



Thirty-Sixth Annual Meeting
American Osler Society

The St. George Hotel
Halifax, Nova Scotia
Monday to Thursday, 1 to 4 May 2006

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of the
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American Osler Society

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Some Overall Learning Objectives

1. *Medical Ethics*. Delineate streams of thought regarding medical ethics. Assess methods of teaching medical ethics during William Osler's era and the present era, and discuss their effectiveness. Define "neuroethics" and its implications for the emerging neuroscience.
2. *Medical Professionalism*. List and discuss at least three exemplars of medical professionalism from previous eras. Explain why John Gregory is a key personage in the evolution of medical professionalism. Cite recent examples of medical professionalism, including the Hurricane Katrina experience.
3. *Medical Humanities*. Give at least three examples of how art, literature, poetry, and music can inform the practice of medicine. Explain with illustrations how our understanding of disease and its treatment is often culture-dependent.
4. *Medical Education*. Discuss William Osler's public support and private ambivalence for women in medicine. Trace the career of Maude Abbott, an Osler disciple who pioneered the scientific study of congenital heart disease. Explain Osler's influence on medical education in England and Wales.
5. *Medical Research*. Review ethical considerations in research, especially those pertaining to children. Illustrate barriers toward disseminating research findings to patient populations with examples such as polio vaccination, cardiac surgery, and organ transplantation.

Monday, 1 May 2006

- 3:00-5:00 pm Readings (FRANCIS A. NEELON, organizer)
5:30-6:30 pm Committee on Professionalism Meeting
7:00-9:00 pm Board of Governors Meeting

Tuesday, 2 May 2006

General Session No. 1 (CLAUS A. PIERACH, Chair)

- 7:45 CLAUS A. PIERACH
Welcome and Announcements
- 8:00 JEREMIAH A. BARONDESS
Osler and Medical Ethics
- 8:20 MARGARET P. WARDLAW AND DAVID M. RIDER
The Primacy of the Interpersonal: William Osler and Women Students at the Johns Hopkins Medical School
- 8:40 SANDRA W. MOSS
Joseph William Strickler: The Man Who Would be Jenner
- 9:00 ALAN MENTER AND GEORGE E. OSLER
The South African Osler Connection (Osler of the Cape)
- 9:20 DAVID DIAZ
William B. Bean Award Studentship
Trains and Trauma: Exploration of a Nineteenth Century Neurosis
- 9:40 REFRESHMENT BREAK
- 10:10 THOMAS A. BENEDEK
The Environment of Osler's Writings on Endocarditis
- 10:30 ARTHUR GRYFE
Improving Leprosy Management in Canada: Newly Discovered Osler Letters
- 10:50 CHRYSSA McALISTER
Healing Hands: A Review of Paul Brand's (1914-2003) Contribution to Leprosy Research and Treatment in the Twentieth Century
- 11:10 JOSEPH J. FINS
John P. McGovern Award Lectureship
A Leg to Stand On: Wilder Penfield's "Neuroethics"

Noon

LUNCHEON

General Session no. 2 (T. JOCK MURRAY, Chair)

1:00

SIMON HANFT

William B. Bean Award Student Lectureship

The Unpoetical Poet: Keats, Medicine, and the Poetry of William Carlos Williams

1:20

DANIEL MORGAN

The Complex Bond Between the University of Michigan and the Success of the New Johns Hopkins School of Medicine

1:40

MARK E. SILVERMAN

The Hoary Tradition of the Gold Headed Cane

2:00

R. DENNIS BASTRON AND LAWRENCE McCULLOUGH

What Goes Around, Comes Around: John Gregory and the Profession of Medicine

2:20

JANET MURRAY

Lady Aberdeen, A Victorian Woman of Vision and Action

2:40

REFRESHMENT BREAK

3:10

J.T.H. CONNOR

Good Doctoring: Robertson Davies's *The Cunning Man*, Sir William Osler, and Sir Thomas Browne

3:30

WILLIAM FEINDEL

Osler Vindicated: Glioma of the Leg Centre with Jacksonian Epilepsy: Surgical Cure

3:50

SHANNON MURRAY

"Dammit, Jim, I'm a Doctor!" The Physician in Education

4:10

JOHN C. CARSON

"Three of My Special Medical Books ... I Should Like to Feel That They are with You": Osler's Bedside Library and Mabel Tremain Brewster

4:30

MARVIN J. STONE

Maxwell Wintrobe, the Hematologist from Halifax

4:50

RICHARD J. KAHN

The Widow's Island Yellow Fever Quarantine Hospital in Penobscot Bay, Maine, 1885-1904: A Medical, Political, and Social History

5:10

ADJOURN

General Session No. 4 (JOSEPH W. LELLA, Chair)

- 1:00 **SERENA TAN**
William B. Bean Student Award Student Lectureship
Lu Xun, Doctor of the Spirit
- 1:20 **DAVID K. C. COOPER**
The Seeing Finger: The Story of Closed Mitral Valvulotomy
- 1:40 **WILLIAM R. DUNCAN**
Rupert E. (Bill) Billingham: From Transplantation Tolerance to Maternal-Fetal Interactions in Cattle to Armadillos
- 2:00 **NEIL MCINTYRE**
A Tale of Two Cities: Osler's Influence on Medical Education in London and Cardiff
- 2:20 *REFRESHMENT BREAK*
- 2:50 **BRYANT BOUTWELL**
Hurricane Katrina Assistance: Stories that Would Make Sir William Proud
- 3:10 **JOCK MURRAY**
Dr. Abraham Gesner, Father of the Petroleum Industry
- 3:30 **DARRYL BINDSCHADLER**
From Chocolate Agar to Near Nobel
- 3:50 **JOHN W. K. WARD**
William Osler and the Palace in Pall Mall
- 4:10 **JOHN NOBLE**
An Account of the Epidemic Catarrh of the Year 1782
- 4:30 **CHARLES T. AMBROSE**
Osler and the Almshouse Safe: An Account of God's House at Ewelme
- 4:50 *ADJOURN*
- 5:30 *BUSES BEGIN LEAVING FOR PIER 21 SOCIETY*
- 6:00 *RECEPTION, PIER 21*
- 7:00 *BANQUET, PIER 21*

5:30

BUSES BEGIN LEAVING FOR RECEPTION AT THE CITADEL

Wednesday, 3 May 2006

7:30

Annual Business Meeting of the American Osler Society
(CLAUS A. PIERACH, Presiding)

General Session no. 3 (FRANCIS A. NEELON, Chair)

8:00

PHILIP W. LEON
Osler and John Donne: Musings on Suicide

8:20

CHRIS GEDDES AND VIVIAN McALISTER
A Surgical Review of the Priority Claims Attributed to Abraham Groes (1847-1935),
Osler's Toronto Classmate

8:40

ROBERT G. MENNEL
Julia Dempsey: Her Nodule, the Mayos, and St. Mary's Hospital

9:00

PETER WARREN
"Too Shocking for General Perusal": Public Accessibility to a Surgeon's Record

9:20

ROBERT R. NESBIT, Jr.
Osler and Vascular Disease

9:40

REFRESHMENT BREAK

10:10

LEE HAMPTON
William B. Bean Award Student Lectureship
Albert Sabin and the Western Hemisphere Polio Eradication Campaign

10:30

J. O. BALLARD
Love of Blood: Discovering the Cause and Treatment of Hemophilia

10:50

ROBERT A. KYLE
Henry Bence Jones, Physician, Chemist, Scientist, and Biographer: A Man for All Seasons

11:10

CLAUS A. PIERACH
President's Lecture: Admission to Medical School, Then and Now

12:00

LUNCHEON

Thursday, 4 May 2006

General Session No. 5 (CHARLES S. BRYAN, Chair)

- 8:00 CHARLES F. WOOLEY
William Osler: A Clinical Historian Straddling Two Centuries
- 8:20 RALPH G. GORDON
Daniel Hale Williams: Moses to African-American Medicine
- 8:40 CHARLES S. BRYAN
Gloria in Absentia: The James Carroll Papers and "The Myth of Walter Reed"
- 9:00 ROBERT I. LEVY
Sir William Osler—A Departure from his Reputation as a Therapeutic Conservative:
The Treatment of Bright's Disease
- 9:20 ALLEN B. WEISSE
On First Looking into Jarcho's Leibowitz: The Clinician as Medical Historian
- 9:40 REFRESHMENT BREAK
- 10:10 CLAIRE HOVERMAN
William B. Bean Award Student Lectureship
The Art of Medicine: Teaching Diagnostic Proficiency and Medical Education through
Visual Art
- 10:30 ALAN N. SCHECTER
Is the Post-Osler Era of Biomedical Research Over?
- 10:50 FRANCIS A. NEELON AND JOHN LAZLO
The Last Professor of Medicine: Eugene Anson Stead, Jr.
- 11:10 C. JOAN RICHARDSON
Maudie of McGill: The Madonna of Hearts
- 11:30 HERBERT M. SWICK
The Music of the Pulse: Gems from the Osler Library
- 11:50 LAUREL E. DREVLOW
Dr. David Livingstone and the Open Sore of the World
- 12:10 MICHAEL BLISS
Cushing Reconsidered
- 12:30 ADJOURN

Osler and Medical Ethics

JEREMIAH A. BARONDESS

Jeremiah A. Barondess is President of the New York Academy of Medicine. He has had a long and distinguished clinical career in academic medicine and has written extensively on education and ethical issues in medicine and on the priorities of the medical profession.

William Osler was the clinical avatar of his time. Clinical medicine was the central orientation of his professional life, and provided the foundation for his wide ranging interests in the roots and the essential nature of medicine.

The “medical ethics” of Osler’s time possessed, with regard to relations between physician and patient, a strongly vertical flavor, a flavor, as Albert Jonsen has noted, of *noblesse oblige*, in sharp contrast to the ethos of the Knights Hospitallers of St. John of Jerusalem which invoked a duty of service to the sick, “as if they were serfs to their Lords.” This contrast between the two sets of priorities plays out even now, as medicine is increasingly embattled. There is pressure on the profession to protect itself and its status, potentially interfering to some extent with traditional concerns with the welfare of the sick.

Osler wrote very little specifically having to do with medical ethics, either in terms of the doctor-patient dyad or with medical etiquette. On the other hand he insisted in his many contacts with the young in medicine, and with others, on a noble conception of the role of the physician and on the importance of a sense of self sacrifice, devotion and tenderness to one’s fellow men. In effect, his stance might be encapsulated as a virtue-based *noblesse oblige* in the more or less traditional sense, with hints of the service obligation made explicit by the Knights Hospitallers, which is to say a somewhat *ex cathedra* beneficence and benevolence interwoven with humanism.

The current relevance of these issues should lead us to consider carefully how we are thinking about these issues, how we are transmitting what we think, and how medicine can more effectively find and act on its priorities.

This paper will seek to explore each of these issues.

Learning Objectives:

1. Delineate traditional streams of thinking with relation to medical ethics.
2. Examine and discuss William Osler’s formulations of the nature and responsibilities of medicine on the one hand and the medical ethics of his time on the other.
3. Evaluate and appraise the manner and effectiveness with which we are thinking about and teaching central ethical issues in medicine at the present time.

Joseph William Strickler: The Man Who Would be Jenner

SANDRA W. MOSS

Sandra W. Moss, a retired internist, is a past president and longtime program chair of the New Jersey Medical History Society. Her research interests center on nineteenth-century American medicine and on the medical history of the Garden State.

At the turn of the 20th century, antivivisectionists and medical researchers engaged in a prolonged and acrimonious battle over the practice of experimentation on human beings. Understandably, the use of children in non-therapeutic medical experiments was an incendiary topic in the debate. Leading physicians such as Welch and Osler believed that ethical behavior was fostered by the training, experience, and professional milieu of the responsible researcher and they publicly opposed the slippery slope of regulation by non-physicians. A few “regrettable transgressions” did not cancel out the benefits of human experimentation.

One of the archfiends of medical experimentation in the view of leading antivivisectionists was Joseph Stickler. A graduate of the College of Physicians and Surgeons, Stickler considered himself a disciple of the leaders of European laboratory and clinical bacteriology. It is unclear why he took a post as staff pathologist in provincial New Jersey, setting up a laboratory for “diagnostic and pathological research” at Orange Memorial Hospital. In the 1880s, Stickler became convinced that the causative organism of foot and mouth disease in cattle was related to (or possibly identical to) the organism of scarlet fever, a major childhood scourge. He tested his theory on approximately 30 children in the mid-1880s. In addition to administering his experimental vaccine, he transmitted scarlet fever to children by direct exposure to secretions or by hypodermic injection. He published his results in the leading New York medical journals of the day and presented his findings before the New York Academy of Medicine. Stickler was among the first American physicians to administer Koch’s ill-fated tuberculin to patients.

Stickler’s publications on a range of infectious disease topics reveal an energetic, driven, man who was not without compassion. Colleagues believed that his obsession with finding a vaccine for scarlet fever led to his suicide in 1899. In 1914, a prominent physician conceded that Stickler’s work was an unfortunate exception to the rule that experimenters were qualified to proceed ethically without formal oversight or external controls. Although Edward Jenner may have been justified in challenging a cowpox-immunized child with live smallpox in 1796, such methods were not acceptable in the 1880s when Stickler challenged recipients of his foot and mouth vaccine with live streptococci. Stickler, concluded the physician, had been mentally ill and obsessed with joining the pantheon of the immortal medical benefactors of mankind.

The proposed talk considers the immediate response to Stickler’s work by colleagues and editors, the scope of research on children in the late nineteenth century, the nature of consent for research involving children, the debate about the use of subjects such as orphans and hospitalized children, the hazy line between therapeutic and non-therapeutic experiments/trials, and the particular and arguably necessary role of children in vaccination research. Stickler’s work is put in perspective by later experiments by other researchers who attempted to transmit scarlet fever to healthy children; examples of such experiments appeared in the American medical literature as late as the 1930s. Stickler turned out to be wrong, of course about the relationship between foot and mouth disease of cattle (viral) and scarlet fever (bacterial). Gerald Gieson, biographer of Louis Pasteur, has pointed out that experimentation involving humans has been more easily accepted if the premise proved to be correct and the practical benefits of the research were great.

Learning Objectives:

1. Explain the ways in which research on children carries special ethical concerns.
2. Describe how physicians justified research on humans in the face of public criticism.
3. Discuss the role of journal editors in judging the ethics of medical experimentation.

The Primacy of the Interpersonal: William Osler and Women Students at the Johns Hopkins Medical School

MARGARET P. WARDLAW AND DAVID M. RIDER

Margaret P. Wardlaw is a second year medical student at the University of Texas Medical Branch on Galveston Island, TX. She is a recipient of the John P. McGovern Student Scholarship in Oslerian Medicine, as well as the McGovern Academy's essay award for 2005. She plans to pursue a career in obstetrics and gynecology. David Martin Rider is a fourth year medical student who has also received the distinction of Osler Student Scholar from his faculty at the University of Texas Medical Branch at Galveston.

On May 2, 1890, in the face of a funding crisis for the establishment of Johns Hopkins Medical School, four single, wealthy Baltimore women stepped forward. They established the Women's Fund Committee, pledging to raise \$100,000 towards the University's endowment on the condition that the school offer admission to women on equal terms with men. The board of trustees accepted the offer, and when the medical school opened in 1893 William Osler became one of the few physicians in the country teaching female medical students. Anxious to see Johns Hopkins Medical School open its doors, Osler publicly supported the Women's Fund and the idea that medical education should be an option for women. However, Osler also reflected the cultural attitudes of his time: he believed that women were better suited for domestic roles and that as physicians they would not be able to fulfill their true natures. Osler often vocalized these feelings to his female students, even suggesting to Dorothy Reed that she not apply for medical school at all. In spite of his vocal opposition to their career goals, Osler's female students tended to have the utmost regard for him. Reed was not alone in viewing Osler as an inspiration and role model for her practice; she also found him personally encouraging and supportive. The key to understanding this paradox lies in William Osler's fundamental approach to human interaction. Just as his revolutionary teaching style placed the doctor-patient relationships at the center of medical education, so the primacy of interpersonal relationships in his student-teacher relationships allowed him to transcend attitudes about the appropriate social order.

Learning Objectives:

1. Account for William Osler's ability to rectify his cultural attitudes about women in medicine with his personal mentorship of female students.
2. Explain the complex social pressures facing early women medical students.
3. Analyze how Osler's fundamental focus on the interpersonal was the foundation of his success in educating female medical students and caring for patients.

The South African Osler Connection (Oslers of the Cape)

ALAN MENTER AND GEORGE E. OSLER

Dr. Menter, who will present this paper is chief of the Division of Dermatology at Baylor University Medical Center and Clinical Professor at the University of Texas Southwestern Medical School, Dallas. He is also president of the International Psoriasis Council.

The British settlement of South Africa began in 1820. Among the first families to step ashore were Benjamin Osler, his wife Jane, and children, arriving with a group of 32 people. Benjamin's nephew, Featherstone Lake Osler (son of his elder brother Edward), had left England to settle in Canada. One of his nine children was Sir William Osler. A wealth of history is available on the South African Osler connection, with family members still prominent to this date, particularly in the Cape Town portion of South Africa. A review of the South African Oslers has previously been presented in the United Kingdom. I have been in close contact with Dr Osler, who has kindly sent me a great deal of material relating to the South African Osler family, which I will summarize.

Learning Objectives:

1. Describe the origins of the South African Osler Family.
2. List the South African medical Oslers.
3. Explain the importance to South Africa of the Osler family's rugby activities.

William B. Bean Award Student Lectureship

Trains and Trauma: Exploration of a Nineteenth Century Neurosis

DAVID DIAZ

David Diaz is an intern at Pennsylvania Hospital, in Philadelphia. This July he begins an ophthalmology residency at Washington University in St. Louis. Prior to working in medicine, Dr. Diaz taught middle and high school history; he holds a BA and MA in American history from Yale.

In 1866 an English surgeon named John Erichsen described the ailment of “railway spine,” a diagnosis found in railway travelers that encompassed a variable constellation of exhaustion, distraction, weakness, pain, and paresthesias. Some sufferers had been involved in train accidents, but the majority had simply taken uneventful journeys. Most patients bore no marks of physical injury, yet their health had plainly declined. The problem, Erichsen argued, stemmed from “a concussion of the spine,” occasioned by the unprecedented speed of railroad travel.

Modern psychiatry would view “railway spine” as a blend of the post-traumatic stress and conversion disorders. Erichsen’s diagnosis apparently captured the first Industrial Age incarnation of these problems. Against the calm of an agrarian society, the train was a new magnitude of machine that introduced a new magnitude of peril: locomotives ran down pedestrians, cars tumbled over embankments, trains collided and burned, and bridges collapsed with appalling regularity. And beyond these physical dangers, the railroad embodied a sort of “cultural danger,” a transformative technology that literally and figuratively trampled the fabric of pre-Industrial life. For some, this combination of physical hazard and cultural upheaval induced powerful psychological reactions.

The number of sufferers grew rapidly, and the illness became a large legal problem, as ailing passengers sued train companies for damage verdicts. The disorder remained a topic of medical debate for nearly four decades. Lacking tools of modern psychology, however, mainstream physicians never escaped Erichsen’s theory of somatic etiology, nor did they develop effective therapy.

The most insightful understanding of railway spine emerged from surprising quarters. The National Association of Railway Surgeons was an organization of American physicians hired by railroads to care for workers and passengers. Although pressured by their employers to dismiss patients as malingerers, the railway surgeons came to understand that powerful forces of suggestion and anxiety underlay the disease. Ultimately, they argued that the problem was “made by suggestion [and] can be treated by suggestion.” This was a strikingly progressive view—essentially a synthesis of experiments from Charcot with the railway surgeons’ observations from thousands of patients—anticipating fundamental aspects of modern psychological theory. At the same time, the problem of railway neuroses faded, remedied by a combination of improved safety and cultural adaptation to the modern era.

Learning Objectives:

1. Discuss how that “railway spine” was probably the first Industrial Age manifestation of post-traumatic stress disorder.
2. Explain why the railroad produced powerful psychological reactions.
3. Evaluate the surprising and powerful paradigm shift achieved by the Railway Surgeons.

The Environment of Osler's Writings on Endocarditis

THOMAS A. BENEDEK

Thomas G. Benedek is a rheumatologist and professor emeritus, Department of Medicine, University of Pittsburgh School of Medicine, and is also past president of the American Association for the History of Medicine. He has spoken previously on Osler's writings on lupus erythematosus and typhoid spondylitis.

In 1878, when the 29-year-old pathologist, William Osler, became interested in "endocarditis," the disease was not clearly defined and its etiology was unknown, although "micrococci" had just been identified in heart valves in this rapidly fatal disease. In his first article on the subject, in 1881, Osler confirmed that micrococci were present on deformed heart valves in all of six patients. In subsequent publications he expanded his autopsy observations to 23 cases, with the findings remaining consistent. However, the micrococci could not be further identified and he was reluctant to ascribe pathogenic significance to them. In his Gulstonian Lectures on endocarditis in 1885 Osler reviewed 209 cases from various sources. He only later pointed out that these were all instances of the acute disease, because the possibility of survival for many months was not yet recognized. He mentioned that he had caused a keratitis in rabbits with material from valve vegetations. This appears to have been his only experimental work in relation to endocarditis. The term "endocarditis" was used both for cardiac symptoms during acute rheumatic fever and the fatal heart disease that usually occurred in the absence of acute rheumatic fever. In 1887 and 1894 publications Osler strengthened the evidence that Sydenham's chorea and rheumatic fever may be related to each other and predispose to infectious endocarditis. The first large clinical attempt to culture blood was described in 1886 using a drop from a fingerpad puncture. A comparable effort to culture blood from an aspirated vein was first reported in 1894. This explains the absence of blood culture data in the Gulstonian Lectures.

Osler's other particularly important article, in 1909, described ten cases of chronic endocarditis. While such cases had been mentioned as early as 1884, this article introduced the concept that infectious endocarditis should be divided into acute and chronic categories. Here "Osler's nodes" were also described. Osler first confirmed the diagnosis with a blood culture in 1902, but he did not culture patients he saw in 1907 and '08. In 1903 Hugo Schottmüller in Hamburg had discovered *Streptococcus viridans* and in 1910 he differentiated endocarditis etiologically, attributing most cases of acute endocarditis to *Streptococcus hemolyticus* and chronic endocarditis to *Streptococcus viridans*. Despite his knowledge of German publications, Osler never cited Schottmüller's discoveries. He rather referred to Emanuel Libman in New York who, also in 1910, had confirmed Schottmüller's etiologic finding. Osler's understanding and teaching regarding endocarditis can be traced from 1892 to 1920 through the first nine editions of *The Principles and Practice of Medicine*.

Learning Objectives:

1. Discuss Osler's role in clarifying the concept of bacterial endocarditis.
2. Explain the relationship between bacterial endocarditis and rheumatic fever.
3. Define the etiologic differentiation between acute and subacute bacterial endocarditis.

Improving Leprosy Management in Canada: Newly Discovered Osler Letters

ARTHUR GRYFE

Arthur Gryfe is a semi-retired pathologist in Toronto. He has been the Secretary of the Toronto Medical Historical Club for 26 years, and is the archivist of the Ontario Association of Pathologists. He is a member of the Board of Governors of the American Osler Society.

In 1889, William Osler decided at the eleventh hour to change his summer travel plans. While heading west to the Annual Meeting of the Canadian Medical Association in Banff, Alberta, he stopped in Toronto, and with 11 year old, Billy Francis, made a 180 degree turnabout, and went to the leper colony at Tracadie in remote New Brunswick. He also arranged to rendezvous along the way with the recently widowed Grace Revere Gross, and to have her accompany him to the lazaretto.

It is easy to understand why Osler, the consummate physician and writer, planning to create the definitive medical textbook, would visit one of the two leprosaria in Canada. But why, of all places, would he take an 11 year-old boy, and the woman he would later marry? While seeking an answer to this question, we serendipitously found previously undiscovered letters, written by Osler, which improved the management of leprosy patients in Canada.

Learning Objectives:

1. Describe the evolution of a nineteenth century leprosy lazaretto.
2. Discuss William Osler's influence on the management of leprosy patient's in Canada.
3. Describe a process to discover significant historical letters.

Healing Hands: A Review of Paul Brand's (1914-2003) Contribution to Leprosy Research and Treatment

CHRYSSA McALISTER

Chryssa McAlister, a medical student at Dalhousie University, is currently deferring her third year to complete a CIHR-funded degree in journalism at the University of King's College. Ms. McAlister traveled to the Christian Medical College in Vellore, India, for a medical elective and there studied the life of Dr. Paul Brand.

In 1890, Sir William Osler visited Tracadie, New Brunswick, to study an endemic focus of leprosy, observations of which are included in his 1892 publication *The Principles and Practice of Medicine*. While he states that the disease is contagious and victims should be quarantined, he offers no real treatment for leprosy and admits that there is much unknown about the disease process.

Over sixty years later, in 1947, at the Christian Medical College (CMC) in Vellore, India, Paul Brand becomes the first orthopedic surgeon to study hand deformities in leprosy patients, and the world's leading authority on the topic. The purpose of this paper is to review Paul Brand's contribution to medical science and leprosy research.

Primary research was conducted at the CMC in Vellore, India, in June of 2005, where interviews with both retired and current staff were recorded. A systematic search of contemporary journals was made for articles on or by Brand. Brand's orthopedics publication, *The Mechanisms of the Hand* (3rd Ed.), was reviewed. Brand's biography by Dorothy Clarke Wilson entitled *Ten Fingers for God* and five spiritual books coauthored by Brand were reviewed.

Amongst his 50 or more searchable publications, Brand describes a novel pattern of nerve involvement and muscle paralysis in leprosy. From close observation of patients in controlled environments, Brand discovers that tissue absorption does not occur in leprosy, but nerve damage leads to trauma, secondary sepsis and trophic changes.

These combined discoveries led to potential treatments for leprosy patients. Paul Brand would perform tendon transfer surgery to return function to affected hands and feet and rehabilitate patients.

Most of his observations in Vellore were made in the *Nava Jeeva Nilayam* (the New Life Center) he built on the hospital campus, a community of village-type huts centered around a training shed where rehabilitating leprosy patients learned both to become self-sufficient in their daily activities and to master a trade.

Much like Osler did in the 1890s, Paul Brand used the powers of observation to help elucidate the disease process of leprosy. He pioneered in its surgical management and devoted his life to the care and social reintegration of leprosy patients.

Learning Objectives:

1. Discuss the evolution of leprosy research over the past century.
2. Outline the successive advancements in the treatment of leprosy.
3. Explain the contributions of Paul Brand to this field.

John P. McGovern Award Lectureship

A Leg to Stand On: Wilder Penfield's "Neuroethics"

JOSEPH J. FINS

Joseph J. Fins is Chief of the Division of Medical Ethics at Weill Medical College of Cornell University where he serves as Professor of Medicine, Professor of Public Health, and Professor of Medicine in Psychiatry. He is a recipient of a Soros Open Society Institute Project on Death in America Faculty Scholars Award and a Woodrow Wilson National Fellowship Foundation Visiting Professorship. He is widely published in medical ethics and health policy and is most recently the author of A Palliative Ethics of Care: Clinical Wisdom at Life's End (Jones and Bartlett, 2006).

"If ever I summon before me my highest ideals of men and medicine, I find them sprung from the spirit of Osler."

—Wilder Penfield

Neuroethics is a recently coined phrase that is shaping our cultural understanding of advances in neuroscience. Cautionary in tone, neuroethics has been described by William Safire as the "examination of what is right and wrong, good and bad about the treatment of, perfection of, or unwelcome invasion of and worrisome manipulation of the human brain." Neuroethics has taken sway in the bioethics community, in large part, because of its putative novelty.

I will use the historical record to critically examine the advent of neuroethics and to maintain that there were, in fact, earlier ethical formulations guiding practice in neurology and neurosurgery. Specifically, I plan to examine the influence of Sir William Osler on Wilder Penfield, the distinguished neuroscientist and neurosurgeon who founded the Montreal Neurological Institute (MNI) at McGill and who did seminal work in the diagnosis and treatment of epilepsy and the study of consciousness.

Wilder Penfield first met Sir William Osler in 1915 when the Regius Professor of Medicine greeted the young Rhodes Scholar to Oxford. Osler was 65 and Penfield 23, having just arrived from undergraduate work at Princeton. Penfield later convalesced with the Oslers at 13 Norham Gardens—"The Open Arms"—in 1916 when the S.S. *Sussex* taking him across the Channel to do aid work in France was torpedoed. He broke his leg and was, as Bliss notes, "taken into the family to recuperate." Penfield reminisced that, "it was a time when their much-beloved only child, Revere, was home on leave from fighting in France, and I was, for the moment made a member of a never-to-be-forgotten family."

Penfield's Oxford experience was formative. Osler became an ego ideal. He did his first autopsy with Osler and performed badly. But with his mentor's encouragement, Penfield recovered only to follow an Oslerian trajectory. He studied medicine at Hopkins and interned under Cushing, another protégé, at the Peter Bent Brigham Hospital. Like Osler, he pursued pathology before entering surgical practice. Most notably, Penfield, like Osler before him at Hopkins, created a novel institution at MNI to accommodate an intellectual vision for clinical practice and research.

These biographical parallels point to an ethical sensibility that Penfield shared with Osler and which sustained and guided him in his innovative work in neurosurgery. Unlike the wary neuroethics of today, Penfield's ethic of care was therapeutically engaged while remaining proportionate and compassionate. As such, it is an historical legacy for ethical deliberations in neuroscience today.

Learning Objectives:

1. Define neuroethics.
2. Trace the influence of Sir William Osler on Wilder Penfield.
3. Using the historical record, delineate Penfield's ethics and their relevance to ethical deliberations for today's neuroscience.

William B. Bean Award Student Lectureship
 The Unpoetical Poet: Keats, Medicine,
 and the Poetry of William Carlos Williams

SIMON HANFT

Simon Hanft is a fourth year medical student at Stanford University. As an undergraduate at Yale University, he wrote a paper on Hart Crane's The Bridge, under the guidance of R.W.B. Lewis, and was named a finalist for the Yale Senior Essay Award. Before entering medical school, Mr. Hanft earned a master's degree in English Literature from the University of Cambridge, where his thesis dealt with the prophetic poetry of Christopher Smart and Williams Blake. While at Stanford, he was awarded a Stanford Arts & Humanities Medical Scholars grant to explore the literature of the physician-author. In the future, Mr. Hanft hopes to become a neurosurgeon and looks forward to the daunting task of finding a place for literary scholarship in his clinical career.

My research is engaged with a rather neglected genre of literary history, that of the work of the physician-author. As of this writing, and thanks to the support of the Bean Research Award, I have dedicated the majority of my research to the work of John Keats and William Carlos Williams, and I am pleased to report that this has been a fruitful enterprise. The relationship between these two physician-poets is far more profound than I initially imagined. It begins in the early writing of Williams, which was little more than a wide-eyed emulation of Keats's masterworks, and continues through Williams's later development, where Keats still reigns, however subtly, as an imaginative force.

There are three fundamental questions that are the underpinnings of my investigation to this point: (1) Why was Williams so fascinated with Keats, and how did this affinity manifest in Williams's early lyrics? (2) What kind of a presence does Keats have in the poetry Williams composed after his very early work, specifically the writing that followed the *Poems* of 1909? (3) In what ways did medicine mediate Williams's relationship to Keats and to his own conception of poetry?

Towards the first aim, I have explored in detail Williams's earliest published poems, and I have uncovered some striking parallels with Keats's odes. Williams's avowed obsession with Keats at this stage in his career gives rise to a curious kind of imitation in his early work, characterized in some poems by a struggle between Williams's growing interest in a lyric of reality and his ongoing subjugation to the influence of Keats's measured rhythms and sumptuous forms. Regarding the second question, whereas most literary critics identify a clear break between the early Keatsian phase of Williams's poetry and the recognizable lyrics of his maturity, starting with *The Wanderer*, I have found that Williams never actually abandons Keats but rather re-imagines him, a process through which Keats remains a powerful though unobtrusive presence. I believe that I have located a never before commented upon instance of what I describe as this re-imagining of Keats, in a much heralded but poorly understood passage of poetic awakening at the conclusion of *The Wanderer*. And finally, as regards the third question, I have initiated what will doubtless prove a long-term engagement with the issue of medicine and the ways in which it contributed to Williams's theory of poetry, the notion of *tactus eruditus* to which Williams so often refers. I feel that the current literary scholarship on this point tends to connect medicine, specifically Williams's actual experience as a doctor, only superficially with his poetry. As such, I have begun to redress this oversight by considering Williams's metaphorical experience as a physician, the ways in which this experience mediates his relationship to his fellow man and to nature, as the muse presiding over his *ars poetica*.

Learning Objectives:

1. Identify the influence of Keats in the early poems of William Carlos Williams, especially in terms of style and tone.
2. Describe how Williams's mimicry of Keats in his early work gave way to a more nuanced incorporation of Keats in the later poetry.
3. Explain the ways in which Williams utilized the experience with his patients, and in turn the change in thinking that this experience wrought upon his own mind, in his mature work.

The Complex Bond Between the University of Michigan and the Success of the New Johns Hopkins School of Medicine

DANIEL MORGAN

Daniel Morgan recently retired from the practice of orthopaedic surgery in Fremont, California, where he held leadership positions on the medical staff for many years. He has had an abiding interest in the history of medicine and in the field of bioethics. The American Osler Society has spurred his interest in both areas.

The Johns Hopkins School of Medicine did not arise *sui generis*. Its appearance marked the fertilization of medical and scientific ideas from Europe with new world money requiring a half century of gestation. At the American Osler Society last year, with special emphasis on Daniel Coit Gilman and William H. Welch, the influence of Yale on its creation and growth was clearly presented, but another university played an even greater role. Viewed from a historical perspective, it is surprising that a new university in a truly rural environment should have anticipated the emergence of “scientific medicine,” not only paving the way for the Johns Hopkins School of Medicine, but also providing the new school with some of its most able and memorable professors. The University of Michigan, with its medical school founded in 1850, embraced German university organization and German experimental science, so that it was natural for its president, James Angell, to be consulted in 1875 about implementing the dream of Johns Hopkins concerning the integration of a hospital and a university.

Although Harvard and Pennsylvania were the other two leaders in progressive medical education in the second half of the 19th century, this paper will focus on the University of Michigan. Michigan had a unique relationship with the Johns Hopkins University and its medical school as exemplified by multiple faculty connections. Of the eight founding professors at new Johns Hopkins School of Medicine, four of them—Mall, Abel, Howell, and Hurd, had University of Michigan connections. These interrelationships will be explored in this presentation in order to show the extensive influence that this rural center of excellence had on the success of the new Johns Hopkins School of Medicine.

Learning Objectives:

1. List ways in which the University of Michigan influenced the development of the Johns Hopkins School of Medicine.
2. Discuss the influence of German science and education on the development of modern medical education.
3. Name and discuss “the other four doctors” who established modern, progressive education at the “new” Johns Hopkins School of Medicine.

The Hoary Tradition of the Gold Headed Cane

MARK E. SILVERMAN

Mark Silverman is Emeritus Professor of Medicine at Emory University and Chief of Cardiology at Fuqua Heart Center in Atlanta, Georgia. A past president of the American Osler Society, his books include a history of British cardiology.

In the late seventeenth and eighteenth century, physicians in London enjoyed a life of prosperity and influence as elite members of society. A cane, topped by a flashy knob of gold, served as their professional badge and as an essential dress accessory, much as the stethoscope later became the symbol. The passage of a cane from an older to a younger physician, a symbolic act that showed high regard and affection, became a common practice. This tradition was imaginatively captured in "The Gold-Headed Cane," published in 1827 by William Macmichael. In this quaint book, which has achieved an elevated status in medicine, the cane speaks as the author recounting its observations as it journeys from the hand of one eminent physician to five others until it is permanently deposited in the closet of the Royal College of Physicians. In doing so, the cane provides an accounting of the composite ideal characteristics of a physician preceding the example of William Osler. Cushing, in "The Life of Sir William Osler," considered Osler to be a "*twentieth century edition of these six men rolled into one.*" Because of the charming and enduring appeal of the book, its unreserved admiration for the highest qualities of a physician, and the hoary tradition that it represents, a presentation gold-headed cane has lived on as a distinguished award given to an outstanding student or physician as well as to others in North America though, perhaps surprisingly, not in England.

Learning Objectives:

1. Describe the history and significance of the Gold-Headed Cane.
2. Give a biographical sketch of the successive owners of the cane.
3. List qualities of the ideal physician as witnessed by the cane.

What Goes Around, Comes Around: John Gregory and the Profession of Medicine

R. DENNIS BASTRON AND LAWRENCE McCULLOUGH

Dennis Bastron, an anesthesiologist, was a student of the great Oslerian William B. Bean. Larry McCullough is Professor of Medicine and Medical Ethics, Center for Medical Ethics and Health Policy, Baylor College of Medicine.

Let's start with a partial problem list of medicine: physicians advertise to increase market share; non-physicians want to diagnose and treat patients; patients doctor shop and self-treat; medical institutions cherry-pick patients; administrators and third parties dictate who physicians will treat and how they will treat them; the profession does not do a good job with the terminally ill or the treatment of pain; medical care is inaccessible to the working poor; there is a malpractice crisis.

If we throw out the malpractice crises, this list is a partial problem list faced by Dr. John Gregory in the mid-eighteenth century. (John Truman noted several other problems that still exist in his article on Gregory [*J Med Biogr* 1995; 3: 63-70]). Gregory was born in 1724 into the famous family of "academic Gregories," which produced prominent mathematicians and physicians for two centuries. It is likely that Gregory's great grandmother passed her mathematical genius to the male line of Gregories. His grandfather invented the reflecting telescope; his father and brother were Professors of Medicine in Aberdeen; his son James followed John as Professor of the Practice of Physic at Edinburgh; and a cousin and close friend, Thomas Reid, founded the Scottish School of Common Sense Philosophy.

Gregory became interested in the problems of medicine (which he defined as "the art of preserving health, of prolonging life, of curing diseases, and of making death easy") while still a student and he quickly developed a growing reputation as a great intellect. Because of his reputation, he received an unsolicited offer to succeed his brother as Professor of Medicine at Aberdeen and later moved to Edinburgh where he was required to give a series of lectures to medical students in which he developed and taught his solutions to the problems of medicine.

Like the problems of medicine, his solutions sound very modern. He believed medicine should be a fiduciary profession based on Baconian science. Modern medicine has rediscovered this concept under the rubric "evidence-based medicine."

Moreover, Gregory believed physicians must have sympathy for patients (he used sympathy in the sense of the Scottish Moral Sense philosophy and used the term interchangeably with "humanity"). Gregory divided sympathy into tenderness (the desire to help a fellow human in distress) and steadiness (equanimity-imperturbability; Aristotle's golden mean). Gregory believed the exemplar of tenderness was the educated women—in essence, he based the doctor-patient relationship on what we would now call a feminine ethic of care.

Gregory was a major influence on Thomas Percival and the codes of ethics in the United States of America. Since the problems he confronted and his solutions were recently rediscovered, he was clearly years ahead of his time.

Learning Objectives:

1. Discuss Gregory's background and his influence on the profession of medicine.
2. Describe Gregory's solutions to the problems of eighteenth century medicine.
3. Compare and contrast Gregory's goals of medicine with modern lists.

Lady Aberdeen, A Victorian Woman of Vision and Action

JANET MURRAY

Janet Murray, a graduate in public relations, journalism and philosophy, is past chair of the Board of Governors of Mount St. Vincent University. She co-authored "Sir Charles Tupper", a biography of the first president of the Canadian Medical Association with her husband Jock Murray. They have co-authored other historical articles, and Janet Murray has made presentations to the Nova Scotia Historical Society, the Dalhousie History of Medicine Society, and the Cumberland Historical Society.

Ishbel Marjoribanks was an extraordinary woman, whose marriage to John Campbell, Lord Aberdeen, enabled her to make her mark on the countries of the British Empire. In Ireland, where her husband served two terms as Lord Lieutenant, and in Canada, where he was Governor-General (representatives of the Crown) Lady Aberdeen addressed herself to a multitude of causes, particularly the needs of women and children and their health. Unfortunately, she found that she was constantly thwarted by those, particularly male physicians and politicians, who believed she was too "aggressive" and too outspoken.

In Canada, she founded the Victorian Order of Nurses, a group of public health nurses who still play an important role in Canada's health care system, and she did this despite the opposition of the Canadian Medical Association, its president, Sir Charles Tupper, and Tupper's good friend Sir William Osler. In Canada she founded the National Council of Women and served as its first president

In Ireland she founded the Women's National Health Association, formed chiefly to fight tuberculosis. She inaugurated the Association with a crusade, taking a caravan into rural Ireland to teach the people how to defeat this terrible white plague. The crusade was opened in October 1907 by Sir William Osler, who by then had revised his opinion of "those Aberdeens" and he gave his complete support and encouragement to the crusade. Its success brought Lady Aberdeen many honors including honorary membership in the British Medical Association, the first conferred on a woman. She also served for many years as president of the International Council of Women

Lady Aberdeen recognized that poverty was the chief deterrent to health, and she gave her support to such causes as protection for the hand-weavers of Ireland. But the British government was not interested in this and recalled the Aberdeens from Ireland. She died in 1939, having made a major contribution to the causes of health, women and children in the British Empire despite constant opposition. She was a woman ahead of her time.

Learning Objectives:

1. Explain the role of Lord Lieutenant and Governor-General, and his/her spouse, and expectations of their role
2. Outline Lady Aberdeen's successes in Canada and Ireland
3. Explain the connection between Osler and the Aberdeens and indicate what prompted him to change his opinion of the Aberdeens.

Good Doctoring: Robertson Davies's *The Cunning Man*, Sir William Osler, and Sir Thomas Browne

J. T. H. CONNOR

Dr. J.T.H. Connor is John Clinch Professor of Medical Humanities and History of Medicine and Associate Dean of the newly created department of Community Health and Humanities in the Faculty of Medicine, Memorial University of Newfoundland, and St. John's, Canada. He is also Professor of History in Memorial's Faculty of Arts. He has written widely on the history of medicine in nineteenth- and twentieth-century North America. His most recent book Doing Good: The Life of Toronto's General Hospital has won numerous awards. He was senior editor of the Canadian Bulletin of Medical History and is currently co-editor of the McGill-Queen's University Press Studies in the History of Health, Medicine and Society series. He teaches undergraduate and graduate students in both the faculties of Medicine and Arts.

Currently, the 60 incoming medical students at Memorial University of Newfoundland are provided with a copy of Robertson Davies' eleventh and final novel—*The Cunning Man* (1995)—are required to read the book prior to their arrival. We then invite them to discuss and write about their reflections during their first week of classes, an exercise that coincides with their “white coat” ceremony. My presentation to the American Osler Society will explain the importance of the narrative of *The Cunning Man*, outline how it is integrated with learning strategies and objectives of a Clinical Skills course, and list outcomes and student responses to this successful Oslerian exercise.

Because the importance of humanism in medicine is one of this book's many messages, it nestles neatly in a course about the connection between basic clinical skills and medical professionalism. As a medical humanities instructor my goal is to have students reflect upon the importance of their professional moral character (virtue ethics) to the practice of good medicine (i.e. attitudes and values). Specific course aims include understanding the place and responsibilities of the medical professional in society and understanding the relevance of the Royal College's CanMEDS 2000 roles (the physician as medical expert, professional, communicator, scholar, collaborator, health advocate, and manager). To bring narrative text and teaching context together for students, we ask them to think of *The Cunning Man*'s Dr. Jonathan Hullah as a “simulated physician” on which they can test notions of ethical conduct and professionalism—is Dr. Hullah a “good doctor?” The real benefit of this exercise is that students take time to read, reflect, and write about the values deemed important for physicians—a valuable platform for the rest of the course (and, ideally, the rest of their careers).

Throughout Davies' work are allusions to the physician Sir Thomas Browne and his great book *Religio Medici* (1642)—a guiding star for both Osler and the novel's central character, Dr. Hullah. Thoughts and themes from Robert Burton's *The Anatomy of Melancholy* (1621), from which comes the novel's title, are very much in evidence too. (Davies himself, like William Osler, was a big fan of Burton's work since his first reading of it as a schoolboy.) As Osler and his contributions also are featured in this novel, it allows an entrée to discuss his place in medicine.

Learning Objectives:

1. Outline the structure and understand the content of *The Cunning Man*—an important work of Canadian fiction
2. Explain its relevance to medical student instruction in clinical skills within the context of medical humanism
3. List ways in which this and similar exercises may be incorporated into the undergraduate medical curriculum

Osler Vindicated: Glioma of the Leg with Jacksonian Epilepsy: Surgical Cure

WILLIAM FEINDEL

William Feindel, Professor of Neurosurgery and former Director of the Montreal Neurological Institute, McGill University, is a member of the Board of Curators of the Osler Library of the History of Medicine, as well as Honorary Osler Librarian and Curator of the Wilder Penfield Archive.

In referring to the pioneer operation for the removal of a tumor in the hand area of the motor cortex reported by Hughes Bennett and Rickman Godlee in 1885, William Osler considered a case he had attended at the Montreal General Hospital in 1883, in which autopsy revealed an almond-sized glioma just beneath the left motor cortex. The patient, a physician's daughter, suffered for fourteen years from intermittent Jacksonian seizures which began in her hand and then spread to her leg and face. She died in the hospital in status epilepticus. This was an instance, Osler wrote, "in which an operation would have been justifiable and possibly have been the means of saving life".

Seventy years later, at another McGill hospital, the Montreal Neurological Institute, a case similar to that described by Osler involved a man aged twenty-four who six years earlier had developed Jacksonian attacks that began in the toes of the right foot and travelled up the right side of the body to culminate in generalized seizures. Diagnostic tests were unrevealing except for the EEG which recorded epileptic spikes from the parietal region.

On 6 November 1953, a craniotomy under local anesthesia disclosed a mass 2 cm in diameter protruding from the upper end of the Rolandic fissure. Biopsy showed a low-grade glioma. Brain mapping by electrical stimulation guided a radical removal with retention of movements of the right leg, foot, and toes. After a full course of radiation therapy, the patient remained seizure-free without medication and went on to an active ecclesiastic career. A CT scan fifty years later showed no evidence of tumor.

Osler was an enthusiastic protagonist, well ahead of his time, for the burgeoning new field of neurosurgery. From his vantage point of extensive experience in neuropathology, Osler made a plea for "medical-surgical neurologists properly trained in the anatomical, physiological, clinical and surgical aspects of the subject". This removal and cure of a glioma in the leg area vindicates Osler's positive attitude for the neurosurgical treatment of such focal lesions.

Learning Objectives:

1. Describe William Osler's positive attitude toward operative interference for brain tumors.
2. Indicate the significance of Osler's extensive background in pathology in relation to his optimistic view of operative treatment for selected brain lesions.
3. Discuss the importance of Jacksonian seizures in neurological diagnosis of focal cerebral lesions.

“Dammit Jim, I’m a Doctor!” The Physician in Education

SHANNON MURRAY

Shannon Murray is Professor of English Literature at the University of Prince Edward Island and a Canadian 3M Teaching Fellow. She has written on Milton’s blindness (presenting that work at the Osler Society meeting in San Francisco), on the journey in Pilgrim’s Progress, and on first-year university learning communities, and she is currently researching the mapping of Thomas More’s Utopia.

Every utopia — and dystopia — has to decide what to do about the body. No matter how well-engineered we can imagine our politics, education, or environment to be, the human body will sicken, deteriorate, and die: and every utopia, therefore, requires a class that will, in one way or another, attend to the body.

Take Gene Roddenberry’s United Federation of Planets as an example: no matter what the series or cartoon or film, every *Star Trek* variation features three occupations: a captain, an engineer, and a doctor. In fact, an analysis of the episodes of all four first *Star Trek* TV series suggests that in almost a quarter of the episodes, the central problem is a physical one, one that requires a doctor’s advice or work. Almost no episode has nothing for a doctor to do.

So, what does it mean when such a pervasive western pop-culture franchise makes the physician so central to its vision of the utopian future? I’ll argue that the presence of the doctor is essential to an exploration of staple Sci-Fi ideas such as identity, genetics, death, life, disability, war, illness, plague, fitness for duty, and even record keeping: but that the basic paradigm of the *Star Trek* doctor— from Southern racist to single mother, from genetically engineered genius to virtual reality — is remarkably conservative: the physician of this utopian future is inevitably a technician, a surgeon, or a pill-concoctor.

Learning Objectives:

1. Classify the kinds of problems that *Star Trek* physicians are called on to solve;
2. Compare the pop-culture/ sci-fi model of physician that *Star Trek* postulates with the physician of earlier Utopian visions from Plato and Thomas More onward.
3. Theorize the reasons for the essential presence of a physician in utopian visions generally and *Star Trek* in particular.

“Three of My Special Medical Books ...
I Should Like to Feel They are with You”:
Osler’s Bedside Library and Mabel Tremain Brewster

JOHN C. CARSON

John C. Carson practices cardiology in La Jolla, California. He is a past president of the American Osler Society.

Mabel Tremain Brewster came from a distinguished, but no longer affluent, family in Auburn, New York. Her mother was a niece of Edward S. Martin, the “Uncle Ned” of *Abroad with Jane*.

Her father, Grenville Truman, of Albany, New York, died of typhoid fever at the age of thirty three, in 1878 (the year Mabel was born), thus ending a career of great promise in legal circles and in Republican politics.

Mabel met William Osler in April 1900, during Easter recess at the Chamberlin Hotel in Old Point Comfort, Virginia. Mabel was seen in consultation with the Fort Monroe Post Doctor. In his biography of Osler (volume 1, page 523), Harvey Cushing states: “During the Easter recess, April 4-10, a much needed outing to recuperate from his [Osler’s] influenza, no less than from the Edinburgh distraction settled only a few days before, was taken with H. B. Jacobs and T. B. Fitcher—Thayer’s successor as Resident Physician. They departed together for Old Point Comfort, and put up at the old Chamberlin Hotel, whence they made various amusing trips...” Cushing adds this footnote: “It was at this time that he [Osler] saw in consultation with the Post Doctor, a patient, Miss Mabel Tremain (Mrs. Robert Brewster), which began a friendship providing many letters for this biography.”

My paper traces the life of Mabel Brewster, its intersections with the Osler family, the disposition to her of “three of my special books” in 1919 (Cushing, volume 2, page 646), and ends with her death in 1941. Osler’s letter of April 24, 1919, evinces his affection for Mabel Brewster:

It just made me homesick to have your Island letter. When the flying night-mails are running ... I shall land there & spend a month with you & the darlings.... She [Sue Chapin] has promised to call on you at Avalon & I should like to feel they are with you.... I have written the directions in each volume. I bought them in London 1881, had them bound & they have been in my bedside library all these years. They are—a Shelly, In Memoriam, & Shakespeare’s Sonnets.

Interviews with Mrs. Brewster’s grandchildren and with an intimate friend of her son, Robert, complete the portrait of this beautiful lady to whom our patron was devoted.

Learning Objectives:

1. Relate what Mabel Tremain Brewster told her family and friends about Sir William Osler.
2. Discuss the importance of books in the Brewster-Osler correspondence.
3. Identify Robert Stanton Brewster and explain what he stood for.

Maxwell M. Wintrobe, the Hematologist from Halifax

MARVIN J. STONE

Marvin J. Stone is Chief of Oncology and Director of the Charles A. Sammons Cancer Center at Baylor University Medical Center in Dallas. He directs the internal medicine clerkship and the medical oncology fellowship program. Dr. Stone received the Distinguished Service Award from the University of Chicago in 2002 and the Lifetime Achievement Award from the International Society for the Study of Waldenström's Macroglobulinemia in 2004. He is a past president of the American Osler Society.

Maxwell Wintrobe was born in Halifax, Nova Scotia in 1901. He entered the University of Manitoba at age 15 and medical school at age 20. Cushing's *Life of Osler* greatly influenced the young student. Osler became his hero and Wintrobe decided that someday he wanted to work at Johns Hopkins. After receiving the MD degree in 1926, Wintrobe obtained a fellowship and began working on an animal model for pernicious anemia. This research project launched him on a lifelong career in hematology.

At Tulane (1927-30), Wintrobe found little available information on blood values in normal adults and children. He collected his own data and developed an accurate method for measuring the packed red cell volume (hematocrit). He also developed the red cell indices (MCV, MCH, and MCHC). These parameters allowed quantitative classification of anemias and remain in widespread use.

Wintrobe's PhD thesis, *The Erythrocyte in Man*, was accepted in *Medicine*. Alan Chesney, the editor of the journal, was also Dean of the Johns Hopkins Medical School. Chesney offered Wintrobe a faculty position at Hopkins, fulfilling his longstanding desire to go to that institution. Wintrobe remained at Johns Hopkins from 1930 until 1943. He took over the Division of Clinical Microscopy a generation after Osler, its founder, left Baltimore. Wintrobe emphasized the importance of routine examination of blood smears. He was the first to identify a cryoglobulin in blood from a patient with multiple myeloma, demonstrating the temperature-dependent reversible precipitation. His studies advanced many areas of hematology, including etiology and management of anemias and the diverse manifestations of leukemias and lymphomas. These investigative activities led to publication of the landmark monograph, *Clinical Hematology* in 1942, which rapidly became the most authoritative work in the field. Wintrobe wrote the entire book through 6 editions and acquired an international reputation.

Wintrobe moved to Salt Lake City in 1943 to become first Chairman of Medicine at the University of Utah Medical School, a position he held for 25 years. He established an excellent Department of Medicine and widely respected Hematology Division. He received the first extramural research grant from the National Institutes of Health. More than 170 graduate students trained in hematology and participated in research activities at Utah.

One of the founding editors of Tinsley Harrison's *Principles of Internal Medicine*, Wintrobe's later literary efforts included two monographs reflecting his longstanding interest in medical history. *Blood, Pure and Eloquent: A Story of Discovery, of People, and of Ideas* appeared in 1980 and *Hematology, the Blossoming of a Science: A Story of Inspiration and Effort* was published in 1985.

The era between 1926 and Wintrobe's death in 1986 was indeed the golden age of hematology. Insights at both the molecular and clinical levels were profound. He played a major role in defining and conveying this new knowledge and in establishing hematology as a distinct subspecialty of internal medicine.

Learning Objectives:

1. Explain Wintrobe's role in the history of hematology.
2. Outline the influence of William Osler on Wintrobe.
3. Examine the specific contributions which Wintrobe made in defining hematology as a distinct subspecialty of internal medicine.

The Widow's Island Yellow Fever Quarantine Hospital in Penobscot Bay, Maine, 1885-1904: A Medical, Political, and Social History

RICHARD J. KAHN

Richard J. Kahn, M.D., practices internal medicine in Rockport Maine and is on the clinical faculty of University of Vermont and Dartmouth Medical Schools. Current projects include a paper on Noah Webster's efforts in the field of epidemiology circa 1800 and publication of an annotated transcription of the manuscript, Diseases of the District of Maine by Jeremiah Barker (1752-1835). His most recent publication: "William Withering's Wonderful Weed" appeared, with chapters by a number of Oslerians, in Clio in the Clinic, edited by Jacalyn Duffin in 2005.

Widow's Island is a fifteen-acre island in the Fox Island Thoroughfare off Rockland, Maine. Today the island appears untouched by anyone but vacationers. As unlikely as it may seem, in the late 1880s the U.S. Navy built a two-story, brick, fifty-bed yellow fever quarantine hospital on this little island between Vinalhaven and North Haven. Certainly Maine has never been a hotbed of yellow fever. Why was the hospital built in Maine at this time and place, who were the people involved, and what happened to the facility over its forty-year lifespan and beyond?

Yellow fever was active in Latin America. In the 1880s, attempts to build the Panama Canal led to the US Navy to dispatch troops to the region. In 1883 a group of residents near the Portsmouth Navy Base petitioned the Secretary of the Navy, protesting the presence of infected vessels in Portsmouth Harbor. The then Secretary of the Navy William Eaton Chandler (1882-85), who was born in Concord, NH, decided to build a new quarantine station among the islands off the coast of Maine and ordered a search for a suitable location.

Though major ports did have quarantine stations by this time, some Navy surgeons believed that certain patients, particularly those with yellow fever, could best be treated if they were isolated in a sparsely settled, cool climate. Maine certainly fitted this description, and there had been no actual epidemics in the state. In 1884 the US Lighthouse Board, which had jurisdiction over Widow's Island, offered it to the Navy Medical Department.

This paper will discuss the issues involved with the community response, building, and functioning of the hospital, which never actually admitted a yellow fever patient. Formal control of the hospital passed from the Navy to the State of Maine on June 1, 1904, marking the end of the Naval Hospital on Widow's Island. For more than ten years thereafter the building was used as a summer retreat for selected patients from the Augusta and Bangor Insane Hospitals.

Learning objectives:

1. Explain why a yellow fever hospital was built in Maine, and locate Widow's Island on a map.
2. Discuss the politics, community response, and functioning of the hospital
3. Discuss the building's later use and demise.

Osler and John Donne: Musings on Suicide

PHILIP W. LEON

Philip W. Leon is a professor of English at The Citadel. He is the author of five books, including Walt Whitman and Sir William Osler (1995). He also holds an appointment to the Faculty of the History and Philosophy of Medicine of the Society of Apothecaries (London).

John Donne (1571–1631) occupies a place in British history both as a distinguished Dean of St. Paul's Cathedral in London and as one of the metaphysical poets who shaped English poetry in the seventeenth century. One of Osler's prized book possessions was a first edition of Donne's *ÁéÜëÜíáôïó* (*Biathanatos*), posthumously licensed for publication in 1644 and published in 1648. The subtitle explains the purpose of Donne's treatise: "A Declaration of that Paradoxe, or Thesis, that Selfe-Homicide is not so naturally Sinne, that it may never be otherwise." In this copy housed in the Osler Library at McGill University one can find several items that Osler inserted suggesting that near the end of his life Osler engaged in a thoughtful investigation of the matters of suicide and physician-assisted suicide, perhaps indicating a dark contemplation of his own death.

Among those items inserted into the text are several clippings from the London *Times* about the death of Count Maresuke Nogi (1843–1912) of Japan who committed suicide honoring the death of the Emperor Meiji. (Count Nogi's wife committed suicide with her husband.) Nogi had been a victorious general at the battle of Port Arthur in 1904 during the Russo–Japanese War; he lost his only two sons in this battle. In anticipation of his suicide, Nogi willed his body to medical science. The newspaper clippings address the question of the appropriateness of suicide in Western culture, and its fading acceptance in Japanese and Chinese cultures.

Another item Osler inserted into Donne's book was a copy of an article, "The Moral Aspects of Suicide" by James Cardinal Gibbons (1834–1921), the archbishop of Baltimore, whom Osler described as "an old friend, and for many years [my] next-door neighbor." In *The Century Illustrated Monthly Magazine* (1907), Gibbons rebuts some of the conventional arguments in favor of "self-murder" and devotes considerable space to the medical ethics of assisted suicide, including for those in pain from terminal illness.

Osler's private note appended to Donne's *Biathanatos* makes clear his toleration for suicide in certain cases. Further, he says that he knows of some cases that he "could not condemn, others that I could not but admire and even, maybe, approve."

Learning Objectives:

1. Cite historical examples of suicide that shaped Osler's thinking on the subject.
2. Examine the rationale for John Donne's views on suicide as found in *Biathanatos*.
3. Contrast views on medically assisted suicide in Osler's day with attitudes prevalent today.

A Surgical Review of the Priority Claims Attributed to Abraham Groves (1847-1935), Osler's Toronto Classmate

CHRIS GEDDES AND VIVIAN McALISTER

Though only a third-year medical student, Chris Geddes has written several chapters of a new major textbook of plastic surgery, based on his post-graduate research in anatomy; Vivian McAlister is a professor in the Department of Surgery. McAlister works and Geddes grew up in an area of Ontario well known to Osler and Groves.

The practice of surgery at the time of Osler's medical education had changed little over millennia. The invention of anaesthesia sparked such rapid development that by the time of his retirement, surgical practice resembled the current model. Abraham Groves, a classmate of Osler's in Toronto, became a General Practitioner in the country town of Fergus, Ontario. Throughout his career, his practice evolved to offer a full range of modern surgical services. Several priority claims have been attributed to Groves's life in surgery including aseptic surgery (1874); appendectomy (1883), surgical gloves (1885), suprapubic lithotomy (1875), and cancer radiotherapy (1905). The purpose of this paper is to assess these claims from a modern surgical perspective.

A systematic search of contemporary journals was made for articles by or about Groves. The 1934 autobiography, notes held by descendants, reminiscences by contemporaries and collateral information were reviewed. The information was assessed not only for priority but also for the development of organised surgical thought.

Groves published frequently throughout his career; 27 papers have been located so far. He spoke at regional meetings in Ontario. Although he maintained a license to practice in the USA, he did not work or publish there. He was a founding member of the Ontario Medical Association but not of the American College of Surgeons. Many medical students apprenticed with him (including his brother, son and grandson) and he founded a school of nursing. His contemporaries published complimentary reminiscences but no correspondence with his classmate, William Osler, is known.

Groves's claims are not absolutely verifiable for aseptic surgery, appendectomy and surgical gloves but the level of evidence is similar to that supplied by others in these areas. Contemporary publications support limited priority for suprapubic prostatectomy and radiotherapy. Groves's writing consistently shows a thorough understanding of the principles and techniques of surgery that would not be out of place today. His explanations for the development of his pioneering practice are sensible to the modern surgeon. His persistent use of cadaver dissection to perfect technique mirrors Osler's use of autopsy to understand disease. Reminiscences of contemporaries support the notion that Abraham Groves led the development of modern surgery. His impact was reduced by nature of the environment in which he chose to work and by the limited circulation of the journals in which he chose to publish.

Learning Objectives:

1. Describe the state of surgery in the mid-nineteenth century.
2. Outline changes that took place in surgery during the latter years of the nineteenth century.
3. Explain the contributions made by Abraham Groves to these changes.

Julia Dempsey: Her Nodule, the Mayos, and St. Mary's Hospital

ROBERT G. MENNEL

Robert G. Mennel is the Associate Director of Medical Oncology at the Baylor University Medical Center's Charles A. Sammons Cancer Center in Dallas Texas. His medical history interests have usually centered on his specialties of oncology and internal medicine and the institutions where he was trained: the University of Pennsylvania, the University of Rochester, and Johns Hopkins.

A metastatic nodule to the umbilicus is called a Sister Mary Joseph node. This eponym usually brings an incredulous look from medical students and physicians alike. Physicians are likely to accept an eponym named for a physician such as a Virchow's node, but they are unlikely to believe that a clinical sign would be named for a nun. However, Julia Dempsey, Sister Mary Joseph OSF, was no ordinary nun. In 1989 at the age of 33, she was assigned to the new St. Mary's Hospital in Rochester, Minnesota. St. Mary's Hospital was planned by William Warral Mayo, the founder of the Mayo Clinic and was run by the Sisters of Saint Francis. The medical staff of St. Mary's consisted of William Warral Mayo and his two sons, Charles Horace Mayo and William James Mayo. The nursing acumen, intelligence and organizational skills and administrative skills of Sister Mary Joseph were recognized by her peers, and at the age of 36 she was awarded the position of nursing superintendent of St. Mary's Hospital. For thirty-five years from 1890 to 1925, Sister Mary Joseph was William James Mayo's first surgical assistant.

Sister Mary Joseph noted that an umbilical nodule observed during the surgical prep of the abdomen of patients receiving surgery for an abdominal malignancy predicted unresectability because of abdominal carcinomatosis. She brought this finding to William James Mayo's attention and in 1928 in the *Proceedings of the Staff Meetings of the Mayo Clinic*, Dr. Will Mayo reported this finding and gave the umbilical metastasis the name, pants button umbilicus. However, the term Sister Mary Joseph node did not arrive on the scene until 1949, ten years after the death of Sister Mary Joseph, when Hamilton Bailey in his textbook, *Physical Signs in Clinical Surgery*, gave the name Sister Mary Joseph nodule to the umbilical metastasis, predictive of incurable abdominal malignancy.

Sister Mary Joseph's fame was not limited to having a clinical sign named for her. She was accomplished in many other aspects of medicine. Seventeen years after she entered nursing, Sister Mary Joseph opened the St. Mary's Hospital School of Nursing. She was the first Vice President of the Catholic Hospital Association of the United States and Canada, which she helped found in 1915. The original surgical building used by the Mayo brothers has been renamed the Joseph Building in her honor.

Sister Mary Joseph was important for the development of St. Mary's Hospital and the Mayo Clinic, and also for the success of the Mayo brothers. By an unusual twist of fate Sister Mary Joseph, Charles Horace Mayo and William James Mayo, three people who worked closely in developing the Mayo Clinic, all died within three months of each other in 1939.

Learning Objectives:

1. Describe the clinical importance of the Sister Mary Joseph node,
2. Outline the important accomplishments of Sister Mary Joseph.
3. Explain the role that Sister Mary Joseph played in the development of the Mayo Clinic and St. Mary's Hospital.

“Too Shocking for General Perusal”: Public Accessibility to a Surgeon’s Record

PETER WARREN

Peter Warren is a respirologist and director of the history of medicine program in Winnipeg. He graduated from Cambridge and Guy’s, the site of this paper. This paper was his dissertation for the Diploma History of Medicine, Society of Apothecaries and has been presented in part to the Canadian Society for the History of Medicine. As an internist I think that the surgical members of the American Osler Society would be interested in the effects of a surgical failure on a young surgeon and how the press should handle it.

On March 29th 1828 the *Times*, with the above phrase, reported an account in *The Lancet* of the death of a patient from surgery at Guy’s Hospital. The patient Stephen Pollard had undergone successful lithotomy by Bransby Cooper, but the operation had lasted an hour rather than the customary minute. Death ensued after 29 hours. Cooper viewed the *Lancet* article as defamatory and sued the editor Thomas Wakley for libel. The *Lancet* used the case to attack nepotism at Guy’s for Bransby was a nephew of the renowned Astley Cooper. There was considerable support for Bransby by Guy’s students who had been at the operation. The case was heard at King’s Bench in December 1828. Many eminent witnesses gave evidence including Thomas Hodgkin who did the *post mortem*. Bransby was awarded damages but of a paltry amount. The account of this case from the articles, correspondence and court records is illustrative of the problems of safety and error in medicine.

In his preface to *The Lancet*, 1823, Wakley had warned that he would publish Hospital reports; otherwise, surgeons may be ‘concealing many circumstances which might reflect discredit on themselves and the institutions to which they belong.’ The benefit of informing the public of a surgeon’s competence and experience seems well founded. On the other hand Astley Cooper expressed his views on providing a surgeon’s record in a lecture to the Guy’s students that was pirated and published in *The Lancet* 1823: “With regard to the publication of operations; this practice, I candidly confess appears to me to be fraught with great danger, and will, I suspect, prove destructive to young surgeons.” And again in the *Medico-Chirurgical Review* “and if a surgeon fail from want of dexterity he suffers mortification enough, heaven knows, in the operating room, without being put to the cruel and demoniacal torture of seeing the failure blazened forth to the public.” There is conflicting evidence from contemporaries that Bransby was affected by the experience and although his later career was a success he seemed to lack full self confidence.

Learning Objectives:

1. Evaluate the benefits and disadvantages for a patient of knowing a surgeon’s successes and failures.
2. Discuss the “learning curve” of a surgeon whose success improves with experience.
3. Examine the role of the press, medical and lay, in informing the public about surgical results.

Osler and Vascular Disease

ROBERT R. NESBIT, Jr.

Robert R. Nesbit, Jr. is Emeritus Professor of Surgery at the Medical College of Georgia, where he was Chief of Vascular Surgery until his retirement in April 2000. Although he is no longer involved in patient care, he continues to be active teaching at the Medical College. He has been a member of the American Osler Society since 2003.

Rudolf Virchow described the pathogenesis of venous thrombosis and the mechanism of pulmonary embolism in 1856. William Osler studied with Virchow in 1873. I reviewed the editions of Osler's *Principles and Practice of Medicine* published during his lifetime to see what Osler had to say about venous thromboembolism (VTE). I was surprised to find that there is very little mention of VTE. Clearly Osler was fully aware of VTE, but it is mentioned in his text primarily as a complication of typhoid fever. Appropriate mention of venous embolism is also included in discussion of pulmonary infarction.

I also reviewed other aspects of vascular disease. Arterial embolism is discussed in several contexts. There is a long discussion of arteriosclerosis and of aneurysms, but little about peripheral arterial disease. Under the heading of arteriosclerosis, there is one sentence about gangrene. Intermittent claudication is clearly described – but only as an analogy for the mechanism of angina pectoris!

Since Osler's time, advances in diagnostic techniques and in therapy, as well as in the incidence of diseases, have increased the importance of awareness of arterial and venous diseases.

Learning Objectives:

1. Describe Osler's understanding of venous thromboembolism
2. Describe Osler's analogy of intermittent claudication to angina pectoris
3. Discuss the changing importance of recognition of arterial and venous disease.

William B. Bean Award Student Lectureship
Albert Sabin and the Western Hemisphere
Polio Eradication Campaign

LEE HAMPTON

Lee Hampton is a fourth year medical student at the University of North Carolina – Chapel Hill with a strong interest in history and public health. He welcomes advice on how to deal with residency.

After completing the development of the oral polio vaccine in the early 1960s, Albert Sabin worked the rest of his life to promote its use for polio control and eradication through various means and medium. During the 1980s, Sabin even attempted to organize and administer large vaccination programs himself through work with the Brazilian government and Rotary International. International efforts against polio evolved slowly, but Sabin was involved in virtually every stage of their development. A high point came in the mid-1980s when he contributed to the start of a campaign to eradicate wild polio from the western hemisphere which incorporated many of the strategies for polio vaccination that Sabin had advocated for years. Among other things, Sabin helped to convince Rotary International, one of the effort's major donors, of the effectiveness of mass vaccination campaigns and inspired great enthusiasm for the project among Rotary's members. Rotary in turn played an important role in convincing governments and other groups to support polio eradication. The western hemisphere effort was ultimately successful, with the last case of wild polio in the Americas occurring in 1991, a few years before Sabin's death. However, Sabin often felt frustrated by flaws he perceived in the program's methods. Such frustration was not unusual for him. His efforts to plan vaccination projects with both Brazil and Rotary International ultimately left him bitterly disappointed when his partners adopted approaches somewhat different from what he had planned. Sabin's experiences demonstrate some of the possibilities and limits inherent in activism by medical researchers because while he did much to generate support for his policy proposals, Sabin often ran into problems when he tried to implement them himself or to work closely with individuals with different priorities. Sabin's combination of enthusiasm, knowledge, persistence, and fame made him a formidable activist, but his confidence and strong will sometimes undercut his capacity to work with people with different viewpoints.

Learning Objectives:

1. Outline the methods Albert Sabin used to promote international polio vaccination and eradication in the 1960s, 1970s, and 1980s.
2. Explain why Sabin was an effective advocate for mass polio vaccination strategies yet wound up in bitter arguments with Rotary International and Brazil
3. Describe the role of Sabin and Rotary International in eradicating polio from the western hemisphere in the 1980s and how Rotary's contribution differed from Sabin's original vision.

Love of Blood: Discovering the Cause and Treatment of Hemophilia

J. O. BALLARD

James O. Ballard is Professor of Medicine, Pathology and Humanities and the Jane W. and Lawrence F. Kienle Chair for Humane Medicine at the Penn State University College of Medicine. He has been attending physician and medical educator in the Division of Hematology/Oncology since 1976 and served as Interim Chair, Department of Humanities from 1999-2002. In 2003, he received Penn State's Distinguished Educator Award. He gratefully acknowledges the kind assistance of Professor Denis Gibbs, Oxford, U.K. and Philip Wilson, Ph.D., Penn State College of Medicine.

The ancient writings of Rabbi Judah Patriarch, Albucasis and Maimonides provide the earliest observations of the bleeding disorder first termed "hemophilia" by Hopff in 1828. However, it is likely that the earliest account of an affected family was in an obituary appearing on March 22, 1791 in the Salem, Mass. *Gazette* (qa. McKusick). It records the untimely demise of Isaac Zoll, age 19, whose "death was occasioned by a slight cut on one of his feet, with an ax....From the time of his receiving the wound, till he expired, no method could be devised to stop the bleeding." The obituary contains a revealing family history of hemorrhagic deaths in his five full brothers, but no bleeding in his stepbrothers.

Dr. John Conrad Otto of Philadelphia is credited with publishing the first detailed clinical report of a family with hemophilia in 1803 in *Medical Repository*. He recognized that the disease could be transmitted from asymptomatic mothers to sons. The Appleton-Swain family of Reading, Mass. originally reported by Dr. John Hay in 1813 became the best-studied hemophilic kindred in part due to the efforts of Sir William Osler whose 1885 publication reinvestigated the clinical and genealogical history of seven generations of this family. The monograph by Bulloch and Fildes (Library of The Royal College of Physicians*) published in 1910 analyzed 1000 cases of hemophilia involving 200 pedigrees, including citations of Osler's cases, and firmly established hemophilia as an inherited tendency to bleed in males. The best-known carrier of hemophilia was Queen Victoria. Of her five daughters, two were carriers who transmitted the disease to three grandsons and six great-grandsons. The most famous of the latter was the Tsaravich Alexis. A popular theory holds that his hemophilia and its management by holy man, Gregorii Rasputin, influenced the series of events leading up to the Russian Revolution.

In the late 19th century hemophilia was thought to be the result of vascular or "blood plate" abnormalities. A variety of early therapeutic modalities are described in the 4th edition of Osler's *Principles...* (1901) including ice, tannic and galic acids, ergot, sulfate of soda purges, inhalation of carbon dioxide, dried suprarenal gland, arsenic, iron, gelatin and even venesection! A largely ignored report by a surgeon in *Lancet* in 1840 had noted that transfusion of fresh blood had controlled postoperative bleeding in a patient who was probably a hemophiliac. By 1910 defective blood coagulation and the laboratory finding of a prolonged whole blood clotting time had been established. The subsequent contributions of Addis, Quick, Patek and Taylor, Merskey, Macfarlane, Graham and others led to the discovery that affected patients had a deficiency of a "globulin" fraction of plasma, later designated coagulation factor VIII. "Christmas Eve factor" or factor IX deficiency was described by Aggeler, Biggs and Macfarlane in 1952. The discovery of cryoprecipitate by Prof. Judith Pool in 1965 ushered in the era of blood product therapy. It became the starting material for lyophilized concentrates of factor VIII prepared using pools of human plasma obtained from thousands of donors. Fortunately the late 20th century epidemics of HIV-1 and viral hepatitis among hemophiliacs receiving these concentrates have been eliminated by the development of recombinant factor VIII concentrate.

Learning Objectives:

1. Describe the earliest written reports of hemophilia and the evolution of knowledge regarding the clinical nature and inheritance of the disease.
2. Describe Sir William Osler's contribution to our understanding of this disease.
3. Trace the sequence of events that led to the modern treatment of hemophilia.

Henry Bence Jones, Physician, Chemist, Scientist, and Biographer: A Man for All Seasons

ROBERT A. KYLE

Dr. Robert Kyle is Professor of Medicine, Laboratory Medicine, and Pathology at Mayo Clinic College of Medicine. He is currently President of the International Society of Amyloidosis, Chairman of the Scientific Advisory Committee of the International Waldenström's Macroglobulinemia Foundation, and Chairman of the Scientific Advisory Board of the International Myeloma Foundation.

The name Bence Jones is recognized today as the name of a protein excreted frequently by patients with multiple myeloma. Although he was not the first to describe the characteristics of the protein, he recognized its importance when he wrote, "I need hardly remark on the importance of seeking for this oxide of albumen in other cases of mollities ossium." He excelled in athletics but was only a mediocre student. Following graduation from Cambridge University, he studied medicine at St. George's Hospital in London. After medical school, he studied chemistry in Justus von Liebig's Laboratory in Giessen, Germany. He published a series of articles on the sediment, uric acid, oxalates and phosphates of urine. He emphasized the frequency of diabetes in an older population. He was the first to describe xanthine crystals in the urine. He and Dupre demonstrated the diffusion of lithium carbonate and subsequently quinine throughout the body and noted that they appeared within 10 to 20 minutes in the urine. He scorned empirical experience, tradition, and authority and concentrated on 'medical facts.' His medical practice included Charles Darwin, Michael Faraday, and Thomas Huxley. His practice grew and in one year his profits were £7,400. Jones knew Florence Nightingale and served on several boards with her. Despite their disagreements, she stated that Bence Jones was 'the best chemical doctor in London.' He played a subsequent role in the establishment of the Hospital for Sick Children on Great Ormond Street. He became secretary of the Royal Institution, Great Britain, which promoted research and teaching of science. The Royal Institution provided research laboratories for Humphrey Davy, John Tyndall, James Dewar and the Braggs, as well as Michael Faraday. Jones's two volume biography of Faraday was well received. Jones developed palpitations of his heart and after examining himself, stated that chronic rheumatism had 'done permanent damage to one of the valves.' He developed congestive heart failure and ultimately died at home at the age of 59. Although Bence Jones' obituary described his work on diabetes mellitus, malignant and tuberculous involvement of the kidney, and microscopic examination of the urine there was no mention of his papers on the unique urinary protein that bears his name. Among his 40 publications, it is interesting to note that a hyphen does not appear in any of his publications. A hyphen was added by his family approximately a half century after his death. Henry Bence Jones was indeed, "a Man for all Seasons."

Learning Objectives:

1. Describe the scope of Henry Bence Jones's contributions to science and medicine.
2. Explain how Jones' discovery of the heat properties of Bence Jones protein was not recognized during his lifetime.
3. List prominent patients and scientists with whom Henry Bence Jones associated.

*President's Lecture**Gaudeamus igitur: Admission to Medical School Then and Now*

CLAUS A. PIERACH

Claus A. Pierach is Professor of Medicine and of the History of Medicine at the University of Minnesota, Twin Cities Campus, Minneapolis. An authority on the porphyrias, he was a full-time clinician until recently; he now enjoys a second career in medical history.

When William Osler (1849-1919) became the first chairman of the Department of Medicine at the newly opened Johns Hopkins Medical School (1893), a high standard was set for admission, so high that Osler said to his colleague William Welch: "Welch, it is lucky that we get in as professors; we never could enter as students." Their first class of 18 students, 3 of them women, was well prepared and fulfilled the requirements of a strict college education in the biological sciences, physics and chemistry, much like today. Foreign language proficiency was required. Although it is not known if any applicants were rejected, it is known that the number of applicants shrunk as the standards increased, especially after the Flexner Report (1910).

The transformation of mainly proprietary medical schools to strictly academically oriented schools was stormy but highly beneficial. Now, medical education had to rely on pre-medical education (Brieger). The end product, a physician, could only be as good as the entering student, necessitating careful selection. While it was easy to select students by college grades and, later, medical college admission test (MCAT) scores, the difficulty remained, how to assess an applicant's character (Ludmerer), a problem to this day. Essays and personal interviews are less than perfect. A new issue emerged in recent decades: the desire to have a diversified class of medical students. At the University of Minnesota Medical School this goal has been largely met: in the current class (2005) 25% are multicultural students, among them 17% under represented minorities (URM). 165 matriculants were selected after 559 interviews from 2285 applicants, an arduous task for the two dozen members of the Admission Committee. Nationwide, 16,648 of 35,741 applicants were enrolled (2004).

These issues are not unique for the US. In the UK the upper social class is the minority of the population but contributes the majority of medical students, a situation not strictly related to the cost of attending medical school but probably to a high degree a consequence of expensive pre-medical education. The German University system, virtually tuition free, selects medical students by a variable quota system according to scholastic standing and socioeconomic background of the applicant.

While the last century has brought considerable refinement to the selection process for entry into medical school, it still has to be humbly acknowledged that luck and chance do play a role and that the best predictor of future behavior as a physician is a careful assessment of the applicant's past behavior.

When Johannes Brahms (1833-1897) received an honorary degree from the University of Breslau (1879), he composed an *Academic Festival Overture* (Drevlow LE), using the student song *Gaudeamus igitur* – Let us rejoice!

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Learning objectives:

1. Describe the changes in admission requirements to medical school.
2. Compare the national to the international situation.
3. Suggest and analyze possible improvements in the admission process.

William B. Bean Award Student Lectureship
 Lu Xun, Doctor of the Spirit

SERENA TAN

Serena Tan is currently a second-year medical student at Duke University School of Medicine. She was born in Singapore, where she received a bilingual education in English and Chinese through high school, before leaving for college at Harvard University.

Lu Xun (1881-1936) was a short-story writer, essayist, critic, translator and literary theorist, widely regarded as the founder of modern Chinese literature. Born in Shaoxing, in Zhejiang province, into an impoverished but educated gentry family, Lu Xun received a traditional education in classical Chinese literature, history and philosophy. Lu Xun's recollections of childhood are filled with images of medicine, illness and suffering. In a piece entitled "Father's Illness", he describes in detail how quack doctors used traditional herb medicine to "treat" and eventually to ruin his father.

Following his father's death, Lu Xun made a series of untraditional educational choices. He enrolled in the Jiangnan Academy, which provided a "modern" high school education, including physics, arithmetic, geography, history and drawing. He was exposed to physiology and medicine through woodblock editions of works like "A New Course on the Human Body" and "Essays on Chemistry Hygiene". When he learned that much of the Japanese reformation owed its beginnings to the introduction of Western medical science to Japan, he decided to seek a western medical education in Japan, dreaming a "fine dream that, on my return to China, I would cure patients like my father who had suffered from wrong treatment ... and promote my countrymen's faith in reform".

In Japan, however, Lu Xun came to the conclusion that the basic "illness" of China was one of the spirit rather than the flesh; for this, literature could prove a better cure than medicines. His decision was provoked by pictures of a Chinese "spy" being executed by the Japanese military in Manchuria during the Russo-Japanese War. Lu Xun felt deeply ashamed of the other Chinese who had gathered indifferently to watch the spectacle. "They were all strong fellows but appeared completely apathetic." After this, he recounts, "I felt that medical science was not so important after all. The people of a weak and backward country, however strong and healthy they may be, can only serve to be made examples of."

Although he left medicine for literature, Lu Xun's medical training had a profound impact on his writing and thinking. His short stories often present damning indictments of Chinese medicine, whose absurdities represented for him the burden of ancient superstitions parading as sacred wisdom – the "Chinese essence," against which science had to struggle.

The medical content of his writings served not merely a literal, anecdotal purpose, but also a conceptual one influencing his thoughts about social issues. He "diagnosed" the Chinese as having been deeply infected by hypocrisy, shamelessness, and suspicion cloaked in a veneer of unquestioned and outmoded traditional "wisdom". This "diagnosis" led him to an intractable conundrum and profound despair: how could an intellectually and spiritually diseased people recognize the true source of their affliction, let alone change their hearts and minds? Through tellingly precise depictions of Chinese people in scathingly sardonic short stories, written in a vernacular language that he pioneered, Lu Xun fought tirelessly to hold a mirror up, to awaken his countrymen to the grim realities of their character and condition so that they could begin to heal themselves.

Learning Objectives:

1. Discuss the idea of "illness" of our age and times – what would be the "illness" of modern America? Of the modern world?
2. Suggest how medical science and literature might be part of the cure.
3. Explain ways in which stories are part of/a form of medical practice/therapy.

The Seeing Finger: The Story of Closed Mitral Valvulotomy

DAVID K. C. COOPER

David Cooper trained in medicine and cardiothoracic surgery in the UK, and then followed a career in academic cardiac transplantation with a major research interest in xenotransplantation. He has recently completed a book on the surgeons who developed heart surgery, for which, during the past 18 years, he has interviewed many involved in this major medical advance.

Although one successful closed mitral valvotomy, in which the surgeon blindly dilates the stenosed valve with a finger, had been carried out by Sir Henry Souttar in London in 1925, this surgical approach for mitral stenosis was not established until the work of Charles Bailey and Dwight Harken in the late 1940s. I had the privilege of meeting both Bailey and Harken in the late 1980s to discuss their work.

At the age of 12, 'Charlie Bailey' suffered the anguish of watching his father die from mitral stenosis in his mother's arms. In his early career, he began to study the structure of the mitral valve and noted its similarity to the ladies' girdles he had sold from door-to-door as a summer job as a teenager. He also gained respect for the strength of the heart when he observed that a deer heart, ejected from the body when the animal was killed by an automobile, continued beating for over 2 hours. His first 4 attempts at mitral valvotomy were associated with the deaths of the patients, and Bailey was banned from operating in three hospitals in the Philadelphia area. In 1948, he planned two more attempts, which he would carry out on the same day at different hospitals, believing that, in the event of a death in the morning, it was unlikely news would have reached the afternoon hospital. The morning patient died on the operating table, but the afternoon patient survived. Thus was established the operation of mitral valvotomy.

Dwight Harken's rather overbearing father ran a rural medical practice. After Dwight graduated in medicine at Harvard Medical School, his father fully expected him to return to the family practice, but he chose not to do so, much to his father's displeasure. During the Second World War, he was put in charge of a US Military hospital in the UK, where he removed 139 fragments of bullets and shrapnel from the hearts and mediastinal tissues in US servicemen, without mortality. This experience gave him confidence that the heart would withstand surgical procedures. He performed his first successful mitral valvotomy only 6 days after Bailey's first success.

From then on, the two men argued intractably at surgical meetings over every conceivable aspect of the operation. Both went on to make further significant contributions to the development of cardiac surgery. The mortality associated with these operations in the early days was considerable, and Harken suffered extreme anguish at his surgical failures. Bailey, in contrast, seemed always willing to attempt an untried operation, no matter how risky, if he felt it would help his patient. Both were flamboyant characters, whose flamboyance led them into difficulties with authority, Bailey resigning his position on two occasions, and Harken on one. Having been born in the same year (1910), and having performed successful mitral valve operations within 6 days of each other, it is ironic that they should also die within a week of each other in 1993, Harken surviving a few days longer. Bailey's widow is quoted as saying, 'Charlie beat him in life, and beat him in death.'

Learning Objectives:

1. Outline the status of thoracic surgery in the 1940s.
2. Evaluate the difficulties involved in developing closed heart surgery.
3. Discuss the factors that stimulate some surgeons to contribute innovations.

Rupert E. (Bill) Billingham: From Transplantation Tolerance to Maternal-Fetal Interactions in Cattle to Armadillos

WILLIAM R. DUNCAN

William R. Duncan is Chief Operating Officer and Chief Scientific Officer at the Baylor Research Institute at the Baylor University Medical Center at Dallas. Prior to joining the Baylor Research Institute, he served in numerous positions at the National Institute of Allergy and Infectious Diseases, including Associate Director for Therapeutic Research in HIV and Deputy Director of the Division of Allergy, Immunology, and Transplantation. Dr. Duncan has published numerous papers in the field of genetics and transplantation immunology and worked with Rupert Billingham for 10 years.

Rupert E. (Bill) Billingham (1921-2002) was clearly one of the pioneers in the field of transplantation. He was lead author on the first publication to demonstrate the ability to experimentally induce transplantation tolerance, published in *Nature* in 1953. This work in mice and his earlier work with Sir Peter Medawar, studying skin graft rejection in maternal and fraternal twins in cattle, led to a Nobel Prize in Physiology and Medicine being awarded to Medawar in 1960, a prize he shared with Sir Macfarlane Burnet, for the discovery of acquired immunological tolerance. Medawar recognized the seminal contributions of Bill Billingham to these studies and he shared a portion of the prize money with his former student and colleague. Billingham's work with Medawar and Leslie Brent, provided the initial experimental evidence that organ transplantation was possible and led to an explosion of experimental studies in animals and ultimately led to the development of the field of clinical transplantation.

After leaving Medawar's laboratory and moving to the Wistar Institute in Philadelphia and subsequently to the University of Pennsylvania where he served as Chairman of the Department of Medical Genetics, Billingham continued his work in transplantation biology. His studies with colleagues demonstrated the importance of passenger leukocytes present in the graft and their role in activating the host immune response, and pioneered tissue typing using the irradiated hamster test and potential of the mixed leukocyte test to assess the important differences in histocompatibility of organ donors and recipients.

In 1964, Billingham published a major monograph in the *New England Journal of Medicine* on the role of transplantation immunity and the maternal-fetal relationship. This series of studies generated interest among immunologists and reproductive biologists and helped establish the field of reproductive immunology. He moved to Southwestern Medical School in Dallas in 1971, where he continued his pioneering studies of the fetus and placenta as transplants with Alan Beer and this led to his interest in the Armadillo as a model for the study of maternal fetal interactions.

Learning Objectives:

1. Outline the Bill Billingham's career and describe how his studies laid the foundation for clinical transplantation and started the hunt for the Holy Grail of transplantation-related immune tolerance and the acceptance of organ grafts without the use of immunosuppressive drugs.
2. Describe how Billingham's familiarity with farm animals led to his pioneering, Nobel-winning studies with Sir Peter Medawar.
3. Discuss the importance of the armadillo in helping attract Billingham to Texas.

A Tale of Two Cities: Osler's Influence on Medical Education in London and Cardiff

NEIL MCINTYRE

Neil McIntyre is Emeritus Professor of Medicine at Royal Free and University College of Medicine. Since his retirement in 1999 he has been working on a history of the Royal Free Hospital School of Medicine (originally the London School of Medicine for Women). He has been a member of the Osler Club of London for 50 years, and is a past president and secretary. He contributes a series on medical statues to the Journal of Medical Biography.

Osler influenced medical education in London and in Cardiff, the Welsh capital, through his involvement in two Royal Commissions, both chaired by Lord Haldane. For the first, on University Education in London (1911-1913), Osler was a key witness. For the second, the Royal Commission on University Education in Wales (1916-1918) he was one of the seven commissioners.

The recommendations of the Royal Commission relating to London had little effect, and were finally rejected in 1926. However, based on advice given to the commissioners by Abraham Flexner, Osler and von Muller, 'clinical units' led by full time university professors were introduced into a few London schools in the early 1920s. However, many were concerned that bedside skills would be lost with this 'attempted Germanization of London University' and several decades elapsed before they were established more widely.

Osler was the only medical member of the Royal Commission on University Education in Wales, which led to the founding of a complete medical school in Cardiff. Influenced by Osler it recommended clinical teaching controlled by full time professorial units. These were established for medicine and surgery in 1921-22. However, bitterness resulted because the existing 'honorary' clinicians, who gave their services free and relied on private patients for their income, were not paid for and had no influence on teaching; use of their hospital beds for teaching was therefore not guaranteed.

The situation improved temporarily after examiners in London refused to accept Cardiff's training programme unless 'honoraries' were recognised as teachers and their beds used for teaching. However, in 1928 most 'honoraries' resigned, perceiving a threat to their private practice income, when it was suggested that part time assistants should be appointed to the professorial units. On 30 September the Infirmary closed its doors to medical students until October 1929. The students went elsewhere for instruction. One enterprising student threatened to sue for breach of contract and was rewarded with an out-of-court settlement.

The problem in both London and Cardiff lay in the concept of 'full time' appointments, an issue being debated again in British medicine. The irony is that Osler, still seen as one of its protagonists, was never himself a full time professor; nor did he advocate full time appointments, at least for heads of clinical departments.

Learning Objectives:

1. List the roles Osler played in the Royal Commissions dealing with educational problems in London and Cardiff from 1911 to 1918.
2. Explain why, for several decades, only a handful of medical schools in London adopted the full time professional unit system, and how this issue has again become contentious in Britain.
3. Discuss why the full time system led to the closing to students of Cardiff's main teaching hospital.

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Hurricane Katrina Assistance: Stories that Would Make Sir William Proud

BRYANT BOUTWELL

Bryant Boutwell is the John P. McGovern Professor of Oslerian Medicine at The University of Texas Medical School at Houston. A news journalist by original training, he holds a doctoral degree in public health and also serves as the UT Medical School's Associate Dean for Community Affairs.

Houston and the Texas Medical Center responded quickly to the medical needs of New Orleans in the days that followed the devastation of Hurricane Katrina. Victims of the storm housed in Louisiana's Superdome were evacuated to Houston's Astrodome and George R. Brown Convention Center over this past Labor Day weekend. Our medical contingency in Houston responded within hours to set up medical care "MASH" units within the facilities as convoys of buses that arrived carrying thousands of evacuees.

This talk will take you behind the scenes with photo images to see how our medical community responded on short notice along with the challenges they faced — both expected and unexpected. Focus will be on The University of Texas Health Science Center's medical command center in the George R. Brown Convention Center where faculty and staff worked with volunteer physicians, nurses, and other allied health professionals throughout the Houston area to oversee more than 9,000 patient visits during a matter of days.

Of special interest, what were the Oslerian qualities of professionalism, care and compassion that can be identified to frame this medical relief effort as a *calling* that went well beyond the delivery of good medical care? Houston responded with open arms — a concept well understood and practiced Sir William Osler throughout his lifetime.

Learning Objectives:

1. List Oslerian ideals for the practice of medicine that relate to this contemporary medical relief event.
2. List at least three examples from this experience that define medicine as a calling rather than a trade.
3. List at least three ways this relief effort benefited the care givers, faculty, staff, and students alike who participated.

Dr. Abraham Gesner, Father of the Petroleum Industry

JOCK MURRAY

T. Jock Murray is former Dean of Medicine and Professor of Medical Humanities at the Dalhousie University, Halifax, Nova Scotia. His numerous awards include the Neilson Award from the Hannah Institute for the History of Medicine and the Nicholas Davies Award from the American College of Physicians. He is currently first vice-president of the American Osler Society.

Dr. Abraham Gesner, (1797-1864), descendant of Konrad Gesner the Swiss naturalist, was born in Cornwallis, Nova Scotia. Although self taught, he pursued experiments in natural sciences, geology, mineralogy and chemistry, traveling to the West Indies and South America in pursuit of his studies. He was financially strapped by his pursuits and his father-in-law, Dr. Issac Webster, said he would only bail him out if he agreed to study medicine.

He studied medicine at Guy's and St. Bartholomew's Hospital, London, and returned to a rural practice in Cornwallis. However, his real interest was in the natural sciences and he carried out the first major geological surveys of Maritime Canada. He was appointed a member of many European geological societies and was the first government geologist appointed in the British Colony. He published widely on geology, immigration regulations, and industrial resources. He invented an electrical dynamo and a motor driven by a voltaic battery. Always collecting, he donated 2,173 artifacts to found a museum of science, the first public museum in Canada, which continues today.

He was also interested in exploring extraction of oils, grease, waxes and fertilizers from a substance called albertite which he found in his explorations. In 1846 he was able to distill from albertite a clear oily liquid he first called *keroselain* (from two Greek words meaning wax and oil) and later contracted it to *kerosene*.

The search for a better illuminating gas was intense during the mid-nineteenth century and Gesner's kerosene was superior to the recently discovered illuminating gas of Lord Dundonald. His textbook, *A Practical Treatise on Coal, Petroleum and Other Distilled Oils*, was very influential in the future development of petroleum products by the newly developing petroleum industry. He formed a company to produce kerosene in Halifax and then moved to New York, where he set up two large kerosene factories. His patents were challenged by entrepreneurs who argued that his substance was coal, to which they had the mining rights, and he could not patent a natural substance like coal. He received little financial reward for his discovery and returned to Halifax to take the Chair of Natural History at Dalhousie University but died suddenly before he could take his post.

To add to the sad story of this brilliant physician who achieved little rewards in life for his discoveries, his grave was unmarked in Camp Hill Cemetery for 69 years. Finally in 1933 the Imperial Oil Company erected a marker to indicate that he was the "father of the petroleum industry."

This paper will explore his contributions to geology and the biased court trial that prevented him from profiting from the discovery that transformed the petroleum industry and provided the world with a better source of illumination.

Learning Objectives:

1. Discuss the changes that illuminating gas made in society.
2. Give specific examples of the diverse involvement in natural sciences by eighteenth- and nineteenth century physicians.
3. Evaluate the legal arguments that broke Abraham Gesner's patents for kerosene.

From Chocolate Agar to Near Nobel

DARRYL BINDSCHADLER

Darryl Bindschadler trained at the University of Rochester, Barnes Hospital, the National Institutes of Health, and the University of Colorado. He practiced Pulmonary Medicine in Cheyenne, Wyoming, for thirty years.

Oswald Theodore Avery was born on Oct. 21, 1877, in Halifax Nova Scotia. His father was a Baptist minister who had moved his family to Canada from England in 1873. In 1887 the family moved to the Bowery section of New York City where Rev. Avery became pastor of a missionary church.

Avery practiced general medicine at a Park Avenue address for three years after graduating from Columbia P&S Medical School in 1904. In 1907 he began his research career in Microbiology at the Hoagland Laboratories in Brooklyn. His paper reviewing the world literature of secondary infection in tuberculosis and his own experimental studies of 100 patients with that malady came to the attention of Dr. Rufus Cole of the Rockefeller Institute for Medical Research. Avery was hired at age 36 and remained at the Rockefeller for the next 35 years.

Avery's career mission was a "systematic effort to understand the biological activities of pathogenic bacteria through a knowledge of their chemical composition." His early career concentrated on the diagnosis and immunologic treatment of bacterial pneumonia as well as bacterial growth factors. The middle years were consumed with the discovery and immunologic characterization of the specific soluble substance of the pneumococcus, the first carbohydrate antigenic material to be described (the first of two paradigm shift-generating events in his career) and work for which he was nominated more than 20 times for the Nobel Prize.

Oswald Avery's crowning achievement came in 1944 at age 67 with the publication of a paper in the *Journal of Experimental Medicine* demonstrating that DNA was responsible for the transmission of hereditary features in the Pneumococcus." Dr. Joshua Lederberg 1958 Nobel Laureate, said: "There is no question that the 1944 paper was the turning point in the concept that the chemistry of genes was DNA....It was the pivotal discovery of 20th century biology." Geneticists and some of his Rockefeller colleagues voiced loud dissent to the DNA conclusions. That dissension plus lack of timely independent corroboration of the discovery led to the Nobel Committee's repeated postponement to awarding the Prize to Avery in spite of at least eleven more nominations.

Quiet and self absorbed, conservative to a fault in his public statements, Avery possessed an incredible aptitude for reasoning by analogy and a persistence in the laboratory second to none. "The world would be more honored if it had honored him more."

Learning Objectives:

1. Outline Oswald Avery's career.
2. Discuss the experiments by which Avery and his colleagues demonstrated that DNA is the "transforming principle."
3. Give at least two reasons why Avery was not honored with the Nobel Prize.

William Osler and the Palace in Pall Mall

JOHN W. K. WARD

Dr J W K Ward is a retired family doctor from Oxfordshire, England. He is a former president of the Osler Club of London and current president of the British Society for the History of Medicine. He is a Fellow of both the RCP of Edinburgh and the RCGP.

William Osler came to Oxford from Johns Hopkins in 1905. His Regius Professorship was meant to be relatively work free, but he threw himself into multiple activities, lecturing round the country, especially in London, and took pleasure in his mastership of the almshouses at Ewelme. He had a car and a chauffeur. In September 1908 he was elected to the Royal Automobile Club, proposed by Edwin Bruce-Porter and seconded by Lord Montagu of Bequieu.

The RAC, founded in 1897, had acquired the site of its purpose built building in Pall Mall in 1908. Its members included royalty, well known society figures and men from the world of motoring. Osler used the club regularly, particularly for entertaining: never more spectacularly so than for a dinner in the club on Wednesday, August 6, 1913, when he invited 196 members of the Section of Medicine

The presentation seeks to examine Osler's involvement in the RAC and the international congress, including menu and table plans for the dinner, work which has not been recorded previously. Additionally, his motoring and medical connections with Willam Morris, later to be Lord Nuffield, Britain's greatest medical benefactor, will be discussed.

Learning Objectives:

1. Discuss whether Osler's change of scene from the USA to Oxford prevented the development of "burnout".
2. Examine the relevance of a gentleman's club to Osler and to our generation
3. Contrast the relationship between the leaders of different disciplines in Osler's day and nowadays.

An Account of the Epidemic Catarrh of the Year 1782

JOHN NOBLE

John Noble is a teacher and general internist who served as Chief of General Internal Medicine for 25 years, first at the University of North Carolina and subsequently at Boston University. The development of primary health care services, the improvement of patient safety and the teaching of medical humanities have been the major foci of his academic career.

“The influenza of the Year 1782, Appearing to the Society (for Promoting Medical Knowledge) an object worthy of their attention, they were desirous of collecting materials for its history; and for that purpose solicited” information on the subject, from gentlemen of the profession established in different parts of Europe.” An account of these materials was then published as the lead articles in Volume I of their publication “Medical Communications.”

Reports of the epidemic were compiled which document the first appearance of an epidemic of Influenza in China in mid 1781. The epidemic was tracked by the author to the East Indies and Siberia during October and November, then to Moscow in December. Month by month, it was then tracked across Europe, arriving in the British Isles by May and June of 1782, to France in July, Italy in August and Spain by September.

The contagious nature of the epidemic is described in detailed reports from physicians across England and Scotland. The evidence in their practices of immunity from and of extreme susceptibility to infection are also described.

The mode of transmission was hotly debated among the group of physicians who contributed to the publication.

Prognosis and the 18th century use of therapeutics were then presented in the final section of the publication.

This report, a forerunner of the modern day *Morbidity and Mortality Weekly Reports* published by the Centers for Disease Control and Prevention in Atlanta, Georgia, provides marvelous insight into late eighteenth century medical acumen. The state of knowledge about immunity, susceptibility and treatment in the late eighteenth century will be compared with more contemporary experience with epidemic influenza, with special reference to the 1918 epidemic in Derbyshire, Wales.

Learning Objectives:

1. Describe eighteenth century knowledge of influenza, its epidemiology and clinical course.
2. Discuss the deliberation over possible causes of influenza in 1782.
3. Identify similarities and differences between the Influenza of 1782 and more recent epidemics including the pandemic of 1918.

Osler and the Almshouse Safe: An Account of God's House at Ewelme

CHARLES T. AMBROSE

Charles Ambrose trained in infectious diseases in Boston, spent 14 years at Harvard Medical School as a research immunologist, and now serves as Professor of Microbiology at the College of Medicine, University of Kentucky, Lexington. He teaches elective rotations in the history of medicine and of microbiology. He is an avid collector of rare medical books and an authority on Irish Setters.

When Osler assumed the Regius Professorship of Medicine at Oxford in 1905, he also became Master of the Almshouse at Ewelme, a village some 14 miles away. [pronounced "you-elm"] This almshouse was a part of a fifteenth century charitable foundation called God's House, which had been established in 1437 by Alice, the first Duchess of Suffolk. She also was the granddaughter of Geoffrey Chaucer, the author of *The Canterbury Tales*. Of wider historical interest is the fact that several of Alice's descendants between 1480 and 1522 were contenders for the throne of England.

Almshouses were frequent charitable creations of the medieval period and derived in part from concern of the rich for their souls after death. The fear of Purgatory dominated religious thoughts of medieval Catholics. To hasten their passage from Purgatory to Paradise the wealthy founded almshouses and chantry chapels, thereby committing in perpetuity almsmen and priests who would glorify God and send up prayerful chants for the souls of their benefactors. Initially, God's House was also founded as a piece of "dynastic propaganda," intended to advance the political aspirations of Alice's descendants.

The remarkable aspect of God's House at Ewelme is that it has survived essentially unchanged for over five hundred years. Thirteen elderly people (now generally thirteen couples) still reside in the Almshouse. Neither the aims of covetous men for its remunerative properties, nor the religious upheavals of medieval England, nor later social pressures have altered significantly either the fifteenth century buildings of God's House or the legal charge of Alice's charitable foundation. Even more astonishing is that in 1906 in a long neglected, rusty safe at the Almshouse, Osler found parchment records from the fourteenth through fifteenth centuries that document this chapter of English medieval history.

Finally, in St. Mary's Church connected to the Almshouse are the ornate tombs of Alice Chaucer and her parents. Nearby on a wall is a large marble plaque commemorating Sir William as once the master of the Almshouse at Ewelme.

Learning Objectives:

1. Outline the role of the Chaucer family in English dynastic history.
2. Describe the fifteenth century Almshouse and Church at Ewelme.
3. Explain why Osler took delight in his appointment at Ewelme and his connection there to medieval England.

William Osler: A Clinical Historian Straddling Two Centuries

CHARLES F. WOOLEY

Charles Wooley is Emeritus Professor of Medicine at Ohio State University School of Medicine, where he had a distinguished career in academic cardiology. A past president of the American Osler Society, he has also published widely in the humanities.

During WW I Osler, Regius Professor at Oxford, used his medical/political influence to support the creation of the military specialty hospitals in England. As consultant to the Military Heart Hospital in 1917-18 Osler met with the U.S. medical officers who were working with Thomas Lewis, the medical director. The young U.S. cardiologist Samuel Levine and his fellow medical officers presented a young soldier with a puzzling clinical condition to Osler. Levine's wartime diary described the scene. Utilizing nineteenth-century physical diagnostic skills Osler excluded most forms of known heart disease and concluded that the diagnosis was idiopathic hypertrophic myocardial disease. Osler then shifted into the twentieth century mode and spoke to Thomas Lewis, electrocardiographic pioneer: "Tom, you ought to be able to tell something we do not know about this man's heart muscle with this new electrocardiographic technique." The EKG in fact showed bundle branch block; the overall clinical findings were consistent with combined cardiac conduction system and myocardial disease. Osler's knowledge of nineteenth- and twentieth-century anatomy, pathology, and history of the cardiac conduction system, his clinical expertise, and understanding of the new technology led to his recognition of this type of cardiac disorder long before such concepts reached clinical threshold.

Earlier in the century (1901) Osler had presented a masterful review of nineteenth-century medicine to the Johns Hopkins Historical Club that was initially published only in the New York *Sun*. Osler analyzed the changing theories of disease during the 1800s, and pinpointed the discovery of scientific laws that resulted in health, and the replacement of philosophic discussion with scientific investigation. He reviewed advances in the physiological laboratories, pathology, and chemistry, identifying the beginnings of scientific medicine. Bacteriology opened unheard of possibilities, preventive medicine became a viable concept, and specific diseases could be traced to their bacteriologic origin. The introduction of asepsis and anesthesia were the foundations of modern surgery. Osler spoke as eyewitness, participant, and nineteenth century historian, and used the material as a platform to inform twentieth century physicians of their heritage and challenges.

Osler, with one foot in the nineteenth century, the other in the twentieth, combined the astute clinician's wisdom with the historian's insights in a unique manner. We have not seen his like.

Learning Objectives:

1. Describe the impact of Osler's clinical skills-honed in the nineteenth century-on the next generation of twentieth century clinicians as personified by the WW I U.S. medical officers in England.
2. Outline Osler's extraordinary grasp of nineteenth and early twentieth century developments in the experimental anatomy, pathology, and physiology of the cardiac conduction system, and the clinical correlation with the new EKG technology in 1917-18;
3. Explain how Osler's appreciation of medical history in general, and the nineteenth century in particular, complemented his twentieth century posture.

Daniel Hale Williams: Moses to African-American Medicine

RALPH G. GORDON

Ralph Gordon is Emeritus Professor of Pediatrics at Michigan State University and Adjunct Professor of History at Western Michigan University. His historical interests include the evolution of medical education, the American Medical Missionary College of John Harvey Kellog, and Civil War medicine. He is currently working on a book on General John Hunt Morgan, CSA, exploring the social and political as well as the military viewpoints.

Several excellent historical studies of medical schools for African-Americans have appeared in the past few years. They tend to look at these programs as single entities, and have generally outlined the reasons for their failure, without trying to explain why the early schools, Howard University and Meharry Medical College persist till the present day. This paper puts forth the view that the work of one individual, Dr. Daniel Hale Williams, was the most important single factor in keeping them alive, and that through his work the later development of the prominent black-oriented medical colleges of today was promoted, as well as the design of early improvements in the care and medical education of African-Americans.

The task that medical educators faced for black students was indeed a formidable one considering the dictum of Abraham Flexner that "The medical care of the negro will never be left wholly to negro physicians." The man who came forth to lead the challenge to this thinking was born in Hollidaysburg, PA in 1856, and after the death of his father worked as a barber in Janesville, WI. He was taken under the wing of Dr. Henry Palmer, surgeon general of Wisconsin during the Civil War, served an apprenticeship with him, and in 1883 became the first black graduate of the Chicago Medical School, which was the forerunner of Northwestern's program. He fortunately secured an internship at Mercy Hospital in Chicago, where he very likely came under the supervision of the eminent surgeon Dr. John B. Murphy.

Williams went into practice in Chicago and soon learned that opportunities for nursing education for young black women were almost non-existent, and that most African-American medical graduates went into practice straight out of medical school, since opportunities for internships were rare. He then started the black hospital movement with his 69 bed Provident Hospital as the flagship, and of critical importance because of its approval by the American College of Surgeons, of which Williams was the only black founding member. Some 40 institutions in 20 states were directly influenced by his work at Provident. He later established internships at Freedman's Hospital in Washington, DC, improved its nursing school, and brought new techniques from Chicago to the Howard University Surgical Department.

On his return to Chicago he embarked on an important facet of his work, improving surgical education at Meharry Medical College, through annual week-long operating clinics for black and white physicians of Nashville alike. These visits improved the prestige of the school, increasing the enrollment by 60% as well. He did these unreimbursed demonstration operations for twenty years with anesthesia administered by Dr. John A. Kenny of Tuskegee Institute, who also gave continuing medical education lectures. In addition to also teaching at Tuskegee, Williams participated in medical education programs in African-American hospitals around the United States, and did much to elevate the knowledge and professional status of the black physician in America. He was an outstanding surgeon, and in 1893 performed one of the first cardiac surgery procedures in the country when he opened the chest of a patient who had been stabbed in the heart. He sutured the pericardial sac and the patient made a full recovery. He published the case, and his work became widely acclaimed since only two attempts of that type had been carried out, which were not very satisfactory. In addition he was one of the first surgeons to suture a ruptured spleen following trauma.

The National Medical Association was founded in 1895 and was also heavily influenced by Williams in response to the American Medical Association's resistance to having black members. His influence on medical education for African-Americans should not be underestimated, considering the fact that Howard and Meharry graduated the majority of black physicians and dentists till the middle of the twentieth.

This presentation will include a rare historical filmstrip showing Daniel Hale Williams and his little hospital at the popular African-American resort near Baldwin, Michigan in the early 1900s.

Learning Objectives:

1. Discuss the role of Daniel Hale Williams in the sustained success of Meharry Medical College and Howard University.
2. Outline Daniel Hale Williams's career, including the role of various mentors.
3. Review Williams's success as a surgeon and the impact his success on enhancing the self-confidence of African-American physicians.

Gloria in Absentia: The James Carroll Papers and “The Myth of Walter Reed”

CHARLES S. BRYAN

Charles S. Bryan is Heyward Gibbs Distinguished Professor of Internal Medicine and Director of the Center for Bioethics and Medical Humanities at the University of South Carolina.

Proof of mosquito transmission of yellow fever made seaports safe from a deadly scourge and Walter Reed a celebrity. Many believe that Reed's three colleagues—Aristides Agramonte, James Carroll, and, especially, Jesse W. Lazear—deserve at least equal credit. Several observations (summarized by Lawrence K. Altman in his book chapter, “The Myth of Walter Reed”) tarnish Reed's reputation among those who have analyzed what took place in Cuba between 1 August and 6 October, 1900, when, it is thought, the other investigators established the key conditions for mosquito transmission: (1) in order to be infectious, mosquitoes must feed on patients during the first several days of clinical illness, during symptoms are nonspecific; and (2) most mosquitoes require about two weeks of viral incubation before becoming infectious. First, Reed left Cuba on 2 August, the day after the investigators agreed to self-experiment, allegedly to complete a report on typhoid fever. However, Reed was vacationing in Pennsylvania with his wife during much of the time when Carroll (who nearly died of yellow fever and whose death in 1907 may have been a late result of yellow fever), Private William H. Dean, and Lazear (who died of yellow fever) were submitting themselves to loaded mosquitoes. Second, Reed requested Surgeon General George M. Sternberg to set aside Lazear's notes for his own use. Many suspect the secret was unlocked by a notebook found in the side pocket of Lazear's uniform blouse, which was presumably in Reed's possession when Reed died in 1902 and which has never been recovered. Finally, Reed returned to Cuba on 6 October, stayed just seven days, and on 23 October presented and had published a preliminary report listing himself as first author and concluding, “The mosquito serves as an intermediate host of yellow fever.” This temporal sequence suggests that Reed opportunistically appropriated the work of his colleagues. Recently, correspondence between James Carroll and his wife, Jennie, have been made public. These letters largely exonerate Reed from the above charges. Reed's departure from Cuba on 2 August and his arrival back in Cuba on 6 October were clearly planned, he did indeed work on the typhoid report while back in the United States, and he encouraged Carroll to look over Lazear's notes. However, Reed's treatment of Carroll—while consistent with the ethos of the times—does raise issues that reverberate today, such as proper attribution of scientific discoveries and the maintenance of mutual respect between and among investigators.



James Carroll
(1854-1907)

Carroll was the first person to contract experimental, mosquito-transmitted yellow fever. He and Aristides Agramonte grew increasingly bitter toward Walter Reed, who received most of the credit. Carroll later showed the agent could pass through a Berkfeld filter—in retrospect, the first demonstration of transmission of a viral disease in humans.

Learning Objectives:

1. Explain why the Cuban physician Carlos Finlay failed repeatedly in his attempts to prove his hypothesis that a specific mosquito (the common household mosquito, *Aedes aegypti*) transmits yellow fever.
2. Discuss the controversy surrounding attribution of proof of the mosquito hypothesis for transmission of yellow fever, including your own interpretation of who (if anybody) deserves the major credit.
3. List three lessons to be learned from the events of 1900 in Cuba and “the myth of Walter Reed.”

Sir William Osler—A Departure from his Reputation as a Therapeutic Conservative: The Treatment of Bright's Disease

ROBERT J. LEVY

Robert Levy, a 1953 graduate of the Johns Hopkins University School of Medicine, studied nephrology under Gilbert Mudge and Arnold Relman and practiced that subspecialty for 45 years prior to his retirement. He is now exploring the literature on the origins of nephrology centered around Richard Bright and his predecessors, as well as Robert Christison and Pierre Rayer who followed up Bright's observations.

Sir William Osler's textbook, *The Principles and Practices of Medicine* (first edition, 1892), in addressing treatment of acute and chronic Bright's Disease contains many echoes of antiphlogistic treatment including depletion therapy of earlier nineteenth century practices. These include bleeding, cupping and depletion therapies such as mercury diuretics in the form of calomel and saline enemas, application of cautery to the loins, use of jalap as a laxative, and cream of tartar as well as pilocarpine to encourage sweating. Osler recommended the use of warm baths as a method of depletion and Canton flannels to prevent chilling as were employed by the physicians in the first part of the nineteenth century. All these procedures were recommended by Richard Bright and his followers, Robert Christison of Scotland, Jonathan Osborne of Ireland and Pierre Rayer of Paris, all of whom helped establish the clinical entity of Bright's Disease. Such procedures from an earlier time are strikingly absent from Osler's discussion of the therapy of other diseases such as tuberculosis and typhoid fever, where Osler is more in compliance with his reputation as a conservative therapeutic conservative. His emphasis on the importance of nursing care and diet in the management of typhoid fever are examples, "The profession was long in learning that typhoid is not a disease to be treated mainly with drugs. Careful nursing and a regulated diet are the essentials in a majority of cases." In considering the etiology of renal disease Osler accepted the assumption of his predecessors that exposure to cold and wet were "one of the most common causes" or alternatively the condition occurred "following exposure after a drinking bout". Even Osler's recommendation in advanced cases of Bright's Disease, "for those in affluent circumstances a residency in a warm equitable climate such as Southern California" has its precedence in the writings of the earlier nineteenth century. Rayer in his *Traite des Reins* similarly indicated that "the doctor will recommend living in a dry and temperate environment, in a flat with southern exposure." The recommendations for treatment of renal disease by Bright and his followers will be compared with William Osler's tacit acceptance of their regimens as appears in the initial and subsequent edition of Osler's textbook.

Learning Objectives:

1. Describe William Osler's tacit acceptance of modes of treatment of renal disease common to those of his predecessors earlier in the century who employed bleeding, cupping, calomel, jalap and cream of tartar, etc.
2. Contrast Osler's therapeutic spectrum with regard to renal disease with that he recommends in treating other conditions such as typhoid fever and tuberculosis where a more thoroughgoing conservative approach is recommended.
3. Demonstrate how the later editions of Osler's *Principles and Practices of Medicine* show very little modifications in the therapeutic management of Bright's disease even up to the 1947 edition edited by Henry A. Christian.

On First Looking into Jarcho's Leibowitz: The Clinician as Medical Historian

ALLEN B. WEISSE

Allen Weisse is Professor of Medicine at the New Jersey Medical School. He has written numerous articles and books on medical history, most recently Heart to Heart: The 20th Century Battle Against Cardiac Disease.

The study and writing of medical history is recognized as an integral part of our understanding of this profession and its place in society. Once principally the domain of interested physician/historians such as Saul Jarcho, the field has become dominated by professional historians. Among members of both groups currently active it appears that the knowledge of languages that contributed so importantly to the work of Jarcho and other predecessors is on the wane. Despite this disturbing trend both clinicians (without degrees in history) and professional historians (without medical training) should be welcomed to the field as long as the quality of the work remains high. Although it appears that an increasing number of clinicians are preparing themselves with additional training in historical research it is still the individual merit of the contribution and not the official academic designations applied to the name of the author that should be the paramount consideration. The career of Saul Jarcho provides a striking case in point.

Learning Objectives:

1. Offer three reasons why clinicians should study medical history.
2. Describe the benefits of participating in historical societies such as the American Association for the History of Medicine.
3. List at least four reasons why clinicians and professional historians should cooperate more fully toward their final goal.

William B. Bean Award Student Lectureship
**The Art of Medicine: Teaching Diagnostic Proficiency
 and Medical Education through Visual Art**

CLAIRE HOVERMAN

Claire Hoverman attended Swarthmore College, graduating with a Bachelor of Arts degree in Art History and a minor in Biology. She is currently a second year medical student at the University of Texas Health Science Center in San Antonio where she continues to learn the art of bedside diagnosis under the auspices of Dr. Abraham Verghese, Director of the Center for Medical Humanities and Ethics.

PROBLEM: In a room full of physicians a speaker asks the audience how in a rural clinic without electricity they might diagnose a pleural effusion without the use of roentgen images and with enough confidence to put in a needle. The ensuing silence is emblematic of what ails bedside diagnosis in North America; an abundance of technology has left physicians (and therefore students who train with them) with little faith in their skills of inspection, palpation, percussion, and auscultation. This project was designed to produce an independent study for medical students to learn proper techniques of diagnosis by training the eye to recognize visual cues through the analysis of art. In turn, this study examines the use of art and art interpretation as a teaching tool to enhance the proficiency of medical students as diagnosticians.

DESCRIPTION OF PROGRAM: An elective incorporating art and medicine was designed for fourth year medical students to take with their general medicine rotations in order to create a dialogue between artistic examples and real life examples of disease. The CD-ROM contains a general introduction to art history and the analysis of art in conjunction with a guide to visible disease apparent at the bedside and represented in works of art. An evaluative component will allow the new skills to be measured.

PREDICTED OUTCOME: By teaching medical students how to recognize particular clues in a piece of art and to further interpret those clues to tell a story both about the subject in the painting and about the history of the art work, students learn to "see" in a completely different way. The elective will also instruct the student on common findings of common diseases.

CONCLUSIONS: Students will learn to see and interpret art and in the process also learn the value of inspection of the patient's outward appearance, body language, gait, facial expression, coloration, and other factors to come to a diagnosis. Emphasizing the art in the art of medicine will allow better questions to be asked of tests that are ordered, and produce more faith in physical diagnosis skill.

Learning Objectives:

1. Define an ongoing dilemma in healthcare as physicians lose the art of bedside physical diagnosis.
2. Examine other modalities for teaching physical diagnosis to students during medical school.
3. Outline the use of art in teaching the importance of visual cues in physical diagnosis.

Is the Post-Osler Era of Biomedical Research Over?

ALAN N. SCHECTER

Alan Schechter has directed an active research program at the National Institutes of Health (NIH) for more than four decades, starting with studies of protein folding and now concentrating on analyzing the interactions of hemoglobin with nitric oxide, as a basis for therapy of sickle cell and cardiovascular diseases. He will attempt in this presentation to place his observations during these research experiences, ranging from basic science to clinical investigation, in an historical context. This perspective has been greatly influenced by his work for the last two decades with the NIH Office of History and the Dewitt Stetten Museum of Medical Research.

A. McGehee Harvey begins his book *Science at the Bedside: Clinical Research in American Medicine 1905-1945* (Johns Hopkins University Press, 1981) with Osler's departure for Oxford and his replacement at Johns Hopkins by Lewellys F. Barker and the "intrusion of science into clinical medicine." As recounted by Harvey the subsequent forty years, for Johns Hopkins and a number of other American institutions, were characterized by a growing cross-fertilization between the basic sciences, especially physiology, and the clinical sciences. NIH historians Victoria A. Harden and Buhm Soon Park (*Inventing the NIH*, Johns Hopkins University Press, 1986 and unpublished manuscript) have documented how these initial endeavors in a few private hospitals, medical schools and institutes, largely funded by philanthropy, grew exponentially after the second World War under the financing of the National Institutes of Health. This transition occurred under the guidance of Thomas Parran, Rolla E. Dyer, Norman Topping, James A. Shannon and a few others and allowed the enormous expansion of clinical investigations *pari passu* with the development of molecular and cell biology, genetics, immunology, neurobiology and other basic sciences. This research expertise, concentrated in academic venues, had few critics even among those not enthusiastic about government spending. However, this new NIH research paradigm gradually evolved from that which could be described as "medical" to being designated "biomedical" research, and in the last two decades the consensus underlying this program has begun to fragment (A.N. Schechter, *JAMA*, 1998). This problem was initially perceived as a loss of physician-investigators, but more recently it has been understood in terms of the loss of publicly-funded clinical research and the increasing barriers between basic and clinical research i.e., the difficulty of implementing actual "translational" research in which there is a clear pathway from laboratory to bedside. Indeed some now suggest that NIH's mission be limited to "basic biomedical research" and not "medical," no less "health," research. Although currently the basic biological sciences continue to develop rapidly, clinical studies are largely commercially-funded and proceed with increasingly marginal results as far as therapeutic milestones. A few efforts have recently been made to reverse these trends, such as the NIH Director's "Roadmap," but so far they are on a relatively small scale. I will make the argument that after a century, and despite enormous current expenditures, we are returning to a situation more similar to that in Osler's time than the paradigm which flourished briefly during the past century.

Learning Objectives:

1. Describe the impact of Lewellys Barker's research agenda on clinical research at Johns Hopkins.
2. Outline the evolution of NIH-funded research for both basic and clinical sciences.
3. Discuss whether we are poised to return to the paradigm that prevailed during Osler's era after enjoying an unprecedented era of "bench-to-bedside" clinical research.

The Last Professor of Medicine: Eugene Anson Stead, Jr.

FRANCIS A. NEELON AND JOHN LAZLO

Frank Neelon is Medical Director of the Rice Diet Program and Emeritus Professor of Medicine at Duke University. He is currently second vice-president of the American Osler Society.

In *Time to Heal*, Kenneth Ludmerer succinctly characterized the position and trajectory of Eugene Stead: “No figure . . . more influenced medicine nationally . . . than Eugene Stead, chairman of internal medicine at Duke from 1947 to 1967. To his contemporaries, Stead assumed near-Oslerian proportions. His seminal discoveries in cardiovascular research reshaped understanding of the pathogenesis of congestive heart failure, he was a clinician-teacher of legendary skill, he pioneered the Physician Assistant Program, he helped foster the development of computerized medical records and outcomes research, his department generated 33 department heads, and his name was known by medical students everywhere in the country. A generation later, one writer observed that Stead’s name “draws a blank from today’s medical students and residents.”

Who was Eugene Stead and what did he do? Stead was the product of humble beginnings: the first son and second child (of five) born on October 6, 1908, to a patent medicine salesman and self-taught pharmacist (Eugene, Sr.) and his wife, Emily. He was raised in Decatur, Georgia, attended Emory University and then its medical school, after which he undertook not one but two internships (first Medicine, then Surgery) at the Peter Bent Brigham Hospital in Boston. After residency training in Cincinnati, he returned to Harvard where he worked with the legendary Soma Weiss. After Weiss’s untimely death in 1941, Stead returned to Emory where, at age 32, he became Emory’s first full-time Professor of Medicine. During 5 years in Atlanta, he instigated and published a series of remarkable reports on the pathophysiology of shock and heart failure. In 1947, he accepted the position of Professor and Chairman of the Department of Medicine at Duke University in Durham, NC, where, over a 20-year tenure, he achieved the remarkable accomplishments noted by Ludmerer.

Stead forged the reputation of Duke University. He did this by casting his shadow over the entire department. He took Morning Report with his residents *every* weekday, he made teaching rounds on Osler Ward three days a week *every* week, and he did this 11 months a year. His remarkable, virtually prescient, ability galvanize students at the bedside of patients, his clarity of vision regarding the nature and the future of medical practice, and his intense personal charisma attracted learners from across the country. Today, medical students may not know Stead’s name, but this is not surprising because, in fact, they know almost no names (and no reputations) of chairs of medicine at schools other than their own. As a result, students almost never talk of going to work *under* (or for) a Professor as pupils once flocked to Osler or Bean or Loeb or Beeson. When Stead died on June 12, 2005, a chapter in American medical education closed too. Contemporary medical educators and leaders would be well advised to look at Stead’s life and career in order to contemplate the path he considered and then made his own.

Learning Objectives:

1. Outline the life and career of Eugene Anson Stead, Jr.
2. Explain the essential elements of medical education, as gleaned from Stead.
3. Cite at least three lessons from Stead’s life and career that might be applied to one’s own.

Maudie of McGill: The Madonna of Hearts

C. JOAN RICHARDSON

C. Joan Richardson is Professor of Pediatrics at the University of Texas Medical Branch, where she is also Director of Neonatology, Medical Director for Inpatient Services, and a Scholar of the John P. McGovern Academy of Oslerian Medicine.

The phenomenal success of pediatric cardiology and cardiovascular surgery can be directly attributed to Dr. Maude Abbott and her contributions to the fundamental understanding of the pathology of congenital heart disease.

Born in Quebec in 1869, Maude Elizabeth Seymour Abbott was orphaned at age 4 and adopted by her maternal grandmother. In 1890 she graduated valedictorian from McGill's Faculty of Arts but was refused admission to McGill's medical school because she was a woman. Undaunted, she entered the Faculty of Medicine at Bishop's College in Montreal as the only woman in her class and graduated with honors in 1894.

Dr. Abbott opened an office in Montreal and while working at the Royal Victoria Hospital produced a significant paper on functional heart murmurs. Read at the Montreal Medico-Chirurgical Society by a male doctor because women were excluded from membership, the paper was well received, and Maude was elected as the Society's first female member. Her study of heart murmurs was to instill in her a lifelong passion for the study of children's heart diseases.

In 1898, she was appointed Assistant Curator of the Medical Museum at McGill. Later that year she met Osler. This encounter had a profound impact on her career, and as his protégé and with his encouragement, she made congenital heart disease her life study.

Abbott became an expert on the pathology of developmental abnormalities of the heart. She was named curator of the museum in 1901, and when Osler visited the museum in 1904, he was very impressed and wrote McGill's Dean of Medicine that her work "was the best McGill had done to date, that she had a genius for organizing, and there was no collection in North America or Britain that came close to it." Osler invited Abbott to write the section on congenital heart disease for his textbook, *Systems of Modern Medicine*, and it was this work that established her as the world authority in the field of congenital heart disease.

In 1907 she founded the International Association of Medical Museums. After Osler's death, she dedicated a special edition of the association's *Bulletin of Pathology* to him. In 1936, she published her *Atlas of Congenital Cardiac Disease*. Her descriptions of the anatomical and hemodynamic consequences of congenital heart defects provided a firm scientific rationale and enabled future surgeons to develop corrective procedures.

Maude Abbott never advanced beyond the rank of assistant professor, although at retirement, McGill granted her an honorary doctorate. After her death in 1940, artist Diego Rivera paid tribute by including her in his mural honoring the world's fifty most important heart specialists. In 1994 she was posthumously elected to the Canadian Medical Hall of Fame, and the Canada Post issued a postage stamp in her honor in 2000.

Learning Objectives:

1. Describe Maude Abbott's major contributions to pediatric cardiology.
2. List some of Maude Abbott's best-known publications.
3. Discuss Abbott's contributions to McGill's medical museum.

The Music of the Pulse: Gems from the Osler Library

HERBERT M. SWICK

Herbert Swick is the Executive Director of the Institute of Medicine and Humanities, which uses the humanities to promote positive healing environments. His research focuses on medical humanities and professionalism.

Physicians have long recognized the pulse as a window to diagnosis and prognosis, relating the state of the pulse to states of health and disease.

The rhythmic beat of the pulse stimulated efforts to interpret the pulse in musical terms and to ascribe qualities of music to qualities of the pulse. Some were poetic references: Hamlet says to his mother, “My pulse as yours doth temperately keep time/ And makes as healthful music.” (Hamlet, III, iv, 140). Others were attempts to understand physiologic functions in more familiar musical terms.

Three books in the Osler Library deal with the role of music in understanding the pulse. In 1640, the German physician Samuel Hafenreffer published *Monochordon symbolico-biomanticum. Abstrusissimam Pulsuum doctrinam...* (Bibl. Osl. 2873), which likened the pulse to musical harmonies. Osler called this tome “one of the most amusing books on the pulse ever written.” Three decades later, the German polymath Athanasius Kircher argued that the pulse represented “musical magnetism” (*Phonurgia nova, sive Conjugium mechanico-physicum Artis...* (Bibl. Osl. 3124).

But the most fanciful attempt to describe the pulse in musical terms came in the 18th century with Francois Nicolas Marquet’s *Nouvelle Methode facile et curieuse, pour apprendre par les Notes de Musique a connoitre le Pous de l’Homme...* (Bibl. Osl. 3335), which was published in 1747. This slim volume includes twenty examples of pulses normal and abnormal. The healthy pulse beat in 3/4 time – like a minuet or waltz – while abnormal pulses could exhibit varying but regular rhythms (example: *poux a neuf tems*) as well as irregular rhythms (example: *poux convulsif*).

Today, 250 years after Marquet, our understanding of cardiac physiology has taken us far from such curious and naïve descriptions of the pulse, but there remains a nostalgic attractiveness to the idea that the human heart makes “healthful music.”

Learning Objectives:

1. Identify three early medical authorities who related the pulse to music.
2. Explain three abnormal pulses identified by Francois Marquet in 1747 in terms of modern cardiac physiology.
3. Hum or whistle the “Healthy Pulse Minuet.”

Dr. David Livingstone and the Open Sore of the World

LAUREL E. DREVLLOW

Dr. Drevlow is Associate Professor of Medicine of the University of Minnesota and is Director of Student Education at Abbott Northwestern hospital, where, as a member of the teaching faculty she instructs internal medicine students and residents both in the lecture hall and at the bedside. An avid and classically trained musician, she frequently spices her instruction with medical histories of artists, composers, and musicians. Though she counts many teaching awards to her credit, Dr. Drevlow identifies her claim to fame as being able to learn about medicine, history and the mysteries of life from her good friend and constant mentor, Dr. Claus Pierach.

The religious revivals that swept through Europe and the Americas at the beginning of the eighteenth century carried Featherstone Osler (William's father) to his missionary post in central Canada, at about the same time as a young Scotsman named David Livingstone (1813-1873) followed a similar calling to Africa. Originally planning to spread the gospel in China, the outbreak of the opium wars (which would eventually bring their own burden to Dr. William Osler's doorstep later in his life) persuaded Livingstone to follow the charismatic missionary teacher by the name of Robert Moffatt to South Africa. Though he counted himself a missionary of Christ to his last day, Livingstone is more widely known as an African explorer, covering more than 29,000 miles in his travels through central and southern Africa, and the first European to set eyes on Victorian Falls. He was a forceful and vocal abolitionist, and a compassionate, tenderhearted physician with a strong affection for the African people.

Although Osler and Livingstone share many common characteristics, the nearest Osler came to central Africa was on a holiday in Egypt. But he certainly knew much about the battles of pathology in Livingstone's career: tuberculosis, leprosy, malaria (African fever), rheumatic fever, and dysentery among so many others. Today, almost a century and a half after Livingstone's remarkable trek, African fever (malaria) still claims more than one million lives a year, most of them children. The vast majority of the people of equatorial Africa lives and dies with neither prevention nor treatment of the disease. Those so fortunate to afford medicines usually receive quinine, the very nostrum Livingstone carried in his medicine box. It was Livingstone's strong hope that opening trade routes to Central Africa would allow the spread of the Gospel, civilization and education to reach the people who dwelled in "the smoke of a thousand villages". The following discussion will describe some of the history of Dr Livingstone and identify Livingstone's and Osler's contributions to the treatment and understanding of this disease, causes of medicine's lack of progress in both prevention and treatment, and expectations for the future management of this "open sore of the world."

Learning Objectives:

1. Identify three strong similarities between Osler and Livingstone
2. Name at least two ways in which Livingstone and Osler increased our clinical understanding of malaria.
3. Give three estimates of the burden of malaria in the early twenty-first century.

Cushing Reconsidered

MICHAEL BLISS

Michael Bliss is University Professor at the University of Toronto. His books include The Discovery of Insulin, Banting: A Biography, William Osler: A Life in Medicine (1999), and Harvey Cushing: A Life in Surgery (2005). His numerous honors include the Order of Canada, fellowship in the Royal Society of Canada, and honorary fellowship in the Royal College of Physicians and Surgeons of Canada.

This paper reports the outcome of a six-year study of Harvey Cushing's life (1869-1939) which has culminated in the publication of *Harvey Cushing: A Life in Surgery* (Oxford & University of Toronto Press, 2005). Using new sources, including family records and personal diaries, and reinterpreting standard sources, ranging from Cushing's correspondence files through his published papers, it is possible to relate Cushing's technical achievement as the founder of neurosurgery to the distinctive characteristics of his personality. It is also possible to set him more clearly in the context of the rise of American medicine and surgery, to assess his work in comparison to such rivals as Walter Dandy, and to indicate some of the costs of his achievement as shouldered by his wife and children. The importance of his relationship with Osler, in the history of medicine, far transcends either simple friendship or the relationship of biographer to biographee. Cushing stands, in substantial part, as the first great product of Oslerian medicine at Hopkins. If Osler represents the bridge between Old World and New World medicine, Cushing was the first great flourishing of the New.

Learning Objectives:

1. Describe the origins of neurosurgery and the importance of Harvey Cushing.
2. Characterize the Osler-Cushing relationship.
3. List at least three factors underlying the historic rise of North American medicine in relationship to Europe.

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