is among the most acclaimed living Irish playwrights. His most successful plays include *The Beauty Queen of Leenane*, set in a small village on the west coast of Ireland; *A Skull in Connemara* in which a man is employed to exhume skeletons in an overcrowded graveyard where he encounters the wife he was once accused of killing; and *A Behanding in Spokane* in which the main character has been searching for his missing left hand for 25 years. McDonagh's characters, including those in *Three Billboards*, are exaggeratedly rural, and gleefully misanthropic.

Both films seem imbued with a Celtic melancholy that is most noticeable in their respective soundtracks. The music of *Manchester By the Sea* provides a counterpoint to the characters' inability to communicate their pain, regret, and love to one another. The film begins with a wordless, harmonized vocal performance that sounds like a children's chorale, and returns at key intervals during the action. Many of the scenes, such as the funeral of Lee's brother, are played solely against music and without dialogue, thereby calling attention to the inadequacy of language, and also to the awkward rituals of bereavement.

McDonagh begins *Three Billboards* with a scene of low-lying fog against the green hills of the Ozark Mountains and the voice of Renee Fleming singing Thomas Moore's *The Last Rose of Summer*. It is then that Mildred stops to peer at the three dilapidated billboards along a lonely road into town and hatches a plan to avenge her daughter's rape and murder.

Finally, both directors successfully employ and exploit the elements of American regionalism. Lonergan's landscape is that of the quaint and picturesque Manchester-by-the-Sea with its anchored trawlers, weather-beaten colonial buildings, endless winter, and stoic townspeople. McDonagh's small town feels less confined spatially with its lush Missouri forests, small businesses, and dusty main street. Its denizens are few and familiar, any of

whom could be lifted right out of a Thomas Hart Benton painting or a Flannery O'Connor story (the owner of the billboard company is reading O'Connor's *A Good Man is Hard to Find* when we first see him).

Manchester By the Sea

Lee Chandler is summoned back to his hometown by the news that his older brother, Joe (Kyle Chandler), has died. Joe was diagnosed with congestive heart failure years before, so his death, while untimely, is not unexpected. What Joe's son, 16-year-old Patrick (Lucas Hedges), and Lee face together might fall under the heading of ordinary grief: sad, but manageable.

However, Lee lives with an extraordinary grief. The control necessary to contain and conceal such pain is frightening, and there are several harrowing moments including when Lee, alone and drunk in a bar, deliberately provokes a fight by throwing a punch at a stranger. His motivation is less about venting this pent-up emotion than about inflicting terrible punishment on himself. Lee carries within him a pointless and unspeakable tragedy which not only prompts self-destruction but also demands isolation.

Viewers first see Lee in his work as a janitor for several apartment buildings near Boston—shoveling snow, dumping garbage, replacing light bulbs, and unclogging toilets. His interactions with residents are fleeting, and his existence is monastic. He lives in a sparsely furnished basement room and moves throughout the building like a silent ghost. The lonely drive to Manchester after the news of his brother's death doesn't really seem to affect him.

Loneragan uses flashbacks to convey narrative detail and provide depth and color to Lee's past relationships with his brother, nephew, and former wife Randi (Michelle Williams), showing him to be a vulnerable, playful, flawed, but loving man. When the fragments of the story begin to snap into place, the source of Lee's anguish is revealed halfway through the film. It is one of unimaginable horror, and viewers then understand his private torture and relentless shame.

Affleck's performance, which won him the Academy Award for Best Actor, is searing and wrenching. Viewers can actually feel his pain in the halting gestures, the blank stares, and the long silences.



Casey Affleck in *Manchester by the Sea*. © Roadside Attractions/Amazon Studios

When Lee learns that he has been named Patrick's guardian he panics. The relationship of reluctant guardian and orphaned teenager turns on moments of clumsy conversations, deep fears of responsibility and abandonment, and comic bickering. Much of the film consists of the daily routines and petty disruptions of ordinary life that happen against the backdrop of catastrophe.

The film grapples with the complexity of forgiveness, of others and of oneself. An ensemble drama, it turns on how one person and one community choose to deal, or not deal, with the consequences of a fatal mistake. In an unforgettable scene between Lee and Randi, she tearfully apologizes for her condemnation of him, her avowal of his responsibility for their children's deaths, and desperately attempts to find some comfort in their shared loss. Viewers see the depth of Lee's suffering, which he cannot speak: "I can't...I'm sorry...there's nothing there." There is much there, but it can neither be articulated nor escaped.

The film does not end with any conventional restoration of family, but it does end with both Lee's and Patrick's awareness and acceptance of how life simply must move through tragedy, loss, death, and remembrance. The final scene of the two fishing recalls the film's initial flashback of a young Patrick being teased by his goofy uncle and his smiling father.

Three Billboards Outside of Ebbing, Missouri

While long pauses and few words are the hallmarks of *Manchester by the Sea*, *Three Billboards* is all about dialogue: the profanities, witticisms, and poetry of small town characters who eschew political correctness. The attention to, and play with, language recalls Shakespeare. The film actually includes a fool, a dwarf, a Falstaffian drunk, and an obsessed hero.



Woody Harrelson and Sam Rockwell in *Three Billboards Outside Ebbing, Missouri*. © Fox Searchlight Pictures

The film also recalls the absurdist tradition of modern drama as the characters, actions, and setting are grotesque. The tone is comic, but the pretext for, and consequences of, the action are tragic. It teeters on the edge of nihilism in which all institutions (law, religion, society) are woefully inadequate or downright corrupt in the face of senseless violence.

One of Flannery O'Connor's most oft-quoted comments is that the truth does not change according to our ability to stomach. The drive toward truth and justice, in the person of Mildred Hayes, becomes the catalyst for old grudges, new losses, long histories, and short bursts of brutality among the residents of Ebbing.

Seven months after the rape and immolation of her daughter Angela, Mildred marches into Ebbing Advertising, plunks down \$5,000 in cash, and rents the billboards with three messages:

"Still No Arrests?"

"How Come, Chief Willoughby?"

"Raped While Dying."

Chief Willoughby (Woody Harrelson) appreciates her action as a grieving mother, but also understands it as a declaration of war in the small town. All matter of mischief is unleashed because of it. The ethical, soft-spoken, and family-oriented Willoughby is dying of cancer, and his dim-witted deputy, Dixon (Sam Rockwell), can't be trusted to respond accordingly or professionally as he is a racist, homophobic, and hot-headed mamma's boy.

The local pastor attempts to persuade Mildred to reconsider, prompting one of the most withering attacks on the venality and hypocrisy of the Catholic priesthood in cinematic history.

McDormand's relentless performance—which won her the Academy Award for Best Actress—of Mildred's

fury, determination, and wit is tempered with quiet, tearful revelations of pure heartbreak. She feels a wrenching guilt when she recalls her off-hand but characteristic retort to Angela who huffs out of the house angry with her mother for not lending her the family car: "I hope I get raped on the way!" "I hope you get raped on the way, too!"

As a murder mystery there is no resolution, and as tale of rural vigilantism there is a hint that something else such

as healing might ultimately prevail. The simple platitude of a bookmark shared by Mildred's ex-husband's 19-year-old girlfriend, "All this anger begets greater anger," recalls the transformative conclusion of Sophocles' *Orestia* in which the righteous vengeance of the Furies, justice through retaliation, is replaced with justice through the law.

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I'm not wearing my glasses.
I just don't care to read the news.

I've no umbrella,
And can wait until the rain stops.

My hearing aids are off.
The place is just too loud.

I've claimed a chair.
No hurry to relinquish it.

My phone is in my pocket—
No twitter app, no texting.

Once accustomed to goals
I've no must do list.

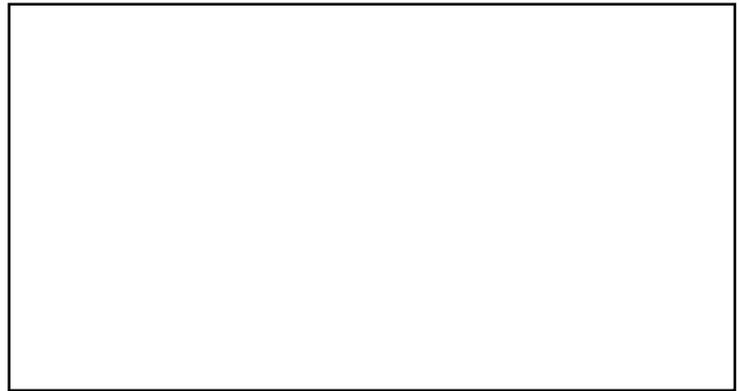
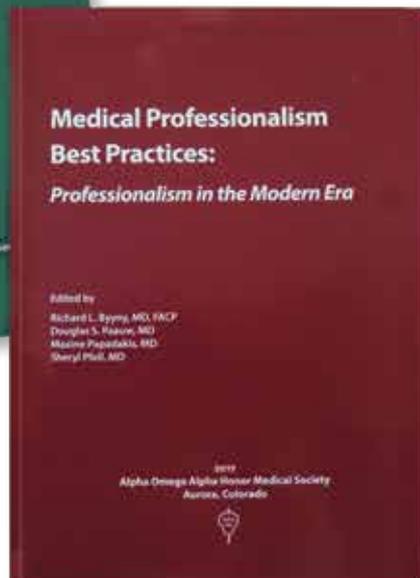
I mull uncertainly.
Deadline carries a different connotation now.

I'm expecting too much
From my caffè Americano.

Raymond C. Roy, MD, PhD

Dr. Roy (AQA, Wake Forest School of Medicine, 2005, Faculty) is Professor Emeritus in the Department of Anesthesiology at the Wake Forest School of Medicine. His address is: Department of Anesthesiology, Wake Forest School of Medicine, Medical Center Boulevard, Winston-Salem, NC 27104-1009. E-mail: rroy@wakehealth.edu





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