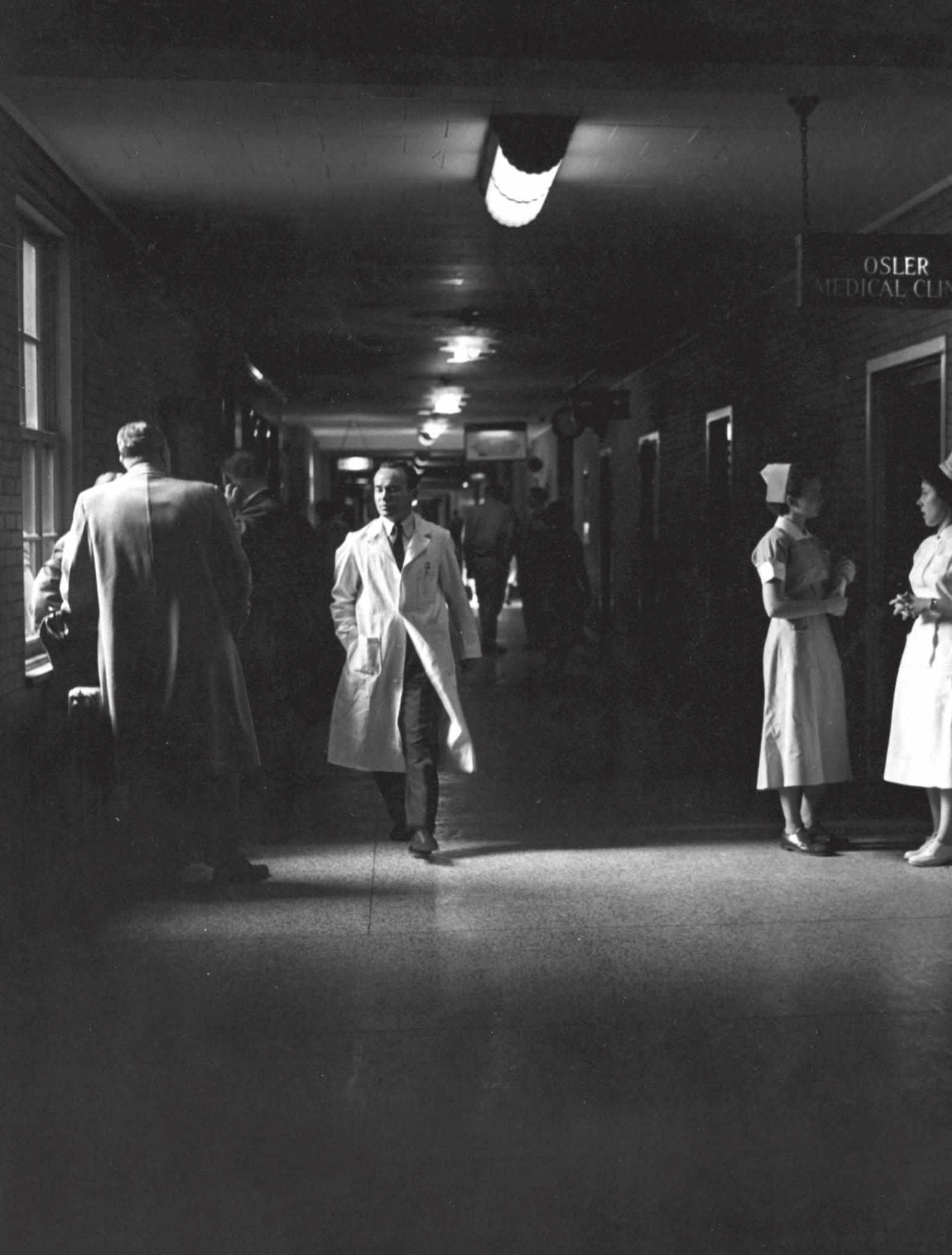

OSLER

Glory days

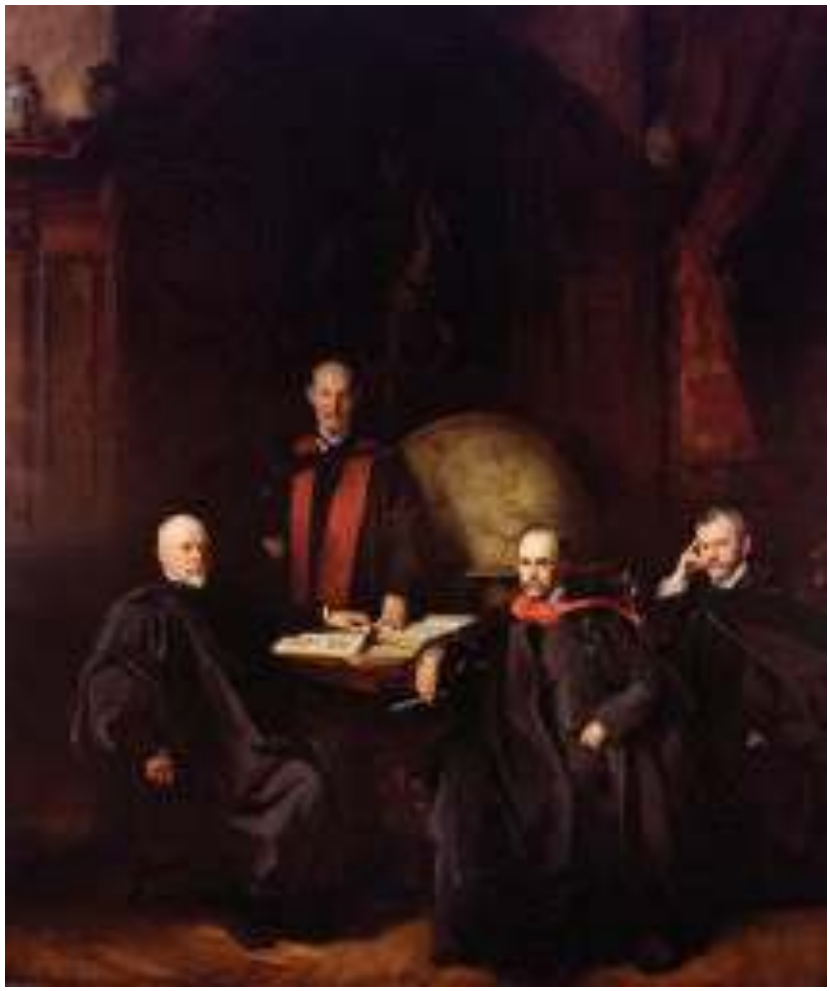
What price glory?

Thomas P. Duffy, M.D.

The author (ΑΩΑ, Johns Hopkins University, 1962) is professor of Medicine at Yale University School of Medicine and director of the Program for Humanities in Medicine there.

In 1888, William Osler, a professor of clinical medicine at the University of Pennsylvania, accepted the invitation of John Shaw Billings, the medical advisor of the university trustees, to become physician-in-chief of the Department of Medicine at the newly established Johns Hopkins Hospital in Baltimore. Osler, age 40, joined three other youthful physicians—pathologist William Welch, age 39; surgeon William Halsted, age 37; and obstetrician-gynecologist Howard Kelly, age 31—in the task of charting the philosophy and working of the Johns Hopkins Hospital and medical

Main corridor in the Osler Building.
Courtesy of the Alan Mason Chesney Medical Archives of the Johns Hopkins Medical Instiurions



Osler, Halsted, Welch, and Kelly—the young Turks, changing medicine.

"The Four Doctors," by John Singer Sargent. Oil on canvas, 1906.
Courtesy of the Alan Mason Chesney Medical Archives of The Johns Hopkins Medical Institutions.

school. They were remarkably successful in establishing an institution that was subsequently characterized by Abraham Flexner as the gold standard of medical education in America, that to which other schools were compared, frequently unfavorably, in the Flexner Report of 1910.[1] Over the course of Osler's 16-year tenure as chief of Medicine at Hopkins, he became the foremost physician of his time and left a commanding legacy in the tradition of medical education and training of young physicians.[2] Osler believed his most important and enduring accomplishment was achieved during his chiefdom at Hopkins, with his role in admitting students to the medical floors where "patients, rather than books alone, could be their teachers of medicine." He requested the epitaph: "He admitted students to the wards." He was committed to the patient encounter as the most important source of knowledge in clinical medicine and established a residency system that allowed this to be realized.[3] Osler's admonition to young physicians to live their lives on the wards was modeled on his own behavior: he occupied a room in the famous dome of the Johns Hopkins Hospital, in close proximity to the wards, for the first three years of his chiefdom, while completing his other legacy, the textbook *The Principles and Practice of Medicine*. Osler's residency training program was modeled on the German system, with residency positions initially filled with members of the graduating classes of the medical school; the original hierarchy of intern, first-year and second-year residents remains the model today. The early residents sometimes served as long as four to six years in this system; this prolonged indenture endures because it often serves as a springboard to prestigious positions in Baltimore hospitals or medical institutions

throughout the country. Although Hopkins was the first medical school in America to admit women on an equal footing with men, a stipulation of the bequest of Baltimore heiress Elizabeth Garrett, the medical school and house staff programs were peopled from the start with almost all white males with a large Southern representation. All were graduates of college, another stipulation of the Garrett bequest; this admission requirement was a prescient move to help guarantee that doctors were broadly educated individuals who could become leaders in their communities. The Oslerian system became the stuff of iron men legends, and its rigor was exported to other schools throughout America. Osler left Hopkins in 1905 to become Regius Professor at Oxford,[4] but his influence on the institution remained firm—a handsome copperplate of Sir William still hangs at the entrance to the Osler building, his countenance and his reputation burnished by careful polishing in his adoring institution.

More than half a century after Osler's tenure, following graduation from Hopkins medical school, I became a member of the Osler medical house staff, one of 22 young men in the group that year. Osler's admonition to physicians to live their lives on the wards was still taken quite literally. Resident physicians, originally housed like Osler in the dome of the hospital, then lived in a one to two block radius surrounding the hospital, overlooking the Bruegel-like back alleys of East Baltimore. From this barracks-like compound, residents took call, trudging back and forth to the hospital during the night to rescue an intern in over his head, an admission that carried a taint of some personal shortcoming. In a moment of candor, one of my co-interns muttered that he thought he had come to residency to be trained, only to discover that he was expected to behave as though he already knew everything. Patients were housed in the Osler medical building, which consisted of five medical floors, each with 30 patients on open wards. The population of each floor was according to gender and color: Osler 2, black male; Osler 3, black female; Osler 4, white female; and Osler 6, white male. The hierarchy of the medical staff paralleled that of the patient populations. The fifth floor, a metabolic research unit, was a desirable rotation because the workload there was less arduous than on the other wards.

Each floor had a defined team of house staff responsible for the patients: two interns and one first- and one second-year resident. This fostered close teamwork with the nursing staff, one of whom, usually the chief nurse, rounded with the house staff each morning, and guaranteed a gentleman's vocabulary on those rounds, as well as providing nursing insights regarding our patients. The nurses brought the sweet treats for the combined physician/nurse chart review every Sunday morning. Admissions were taken in rotation by the two interns with no specified time off save for a half day and night each weekend. One to two admissions each night was the usual volume of patients, with the workload more or less evenly distributed over the whole week. Each patient was thoroughly interviewed and evaluated by each member of the team—there was less confusion about the details of patient's lives than there sometimes was about whether it was night or day. The patients were truly the responsibility of the house staff—no private physicians were allowed to admit patients to this service. (A private medical service, the Marburg service, had its own house staff and its own world.) Attendings assisted the house staff in patient care, but their presence was mainly evident during three weekly attending rounds; the term "visit" aptly

Courtesy of the National Library of Medicine.

Independence and responsibility for the house staff, but with careful scrutiny from above

defined their role. A philosophy that house staff independence was critical for optimal learning guided the program. This was so strongly felt that no physician fees were ever generated for care of Osler ward patients, since fees would have required a larger presence of senior attendings. This was the accepted and fiercely defended trade-off that permitted this independent house staff training system. However, the care was never cavalier, never unmonitored or unexamined. A safety net was built into the system that no longer exists in most programs: second-year residents were seasoned with two-year fellowships following their first residency year. Thus, they brought to the program two additional years of subspecialty training and, just as importantly, two additional years of maturation; they were therefore essentially equivalent to today's junior faculty. Each year of clinical training created an expectation, usually fulfilled, that additional sophistication would be brought to the examination and management of each patient; each exam was expected to uncover some new physical finding or subtle clue that became part of everyone's knowledge of the patient.

A further guarantee of good medical care was the influence and model of Mac—Abner McGehee Harvey, the Osler Chairman of the Department of Medicine—who did daily attending rounds sequentially throughout the four medical

Dr. A. McGhee Harvey, M.D.
Courtesy of the Alan Mason Chesney Medical Archives of The Johns Hopkins Medical Institutions.

After making blood smears, acid-fast stains, and doing urinalyses, the admissions began

floors of the Osler service. Case presentations were rehearsed and given without scripts by nervous house officers or panic-stricken medical students. These professor rounds were choreographed in every detail: the patient was gowned and draped according to a nursing protocol that permitted examination of the entire body without any unnecessary exposure of any part of the body; he was transported in his bed to the classroom that adjoined each floor (the doorways of such rooms were specifically enlarged to permit entry of patient beds for attending rounds); a rounding basket on each floor contained all the instruments necessary for examination of the patient, including a black silk scarf to drape over the professor's head to exclude light during his examination of the patient's retina. Rounds were an occasion to present diagnostic or management dilemmas to the chief—we counted on his wisdom and skills to help resolve our problems while simultaneously educating us. It was the perpetuation of the Oslerian tradition, with each of us building his storehouse of clinical scripts at the bedside and modelling himself in style and hoped-for substance on our respected chief.

Our work was labor intensive, some of it now appearing almost comical. It was an intern's duty to paste the daily lab reports into the medical charts and transcribe the laboratory data to a flow sheet. It was not uncommon for a lab report to be pasted over a consultant's note that had managed to disturb the intern in some way. House staff today carry laptop computers and PDAs to help juggle the reams of lab data and medical information thought essential for modern medical care. House staff of my generation carried their own microscopes, with which they examined each patient's blood smears, urine sediments, and sputum samples. Gaffkey counts, a method for quantitating the density of acid-fast organisms on a sputum sample, were part of every sputum examination. Diabetic ketoacidosis was a condition that spelled certain exhaustion for the house officer; it was managed without benefit of a chemistry laboratory (acetone tablets, glucose strips, EKG monitoring of K levels), and required attention that often extended over 10 to 12 sleepless hours, by which time the next admission was reaching the floor. Peritoneal dialysis for acute renal failure was the responsibility of the intern. This required an hourly switching of the IV infusions and the peritoneal drainings. An hourly alarm guaranteed that neither the intern nor the patient obtained any sleep. Sinclair Lewis's description of Martin Arrowsmith's internship—"he worked 76 hours with half hours of sleep"—certainly describes the Osler intern's life at times. The physical surroundings were also a problem: my shirt was almost always stuck to my back in the sweltering, non-air conditioned wards during Baltimore summers.

An additional challenge in the program was its pyramidal structure, which dated back to Osler's time. Each year of training saw a whittling away of approximately half of the original number. For some, this was a voluntary or even welcome

exiting from a world in which they no longer desired to live. One of my co-interns, now a psychoanalyst, who opted out after one year, described his internship as the most horrible year of his life. Yet his attitude was an uncommon one, with most of the house staff enthusiastic in spite of the constant demands. Residency training was a performance art, with all of us on stage mouthing a script crafted by Sir William at the turn of the century. The rich variety of disease among impoverished Baltimoreans provided us with a heady mix of clinical scripts, amended and edited by first- and second-degree disciples of Osler. Near total devotion of our time and energy to medical training was a *quid pro quo*, the trade-off that allowed us to remain part of tradition, a tradition of excellence in medicine.

I survived the whittling. I triumphed by being singled out to become the Osler chief resident, confidante of the chief, ennobled and indentured. Glory enveloped the chief resident at Hopkins; the honor of receiving the mantle of the legacy of Sir William Osler was the ultimate prize awarded each year to one individual after several years of medical residency training polished off with a subspecialty fellowship. The position allowed for a closely mentored relationship with the chief of Medicine: one met with him six mornings each week to review the problems of the previous day. The chief resident oversaw the house staff care of five wards of predominantly indigent patients. House officers were the patients' physicians and they accepted this responsibility of being available for all but one day of the week. Such immersion would strike any modern house officer as crazed, yet the spirit of the institution somehow sustained an almost superhuman effort. The air of bravado was barely contained by the starched white suits that were our uniforms; the rare female house officer did not dare deviate from this lifestyle.

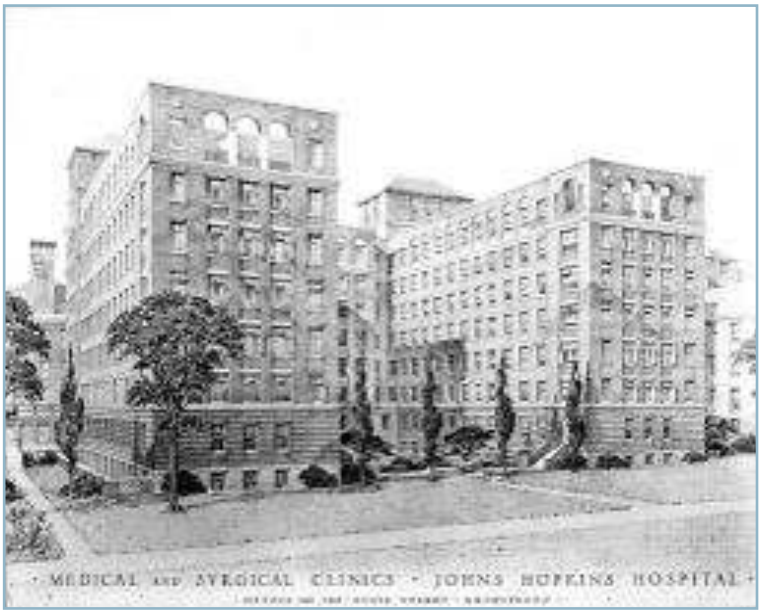
In this setting, the chief residents' tasks were both exhausting and exhilarating. Attention to administrative details filled the day, in addition to providing consultations on the surgical/obstetric service. Evenings were spent rounding through the Osler wards, stopping on each floor to speak about and frequently examine the new admissions to the floor. This latter task constituted the most enviable aspect of the chief resident's position, with its exposure to wonderful young physicians in the thick of learning to care for patients with an astonishing variety of illness. Ministering to these house officers and educating them and medical students, as well as resident rounds three times weekly left little time for a chief resident to sleep or attend to personal needs. Drama, mainly of a tragic sort, surrounded us all. Humor was hospital humor that often had as its target doctors as well as patients. Our lives were consumed with doctoring, a task made more daunting by our reach often exceeding our still-unformed grasps. We were a group of young doctors with near unachievable expectations of ourselves and others, a posture not at all conducive to real fulfillment or to laying a foundation for a harmonious life.

Many powerful memories remain from that chief residency

Being chief resident—exhausting, exhilarating, and a constant challenge for equanimitas

period more than three decades ago. There was the exhilaration in witnessing many diagnostic and therapeutic triumphs, the most fulfilling of the year being the remarkable growth in style and substance of the house staff who were my responsibility. But some memories will always remain more vivid because they represent a violation, a rent in the human fabric in which we were all involved. My most traumatic event had its beginning in a phone call from a nursing student supervisor, asking me to come to the nursing dormitory located across the street from the hospital to visit the room of a senior student nurse who was believed to have taken her life. With feigned calm as a cover for my intense apprehension, I rode the elevator alone and found her room in the dormitory. Upon entering the room, I recognized the young woman as the pretty student nurse who had worked with me in the ICU on a previous evening. She was seated upright in her bed and was dressed in a tan lacy nightgown; a writing pad rested on her lap with a pencil aside her thigh. One might have mistaken her for a sleeping bride except for the rank smell of vomit that soiled her gown and tangled her long hair. Her blueness did not require a physician to confirm that she was dead. My clinical impression led me to diagnose that aspiration was the final event. Her notepad detailed her suicide, with her childish script describing her noble and brave act in choosing death with sedatives. The petering out of her writing on the page documented the loss of consciousness as the sedatives took their effect.

I was joined by the nursing supervisor and agreed to fill out the necessary death forms. She requested one additional duty of me: to search the room for any "objectionable" material. The only item discovered was a photo in the top drawer of the bureau. It was of a young man dressed only in combat boots, holding a champagne bottle in an outstretched arm. His nakedness may have led to the relegation of the photo to the bureau, but the unrestrained joy in his cocky smile and posture redeemed his image. In asking me to search the room, I had been asked to



Architectural drawings of the medical and surgical clinics of John Hopkins Hospital.
Courtesy of the Alan Mason Chesney Medical Archives of The Johns Hopkins Medical Institutions.

sanitize the young woman's life as well as her death.

This took place early on a Saturday morning, the day each week that medical grand rounds took place. These formal rounds in the medical amphitheater represented a documentation of the Hopkins medical community's aspirations and triumphs. Sanitized versions of cases of the week were presented from memory by well-rehearsed house officers, and the details of the diseases were thoroughly discussed by the medical staff experts. As the chief resident, these ceremonies were my responsibility, conducted with a phalanx of house staff in their white uniforms in attendance at the front of the hall. That morning, I joined this assembly in time to introduce the cases and sit beside my mentor in the first row, basking in his reflected eminence and expunging all taint of my mission of only a few moments before. My duty had been admirably performed; it was now time to switch into my imperturbable chief resident persona and address the tasks at hand. I was caught up in the drama of the wards unfolding in the lines voiced in the grand rounds; I gave no voice of my own to the self-inflicted death of a nurse colleague, and never pursued the details of her death nor its impact upon others. Was she overwhelmed by what we all witnessed? Was she pregnant, a condition that would have ended her nursing training? I didn't ask any of those questions to myself. To explore its effect upon me was not an option I chose to pursue at the time; *æquanimitas* was a "virtue" we had inherited from Sir William.

The failure to acknowledge so devastating an event appears so callous in retrospect, with the magnitude of the omission highlighting the destructive fashion in which we were formed into professionals. The environment was not uncaring, and the deliberate independence granted house officers was recognized as one of the most positive features of a program that attracted many of the leading graduates of medical schools throughout the country. It was not unsupervised independence, although the supervision was most frequently performed by residents only one or two years further along in training. Survival techniques necessarily included some stonewalling of patient admissions, and aggressively discharging patients to keep manageable the task of the house officer. There was an admirable gentlemanly decorum that echoed somewhat the Southern tone and location of Hopkins, and the origins of many of the senior staff. These gentlemen did not complain, but lived lives of quiet distinction and accomplishments. The black humor of modern medical training was not yet in evidence; the equating of medicine with a monastic calling was a proper assessment of the program, and the attendant demands of that vocation were accepted as part of the same territory.

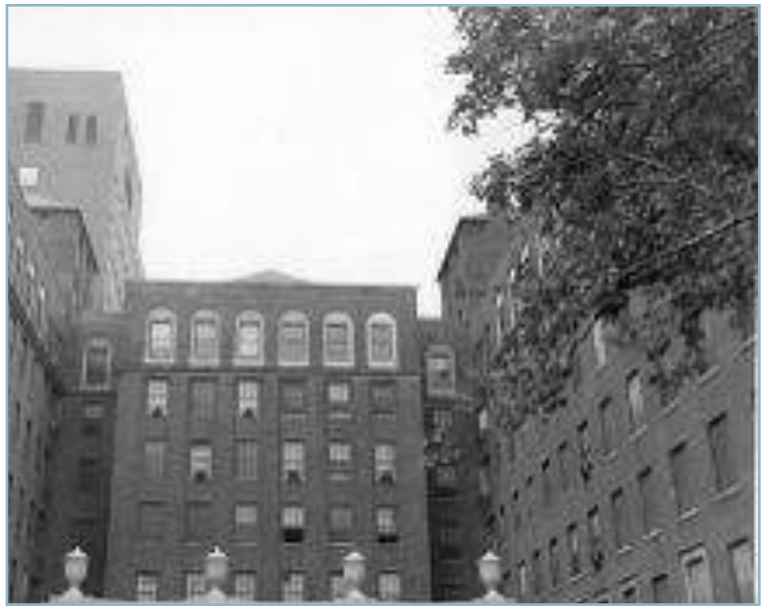
The nursing school incident is not the only memory that remains vivid—other personal encounters with tragedy will also never be erased. A young woman in my care leapt to her death from a third-story hospital room shortly after I had placed her in isolation with a diagnosis of pulmonary tuberculosis. My elation at having made a swift diagnosis of tuberculosis on the basis of an examination of her sputum smear had blinded me to what such a diagnosis meant to that frightened woman. I ministered to a group of numbed house staff on the first night of my chief residency, when a diabetic

Tradition prevented admission of moral or emotional distress

adolescent died acutely following a lumbar puncture made by the intern on the team; the shock of her death was compounded by the possibility that we had caused it. We did not acknowledge the impact of such events upon our emotions; we distanced ourselves by resorting to a scientific analysis of the problem that had led to the sorry outcome. We learned our lesson regarding lumbar punctures in diabetes, but we did not discuss or even consider the impact of such punctures upon our own lives in medicine. One evening, I saved an elderly gentleman's life by rapidly recognizing that an esophageal

balloon had migrated from its proper position and was now blocking his airway. When the balloon did not deflate with cutting of the tubing, I straddled the patient, and, with my knee to his chest, took his nasal septum and several units of blood in the process of removing the still inflated balloon. This happened in the middle of the night when no one else was on the floor. I was not sorry that duties kept me up all night, since his tormented eyes would have kept me awake a long time.

One might conclude that such traumas are eventually forgotten and leave no scars. Sir William Osler's prescription of detached concern in the doctor-patient relationship should be good preventive medicine in not allowing such events to disturb our fabled *æquanimitas*. There are hints, however, that the accumulation of these encounters, especially when unacknowledged and unshared, resulted in tragedy for some of the physicians who experienced them. A high incidence of alcohol and drug addiction among all physicians is attributed to the stress of their lives and the ready availability of drugs. A longitudinal study of Hopkins medical graduates documents a significantly increased incidence of suicide among them, a dark side of the profession that has not received the examination it deserves.[5] Perhaps the burden of threatening medical encounters ultimately becomes a source of such disequilibrium that life becomes unravelled. The burden may become unbearable for those who internalize the trauma, who become caught up in the rituals of grand rounds inside and outside the hospital.



Osler Medical Building, view over Hurd Hall.
Courtesy of the Alan Mason Chesney Medical Archives of The Johns Hopkins Medical Institutions.

The rigor and demands of such training were not unrecognized. It was generally accepted that house staff training provided a safe environment in which a young doctor could and even should be pushed to his limit. This was part of the maturing experience, to learn one's limits while part of the close supportive community of house officers. Few individuals reached this crisis point in training, although some elected to leave the program for less demanding sites; no formal attention to the toll of house training was then in place. There was also a conspiracy of silence, a very stiff upper lip, which characterized the surroundings; to complain would have reflected poorly upon a tradition in which we were heavily invested. Many considered the stakes to be worth the trade-off. The graduates of the program were superbly trained in internal medicine, and most went on to very successful careers; we accepted the privations to remain members of this exclusive club, with the hoped-for expectation of admittance to even more privileged realms. We were captive to our dreams and remained remarkably accepting of our own self-torture.

The serenity that a posture of *æquanimitas* and detached concern should have permitted us was illusory; it was not possible to erase all memories of the large number of tragic encounters that occurred over the course of several years. These memories remained like faint images on the chalkboards of our psyches, and, with their accumulation over time, took up more space and became more emboldened on those boards. We misled ourselves in thinking that we had mastered what devastated others. Even more, we failed to consider what was the impact of these experiences upon ourselves and our loved ones. The trauma may have had effects that are still not recognized.

At the same time that we were engaged in house staff training and becoming equipped with the skills to wage a war on illness, a real war engaged our country. In the aftermath of that war, the invisible wounds that were created by its trauma became a recognized psychiatric entity, post traumatic stress disorder (PTSD).[6] The first criterion for its diagnosis was exposure to an event or events that are outside the range of usual human experience and that would be markedly distressing to almost anyone. In addition, this exposure needed to be accompanied by a strong emotional reaction such as fear, terror, or hopelessness. There also was a dose-response character to PTSD—the greater the exposure, the greater the likelihood of subsequent development of the disorder. The ingredients for the creation of this syndrome certainly were repeatedly present in our lives; perhaps some were more vulnerable than others, as the literature suggests is the case for this syndrome. The symptoms of severe anxiety, panic attacks, rage, depression, and substance abuse destroy the lives of veterans who have witnessed or participated in the atrocities of war. The illness does not occur until after an interval following the causal events; there is a period of intervening numbness before lives are distorted and often destroyed by this aftermath of trauma. More recently, it has been documented that PTSD occurs after bone marrow and cardiac transplants, and in firefighters and medics who have been exposed to traumatic events. It does not seem at all unlikely that doctors, especially young doctors, might experience the same illness with their repeated exposure to the tragedies of their patients' lives, in circumstances that are not unlike a battle zone. The concentrated intensity of house

Were house staff immune from post traumatic stress disorder?

officer training may, with its camaraderie, hold the volcano of unacknowledged feelings in check; years after the events, and when the protective cover of life in the trenches has worn off, when one no longer sits in the front of the amphitheater with one's chief, the residual dust may cloud the joys and accomplishments that a life in medicine should allow.

Today, house staff training programs have eliminated the exhausting work schedule of the past and support is in place to ensure that learning outpaces service during this period. Still, the concentration of pathology in certain subspecialties such as oncology and the emergency room may produce the circumstances that flirt with PTSD. Another corrective in place is the result of a larger presence of women in medicine; Elizabeth Garrett's ideas have become the reality, with a taming of the macho style that an all-male environment tended to sustain.

Self-preservation: learning to be detached from oneself

There now is a greater willingness to acknowledge the impact of suffering and tragedy upon one's self and to dispense with the stiff upper lip behavior that was previously the norm. This is important, since the only documented means of preventing the stress disorder is to share the stories of the threatening events. The failure to capitalize upon such a simple resource may seem strange, but one must remember that self-awareness and self-examination are not the strong suit of most physicians, who tend to turn their gaze upon others. The real detachment may be from themselves.

The picture that emerges from looking back at the Oslerian system, at looking at any physician training program, is its resemblance to an image described by Calvin Trillin concerning graduates of Yale.[7] Everyone leaves the days of college glory with a backpack that most anticipate will become heavier as they garner the rewards that Yale and hard work prepared them for. An exaggerated sadness awaits those whose backpacks became lighter as they grow older—the glorious days are fewer, the golden days are the college experience. The days of Oslerian training were glory days, but at what price? Some souls were splintered, their backpacks emptied; hopefully their owners became wounded healers. For some, their spirits were broken and perhaps never annealed. Others, like me, continue to wonder what is the best balance, but take some solace in receiving letters from my interns 25 years later.

"You cannot imagine how many times I look back at a case and wonder if I would have gotten the diagnosis and treatment so well worked out if I had not felt you somewhere in my subconscious. . . . That comes directly from those late night residency rounds with you. Thanks." This is a message that has been thought throughout the Oslerian tradition—a bittersweet, rusted reminder of the days of iron men.[8]

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The author's address is:
Yale University School of Medicine
333 Cedar Street, WWW 4
P.O. Box 208021
New Haven, Connecticut 06520
E-mail: thomas.duffy@yale.edu