



Thirty-Ninth Annual Meeting
of the
American Osler Society

The Cleveland Renaissance Hotel
Cleveland, Ohio
Monday to Thursday, 20-23 April 2009

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Some Overall Learning Objectives

1. *Medical Education.* Name at least three ways in which study of the humanities informs medical humanism. Describe in detail issues pertaining to medical student access to research.
2. *Medical Research.* Discuss issues pertaining to the development of insulin, the development of cardiopulmonary bypass surgery, and the awarding of prizes for research. Name at least two ways by which Claude Bernard impacted medical research as we know it today.
3. *Medical Practice.* Explain the relevance of medical history to the understanding of syphilis, smallpox, thyrotoxicosis, and meningococcal disease.
4. *Medical Ethics.* Review the evolution of Ethics Committees in the United States. Debate the ethics of self-experimentation and also the ethics of advertising by physicians, both pro and con.
5. *Surgery.* List at least two issues pertaining to the development of plastic surgery, battlefield surgery, and laparoscopic cholecystectomy.
6. *Public Health.* Discuss at least five lessons learned from the epidemic of pellagra in the United States during the early twentieth century.

Officers and Board of Governors

American Osler Society

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	FRANCIS A. NEELON (2011)

Monday, 20 April 2009

- 3:00-5:00 pm Readings (FRANCIS A. NEELON, organizer)
- 5:45-6:45 pm Past Presidents Dinner
- 7:00-9:00 pm Board of Governors Meeting

Tuesday, 21 April 2009

General Session No. 1 (JOSEPH W. LELLA, presiding)

- 7:50 JOSEPH W. LELLA
Welcome and Announcements
- Osleriana*
- 8:00 MICHAEL BLISS
A Field of Medical Dreams: William Osler and the Discovery of Insulin
- 8:20 PAUL BERMAN
“Dear Old Friends”: Unpublished Correspondence Between William Osler and Horatio Wood, Sr.
- 8:40 GEORGE S. BAUSE
Hayesian and Oslerian Attitudes on Advertising by Professionals and on “Aerating” Patients
- 9:00 CHRISTOPHER J. BOES
Osler on Migraine
- 9:20 GEORGE SARKA
Sir William Osler and the History of the Treatment of Syphilis, the Great Pox
- 9:40 *REFRESHMENT BREAK*
- Western Reserve Medicine*
- 10:10 WILLIAM S. HAUBRICH
Emergence of Medical Education in the Western Reserve
- 10:30 DAVID K. C. COOPER
John Gibbon, Walt Lillehei and the Development of the Heart-Lung Machine

10:50

LEONARD H. CALABRESE AND JAMES B. YOUNG

The Cleveland Clinic Fire of 1928: A Defining Moment in Clinic History and American Hospital Safety

The John P. McGovern Award Lectureship

11:10

PATRICK A. McKEE

Is Scholarship Declining in Medical Education?

Noon

LUNCHEON

General Session No. 2 (JOHN NOBLE, presiding)

Miscellaneous Topics

1:00

MICHAEL MORAN

Darwin's Dilemmas

1:20

DARRYL D. BINDSCHADLER

War Wounds and Sir Almroth Wright

1:40

THOMAS W. FRANK

Uniformed but not Un-Informed: The United States Army, the Caduceus, and Medical Iconography

2:00

MICHAEL J. FULLER

John Jacob Abel: A Profile in the Heart of Medicine

2:20

JOHN D. BULLOCK

Henry Stallard and "Chariots of Fire"

2:40

REFRESHMENT BREAK

Medical Ethics and the Humanities

3:10

ELLIOT TAPPER

Consults for Conflict: The Evolution of Ethics Consultation

3:30

MARVIN J. STONE

The Humanities are the Hormones

3:50

DAVID S. WHEELER

The Color of Disease

- 4:10 MARGARET P. WARDLAW
Self-Experimentation: A Thing of the Past?
- 4:30 ALLEN B. WEISSE
Noble, not Nobel: How Not to Win the Most Prestigious Prize in Medical Research
- 4:40 *ADJOURN*
- 6:00 *BUSES BEGIN LEAVING FOR DITTRICK MEDICAL HISTORY CENTER AND MUSEUM*

Wednesday, 22 April 2009

- 6:00 General Session No. 3 (CHARLES S. BRYAN, presiding)

Osleriana

- 8:00 DENNIS R. BASTRON
Osler and the Ether Dome
- 8:20 ALLISON M. BABELAY
“The Great Arabians”—Osler’s Perspective on Islamic Medicine
- 8:40 ROBERT I. LEVY
Sir William Osler’s Take on Pierre C.A. Louis’s Recommendations on Bleeding
- 9:00 GORDON FRIERSON
Osler and the Pork War
- 9:20 BILLY ANDREWS
The Tie that Binds
- 9:40 *REFRESHMENT BREAK*
- 10:10 IAN A. CAMERON
Not Just a Single Species Doctor: Osler and the Pictou County Cattle Disease

Boston Medicine

- 10:30 MARIO J. MOLINA
Sir William Osler, James Jackson, and George Minot

10:50 JOHN NOBLE
Medical Awakening in the Eighteenth and Nineteenth Centuries: Contributions
of James Thatcher

William B. Bean Student Research Award Lectures

11:20 JAMIE FRASER
Molding an Independent Specialty: Plastic Surgery in Postwar America, 1919-
1941

11:40 AMIT SHARMA
Franz Weitlaner—The Greatest Spreader of Surgery

12:00
LUNCHEON

General Session No. 4 (MICHAEL BLISS, presiding)

Miscellaneous Topics

1:00 CHARLES T. AMBROSE
Constantine Samuel Rafinesque—An Early Nineteenth Century American
Naturalist

1:20 JOHN K. RAY
Highlights from the History of Graves' Disease

1:40 ROBERT R. NESBIT
Laparoscopic Cholecystectomy: Its Introduction into U.S. Surgical Practice

2:00 ROBIN L. ROHRER
Epidemiology in Childhood Cancer: Comparison Studies in the United States,
the United Kingdom, and Germany, 1975-2005

2:20
REFRESHMENT BREAK

Pellagra

2:40 CHARLES S. BRYAN
How Close They Came: Pellagra in the Pre-Goldberger American South

3:00 H. MIKE JONES
Pellagra, Progress, and Public Polemics: Goldberger, E.J. Wood, and The Osler
Connections

PANEL DISCUSSION

Miscellaneous Topics

- 3:40 RICHARD KAHN
A Twice-Told Tale of a Titillating Title, or Dr. Kahn's Obscene Anatomical Museum Revisited
- 4:00 SANDRA MOSS
"The Country Practitioner"—A Unique Medical Journal
- 4:20 DAVID HABURCHACK
Claude Bernard: Is the Father of Evidence-Based Medicine Obsolete?
- 4:40 *ADJOURN*
- 6:30 *RECEPTION AND BANQUET*

Thursday, 23 April 2009

- 7:30 AM *ANNUAL BUSINESS MEETING*

General Session No. 5 (SANDRA MOSS, presiding)

In Memoriam

- 8:00 LAWRENCE W. JONES, SAKTI DAS, AND JOHN CARSON
Student and Chief: Memories of Earl Nation

OPEN DISCUSSION

Earl Nation, Charles Wooley, and Mark Silverman, Bearers of the Osler Flame—
How Can We Best Perpetuate Their Memories?

Miscellaneous Topics

- 9:00 S. ROBERT LATHAN
"Elvis is Dead"—Celebrities and Substance Abuse
- 9:20 MARY M. CARROLL AND FREDERICK S. HUANG
Meningococcal Disease: Historical Achievements and Current Challenges
- 9:40 *REFRESHMENT BREAK*

Johns Hopkins Medicine

10:10

ROBERT A. KYLE

“The Saga of an Oxford Don”: Chinese Breathing Exercises, Vegetable Juices, and Coffee Enemas

10:30

WILLIAM H. JARRETT

The Pithotomy Club at Johns Hopkins: R.I.P.

10:50

JAMES R. WRIGHT

Two of “The Four Doctors” and Their Role in the Development of Covert Autopsy Techniques

11:10

ADJOURN

A Field of Medical Dreams: William Osler and the Discovery of Insulin

MICHAEL BLISS

Michael Bliss has published five books in the history of medicine, including The Discovery of Insulin, William Osler: A Life in Medicine; and Harvey Cushing: A Life in Surgery. His Goodman Lectures, delivered this fall at the University of Western Ontario, are currently being revised for publication as From Fatalism to Mastery: (Canada and) The Coming of Modern Medicine.

The principal pancreatic hormone, insulin, was first isolated at the University of Toronto in 1921-22, several years after Osler's death. Thus he had no direct involvement in one of the most sensational, and controversial, discoveries in the history of medicine.

But Osler's indirect influence on the insulin research was very considerable. It does not rest on the not totally coincidental fact that Frederick Banting's father was baptized by the Reverend Featherstone Osler in 1849 in the same ceremony in which he baptized his own baby, William. Rather it rests more solidly on the influence that Osler's achievements at Johns Hopkins had in Ontario, specifically at the University of Toronto. The early twentieth-century development of both the University's Faculty of Medicine and its principal teaching hospital, Toronto General, emerged as a result of Canadians' faith in the future of advanced medical education and research as personified in the work of the Canadian-born "exile", William Osler at Johns Hopkins. The creation of world-class research and hospital facilities in Toronto, and the recruiting of outstanding personnel to staff these facilities (including a failed attempt to lure Osler home to Toronto) laid the groundwork for the emergence of insulin. It was isolated at Toronto not because of brilliant research by Banting and Best, but as a result of the collaborative efforts of a team of four – Banting, Macleod, Collip, and Best – who were carrying out a frontal assault on the problem of the pancreas using some of the most advanced facilities in the world.

It happened that Osler, in his work with thyroid extracts in the 1890s, and his reflections on the development of endocrinology, had anticipated sensational therapeutic breakthroughs such as the coming of insulin provided. The Toronto discovery was a remarkable vindication of the Oslerian faith, the Oslerian wager – if society gave physicians the resources they needed to build new playing fields, the world would come and celebrate achievements ranking with the miracles of old.

The paper draws on both my biography of Osler and my 1982 book, *The Discovery of Insulin*.

Learning Objectives:

1. Explain how the principal pancreatic hormone was discovered
2. Explore the relationship of Oslerian values to major research achievements
3. Discuss the interplay of Canada and the United States in the building of modern medical institutions

A Field of Medical Dreams: William Osler and the Discovery of Insulin

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“Dear Old Friends”: Unpublished Correspondence Between William Osler and Horatio Wood, Sr.

PAUL BERMAN

Paul Berman is Assistant Professor of Medicine at the University of Massachusetts Medical School in Worcester, Massachusetts. He is a member of both the American and Canadian History of Medicine Societies as well as the American History of Nursing Society, to which (along with the American Osler Society) he has made numerous presentations.

Harvey Cushing, in his biography of William Osler, wrote “all who were familiar with Osler’s consulting room and study in Baltimore and with his library in Oxford, will recall certain well known pictures.” Besides portraits of Linacre, Sydenham and Harvey there were a few photographs of his closest friends. One of those “wearing a picturesque fur cap such as a distinguished earlier fellow townsman of his, Benjamin Franklin was wont to wear”, was that of Horatio C. Wood Sr..

Wood was Clinical Professor of Diseases of the Nervous System at the University of Pennsylvania and with his uncle George Wood; he co-edited *The United States Dispensatory* of 1883. In the summer of 1884 Horatio was “surreptitiously” sent to McGill to check out Osler’s credentials as a candidate for the position vacated by the death of Alfred Stille Professor of Clinical Medicine at the University of Pennsylvania. Subsequently, in the fall of 1884 Osler joined the faculty in Philadelphia.

Using letters in the archives of McGill University as well as manuscripts from the University of Pennsylvania, Johns Hopkins, Norden Garden, and Oxford as well as notes from the John Shaw Billings Papers, I explore the previously unexamined relationship that existed between these two great men. Only 6 letters remain. One letter contains Wood advising Osler on royalties for his medical text; a second is a tongue in cheek discussion of Osler’s possible move back to McGill. The other letters deal with personal matters, but it is the last letter, dated March 12, 1919 from Osler to Wood which I find particularly touching. Osler closes with the comment: “I would like to see India and Japan.... particularly if you were along with me.” Nine months later Osler was dead, and his great friend Wood would follow a year later.

Learning Objectives:

1. Review the contributions of Horatio Wood Sr. to the U. of Pennsylvania
2. Explain how Wood and Osler met and what they had in common.
3. List G.B. Wood’s contributions

Hayesian and Oslerian Attitudes on Advertising by Professionals and on “Aerating” Patients

GEORGE S. BAUSE

George Bause, a graduate of The Johns Hopkins University School of Medicine, is a clinical associate professor at Case Western Reserve University. Since 1987 he has served as curator of the Wood Library-Museum of the American Society of Anesthesiologists.

This presentation compares and contrasts the attitudes of the Reverend Dr. Samuel J. Hayes, D.D.S. (1833-1897) and Professor William Osler (1849-1919) towards advertising by “doctors” and towards introducing patients to “fresh air.” The two men differed markedly on the propriety of professional advertising. With hyperbole, Hayes advertised his proprietary anesthetics and patented vaporizers on trade cards, in business directories, and in serial publications. In contrast, Osler avoided patenting his innovations, protested accusations that he had advertised his services, and would have been horrified by recent references to him in patent and advertising publications.

Rev. Hayes preached the therapeutic value of “fresh air” and of aerating vaporizers to provide “Anaesthesia vs. Asphyxia.” As soon as cylinders of compressed oxygen were widely available, Hayes supplemented his anesthetics with oxygen. False therapeutic claims by charlatans and supply companies likely slowed Osler’s acceptance of oxygen supplementation for “appropriate” patients. However, Osler was a staunch advocate of fresh air as therapy for the “White Plague” of consumption (tuberculosis).

Editing only one professional journal and dying before completing his anesthesia textbook, Hayes nonetheless pioneered the use of oxygen in every anesthetic administered today. An incredibly prolific editor and author, Osler introduced “fresh air” not only as therapy for thousands of patients but also to medical education worldwide. Ironically, during the same week of June 1897, dentist Hayes lay dying in Pittsburgh while, 250 miles away, Osler celebrated in Baltimore with his first class of medical graduates at the Johns Hopkins University.

Learning Objectives:

1. Contrast how Drs. Hayes and Osler advertised professional services.
2. Explain how these two men “aerated” their patients in different ways.
3. Compare the willingness of Drs. Hayes and Osler to supplement patient therapy with oxygen.

Osler on Migraine

CHRISTOPHER J. BOES

Chris Boes is an Assistant Professor of Neurology and neurology consultant at the Mayo Clinic in Rochester, MN. His research interests include the history of neurology and headache.

Sir William Osler was considered by some to be the greatest doctor ever. His 1892 textbook *The Principles and Practice of Medicine* became the dominant medical text in the English-speaking world. The topic of migraine was covered in this text. His neurological mentors and friends, Sir William Gowers and Silas Weir Mitchell, likely had an influence on his views on migraine. Osler himself may have had the illness. Osler was labeled a therapeutic nihilist by some.

Methods:

Review of the migraine chapter of the 9 editions of *The Principles and Practice of Medicine* that Osler contributed to, Osler's publications, Gowers' and Weir Mitchell's publications, the biographies of Osler by Bliss and Cushing, *Bibliotheca Osleriana*, and the Osler Library Archive Collections at McGill University.

Results:

In an 1889 letter, Osler wrote: "Dear Musser, Sorry I could not join you last eve. but I was dead beat, having had a most tiring afternoon, & with a – for me unusual thing – splitting headache. So I went to bed at 9:30."

In addition to describing the cardinal features of migraine in his chapter, Osler commented that "remarkable prodromata have been described, particularly in connection with vision . . . apparitions may appear—visions of animals, such as mice, dogs, etc." Weir Mitchell published a paper describing unusual "visual prodromes" in four patients with migraine. Osler commented that "many of the headaches from eye-strain are of the hemicranial type" and recommended that "errors of refraction should be adjusted." Weir Mitchell described headache associated with eye-strain from refractive or accommodative errors in 1874, but clarified in 1876 that actual migraine from eye troubles was rare.

Osler commented that "the temporal artery on the affected side may be firm and hard, and in a condition of arterio-sclerosis." Preventively Osler mentioned bromides, iron, arsenic, nitroglycerin, and cannabis. For acute attacks, Osler recommended coffee, chloroform, cannabis, antipyrin, antifebrin, phenacetin, caffeine citrate, nux vomica, or ergot. He thought cannabis was the most satisfactory remedy. Gowers felt that nitroglycerin was the best migraine preventive drug, and the best acute treatment was bromide plus cannabis.

Conclusions:

Osler may have suffered from migraine himself. He was well aware of the cardinal features of migraine, and mentioned unusual manifestations such as formed visual hallucinations. The apparitions mentioned by Osler likely refer to a paper by Weir Mitchell on that topic, given the similar clinical descriptions. Osler also indirectly referred to Weir Mitchell by commenting on the association between eye-strain and migraine exacerbation. He mentioned both the neurogenic and vascular theories, but focused more on the vascular hypothesis by emphasizing ipsilateral temporal artery atherosclerosis in migraine. Of note, Gowers also mentioned one migraineur with ipsilateral temporal artery hardening and rigidity. Osler was not a therapeutic nihilist when it came to migraine. Osler's treatment recommendations were similar to those of Gowers, and he may have been influenced by Gowers' *Manual of Diseases of the Nervous System*.

Learning Objectives:

1. Outline Osler's thoughts on migraine.
2. List authors who influenced Osler on migraine.
3. Summarize his therapeutic recommendations.

Sir William Osler and the History of the Treatment of Syphilis, the Great Pox

GEORGE SARKA

George Sarka is an Associate Clinical Professor of Medicine at UCLA, Governor of the ACP, Southern CA, Region II, President of the LA Neurological Society and a medical historian/ lecturer. He is a diplomate in 8 specialties: Internal Medicine, Rheumatology, Neurology, Geriatrics, Sports Medicine, Headache Medicine, Emergency Medicine and Occupational Medicine. He received his MD from McGill University in 1980, MPH from UCLA in 2003, is presently a DrPH Candidate in Public Health at UCLA.

Syphilis has been called the “great mimic” because its symptoms are similar to those of many other diseases. In fact, before the introduction of specific bacteriological and immunological tests, many physicians believed that “whoever knows all of syphilis knows all of medicine.”

“A mysterious epidemic, hitherto unknown, which had struck terror into all hearts by the rapidity of its spread, the ravages it made, and the apparent helplessness of the physicians to cure it.”

The father of internal medicine, Sir William Osler, used these ominous words to describe the sudden appearance of syphilis 500 years ago. This same man would eventually write his magnum opus in 1892—*The Principles and Practice of Medicine: Designed for the Use of Practitioners and Students of Medicine* where one of the areas of discussion in that text was that of the treatment of syphilis which served as a therapeutic roadmap for physicians of Osler’s time and thereafter.

Syphilis underwent a variety of treatments before and after Osler’s time at both the individual and societal levels including an assortment of myths and unfathomable remedies; hot steam baths; chemical therapies including mercury, potassium iodide, arsenicals, bismuth; medicinal plants such as guaiacum, sarsaparilla, sassafras, tobacco; surgical therapies which include trepanning and plastic surgery; syphilization; vaccinations; fever therapy/malariotherapy; antibiotics and public health measures.

The treatment of syphilis was a harbinger of what was to come in medicine with its strong influence in the advancement of medical experimentation and research, in the birth of venereology, infectious disease, plastic surgery, preventive, laboratory and immunological medicine as well as being a catalyst in development of pharmaceuticals. The U.S. Public Health Service also owes homage to this disease and its therapy which was pivotal in the emergence of this agency as a major political player in the wellbeing of the nation. Lastly, the treatment of syphilis or lack thereof has also fostered much discussion on the moral and ethical issues of its time such as with the Tuskegee Syphilis Study whose importance still permeates the conscience of man today.

In conclusion, indeed, “whoever knows all of syphilis knows all of medicine.”

Learning Objectives:

1. Outline the various treatments for syphilis before and after Osler’s *Principles and Practice of Medicine* in 1892.
2. Describe Osler’s contribution to the treatment of syphilis.
3. Discuss the importance of the treatment of syphilis in the evolution of medicine and its subspecialties, plastic surgery and public health.

Emergence of Medical Education in the Western Reserve

WILLIAM J. HAUBRICH

William S. Haubrich is a 1947 graduate of the Case-Western Reserve University School of Medicine. He is now Clinical Professor of Medicine at the University of California San Diego and Senior Consultant Emeritus at the Scripps Clinic in La Jolla. He has long served as an author and editor of medical texts. Retired from active clinical practice, he still scribbles.

In the waning 1790s, the powers-that-be of the State of Connecticut faced two pressing issues: how to compensate its citizens who had suffered losses from depredation by hostile British incursions, and how to respond to the clamor by Revolutionary War veterans for long overdue payment for military service. To meet these demands the authorities cast their eyes on land in the Northwest Territory that might be claimed by Connecticut. Moses Cleaveland and his intrepid band of surveyors sallied forth to establish plausible claim to an area that soon would become the northeast corner of Ohio.

Thereupon, a stream of emigrants from New England began to populate Connecticut's Western Reserve. Among them was a sprinkling of doctors to help cope with illnesses and injuries awaiting newcomers to the frontier. Three of the better trained and more capable were John Delamater (1787-1867), Jared Potter Kirtland (1793-1877), and Horace Ackley (1810-1859).

In early 19th century America, wherever doctors congregated they were likely to plant a medical school. At least four such schools cropped up in the Western Reserve. Delamater, Kirtland, and Ackley served ably on these fledgling faculties. Eventually the several schools consolidated as The Cleveland Medical College, technically organized as the medical faculty of what was then Western Reserve College located in Hudson, Ohio. This was the precursor of what is now the School of Medicine at Case-Western Reserve University.

To the perspicacious frontier physicians and surgeons of the Western Reserve is credited the emergence of Cleveland as a present-day premier center for medical care, education, and research.

Learning Objectives:

1. Trace the origin of "The Western Reserve."
2. Name three pioneer physicians and surgeons who laid the groundwork for medical education in the Western Reserve.
3. Cite the evolution of what is now the School of Medicine of Case-Western Reserve University.

John Gibbon, Walt Lillehei, and the Development of the Heart-Lung Machine

DAVID K. C. COOPER

David Cooper, Professor of Surgery at the University of Pittsburgh, has spent his career mainly in cardiac transplantation and related research. His book on the history of heart surgery, 'Cutting to the Heart', should be published within the next year.

The development of the heart-lung machine is the story of two men. John Gibbon came from a long line of eminent Philadelphia surgeons, and had an Ivy League background. Walton (Walt) Lillehei was a Midwesterner who, having achieved immense fame as a surgeon, saw his career and life collapse around him.

John Gibbon was born in Philadelphia in 1903. As a young research fellow at the Massachusetts General Hospital in 1930, he sat one night observing a patient who had a massive pulmonary embolus (clot occluding the flow of blood to the lungs). It occurred to him that, if there were a machine that could support the patient's heart and lungs, this might provide time for the clot to be cleared and allow recovery. He began to work on this concept, using a simple roller pump and developing an oxygenator based on the fact that oxygen can penetrate a thin film of blood. WWII intervened, and it was in the late 1940s that he resumed this research in Philadelphia. He was given immense help from IBM, without which his work may not have come to fruition. He used his 'pump-oxygenator' successfully in one patient in 1953, in whom he closed an atrial septal defect (a simple defect that could have been repaired using hypothermia). Three other operations were unsuccessful. After 23 years developing his heart-lung machine, he abandoned open-heart surgery forever. However, his machine was refined by John Kirklin at the Mayo Clinic, who established its value in 1955. Gibbon retired in 1967 to devote himself to painting and other interests. He died in 1973, aged 69, from a heart attack while playing tennis.

Walt Lillehei was born in Minneapolis in 1918. He studied at the University of Minnesota, and on qualifying as a doctor joined the US Army in 1942 as a surgeon and spent almost 4 years in Europe during WWII. He returned to Minneapolis to complete his residency, after which a lymphosarcoma was excised from his neck; he underwent extensive surgery and irradiation. As a junior faculty member, he set his mind to perform surgery within the heart, for which he needed to develop a heart-lung machine. Initially, he and his junior colleagues came up with the idea of 'cross-circulation', in which an adult human (e.g., a father or mother) was used as a 'biological' heart-lung machine to support the circulation of a child, enabling the child's heart to be stopped and operated on. After successful work on dogs, in 1954-5 Lillehei carried out 45 such operations, each of which carried a potential 200% mortality. Twenty-eight of the 45 children survived, and no donor was lost. No other surgeon worldwide had the audacity or courage to undertake this form of surgery.

By this time (1955), however one of Lillehei's research fellows, Richard DeWall, had developed a very simple bubble-oxygenator which was both cheap and disposable. Its cost was estimated to be \$50-100, in comparison to Gibbon's \$50,000 machine. It was this simple pump-oxygenator that enabled open-heart surgery to be established worldwide.

Having achieved this great success, and being described by Norman Shumway as 'the greatest surgeon in the world', Lillehei became chairman of the Department of Surgery at Cornell University in New York. He became embroiled in a number of scandals related to his personal life, and these included a prolonged trial in 1972 for lack of payment of taxes to the IRS. Although saved from prison, he was forced to retire (aged 55) and for many years lived in the surgical wilderness until John Kirklin, among others, restored him to his rightful place among the 'surgical immortals'. This brilliant and colorful, yet flawed, man died in 1999, aged 80.

Learning Objectives:

1. Describe the physiology of the heart-lung machine.
2. Discuss the ethics of cross-circulation.
3. Discuss the personal abilities and circumstances that enabled Gibbon and Lillehei to make their respective contributions to heart surgery.

The Cleveland Clinic Fire of 1928: A Defining Moment in Clinical History and American Hospital Safety

LEONARD H. CALABRESE AND JAMES YOUNG

Leonard Calabrese is a Professor of Medicine in the Cleveland Clinic Lerner College of Medicine where he heads the curricular track on Human Values in Health Care. He holds both the R J Fasenmyer Chair of Clinical Immunology specializing in the areas of immunodeficiency and vasculitis and The Theodore J Classen Chair of Osteopathic Research and Education. James Young is the Chairman of the Endocrinology & Metabolism Institute at the Cleveland Clinic Foundation and Professor of Medicine at the Cleveland Clinic Lerner College of Medicine.

On February 26, 1921 the four founding physicians, George W. Crile, Frank Bunts, William Lower and John Phillips regaled at the grand opening of the Cleveland Clinic while listening to a dedication by Charles Mayo. The clinic was based on the Mayo model of multidisciplinary care conducted in an atmosphere of research and education. By 1928 the enterprise was booming and clinic operations centered on the state of the art out patient facility still located at the center of the campus. On May 15th of that year a busy day was underway with an estimated 250 to 300 people in the main clinic building.

Around mid day a cataclysmic event occurred with a fire erupting in a film storage facility in the basement of the main clinic building. After only 2 hours the fire was extinguished but not until 129 people lost their lives including eight physicians and six nurses. Among these were John Phillips, a founder and Charles Locke the clinic's first neurosurgeon. On hearing the news Harvey Cushing a native Cleveland and dear friend of Crile and Locke rushed from Boston to Cleveland to be of assistance. The cause of the fire was combustion of nitrocellulose x-ray film stored in a poorly ventilated room in the basement. Important questions that followed the disaster included: 1. Why was such a brief fire so deadly and what was the cause of death of the victims and 2. What was the cause and were there people, systems or institutions culpable for these events. The Cleveland Clinic fire was not only one of the major catastrophes in the history of the city but subject of interest throughout the world. Sorrow was quickly followed by outrage and investigations ensued by city, county and state probes supplemented by investigations by the Bureau of Standards, the National Board of Fire Underwriters and the War Department. Although a cause was never conclusively determined several theories were proposed and tested by experimentation that will be discussed. The aftermath of the fire left not only a profound toll in human life but essentially brought the fledgling clinic to its knees both in spirit and financially. Despite these challenges the remaining founders persevered at great personal financial risk and rebuilt with amazing speed. As a result of the clinic fire a watershed was reached in the material science of x-ray film technology and handling with both a move to stringent national standards for the storage of nitrocellulose film and more importantly a wholesale endorsement of acetate based or 'safety' film. To this day the legacy of the clinic fire while contextualized as a major advance in hospital safety is still felt as the darkest moment of Cleveland Clinic history.

Learning Objectives:

1. Describe the events surrounding the Cleveland Clinic fire of 1928
2. Describe the investigations into the responsibilities for and the scientific basis of the great loss of life during this brief fire
3. Contextualize the Clinic fire as a watershed moment in US hospital safety history and the annals of the Cleveland Clinic Foundation

John P. McGovern Award Lectureship

Is Scholarship Declining in Medical Education?

PATRICK A. McKEE

Patrick A. McKee, whose research interests center around structure-function relationships of blood clotting proteins and fibrinolytic proteins, is George Lynn Cross Professor of Medicine and Laureate Chair of Molecular Medicine, University of Oklahoma Health Science Center., where he as previously chair of the Department of Medicine. Prior to his return to Oklahoma in 1985, he spent sixteen years at Duke University Medical Center where he was the first chief of the Division of General Internal Medicine.

Mastering a body of facts is necessary for graduating from medical school. Subsequently during residency and subspecialty fellowship years, the postgraduate is expected to be able to assemble some of these facts into correct patterns that allow an understanding and treatment of patients' illnesses. Increasing experiences with patients and their diseases expand the physician's expertise. Curiosity and critical judgment are implied to be essential accompaniments and are assumed to grow during this progression towards mastery. But their development and growth during medical school, residency and fellowship may be receiving lessened attention since neither is particularly amenable to current emphases on teaching and testing strategies.

Presently medical school lectures are often poorly attended and usually carry the expectation of comprehensive handouts from faculty; paid note-takers; and slide availability via internet. Requisite laboratory experimentation in conjunction with selected course work has virtually disappeared. It is often stated that students and trainees are "learning how to learn" as a lifelong commitment, given that all aspects cannot possibly be covered during formal education and moreover, change. Despite this, medical curricula are stuffed with increasing numbers of lectures on diverse subjects deemed essential to a physician's education. Emphasis is placed on passing exams. Little concern is manifest about students and trainees experiencing what will surely be impossible when they leave the academic environment, namely, hands-on exploration of the unknown using their own thinking and creativity. Many students and trainees finish without a clear understanding of the language of basic science or its methods and how they spill over as important in the clinical sciences.

Frequently special student, resident or fellow sessions are devised to teach to licensing tests and board exams to ensure that graduates represent their programs well. That ~92% of first-time takers now consistently pass the ABIM exam questions the wisdom of this time expenditure on an instrument that may not differentiate much. Progressively, the ACP has relaxed essentials for acquiring fellowship status (FACP) from several publications in peer-reviewed journals to now only a period of being in practice for a few years, diluting expectations of evidence of critical thinking, creativity, and scholarship.

The acknowledgment and preoccupation with the "learning curve" ignores the "forgetting curve," the latter positing that much lecturing in medical school may be wasteful of students' and trainees' time so that opportunities to promote better learning through critical judgment are missed, and a way of thinking that derives from efforts to resolve unanswered questions about patients is never experienced. Existent and proposed formats for graduate and post-graduate education will be discussed.

Learning Objectives:

1. List three factors that discourage medical students from thinking creatively.
2. Discuss the dangers of teaching toward licensing tests and board examinations.
3. Evaluate proposed new formats for graduate and postgraduate medical education, and discuss the likelihood that they would enhance originality and scholarship.

Darwin's Dilemmas

MICHAEL MORAN

Michael Moran has presented to the American Osler Society over a wide range of topics, from astronomy to medical genius. He has started his own practice in South Florida while continuing his eclectic interests in all aspects of science. He continues to read, write and ponder the relationship of physicians and advanced technologies. He was one of the chosen few physicians to present at the Whitney Symposium on Healthcare. He will be presenting The Ravitch History of Medicine Annual Lecture at the University of Pittsburgh.

This year, marks the bicentennial of Charles Darwin's birth and the sesquicentennial of the publication "On The Origin of Species by Means of Natural Selection, or the Preservation of Favored Races in the Struggle for Life." Darwin clearly expressed his admiration of his grandfather, Erasmus in his own autobiographical sketch and by naming his first transmutation notebook, "Zoonomia." Both Charles and Erasmus were remarkably gifted intellectuals and both were highly innovative theorists. Each Darwin managed to leave numerous epistemological dilemmas in their wake.

It is also the 220th anniversary of the publication of "The Botanic Garden" from Charles Darwin's grandfather, the physician polymath, Erasmus. Erasmus climbed into popular culture with this lengthy poem that delved into the scientific intricacies of the sexual lives of plants. Both Darwins were strong proponents of the importance of sexuality in theory and practice. Erasmus had 12 legitimate and 2 illegitimate children, and Charles fathered 10 children with his wife Emma in their first 17 years of marriage. Charles printed his ideas on the importance of sexual activity in "The Descent of Man, and Selection in Relation to Sex." Their combined opinions on sexuality certainly caused a significant dilemma during the Victorian era.

Charles became a gifted naturalist during his circumnavigation voyage on the Beagle, and at age 28 began his speculation on evolution. He became a prolific collector and writer, returning with a 770 page diary, 1,383 pages of geology notes, 368 pages on zoology, 1,529 creatures in spirits, 3,709 stuffed birds, animal skins, and one half eaten "Petise." Erasmus was a physician, polymath, and author who was a dedicated naturalist and botanical icon. Erasmus drew the ire of English intellectual scientists, but Charles took on the world's. Both Darwins were not shy in their use of anthropomorphisms in describing their love of natural things, life, which sadly in modern biologic research is no longer acceptable.

Perhaps the greatest dilemma both the grandfather, Erasmus and modern scientific icon, Charles embraced was eliminating the role of god in the natural world. Erasmus most certainly formulated a rather distinct impression on the origins of life and species and was considered a Lamarckian. Dr. Darwin designed his own family crest that heralded his ideas on life from life. He emblazoned his coach with this symbol until the Church mandated its removal. Charles eliminated creation from his theory of evolution. The continuing dilemma imposed by these Darwins is best shown by Gallup polls in 1982, 1999, and 2004: Forty-four to forty-seven percent of Americans believe that God created human beings and between 37-40% believe that God "guided" evolution (theistic evolution)—both opinions that are diametrically opposed to Darwin's view.

Learning Objectives:

1. Describe the similarity between Erasmus and Charles Darwin in terms of their scientific interests.
2. Name some of the dilemmas that have arisen from the speculations of both Darwins.
3. Explain how the writings and thinking of these two Darwins have effected thought in the Victorian and modern eras.

War Wounds and Sir Almroth Wright

DARRYL D. BINSCHADLER

Darryl Binschadler trained at the University of Rochester, Barnes Hospital in St. Louis, the National Institutes of Health, and the University of Colorado, and has practiced pulmonary medicine in Cheyenne, Wyoming for 30 years.

Sir Almroth Wright, Sir Almost Right, Sir Always Wrong, the Plato of Praed Street, cast by George Bernard Shaw as Sir Colenso Ridgeon in *The Doctor's Dilemma*, greatly opposed to allowing women to vote, a personality that was uncompromising, bombastic and iconoclastic, he contributed greatly to our understanding of the immune system, and was largely responsible for compulsory typhoid immunization of the BEF in WWI. He made a major contribution with his studies and treatment plans for WWI wounds. Wounds suffered by WWI soldiers were almost universally infected. Never before had battles taken place where there was such an enormous use of shrapnel producing high explosives and machine gun bullets at close range. The terrain of battle was often farm land that was well manured and soggy with men standing in fecal contaminated water for weeks on end. Working very hard "because it makes me very unhappy to see these wounded boys lose their limbs or their lives through infection, which could-if we had the knowledge-be cured" he was able in a short time span to fully elucidate the problems and develop practical solutions. Wright's papers allow one to observe the progressive manner in which physiological and surgical principles and their application developed in the mind of a scientific investigator and the ingenious methods which he used to render practical the treatment he propounded. He was the first to distinguish clearly those microbes that are killed by fresh serum from those that grow almost uninhibited in serum. He discovered that the Welch and tetanus bacillus could grow in "corrupted" serum. and devised methods to measure that "corruption" (the loss of antitryptic activity in the serum.) He demonstrated the total inadequacy of commonly used antiseptics to destroy microbes in the recesses of jagged dirty wounds. He devised methods of treatment with hypertonic NaCl to increase flow of lymph to aid in disinfection. He promoted early surgical debridement near the front lines to increase the chances of successful treatment of wounds. He studied acid-base balance and devised treatment of acidosis with 5% Bicarbonate. Wright was able to formulate and place in effect most of these plans in the short time interval between his arrival in France in October 1914 at the Boulogne #13 British Military Hospital and his speech to the Royal Society of Medicine in London on March 30, 1915. His conclusions and plans were never officially adopted, but there is little doubt that his discoveries and ideas were extremely beneficial in the management of the most difficult wounds mankind had faced up to that time. His personal battle with Sir W. Watson Cheyne over the use of antiseptics damaged Wright's credibility and his historical legacy. By the time of the Second World War, many of his proposals and treatment ideas had been accepted and were put into practice.

Learning Objectives:

1. Outline Wright's management of World War I wounds.
2. Discuss Wright's objection to the use of antiseptic agents in treating war wounds.
3. Define "serophytes" and "serosaprophytes".

Uniformed but not Un-Informed: The U.S. Army, the Caduceus, and Medical Iconography

THOMAS W. FRANK

Thomas W. Frank is a Colonel on active duty in the US Army. An internist and an allergist by trade he is a graduate of the Tulane University School of Medicine and obtained his graduate medical education at Brooke Army Medical Center in San Antonio Texas and Walter Reed Army Medical Center in Washington, DC. He has served in numerous locations and capacities in the US and abroad. He is currently chief of the department of medicine at William Beaumont Army Medical Center in El Paso, Texas.

Shorn of his divine attributes, he remains our patron saint, our emblematic God of Healing whose figure with the serpents appear in our seals and charters.” Sir William Osler, “Modern Medicine,” 1921.

The staff of Asklepios is the oldest and most appropriate symbol of the medical profession to arise from the Greco-Roman world. In modern times however the staff has found a competitor in the Caduceus as the symbol of medicine in the western hemisphere. Controversy and uncertainty surround the symbols. A McGill University medical librarian has suggested that Osler’s comment in “Modern Medicine” shows that even he was confused as to whether a one or two serpent staff was most appropriate. While multiple explanations have been advanced as rationale for the eclipse of the Asklepiian staff by the Caduceus, there is general agreement that the adoption of the latter by the United States Army as the emblem of its Medical Corps is largely responsible for the widespread association of the Caduceus with medicine. Many authors have argued that poor classical scholarship by one or more ignorant Army physicians caused this state of affairs but a closer look suggests conversely that the adoption of the Caduceus was fitting and appropriate as an emblem of military medicine. Among the many ideas associated with the Caduceus, is the notion of neutrality. To the Army Medical Department the Caduceus symbolized not the profession of medicine but rather the neutral status of military medical personnel on the battlefield as non-combatants. The mis-appropriation of the symbol by civilian medical institutions and organizations should not therefore be blamed on “un-informed” Army iconographers.

Learning Objectives

1. Explain the origins of both the staff of Asklepios and the Caduceus.
2. Outline the controversy surrounding the two symbols.
3. List the reasons the Army selected the Caduceus as the emblem of the Medical Corps.

John Jacob Abel: A Profile in the Heart of Medicine

MICHAEL J. FULLER

Michael Fuller is Associate Professor of Medicine at the University of South Carolina School of Medicine, Associate Program Director for the Internal Medicine Residency and Vice-Chairman for Faculty Development and Education at Greenville Hospital System where he also serves as an attending in the Division of Pulmonary and Critical Care Medicine.

The journey of John Jacob Abel (1857-1938) began in Cleveland, OH and proceeded through Ann Arbor, MI, Europe, and Baltimore, MD. In 1890, Abel was offered an opportunity to head and create the first Department of Pharmacology in America at the University of Michigan School of Medicine. His time at Michigan was short-lived because of a fortunate meeting with a honeymooning William Osler. At Johns Hopkins, Welch, Osler, Halsted and Kelly were already appointed, and they were seeking equally outstanding men to fill chairs for preclinical subjects. Osler handled the negotiations to attract Abel from Michigan writing that, "Therapeutics is a subject sadly neglected here, I am afraid." Abel, strongly attracted by the opportunity, moved to Johns Hopkins where he spent the last 45 years of his career.

Abel had a profound interest in the biochemical processes of tissues and desired to understand their mechanisms. He is remembered for his pioneering work with epinephrine, insulin, tetanus toxoid, and vividiffusion. He also believed in the need for professional organizations, founding several scientific gatherings and societies and establishing periodic journals to disseminate the findings of scientific investigation.

It is difficult to completely evaluate the influence of Abel. Yet, it is often the intangible that is overlooked—a good, honest, thoughtful spirit with a passion for the extraction of truth. Abel was a great educator, but not in the usual sense. In fact, he was a rather inept lecturer, but had an outstanding reputation as an investigator. His sincere interest in his learners, curiosity and desire for proof, and wish for developing inquisitive minds brought large numbers of students to him. He challenged them to excellence by emulating his enthusiastic love of study.

Abel gave us much by his investigations and knowledge. But more than that, he gave us ideals which anyone would do well to follow. These ideals made it possible for him to see what was best in medicine and what problems were of the most importance for investigation. Perhaps one of Sir William Osler's favorite poems also describes the ideals of his colleague:

Look to this Day!
For it is Life, the very Life of Life.
In its brief course lie all the
Varieties and Realities of your existence:
The Bliss of Growth, the Glory of Action, the Splendor of Beauty;
For yesterday is but a dream
And tomorrow is only a vision;
But today well lived makes
Every yesterday a dream of happiness,
And every tomorrow a vision of hope;
Look well therefore to this day.

Learning Objectives:

1. Describe how John Jacob Abel's training influenced his offerings to the US medical educational system.
2. List professional contributions of John Jacob Abel.
3. Describe how John Jacob Abel's personal qualities proved to be an educational asset.

Henry Stallard and “Chariots of Fire”

JOHN D. BULLOCK

John D. Bullock is an infectious disease epidemiologist at Wright State University in Dayton, Ohio, and was formerly Professor and Chair of Ophthalmology and The Brage Golding Distinguished Professor of Research. As an undergraduate, Dr. Bullock ran track at Dartmouth College with the 1964 Olympic Gold Medal sprinter, Gerald Ashworth (4 x 100 m Relay). Dr. Bullock claims to be the world record holder for the number of times he has seen the movie, Chariots of Fire.

The 1924 Paris Olympics were immortalized in the critically acclaimed 1981 British film, *Chariots of Fire*. This film was a huge commercial success and garnered four Academy Awards, including Best Picture and Best Music, Original Score. The executive producer was Dodi Fayed. The movie featured Harold Abrahams, a Jewish sprinter who wanted to become the first European winner of the Olympic 100 m dash, and Eric Liddell, a devout Christian who refused to run a 100 m heat on the Sabbath. Instead, Liddell won the 400 m run several days later, establishing new Olympic and world records. There were a number of 1924 medalists who went on to even greater fame after the Olympics, including Johnny Weissmuller (Hollywood’s first Tarzan), Gertrude Ederle (first woman to swim the English Channel), Benjamin Spock (pediatrician and author), and Jack Kelly (father of Princess Grace of Monaco). Another 1924 Olympic medalist was Henry Stallard, who became a world-renowned ophthalmologist. Stallard published over 100 articles and two textbooks, was President of the Section of Ophthalmology of the Royal Society of Medicine, President of the Ophthalmological Society of the United Kingdom, Assistant Editor of the British Journal of Ophthalmology, and pioneer in radiation treatment of intraocular tumors. Stallard ran track at Cambridge University with Harold Abrahams and was also characterized in *Chariots of Fire*, appearing in 24 scenes and mentioned in two others. At the 1924 Paris Olympics, Stallard finished fourth in the 800 m run. In spite of a stress fracture of the navicular bone and a ruptured ligament in his right foot, he won a bronze medal in the 1500 m run, bettering the previous Olympic record by 1.2 seconds but losing to the legendary Paavo Nurmi, of “Flying Finn” fame. Stallard was an extremely gifted individual who enjoyed two international careers: middle distance running and ophthalmology. He was an inspiring role model to both athletes and physicians, and is truly worthy of our great admiration and emulation.

Learning Objectives:

1. List Henry Stallard’s contributions to ophthalmology.
2. Explain the effects of boney fractures and ruptured ligaments on running.
3. Discuss the origins of radiation treatment for intraocular tumors.

Consults for Conflict: The Evolution of Ethics Consultation

ELLIOT TAPPER

Elliot Tapper is a medical student with a passion for the examined life. He loves answers second and questions first, promising to go wherever they shall lead. Despite technically beginning his journey on the Canadian prairies, he claims birth at University of Chicago. Currently studying medicine in Atlanta, he'll be a medicine intern soon enough.

In a very short time, ethics consultation has become a nearly ubiquitous hospital service. The first consult was reported only in 1984; its rise has been meteoric. Yet, few are the studies that describe the population and ethical conflicts served by these consults; fewer are the studies that evaluate the approach, impact, and outcomes of ethics consultation. Despite their ubiquity, there are no standards by which we may compare the preparation for or the delivery of ethics consultation services. For better or for worse, there is consensus neither on who should nor how we ought to consult. Indeed, the literature on the subject focuses, to this day, on hammering out the philosophy and ethos of consultation. It is clear, however, that ethics consultation is useful. Namely, it facilitates communication in an era where the consequences of miscommunication can be serious.

Born to serve the dual and reinforcing fears of futile care and medicolegal liability, the ethics consult has since experienced a steady rise concomitant with that of the patient autonomy movement. Ethics consultation committees emerged to diffuse tensions between empowered patients and doctors in an age of waning paternalism. On one hand, despite the absence of standards, this historical understanding should tell us how to evaluate consultation. On the other, the fact of these fears and tensions simultaneously offers insight into problems with the state of the patient-doctor relations.

In support of these conclusions, I offer interviews with the founding personalities in clinical ethics and original research from a study of ethics consultation at a large, urban medical center. Core findings from this study are three: most ethics consults succeed by facilitating conversations by clarifying the issues at hand, there are patient characteristics that may be predictive of the need for ethics consultation and the "classic" cases of clinical ethics are absent from our practice.

Learning Objectives:

1. List the motivations and formative reasons for ethics consultation
2. Describe the process of ethics consultation and its present relationship in the procedure and culture of healthcare delivery.
3. Explain how clinical ethics is evaluated

The Humanities are the Hormones

MARVIN J. STONE

Marvin J. Stone directs the internal medicine clerkship and medical oncology fellowship program at Baylor University Medical Center in Dallas. Dr. Stone received the Lifetime Achievement Award from the International Society for the Study of Waldenström's Macroglobulinemia and is a past president of the American Osler Society. In 2008 he received the Alpha Omega Alpha Volunteer Clinical Faculty Award from the University of Texas Southwestern Medical School.

William Osler was the first physician to be elected President of the British Classical Association. In his inaugural address at Oxford in May 1919, Osler talked about “The Old Humanities and the New Science.” Osler focused on the interconnection of science and the humanities and stressed the importance of the educated man having some knowledge of each.

Osler told his colleague, William Welch, that he had never given so much thought to the preparation of a speech as he did to this one. In his address Osler remarked, “In a life of teaching and practice, a mere picker-up of learning’s crumbs is made to realize the value of the humanities in science not less than in general culture.” Still reeling from the loss of his only son in the recent World War, he spoke about the enormous destruction of life that occurred and predicted that there must be a very different civilization or there would be no civilization at all.

Osler then turned his attention to hormones, the essential lubricators of the body, and told his audience “the men of your guild secrete materials which do for society at large what the thyroid gland does for the individual. The Humanities are the hormones.” He went on to say the Humanities bring the student into contact with the master minds who gave us the great ideas and institutions of our civilization. He emphasized the greatest single gift in education is to infect the average man with the spirit of the Humanities.

Osler cautioned that the accelerating development of modern science may result in her undoing. Scientists can lose all sense of proportion in a maze of minutiae. He concluded by saying, “the direction of our vision is everything” and the persistence of hope is a witness to the power of ideals to captivate the mind. This was the last formal address given by Osler. Less than two months later, he celebrated his 70th birthday. On December 29, 1919, he died.

Many of Osler’s precepts have timeless relevance. His thesis, “The Humanities are the Hormones”, may be more important now than in 1919 as we cope with the moral and humanitarian dilemmas associated with intense pressures to provide needed care and reduce cost.

Learning Objectives:

1. Discuss the events leading up to Osler’s inaugural address to the British Classical Association.
2. Explain Osler’s view that the “Humanities are the Hormones.”
3. Evaluate the role of the humanities in present dilemmas of health care delivery.

The Color of Disease

DAVID S. WHEELER

David Wheeler is a MD/PhD pre-doctoral fellow at the University of Pittsburgh. He has served on the executive board of the C. F. Reynolds Medical History Society for the past two years.

Four days before her 35 birthday, Elizabeth Whitehead was found unconscious on the floor of the kitchen. When she was seen by a physician later that day, his physical exam revealed an elevated temperature and labored breathing. What is the diagnosis? Is there treatment? Will she live? Is anyone else in the house at risk of this disease? In this fictional scenario, the physician's ability to answer these questions would greatly depend on the time-period; a physician practicing in the 1700s would answer very differently from one practicing today. Yet the past medical history, clinical presentation and physical exam, which medicine considers the corner stones of diagnosis, are independent of the time period. So what accounts for the improved diagnostic ability of modern physician? Simply put, the capacity for a physician to directly visualize the disease process.

The first tissue stains, often extracts from brightly colored plants, were used in laboratory research visualize the cellular morphology of plant and animal tissue. The most important of these early natural stains was hematoxylin, a dark blue derivative of logwood bark. With the industrial revolution in the late 1800s came an explosion of synthetic stains including eosin, aniline blue, and methylene blue. This created the perfect environment for physician scientists like Rudolf Heidenhain, Paul Unna and Paul Ehrlich to apply these stains to human tissue and build the foundation for modern histology. Building on this foundation, Rudolf Virchow, applied these histological stains to diseased human tissue and began studying disease at the cellular level. He and his students recognized that it was disruptions at the cellular level which caused the macroscopic presentation of disease. Furthermore, treatment should be aimed at counteracting these cellular disruptions opposed to physical symptoms. This radical idea, a direct product of their ability to visual normal and disease human tissue, became the fundamental tenet of modern pathology.

In the modern era, the technology to visualize disease has rapidly advanced. The development of fluorescent microscope, conjugated antibodies and fluorescent in-situ hybridization (FISH) has sharpened the lens of pathologists allowing them to see what was previous hidden. This increased vision translated into faster more accurate diagnoses and better more-targeted treatments.

Learning Objectives:

1. Describe the evolution of histological stains over the past two centuries.
2. Examine the how and when these dyes transitioned from the laboratory to the clinic.
3. Discuss the major impact of improve histological preparation on human disease.

Self-Experimentation: A Thing of the Past

MARGARET P. WARDLAW

Margaret P. Wardlaw is an MD/PhD student at the University of Texas Medical Branch at Galveston. Margaret is currently completing her second year of coursework at the Institute for Medical Humanities with a focus in the History of Medicine. She is the proud recipient of a John P. McGovern scholarship in Oslerian Medicine. Margaret is a co-director of the student run free clinic, St. Vincent's.

During the nineteenth-century self-experimentation played a major role in establishing the ethical nature of a medical experiment. Lauded as “the golden rule” of human experimentation, the willingness of a researcher to go first was believed by many, physicians and lay-people alike, to be requisite for ethical human subjects research. The long history of self-experimentation goes back at least as far as the Enlightenment, when Santorio Santorio conducted metabolic experiments on himself. The practice peaked during the turn of the century bacteriological revolution with the famous case of the Walter Reed commission of 1900. (Though Reed himself never participated, his name is synonymous with the practice.) And though it declined in prevalence and respectability, self-experimentation continued well into the 20th century with such notable scientists as Lanistier and Forssman. Recent scholarship, including Robert Altman’s *Who Goes First*, suggests that the self-experimentation is alive and well in many modern laboratories. Additionally, the Nobel Prize winning team Marshall and Warren, Australian researchers who infected themselves with *H. pylori*, has caused some to reconsider the common idea that self-experimenters represent what has been called a “lunatic fringe” in medical research. Despite its historical importance and current undeniable presence, self-experimentation has been variously criticized as reckless, non-objective, insufficient to establish the ethical nature of a study, and even anti-feminist. Critics suggest that by putting themselves in the same position as their research subjects, self-experimenters risk losing their scientific objectivity. This criticism illustrates a paradigm of clinical research that unnecessarily pits scientific rigor against empathetic patient care. A careful examination of the history of self-experimentation shows that far from being anathema to good clinical research, self-experimentation can serve important ethical functions. Far from being a thing of the past, modern self-experimenters attest to the usefulness of self-experimentation as a useful tool for establishing respect for human subjects and creating empathy in the subject-researcher relationship.

Learning Objectives:

1. Discuss key events in the history of self-experimentation.
2. Explain the importance of self-experimentation to research ethics.
3. Debate the criticisms and advantages of self-experimentation in modern clinical research.

Noble, not Nobel: How Not to Win the Most Prestigious Prize in Medical Research

ALLEN B. WEISSE

Allen Weisse retired from his full-time professor of medicine position at the New Jersey Medical School in 1997 in order to devote himself more fully to his work as a medical writer/historian. He remains as clinical professor continuing to stimulate new generations of students and house staff to explore the past and move knowledgeably into the future of American Medicine. His latest book, Lessons in Mortality, was published by the University of Missouri Press in 2006.

The Nobel Prize in Physiology or Medicine has represented the highest honor bestowed upon biological scientists for over a century. Despite its widespread recognition controversies have often surrounded these awards. Almost invariably these have involved questions of omission. Why have some important medical accomplishments been overlooked? Why have a number of distinguished investigators been ignored? Because the workings of the Nobel committees involved in the selection process have been so secretive over the years it is difficult to fathom what the reasons might be for such decisions. For this reason certain patterns of rejection have been identified giving better insight into the functioning of this important institution. These have been recognized as responses to the following: How not to win a Nobel Prize. Included in this category are: highlight a previous mistake in the awarding of a prize; become a surgeon; die prematurely; become a junior partner; defy the rule of three; become an inventor; become controversial; work in a no longer fashionable "vineyard;" possess the wrong pedigree; be humble; and stop an epidemic.

Given such revealed deficiencies it might be asked if there is still a need for a Nobel Prize with the development of major governmental and private support for medical research during the twentieth century. Yet it may also be argued that the Nobel Prizes still serve to emphasize to the world at large as well as the scientific community the need to recognize and support the future pathways of research to understand the human organism and find ways to cure or ameliorate the diseases that afflict it.

Learning Objectives:

1. Recognize the role of awards in the encouragement of medical research.
2. Discuss the changing emphasis on the types of medical research being conducted.
3. Explain why, despite the best efforts of any awarding institution, both errors of selection and rejection are inevitable.

Osler and the Ether Dome

DENNIS R. BASTRON

Dennis Bastron is Professor of Clinical Anesthesiology and a faculty member of the Medical Humanities Program at the University of Arizona.

One session of the 2008 Annual Meeting of the American Osler Society was held in the Ether Dome of the Massachusetts General Hospital. Sir William would have heartily approved of that for several interrelated reasons.

Dr. Osler believed that the introduction of surgical anesthesia was not only one of the three most important medical achievements of the 19th century (along with sanitation and aseptic surgery), but also was one of the greatest boons for the human race. In a remarkable overstatement, he likened the introduction of anesthesia to Prometheus giving fire to the race, as “the greatest single gift ever made to suffering humanity.

Dr. Osler placed great importance on the first public demonstration of ether anesthesia (16 October 1846) at the MGH. He regretted his inability to give the 1912 Ether Day Address because of previous obligations. Well aware of the “Ether Controversy,” Sir William came down solidly on the side of Morton credit for the introduction of surgical anesthesia. On 16 Oct 1918 Osler hosted an Ether Day dinner for graduates of the MGH in England and displayed important material related to the original event.

In a paper entitled “William Osler’s Bibliomania,” delivered at the 1999 AOS meeting in Montreal, one of our own bibliomaniacs, Bruce Fye, pointed out that anesthesia was the only entry in the *Bibliotheca Osleriana* that represented a subject rather than an individual. He also discussed the urgency Dr. Osler felt in his last years to complete his collection of the original descriptions of the event, particularly the *Boston Medical and Surgical Journal* for 1846. When he finally received a copy of this in December 1919, he had it inscribed “All things come to him who waits—but it was a pretty close shave this time!” A few days later Sir William’s earthly journey ended and he was reunited with his son Revere.

Learning Objectives:

1. List three 19th Century medical achievements Osler believed to be most important.
2. Describe why Osler thought the introduction of surgical anesthesia was one of the greatest boons to mankind.
3. Explain why Osler credited Morton for the introduction of anesthesia.

“The Great Arabians”— Osler’s Perspective on Islamic Medicine

ALLISON M. BABELAY

Allison M. Babelay, a second-year student at the University of South Carolina School of Medicine, numbers among her accomplishments membership on a clogging team that won the national championship five consecutive years. The work reported here was done during a summer preceptorship with Dr. Charles S. Bryan.

In his essay “Unity, Peace and Concord”, William Osler called medicine “the only world-wide profession, following everywhere the same methods, actuated by the same ambitions, and pursuing the same ends.” He added: “Linked together by the strong bonds of community interests, the profession of medicine forms a remarkable world-unit in the progressive evolution of which there is fuller hope for humanity than in any other direction.” Osler acknowledged the importance of Arab-Islamic medicine in two respects: (1) translation and preservation of Greek and Roman texts during Europe’s Dark Ages, and (2) advances made by those he called “the great Arabians”, especially Rhazes and Avicenna. My purpose is to offer a brief overview of Islamic medicine between the eighth and thirteenth centuries and to propose that its overarching contribution was the perpetuation of a medical tradition based on empiric observation unencumbered by metaphysical belief systems.

Following the fall of Rome (circa 476 C.E.), Europe entered the Dark Ages and Western culture came to a virtual standstill. Islamic conquests during the seventh and eighth centuries led to a great cultural awakening that proved foundational to the later European Renaissance in many fields of inquiry, including medicine. The Bayt al-Hikma (House of Wisdom) in Baghdad became home to scores of scholars who translated into Arabic numerous classical works including Galen and the Hippocratic Corpus. However, the fervor to translate gradually died out; the House of Wisdom was destroyed by Mongols (1258-1259); and when the Muslim Kingdom of Granada fell to Ferdinand and Isabella in 1492 the demise of the Islamic Empire was virtually complete. Islam’s isolation from the West should not belittle our collective debt to these ardent translators.

In *The Evolution of Modern Medicine*, Osler asserts: “But close upon the crowd of translators who introduced the learning of Greece to the Arabians came original thinkers of the first rank, to a few only of which time will allow me to refer.” Like all commentators on the subject, Osler referred frequently to Abū Bakr Muhammad ibn Zakarīyā al-Rāzī (Rhazes) and Ibn Sīnā (Avicenna). Rhazes (c. 860-925) is best known for distinguishing smallpox from measles, while Avicenna (c. 980-1031) is best-known for his *Canon*, a comprehensive and exquisitely-organized compendium of then-extant medical knowledge. Osler avidly pursued the restoration of Avicenna’s tomb; indeed, for number of entries in the index to Cushing’s biography of Osler, Avicenna ties for second place (with Thomas Sydenham) only to William Harvey. Osler’s failure to mention Ibn Al-Nafis (c. 1210-1288), who roundly disputed Galen’s account of invisible pores between the left and right ventricles and who posited instead what we now know as the pulmonary circulation, is understandable as Ibn Al-Nafis’s work was apparently unknown in the West during Osler’s lifetime (it surfaced in 1924).

As is well-known Islam was founded on Muhammad’s vision from Allah (610), which prompted a common identity among previously-polytheistic Arabs and which inspired the subsequent Arab conquests. I suggest that an important, indeed pivotal contribution of Islamic medicine (besides the two already mentioned) was its separation of scientific inquiry from religion and magic. The Hippocratic tradition of such a separation was to a large extent lost during the Dark Ages. Perhaps a better appreciation of the contribution of Islamic medicine (and other aspects of Islamic culture during its zenith) might help mollify certain tensions that plague the world today.

Learning Objectives:

1. Identify the Bayt al-Hikma (House of Wisdom) and explain how it played a pivotal role in the preservation of Greek and Roman texts during Europe’s Dark Ages.
2. Name at least one specific contribution to medicine by Rhazes, Avicenna, and Ibn Al-Nafis.
3. Discuss whether a greater appreciation of Islamic medicine (and other aspects of Islamic culture between the eighth and thirteenth centuries) might help alleviate some of the tensions that exist today.

Sir William Osler's Take on Pierre C.A. Louis's Recommendations on Bleeding

ROBERT I. LEVY

Robert Levy is a graduate of the Johns Hopkins University 1949 and Johns Hopkins Medical School 1953. He practiced for 45 years as a nephrologist. Since retiring he has been working at the Welch History of Medicine Library in the field of history of nephrology and related subjects in 19th century medicine.

William Osler recognized Pierre Louis' *methode numerique* as iconoclastic, writing a paper on Louis, "*The Influence of Louis on American Medicine*", and visiting his grave in Paris. On the other hand Osler ignored Louis' questioning of the usefulness of bleeding in pneumonia. This paper will evaluate this dichotomy. The background for the use of bleeding in inflammatory conditions and the theories of Broussais are discussed. Louis' numerical method of complying results of treatment for a carefully defined condition and examining results by statistical consideration will be compared with more established procedures emphasizing the value of tradition and the physician's judgment in the individual patient. The debates in the Royal Academy of Medicine on the applicability of using these methods will be reviewed. The history of statistics that had been applied to gaming theory, astronomy and vital statistics will be seen as background to their use in Louis' *Methode numerique*. Limitations on the use of mathematics for analysis of Louis' data will be discussed. His conclusion on the effect of bleeding in pneumonia will be shown to be modest: 1. Influence of bleeding in the early period of presentation of pneumonia is of limited effectiveness, 2. Pneumonia is never arrested by bleeding, 3. Narrow limit of effectiveness of bleeding in pneumonia. Possible explanation of Osler's penchant for bleeding in pneumonia in spite of recognizing Louis' *methode numerique* will be considered. 1. Osler paid more attention to Louis' role of training and influencing the young physicians who studies in Paris and brought back to America Louis's enthusiasm and careful investigative techniques, 2. He skimmed the paper *Researches on the Effect of Bloodletting in some Inflammatory Disease of 1828* and didn't understand or on the other hand rejected the not entirely convincing statistics, 3. He recognized underlying heart failure as a feature in pneumonia, as he did in a number of other conditions

Learning Objectives:

1. Explain Pierre Louis' *Methode numerique* and describe how it was the fundamental initial technique that along with statistical methods developed later made possible our current concept of Evidenced Based Medicine.
2. Describe how Louis' emphasis on careful study and recording of results was an initial driving wedge into the practice of bleeding for inflammatory conditions.
3. Discuss William Osler's acceptance of more vigorous as well as early bleeding in pneumonia, which were against the prevailing opinion of his time..

Osler and the Pork War

GORDON FRIERSON

Gordon Frierson was engaged in the private practice of internal medicine and infectious diseases for 35 years. He served as attending physician at the Tropical Medicine Clinic at the University of California San Francisco for many years and operated a private travel medicine clinic for 16 years. He is currently retired.

In 1883 Osler reviewed a book summarizing the French experience with trichinosis during a ban on importation of American pork to France. In the review Osler chided American meat packers and the American government for not using more aggressive inspection measures. Osler had an interest in this disease. As a student he had fed trichinous meat to rabbits. Later, while on the faculty of the Montreal Veterinary College, he published data on the parasite compiled from a local slaughterhouse.

In 1880, based on a fear of trichinosis from American pork (and political pressures), Germany placed a ban on importation of American sausage, followed in 1883 by a ban on all imported American pork. Other European countries, including France, followed suit. The controversy over the exportation of pork, especially to Germany (which constituted about 10% of the total), continued through the 1890s, engaging the meat industry, high levels of government, and medical and veterinary scientists, including Rudolf Virchow. Germany had created a vast system of microscopic examination, eventually employing close to 50,000 people at a cost of about \$3,000,000/year, more than the entire USDA appropriation. They insisted on something similar from the U.S. The German government finally lifted the ban in 1891, only after the U.S. reluctantly mandated microscopic inspection of pork for export. However local German restrictions continued to harass importers, prompting further action. Charles Wardell Stiles, a respected zoologist, who later taught medical zoology at Johns Hopkins during Osler's time, was eventually assigned by the U.S. government as a scientific attaché to Berlin to study the matter. His 2 year investigation demonstrated that microscopic meat examination in Germany generated huge expense and general inefficiency, that its preventive efficacy was poor, and that American pork was a negligible contributor to local disease. These findings helped to ease the trade with Germany and eliminate this form of meat inspection in the U.S. in 1906. Stiles went on to do important work with the Rockefeller Sanitary Commission in controlling hookworm in the South. Osler's interest in trichinosis continued. One of his Hopkins students, Thomas Brown, discovered the high eosinophilia in trichinosis and suggested it as a diagnostic aid. Osler himself published again on the disease in 1899.

Learning Objectives:

1. Trace the early history of trichinosis.
2. Discuss the merits of European concern over trichinosis from American pork.
3. Discuss the role of C. W. Stiles and other American scientists in clarifying the risks of trichinosis.

The Tie that Binds

BILLY ANDREWS

Billy Andrews was unable to present his paper at the meeting. Substituting for Dr. Andrews were Christopher Lyons and Pamela Miller; their abstract is on the next page.

Billy Andrews, now Professor and Chairman Emeritus of Pediatrics at the University of Louisville School of Medicine and part-time in Medical History, Ethics and Humanities, has been a member of the American Osler Society since 1972, a past president of the American Osler Society (1996-97), a Scholar in Medical History and Ethics (1993) and Visiting Fellow in Medical History, Ethics and Humanities at Green College, Oxford (1998-2004). He was a Founder of Clinical Neonatology, author of "The Children's Bill of Rights," and other statements and poems largely relating to medical history, ethics and humanities.

Sir James Spence became one of Great Britain's foremost pediatricians and educators who knew Sir William Osler, Lady Osler and their son Revere. Spence attended to the dying Revere in France. He became an outstanding dean and later the Sir James Spence Medal of the British Pediatric Association was given in his honor. He was also the author of an outstanding pediatric textbook which went through many editions. One of Spence's most outstanding students in pediatrics became the world renowned neurologist, Sir John Walton, who became Lord of Detchant. Lord Walton continued the Osler Library at Green College, Oxford, first as Warden and later while a Member of Parliament until it became the Osler-McGovern Centre.

Wilburt Cornell Davison, Osler's favorite American student at Oxford, met Revere Osler and kept lifetime correspondence with Lady Osler. Davison completed his medical training and pediatric training at Johns Hopkins. He became assistant dean and acting chairman of pediatrics there before building the Duke University Hospital and Medical School in Durham, North Carolina, USA. Davison wrote *The Compleat Pediatrician* for eight editions. He kept his ties with Oslerians and his special friendship with Sir James Spence. He also received the very highest awards from many countries and an honorary doctor's degree from Oxford.

Davison's favorite student of medicine and the humanities was John P. McGovern who became one of the leaders of allergy and immunology in the United States and built the largest private Allergy Clinic of the United States in Houston. McGovern was a founder of the American Osler Society and became one of the greatest promoters of Oslerian philosophy and the humanities. Through the great wisdom of Sir Richard Doll and William Gibson, John McGovern became a visiting fellow of Green College and then became a great contributor for the establishment of the Osler-McGovern Centre, which unified British and American interests to promote the great life and work of Sir William Osler into the 21st century.

Learning Objectives:

1. List several British and American pediatricians who have done so much to advance pediatrics, medicine and the Oslerian humanities; as they were called.
2. List several successors of Spence and Davison who also achieved great stature in medicine and kept the flame of Osler's medical philosophy and ethics alive for the benefit of students and patients.
3. Discuss the influence of these men upon establishing lectureships, societies and institutes to promote the finest of Osler's character and philosophy.

The William Osler Photo Collection

An Online Project by the Osler Library of the History of Medicine, McGill University

Christopher Lyons and Pamela Miller

Chris Lyons has been the Assistant History of Medicine Librarian at the Osler Library of the History of Medicine since December 2004, and is involved in all aspects of the Library's work. Mr. Lyons is the driving force behind The William Osler Photo Collection and has given several presentations and written pieces about the Library.

Pamela Miller is History of Medicine Librarian at the Osler Library, McGill University. Her major interests are the Library's significant archival collections, conservation, exhibition, McGill's heritage collections and the history of medicine at McGill University.

Interest in Sir William Osler has persisted throughout the twentieth and into the twenty first century. This is seen not only in terms of publications and the existence of a number of organizations dedicated to perpetuating his memory and ideals, but also in the numbers of people who visit the Osler Library to carry out research or just to see the Library's unique collection of Osleriana. For a number of years now, The Osler Library has sought to respond to this persistent and global need through the internet. Thanks to a generous donation by the John P. McGovern Foundation, we have completed our most ambitious project, the William Osler Photo Collection. This is a searchable and browsable website of 384 digitised images drawn from the Osler Library's collection of photographs of Sir William Osler, initially begun by Harvey Cushing for his 1925 biography *The Life of Sir William Osler*, and added to subsequently. The images cover all stages of his life, from his early years in Ontario, through his time at McGill, the University of Pennsylvania and The Johns Hopkins University, ending finally with his position as Regius Professor of Medicine at Oxford. There are also photos of Lady Osler, his son Edward Revere and other family members. We feel that members of the American Osler Society would like to be introduced to this new resource, learn some of its features, and discover how they can help to develop this further. The URL for the site is <http://digital.library.mcgill.ca/Osler/index.php>.

Learning Objectives:

1. Describe the William Osler Photo Collection website
2. Use the site to best advantage.
3. Contribute information to website when appropriate.

Not Just a Single Species Doctor: Osler and the Pictou County Cattle Disease

IAN A. CAMERON

Ian Cameron is a Professor in the Department of Family Medicine, Dalhousie University. He has been the President of the Dalhousie Society for the History of Medicine since 1985. His book, Quarantine, What is Old is New: Halifax and the Lawlor's Island Quarantine Station 1866-1938, was published in 2007.

William Osler's early study of natural history became the foundation for his later career in pathology and clinical medicine. When he first joined the McGill medical faculty this broad based interest in science found expression in his involvement with comparative medicine, a field of study that evolved into veterinary medicine. His interest was not merely a passing one. He was appointed a professor at the Montreal Veterinary College, taught a course in animal entozoans, gave animal pathology demonstrations and was involved in the annual and graduation examinations of the veterinary students. He was president of the Veterinary Medical Association of Montreal in 1880.

When it was reported that a mysterious illness was killing cattle in Pictou County Nova Scotia, Dr. Osler was asked by the Federal Department of Agriculture to be part of a team investigating the problem.

Dr. Osler studied the information from a preliminary report on the cattle disease conducted in the summer of 1881. The following summer he went to Pictou County where he collected demographic and clinical data and performed autopsies on affected cattle. He also conducted several research trials to determine suspected agents.

Dr. Osler's quest to understand the mechanisms of illness was not limited to the human species. Although his career commitments did not allow him to take on the longer task of determining the precise cause of the Pictou County Cattle Disease, he did provide a format for an interdisciplinary consultation, a concept that is of interest today. He also reinforced a methodology that would ultimately solve the cause of the cattle disease.

Question: Is there any connection between the Pictou County Cattle Disease and "milk sickness", the illness that claimed the life of Abraham Lincoln's mother?

Learning Objectives:

1. Discuss Dr. William Osler's contribution to determining the cause of the Pictou County Cattle Disease?
2. Discuss the value of developing key research questions in establishing the cause of the Pictou County Cattle Disease.
3. Discuss the potential benefits of an interdisciplinary consultation.

Sir William Osler, James Jackson, and George Minot

MARIO J. MOLINA

Mario Molina is Chairman and CEO of Molina Healthcare. He also serves as Chairman of the Aquarium of the Pacific and was featured in TIME Magazine as one of the 25 Most Influential Hispanics in America.

In 1922, Grace Revere Osler wrote to George Minot, future Nobel Laureate: “Dear George, I am sending you a picture found among Sir William Osler’s treasures feeling sure you will like having it. I daresay you have read Sir William’s appreciation of young Jackson in his article on Louis’ American pupils in ‘The Alabama Student’” (unpublished letter).

The silhouette was of an eight-year old James Jackson Jr. that had remained in the family until given to Osler by his friend James Jackson Putnam (1846-1918). Putnam was the grandson of James Jackson, Sr. and the author of his biography (Osler 3064).

James Jackson Sr., (1777-1867) was instrumental in the founding of the Massachusetts General Hospital, the New England Journal of Medicine and Surgery (now the NEJM), and served as president of the Massachusetts Medical Society and the AMA.

His son, James Jackson Jr., (1810-1834) a favorite pupil of P. C. A. Louis, published a study of cholera in 1833, and he is remembered for his study of emphysema and pulmonary tuberculosis. He returned from Paris to Boston to enter practice only to die from dysentery. In 1835 his father, published “A Memoir of James Jackson Jr., with extracts of his Letters to his Father; and Medical Cases, collected by him” (Osler 3060). The following year he resigned from the Harvard Medical School, and he was never the same after his son’s death.

Osler was familiar with the tragedy of the Jackson family. In his book, *The Alabama Student*, he recounts the events of younger Jackson’s life, his contributions to medicine and his tragic death. In 1910, Osler laid a wreath at Louis’ tomb. His thoughts went to the young Jackson and “to Louis himself [there] came a similar tragedy. Inside the tomb is a slab of marble to the memory of his only son, a medical student who died in his eighteenth year.” (Cushing, Life, ii, 154). The events of the Jackson family foreshadow those of the Osler family. Edward Revere Osler (1895-1917), grandson of the famous American patriot, Paul Revere, died in the First World War, an event from which his father never recovered.

So how does George Minot (1885-1950) enter into our story? Osler received the picture of James Jackson, Jr. from J. J. Putnam, grandson of James Jackson, Sr. When Grace Revere Osler gave the portrait to Minot, she restored it to the family because Minot was the senior James Jackson’s great grandson.

Learning Objectives:

1. List three contributions to American medicine made by James Jackson, Sr.
2. List three areas of contribution to American medicine added to by James Jackson, Jr.
3. Explain how George Minot and J. J. Putnam related to James Jackson, Sr.

Medical Awakening in the Eighteenth and Nineteenth Centuries: Contributions of James Thatcher

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 Healthcare Services, the improvement of Patient Safety and the teaching of Medical Humanities have served as the major foci of his academic career.

James Thacher, was an American physician who did not have the opportunity to study in Europe due to the lack of financial support and the impending Revolutionary War. Despite these realities, he became one of the outstanding physicians, educators and authors of his generation.

Born in Plymouth, Massachusetts in 1754, he apprenticed with Abner Hersey for six years and at the age of 21, joined the Continental Army in Boston on July 15, 1775 under General George Washington. He served as a battle surgeon with the troops at Ticonderoga, Trenton, Princeton and Valley Forge and subsequently joined General Nathaniel Greene on the extensive Southern Campaign in the Carolinas in 1780 and finally, in the battle at Yorktown in 1791. He kept a Military Journal which provides a daily chronicle of the realities throughout the entire War of Independence including personal descriptions of General Washington, the execution of Andre and the final surrender in Yorktown. He resigned his commission in 1783 and returned home.

Over the next thirty five years, Dr. Thacher established a very successful medical practice in Plymouth and neighboring communities. He was regularly accompanied by 6-8 medical students who lived in his house and joined him on his rounds. He lectured regularly at Harvard Medical School and was appointed as the Boylston Professor.

Dr. Thacher was a prolific author, publishing eight books between 1810 and 1831. He died in 1844 at the age of 90.

His books included: *New Dispensary*-1810; *Observations of Hydrophobia* -1812; *American Modern Practice* -1817, 1826; *Military Journal* -1823; *American Biography* -1824; *American Orchardist*- 1822; *Ghosts, Demonology and Apparitions* -1831; and *History of Plymouth* -1831, 183535.

Learning Objectives:

1. Explain the derivation of the first American Medical text from European texts of the time.
2. Review of care of casualties during the Revolutionary War.
- 3 Describe the transformation of a battle surgeon to Boylston Professor at HMS, and also Thatcher and the circle of Founding Colleagues of Harvard Medical School.

*William B. Bean Student Research Award Lectureship***Molding an Independent Specialty:
Plastic Surgery in Postwar America, 1919-1941****JAMIE FRASER**

Jamie Fraser is a third-year student at the University of North Carolina School of Medicine in Chapel Hill.

The field of reconstructive surgery has its origins in ancient times but the First World War is generally considered the birthplace of modern-day plastic surgery. Advances in medicine, surgery, and military strategy in the decades preceding the Great War made possible the unprecedented facial reconstructions attempted by surgeons during the conflict. In one British hospital alone, over 8,000 wounded soldiers were treated for facial wounds during the war. At the end of hostilities in 1919, dozens of surgeons skilled in the fine techniques of facial reconstruction returned to civilian society at a time before the field of plastic surgery existed as an independent specialty.

In postwar England, wartime reconstructive surgeons failed to establish plastic surgery as its own field while the fledgling branch of surgery flourished in the United States. By the outset of World War II, Americans boasted sixty trained and certified plastic surgeons while Britain claimed only four. The irony of this gross imbalance between American and British plastic surgeons is the fact that almost all of the US reconstructive surgeons had either directly or indirectly studied under surgeons who had operated in England during WWI. Why then did plastic surgery achieve such success in postwar America while the specialty floundered in Britain?

The answer to this question is complex but can be explained by the resolve of early American plastic surgeons, the acceptance of plastic surgery by both general surgeons and civilians, and by the willingness of the US to provide educational infrastructure to properly train surgeons in reconstructive techniques. In Britain, on the other hand, plastic surgery failed despite the efforts of the wartime reconstructive surgeons because of overwhelming resistance in the general surgical community and even by the public, which refused to endorse a branch of surgery that appeared to play mainly a cosmetic role in peacetime society. In the end, the collapse of plastic surgery in Britain highlights the challenges, sacrifices, and ultimately successes of the surgeons who worked to establish the independent specialty in the United States.

Learning Objectives:

1. Modern plastic surgery has its origins in the First World War.
2. Plastic surgery failed to establish itself as an independent specialty in interwar Britain.
3. Postwar America was a friendlier environment for the establishment of plastic surgery as its own field.

William B. Bean Student Research Award Lectureship

Franz Weitlaner—The Greatest Spreader of Surgery

AMIT SHARMA

Amit Sharma is a second-year student at New Jersey Medical School – University of Medicine and Dentistry, New Jersey. He plans to pursue a career in surgery.

In every set of surgical instruments, be it for the orthopedic surgeon, neurosurgeon or ophthalmologist, there are tools unique to the trade. They all, however, contain a Weitlaner retractor of variable dimensions. This self-retaining instrument is ubiquitous in the operating theater. The Weitlaner retractor holds apart tissue without an assistant keeping it in place. It is quite a contrast to basic handheld retractors, infamous for their exhausting demands on the weary arms of medical students and other theater underlings. Today the Weitlaner and Weitlaner-derived retractors are employed in procedures concerning nearly every organ system and muscle. Yet, ask for a Weitlaner (pronounced Veit-lahn-er) retractor and one shall receive either a questioning stare, or a white line.

For many years, surgeons and assistants alike have been bastardizing this retractor as the Wheatlander, Weetlaner, or Wheatie. During a recent survey at a large, inner city hospital, the Weitlaner retractors were labeled with a “d” added to the name. Though an honest mistake, this error stems from the lack of information concerning and recognition of the inventor: Franz Weitlaner. During this presentation, the inventor of the Weitlaner retractor will finally be revealed and his life story told. The medical and surgical environment of rural 19th-century Austria and inadequacies of contemporary models compelled Dr. Weitlaner, a general practitioner, to invent this instrument that has become a critical mainstay of modern surgery. The author corresponded with members of the Weitlaner family, archivists at historical Austrian universities, and parishioners of small European townships to construct the biography of this previously unknown inventor. Nineteenth century journals and trade catalogues were also reviewed so as to understand the evolution of this popular self-retaining retractor.

Learning Objectives:

1. Discuss the biography of the inventor of the Weitlaner retractor.
2. Outline the evolution of the self-retaining retractor and its place in surgery.
3. Describe the intellectual and professional environment of 19th-century rural Austria.

Constantine Samuel Rafinesque— An Early Nineteenth Century American Naturalist

CHARLES T. AMBROSE

Charles Ambrose is a graduate of Hopkins Medical School, completed a residency in infectious diseases in Boston, and was a research immunologist at Harvard Medical School & in Paris for 14 years. Currently, he is a professor at the College of Medicine, Univ. of Kentucky, teaches medical microbiology in the regular curriculum, and gives electives courses in the history of medicine & of microbiology.

The bicentennial celebration of Charles Darwin's birth is an occasion to note the lives of men who anticipated his theory of natural selection or some aspect of it. The full concept has two parts – the regular appearance of new species and their survival by various selective pressures. During the century or so before Darwin, the biblically ingrained notion of the immutability of species was increasingly questioned. Critics of his revolutionary book on biological evolution chided him for not acknowledging his predecessors; so in later editions Darwin added “An Historical Sketch.” Chronologically, the eighth person he cited was Constantine S. Rafinesque, who in 1836 described plant varieties becoming new species “by assuming constant and peculiar characters” – this a full two decades before Darwin published *On the Origin of Species* (1859).

Rafinesque grew up in Italy and France, was self-taught in the natural sciences, and had no formal university education. In 1802 he came to the US, where he soon met and corresponded with Thomas Jefferson on botanical matters. He was professor of natural history at Transylvania University in Lexington, KY from 1819 to 1826. (Transylvania was the first school of higher learning west of the Alleghenies, having been founded in 1780.)

Rafinesque was a polymath but principally a taxonomist. He had an insatiable urge to explore, examine, collect, and publish his findings, thus gaining priority of discovery. It's estimated that during his early decades in the US he traveled mainly by foot over 8000 miles in fourteen Eastern and Midwestern states. He walked across the Appalachians five times. He spent time with John James Audubon in Kentucky. Rafinesque identified and coined binomial species names for some 6700 new plants plus some animals -- notably fish & mollusks. He published over a dozen books on taxonomy. His most enduring work is his two-volume *Medical Flora and Botany of the United States* (1828 & 1830). His other medically relevant book was entitled *The Pulmist; or Introduction to the Art of Curing and Preventing Consumption or Chronic Phthisis* (1829).

He left Lexington in 1826 and lived out his life in Philadelphia, where he continued to write on taxonomy and a wide range of other subjects. He published some 220 or so articles and books. His ideas about species (radical for that period) plus his occasional taxonomic blunders and intemperate comments about rival biologists led journals to refuse his taxonomic submissions and naturalists of the period to ridicule him. In his later years Rafinesque pursued with scant success a variety of initiatives, never obtained another university professorship, and died in diminished circumstances in 1840.

Learning Objectives:

1. Identify Rafinesque's contribution to the concept of Darwinian evolution,
2. Describe the role of Rafinesque in early nineteenth-century American natural history.
3. Explain the reasons for the rejection of Rafinesque by American naturalists.

Highlights from the History of Graves' Disease

JOHN K. RAY

John Ray is a fourth year medical student at the University of Texas Medical Branch in Galveston, TX, and a student scholar in the John P. McGovern Academy of Oslerian Medicine. He is currently applying to family medicine residencies, but is also interested in medical history and the history of physical diagnosis. His particular interest in Graves' disease was kindled by discussions and experiences on rounds during a month of Endocrinology while on Internal Medicine.

Autoimmune hyperthyroidism, also known as Graves' disease, von Basedow's disease, and Morbiadi Flajani, is the most common cause of thyrotoxicosis affecting up to 2% of women and 0.2% of men. It is of some wonder that a disease so commonly encountered would maintain so many aliases and eponyms. In the early stages of its discovery, descriptive appellations such as exophthalmic goiter, exophthalmus hystericus, exophthalmus anemicus, and exophthalmic bronchocoele abounded, and they would be replaced by just as many eponyms. Many great physicians played a part in shaping our understanding of this disease, as well as weighing in on the argument of who first discovered it. Robert James Graves and Carl Adolf von Basedow, the two for whom the disease is most commonly known, were not the first to describe goiter in association with exophthalmos. The journey would be incomplete without the accounts of several other contemporaries of Graves and von Basedow such as Osler, Legge, Charcot, von Graefe (whose eponomic physical exam finding has been renamed "lid-lag"), Henoeh, Parry, Flajani, Moebius, and Trousseau. The discovery of Graves' disease is not only interesting, but may also offer important lessons for approaching modern medical discovery and clinical teaching. The understanding of Graves' disease evolved rapidly through the early twentieth century with the elucidation of the biochemistry and physiology of the thyroid gland, as well as the discovery of thyroid-stimulating antibodies during the latter 20th century. No discussion of Graves' would be complete without at least minimal attention to its return to the international spotlight in 1992 when not only George Herbert Walker Bush, but also his wife, Barbara, and dog, Millie, mysteriously developed Graves' disease. Graves' disease is an interesting and common ailment whose history is dotted with names familiar to modern medicine, and stands out as a "gem" of the Golden Era of Physical Diagnosis.

Learning Objectives:

1. Recount the early clinical history of what we now know as Graves' disease.
2. Discuss how key discoveries and observations were assimilated into the common knowledge about this disease.
3. Express an understanding of how simultaneous medical and technological advances around the world came together to expand our knowledge of Graves's disease.

Laparoscopic Cholecystectomy: Its Introduction into U.S. Surgical Practice

ROBERT R. NESBIT

Robert Nesbit was Chief of Vascular Surgery at the Medical College of Georgia 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.

Karl Langenbuch performed the first successful cholecystectomy in Berlin in 1882. The first laparoscopic cholecystectomy was also performed in Germany in 1985 and the first laparoscopic cholecystectomies in the United States were performed - by Mckernan and Saye in Marietta, Georgia and by Olsen and Reddick in Nashville, Tennessee - in the summer of 1988. The new procedure received wide attention among surgeons and the public after Mckernan and Reddick introduced their procedure during the meeting of the American College of Surgeons in Atlanta in the fall of 1989. Both American groups - neither of which was academically based - began teaching the technique of laparoscopic cholecystectomy at weekend courses where surgeons were rapidly introduced to the techniques of laparoscopy and often "learned" laparoscopic cholecystectomy by performing the procedure on one pig. There was a definite learning curve for the procedure and major injury to the common bile duct was significantly more common than with the open operation.

The rapid and widespread adoption of the laparoscopic technique of cholecystectomy led to the convening of an NIH Consensus Conference on Gallstones and Laparoscopic Cholecystectomy in September of 1992. By that time it was estimated that more than 15,000 surgeons had received some training in laparoscopic cholecystectomy and that close to 80% of cholecystectomies were being performed laparoscopically. Bile duct injuries led to many malpractice suits and New York State passed a law specifying appropriate supervision required of surgeons before performing laparoscopic cholecystectomy independently.

New drugs are subjected to elaborate testing before they are approved for use. There is no such protocol for the introduction of new operative procedures. How such innovations should be made available to the public remains controversial.

Learning Objectives:

1. List the technical developments which made laparoscopic surgery feasible.
2. Explain how laparoscopic cholecystectomy became so quickly accepted as the preferred technique.
3. Discuss the problems associated with the introduction of new procedures.

Epidemiology in Childhood Cancer: Comparison Studies in the United States, the United Kingdom, and Germany, 1975-2005

ROBIN L. ROHRER

Robin Rohrer is a professor of history at Seton Hill University where she teaches history of western medicine including American Medicine and Culture. Her area of specialization is in the history of childhood cancer therapy as well the experience of childhood cancer since 1970. Her most recent publications include a chapter in Permeable Walls on the institutional experience of the Children's Hospital of Pittsburgh Oncology Division published by Clio Medica. She is also writing a monograph of the development of therapies for childhood leukemias for Northern Illinois University Press. Support for her research has included two Wellcome Grants in the History of Medicine and a Pisano Grant from the National Institutes of Health.

This paper examines the progress made in the international study of childhood cancer incidence in western nations in the period from 1975 to present, that is the in the era of modern curative therapy. After early strides in the 1960s and 1970s with multi modal therapy, the treatment of cancers in children has made slower steps, particularly in the area of new drug development. At the same time interest and research into the genetic diagnoses of these cancers has recently made a leap forward and the possibility of targeted individual therapy is a closer reality.

This study of the history of childhood cancer epidemiology, part of a longitudinal study by the author, examines the international data in approximately the last thirty years to find similarities and differences in the incidence, and possible environmental causation in the United States, the United Kingdom and Germany. These nations have excellent data (for instance the SEER data in the United States) and comparable data selection. The author assesses the use of this data in its relationship to therapy development and the wider question of the role of epidemiologic studies in pediatric oncology in general. Whereas the study of tobacco use and other lifestyle choices has played an obvious role in the development of therapy for adult cancers such as lung, colon and breast cancers, is there a parallel in childhood cancer research and clinical practice?

The author analyzes published research as well as archival material from the Children's Oncology Group, the National Cancer Institute and the National Institutes of Health History Office.

Learning Objectives:

1. Identify the major epidemiological data sources from the United States, the United Kingdom and Germany.
2. Determine the types of data included in each national epidemiologic study;
3. Identify one application of incidence data that has been incorporated into pediatric oncology protocol design.

How Close They Came: Pellagra in the Pre-Goldberger South

CHARLES S. BRYAN

Charles S. Bryan is Director of the Institute of Medicine and Family Practice at Providence Hospital, Columbia, South Carolina, and Heyward Gibbes Distinguished Professor of Internal Medicine Emeritus at the University of South Carolina School of Medicine.

The popular history of pellagra is commonly associated with a single name: that of Joseph Goldberger (1874-1929) who was appointed chief investigator of the disease by the United States Public Health Service in 1914 and who reported a year later that the cause was dietary deficiency. Goldberger amply deserves the credit accorded him, and especially for his zealous persistence in the face of virulent opposition, yet this account is incomplete in at least two ways.

First, Goldberger could not have arrived on the pellagra scene at a more propitious moment. Vitamin deficiency as the cause of pellagra had been proposed by Kasimir Funk (coiner of the term "vitamin") in 1911, further suggested by Fleming Sandwith in 1912 and again in 1913, and had aroused the interest of Carl H. Alsberg of the U.S. Department of Agriculture. A substantial body of experimental evidence, and especially the work of Claude H. Lavinder, supported the non-transmissibility of pellagra from one person to another by blood or other body fluids, making Goldberger's self-experiments quite safe.

Second, the efforts made by American physicians to characterize and treat pellagra were without precedent. Between 1907 and 1915, 408 American physicians senior authored 759 papers on this subject (Figure). After the initial reports from Alabama (Searcy, 1907) and South Carolina (Babcock, 1908), American physicians surpassed Italians as the most prolific contributors to this literature. Babcock organized the first of three triennial conferences in 1909 and became something of a clearinghouse for information. Although nearly everyone of that era realized the importance of diet in the treatment of pellagra, these physicians were misled by (1) a body of allegedly scientific evidence especially from the controversial Italian Cesare Lombroso implicating spoiled corn; (2) the zeal of numerous physicians, most notably the Englishman Louis Sambon, to gain immortality by identifying a vector-borne pathogen; (3) two American studies, one done in the South by the Thompson-McFadden Commission and the other in Illinois, that allegedly excluded dietary deficiency as the etiology; and (3) the myriads of speculations about potential causes, which no doubt numbed them against radically new ideas. It was to Goldberger's enormous advantage that he came to pellagra investigation as an outsider who had not participated in the previous seven years' (that is, 1907 to 1914) controversies.

Broader themes of the pre-Goldberger pellagra effort in the United States include (1) the extent of the efforts by an increasingly confident American medical profession to tackle what for them was a new disease; (2) the ascendancy of American science onto the world stage; (3) the professionalization of medical research in the wake of the Flexner report and its eventual impact on town-gown relationships; and (4) what I believe to have been a missed opportunity for national public health officials to forge a close working relationship with physicians in private practice and state governments.

Learning Objectives:

1. Name three American physicians who wrote or edited books about pellagra prior to 1911.
2. Identify previous facts that helped Goldberger come to the conclusion that pellagra is caused by dietary deficiency.
3. Discuss pellagra as an example of how social factors including prejudices and inferiority complexes affect the ability to understand and control disease.

Pellagra, Progress, and Public Polemics: Goldberger, E.J. Wood, and the Osler Connections

H. MIKE JONES

Mike Jones is Professor of Pathology in the University of North Carolina School of Medicine and attending on the Autopsy Service of NC Memorial Hospital.

In 1907 pellagra burst upon the American South, quickly rising as high in the statistical tables as tuberculosis and pneumonia. Recent historical publications about pellagra emphasize the sometimes personal and vociferous resistance among southern physicians to Goldberger's dietary theory of causation. The stereotype of that hostile viewpoint most often cited is Dr. J. A. Hayne, chief public health officer in South Carolina. There are two problems with such a narrow view of the reaction to Goldberger's announcements. First, reaction was more diverse, even if initially cautious. Second, Goldberger's early public comments are couched in terms which might offend some in a society more sensitive to issues of courtesy.

E. J. Wood, MD, of Wilmington, NC was one of the earliest, most persistent, and most recognized American investigators of pellagra, having at least twenty publications on the subject between 1908 and 1926, ending with a chapter in Osler's *Modern Medicine*. The Wood Family Papers, held at UNC Wilmington, contain previously unpublished and unreported correspondence from the Oslers, Malloch, and Cushing between 1908 and 1925. Osler wrote Wood from Bologna in 1908 that he was sending "Tizzoni's just issued paper on pellagra" with three slides which "show the organism."

Theories of the etiology of pellagra had centered on corn in the diet for almost 200 years. After the breakthroughs of Pasteur and Koch and the unmasking of one disease after another as microbial, "infectionists" began to dominate the discussion and Wood pursued several theories of infection. When Goldberger was traveling through the South he met with Wood, who at the time favored Sambon's parasite theory, hazarding the opinion that the vector might be bedbugs. Thereafter, in Goldberger's correspondence with his wife, Wood was referred to as the "bedbug man."

After Goldberger's results were published, reactions included not only hostility, but acceptance by open-minded physicians like Wood, who was a quick convert after considering the data. Academia, including William Welch, accepted Goldberger's ideas relatively early. The evolution of thinking about pellagra can be traced through Wood's publications and Osler's textbook, which denied its existence in America through the sixth edition (1907).

Wood later went to England in 1919 to complete a fellowship in tropical medicine under Sambon. The remainder of the Wood correspondence is from the year of Osler's death and after, but testifies to the high regard Osler had for Wood, who was by some accounts the only representative of the American medical profession at Osler's funeral.

Learning Objectives:

1. Define the relationship between Osler, E J Wood, and Joseph Goldberger
2. Contrast the varieties of response to Joseph Goldberger's exposition of means to prevent or cure pellagra
3. Explain the role of the Oslerian approach of avoiding critical comments regarding others

A Twice-Told Tale of a Titillating Title, or Dr. Kahn's Obscene Anatomical Museum Revisited

RICHARD KAHN

Richard Kahn, who was president of the American Osler Society 1998-1999, asks the reader to excuse his moderately severe case of Witzelsucht. The word Witzelsucht comes from the German witzel(ei) meaning pun or joke, and sucht meaning addiction or yearning (sucht derives from the same roots as sick), is a set of rare neurological symptoms characterized by the patient's uncontrollable tendency to pun, tell inappropriate jokes and pointless or irrelevant stories at inconvenient moments. The patient himself nevertheless finds these utterances intensely amusing. Relevant recent research related a genetic link between Witzelsucht and the urge to advocate astounding alliteration. His work on the Jeremiah Barker manuscript frequently gets diverted to subjects like the above paper.

One Saturday in January 2007 my weekly NCBI (National Center for Biotechnology Information) search of the history of medicine literature turned up the following article: Bates, A W, "Dr Kahn's Museum: obscene anatomy in Victorian London." J R Soc Med. 2006 Dec;99(12):618-24 The title piqued my interest. (Understatement)

After reading the article I emailed Dr. Bates at the Dept. of Histopathology at the Royal Free Hospital in London. He wrote that he was pleased to hear from "a member of the Kahn family who is also a medical historian" and sent me his reference material on Dr. Joseph Kahn and the museum. The story takes us from Alsace to London to New York City, Chicago, and San Francisco. It involves the rise of public anatomy museums in the 19th Century, sexually transmitted disease, Onanism, and pornography. Kahn's Museum of Anatomy and Pathology opened in 1851 with a very positive review in *The Lancet* that year. The exhibits apparently became more titillating; lectures, books, and consultation on the dangers of Onanism, etc led to charges of quackery. Britain's Lord Campbell's Act of 1857, the work of The Society for the Prevention of Vice and claims of quackery by the medical community led to the demise of the museum c1872.

Dr. Kahn's Museum of Anatomy opened in New York City in 1873 but now with Dr. L. J. Kahn giving lectures on "Nervous Exhaustion and Special Diseases . . ." (code for Onanism, impotence, etc) and consultations. Most newspapers advertised the museum and consultations available there or by mail (send money and urine sample). Anthony Comstock and the New York Society for the Suppression of Vice were finally successful in shutting down Kahn's and the other "anatomical museums" in the late 1880s. The Comstock law of 1873 was a federal law making it illegal to send any "obscene, lewd, and/or lascivious" materials through the mail, including contraceptive devices and information. It banned contraceptives and the distribution of information on abortion for educational purposes.

Sources include two articles by A W Bates, *The Lancet*, and other British and U.S. medical journals, British and U.S. newspapers, and: *A Traffic of Dead Bodies: anatomy and embodied identity in nineteenth-century America* by Michael Sappol, Princeton Univ. Press, 2002.

Learning Objectives:

1. Explain the rise and fall of public anatomical museums in the 19th Century
2. Identify Onanism.
3. Identify Anthony Comstock.

“The Country Practitioner”—A Unique Medical Journal

SANDRA MOSS

Sandra Moss is a retired internist and past president of the Medical History Society of New Jersey. Her research interest is in 19th-century American and New Jersey medical history.

In the 19th century, country practice was widely held to differ from urban practice. Not only was the country practitioner burdened by professional isolation and wearisome travel, but the medical journals of the day devalued his hard-won clinical experience. At the same time, country patients, with their independent ways and hardy life in the fresh air, were stronger and in some fundamental way different from the enervated and pallid urban masses who filled the clinics and charity hospitals in the cities.

In 1879, Ellis P. Townsend, M.D., an energetic country doctor in Beverly, New Jersey, singlehandedly founded and edited a monthly journal called *The Country Practitioner*. Special Collections at the University of Medicine and Dentistry of New Jersey recently acquired a photocopy of this hard-to-find publication. This presentation provides a first look at this unique professional journal in the context of 19th century American medicine.

“Like all literature,” wrote Bruce Fye, “the literature of medicine is shaped by the social and intellectual climate of its time.” Townsend’s goal was to add to medical knowledge by tapping the “latent information” possessed by every country practitioner, “working, reading, striving, and fighting his way alone through emergencies that would cause some of the great medical luminaries to stagger in their traces.”

In addition to publishing articles “clipped” from other journals and the all-too-few submissions by country doctors, Townsend penned lively and often tart editorials. Subscriptions, though modest in number, came from all parts of the country. In the brief years of its existence, *The Country Practitioner* addressed current controversies such as the role of the lancet in pneumonia, smallpox vaccination, post-partum abdominal binders, and the diagnosis and treatment of oft-fatal childhood diphtheria. Obstetrical disasters were a constant source of anxiety: “What physician that has stood by the bedside of a patient, writing with puerperal convulsions, surrounded by frightened friends and attendants, does not shudder, as his memory dwells upon it,” wrote one contributor.

Professional issues included quackery, licensing legislation, clergymen and “busy women” in the sickroom, the role of autopsies in defending physicians from the “odium” of blame, the soporific meetings of the state medical society, and the ethics of commenting on “celebrity” patients (in this case President Garfield) by physicians not in attendance.

The Country Practitioner ceased publication without notice in 1882 and Townsend relocated to Camden, N.J., a relative metropolis across the Delaware River from medically cosmopolitan Philadelphia. Seemingly a restless man, he left for Montana, in about 1890. He died in 1907 from complications of frostbite and amputation following a medical call in rural Lane Deer, Montana, where he was employed as a government physician.

Though *The Country Practitioner* lasted just over 2 years, it occupied a neglected niche in the nascent American medical literature. “There are many points in a country practice,” wrote the editor, “that can only be studied from the basis of country practice.”

Learning Objectives:

1. Contrast rural and urban practice in the 19th century.
2. Discuss the role of the country doctor as medical educator.
3. Identify three key concerns of the rural practitioner with respect to daily practice.

Claude Bernard: Is the Father of Evidence-Based Medicine Obsolete?

DAVID HABURCHAK

David R. Haburchak is Professor of Medicine, and the Internal Medicine Residency Training Program Director at the Medical College of Georgia, Augusta, Georgia, where he has taught for the last 15 years. He is a specialist in Infectious Diseases, and has served as a Department Chairman at two U.S. Army medical centers during a previous 24 year career in the military.

Claude Bernard (1813-1878) has been described as both the “Father of Physiology” and “Father of Experimental Medicine.” Much admired by Osler, Bernard had a place of prominence in Osler’s *The Evolution of Medicine* and his personal library.

Bernard is best known for his *Introduction to the Study of Experimental Medicine* (1865) wherein he outlines the concepts of homeostasis, cause and effect determinism in biological systems, verification by observed evidence, and application to individuals because of consistency between those individuals. His concepts and methods laid the ground work for the explosive scientific progress in biological medicine, starting with specific germs as the causation of disease and culminating in the modern placebo-controlled randomized trial as the acme of evidence-based medicine (EBM).

In the 150 years since Bernard and the 90 years since Osler the edifice of EBM has begun to crack, with some crevices reaching down to fundamental concepts espoused by Bernard. The Bio-Psycho-Social Model described at Rochester in the 1970’s and Patient-Centered Care model at Western Ontario in the 1980’s pointed the way to a model of medicine as a complex system with enumerable uncontrollable variables. The very success of the experimental model of medicine in understanding and conquering simple perturbations of homeostasis may have exposed its major flaw of oversimplification when applied to chronic illness, co-morbidity, poverty, mental illness, and the financing of health care.

A better model might be that of complex adaptive systems theory, which denies homeostasis in favor of dynamic non-equilibrium states; replaces simple cause-effect determinism with bounded meta-stable states; and treats individuals not as identical, but as free-agents within a network of polymorphic genetic, environmental, social and economic influences that produce outcomes that obey a non-linear power law distribution.

Like Newton, Bernard’s science has been superseded at the extremes of reality and overly simple for our current time. Clinical controlled studies are too expensive to complete, and almost all clinical investigation produces negative, equivocal, marginal or costly results. New drug development has ground to a halt, and patients die of gluttony and sloth while doctors abandon primary care to guideline-readers and “alternativists.”

Despite this, Osler’s model of virtue-based medical care, personal responsibility, and broad holistic historical and literary view of humanity offers a means of reconciliation and a way forward. His well known skepticism of therapeutics might now be applied to a more realistic appraisal of the predicament of man and the role of medicine to alleviate it.

Learning Objectives:

1. Describe the influence of Claude Bernard on Osler and twentieth century medicine.
2. Describe the key point of Bernard’s model of experimental medicine and concepts of homeostasis.
3. Explain why complex systems theory with its non-linear dynamics, indeterminacy, and power law probability distribution better explains current problems in healthcare.

Student and Chief: Memories of Earl Nation

LAWRENCE W. JONES, SAKTI DAS, AND JOHN CARSON

Lawrence Jones met Earl Nation in 1963 and was his colleague for nearly four decades and his partner in the practice of urology for 15 years. Sakti Das and John Carson are both long-term members of the American Osler Society.

Earl Nation (1910-2008) epitomized the Oslerian ideal of combined intellectual preeminence with nobility of character. He was our teacher and colleague. He showed us the way. In the year of his passing, we shared our experiences with many of his friends and colleagues.

Materials: Our text was the correspondence of Charles Camac and William Osler compiled by Nation and John P. McGovern. It was chosen because it contained within it the view Camac held of Osler, which we likened to our view of Earl Nation: The model of the complete physician, supremely competent in the science of medicine, humane, constantly aware of the uniqueness of each patient, and cognizant of the larger role of the physician in society. Our sources included personal experiences, correspondence, records of unusual cases, testimonials, essays written by Earl, and the biography of a close friend of Earl.

Observations: Earl Nation was humble. He never allowed a door to be held open for him to pass through by anyone. He was communicative: He usually answered the telephone on the first ring; his progress notes were prompt, clear, to the point and of impeccable penmanship. He was an advocate for his profession, his specialty, and the public and personal health of our patients and our fellow human beings. His spending habits were thrifty. We seldom recall indulgent spending. He was committed to the study and practice of medicine. He was quick to praise. He was slower to blame. He was occasionally (and justly) critical. He seemed to maintain a clinical detachment sufficient to allow him to function in the face of a critical patient or a challenging clinical setting. On the other hand, his ready ear with his adoring employees occasionally and needlessly involved him with office quarrels. He came to work at the appointed hour and left when the work was done. He expected and received the same from his partners. He was never morose. He was very adept in extracting critically important elements in a history without hesitating or belaboring over clinical minutia. He was realistic in time management. His patients seldom commented that they felt short changed with the time he spent with them or that he was too brusque. His collection of obsessive-compulsive patients included urophilia, bedcentricism and fear of germs. He reported on goosiness. His apocrypha included phiniminimiasis, aplumbopenosis and assdragalitis. With regard to surgery, his degree of innovation was mixed. He was one of the last in the world to give up the cold punch technique for use in transurethral prostatectomy. On the other hand, he was fascinated by cryosurgery. In general, he always preferred a nondisposable item to a disposable item in procedures such as stone surgery. He always preferred radioactive gold, therapeutic castration and generic drugs.

Conclusion: Earl Nation taught us the ephemeral qualities of humility, empathy, and advocacy. He embodied Osler in his public and, more importantly, his private life. Like Camac and Osler, we, his students, will emulate our chief.

Learning Objectives:

1. List three types of obsessive-compulsive behavior.
2. Explain how Earl Nation's traits will affect your life.
3. List two apocryphal medical conditions.

“Elvis is Dead”—Celebrities and Substance Abuse

S. ROBERT LATHAN

Robert Lathan, a graduate of the Johns Hopkins University School of Medicine, is a retired internist in Atlanta, Georgia. He collects Elvis memorabilia and impersonated Elvis at the weddings of all three of his children.

The occasion of the American Osler Society's meeting in Cleveland with its special event at the Rock and Roll Hall of Fame prompts examination of a significant downside of the entertainment industry: the potential for substance abuse including fatal drug overdose. The death of Elvis Presley is perhaps the best known example of such tragedy, but others readily come to mind (for example, Janice Joplin, John Belushi, Judy Garland, Anna Nicole Smith, Heath Ledger, Marilyn Monroe, and Jimi Hendrix).

In his last 3-4 years, Elvis Presley was declining with difficulty performing and unfavorable reviews, anger and depression, colon problems, weight gain and a bloated appearance, and bizarre behavior. His unexpected death on August 16, 1977, in his Graceland mansion in Memphis, Tennessee, has been the subject of extensive study. On the morning of his death he played racquetball and was noted to tire easily. Still, he seemed in a good mood and stayed up all night as usual, entertaining friends, playing the piano, and singing. Shortly before he retired at 8 a.m. (he usually went to bed at 6-7 a.m.), three packets of prescription drugs arrived for an upcoming tour. The autopsy did not show an obvious cause of death, but two months later a toxicology report suggested polypharmacy. Fourteen drugs were found in his system, including codeine (at 10 times the therapeutic level), Quaalude (in a toxic amount), morphine, Demerol, Placidyl, Valium, and several barbiturates. The combination of CNS depressants and codeine was thought to be lethal. However, the medical examiner's office stuck to their original diagnosis: “cardiac arrhythmia”. Family members and physicians including the pathologists initiated a cover-up to preserve the Elvis image and legacy. The stomach contents at autopsy were destroyed without ever having been analyzed. No real police investigation was ever made, and no drugs were found at Graceland. The circumstances, investigation, and subsequent “mystery” of Elvis's death bear many similarities to the deaths of other celebrities, including those mentioned briefly above).

Celebrity patients often practice polypharmacy. Many use multiple physicians, multiple drugstores, and multiple aliases to obtain their medications. In this regard, they often have much in common with other drug-seeking addicts. Prescription drugs (and especially the opioid analgesics) now cause more deaths than do heroin and cocaine. These “accidental” celebrity deaths highlight wider societal problems including ready access to drugs, the dangers of combining such drugs as opioids, barbiturates, and sedatives with alcohol, and the deteriorating doctor-patient relationship.

What would William Osler have done or suggested? It is known that Osler and his colleague William H. Welch were very supportive of the famous surgeon William S. Halsted, who before coming to Johns Hopkins had been treated for cocaine addiction by being switched to morphine. Osler, as Halsted's physician, documented in a secret diary Halsted's continued addiction to morphine. In a late diary entry, Osler wrote that Halsted “got the amount down to 1 ½ grains/day and later possibly got on without it.” However, in 1934 Welch stated that “although it has been widely reported that Halsted conquered his addiction, this is not entirely true. As long as he lived, he would occasionally have a relapse and go back on the drug.” Thus, Halsted led a life of controlled addiction. We have reason to think that a supportive, mutually trusting doctor-patient relationship played a large role in securing this favorable outcome.

Society's view of drug addiction has changed very little since Osler's time and is still frequently approached with secrecy and denial. How might we do better?

Learning Objectives:

1. List at least three features of drug-seeking behavior common to certain celebrities and other addicts.
2. Discuss how the prelude, circumstances, investigation, and cover-up of Elvis Presley's death resemble those of certain other “accidental” celebrity deaths.
3. Outline what is known about William Osler's doctor-patient relationship with the surgeon William S. Halsted, and discuss whether that relationship might be a useful example for physicians sought out by celebrities.

Meningococcal Disease: Historical Achievements and Current Challenges

MARY M. CARROLL AND FREDERICK S. HUANG

Ms. Carroll is a junior medical student at The University of Texas Medical Branch and an Osler Student Scholar with the John P. McGovern Academy of Oslerian Medicine. Dr. Huang is the director of pediatric hematology/oncology at The University of Texas Medical Branch and an Osler Scholar with the John P. McGovern Academy of Oslerian Medicine.

In 1915, William Osler observed, “In cerebrospinal fever we may be witnessing the struggle of a new disease to win a place among the great epidemics of the world.” When August Hirsch published his history of meningococcal meningitis in 1886, it was associated with a mortality rate of 70%. Today, the mortality rate for meningococcal disease is 10-14%. Much of the basis for the contemporary therapies and modern vaccines that have contributed to this reduction was, in fact, established around the turn of the last century.

Hirsch’s work was joined by those of Anton Weischelbaum, Heinrich Quincke, and F. Kiefer, whose discoveries added immensely to the accurate diagnosis of meningococcal meningitis. Osler’s contributions included a number of insightful case studies, an understanding of its significance for the military, a recognition of the arthritis that it can cause, as well as a comprehensive summary of what was known in *The Principles and Practice of Medicine*. These breakthroughs were followed by the birth of two different classification systems for *Neisseria meningitidis*, elements of which have survived in the current organizational scheme for this bacterium. The early twentieth century also saw the successful development of an effective vaccine, which has evolved into a recommended component of the routine health maintenance of millions of adolescents.

These historical advances not only exemplify the achievements of the time, but they also highlight the challenges that meningococcal disease still poses to this very day. The treatment approaches have not significantly changed and the mortality rates have not substantially improved since the introduction of sulfonamides six decades ago. Additionally, Osler’s prediction about cerebrospinal fever and its potential to be one of the “great epidemics of the world” is a reality in sub-Saharan Africa, an area with a tremendous burden of meningococcal disease that is known as the “Meningitis Belt.” Military recruits and college freshmen have garnered much attention as high risk groups, but infants actually have the highest incidence of meningococcal meningitis because more than 50% of these cases are caused by the serogroup B strain, for which no vaccine currently exists. These and other challenges continue to test modern strategies for the treatment and prevention of meningococcal disease.

Learning Objectives:

1. Review the history of meningococcal disease over the last century.
2. Detail the historical achievements in the diagnosis, treatment, and prevention of meningococcal disease.
3. Outline the current challenges for the treatment and prevention of meningococcal disease.

“The Saga of an Oxford Don”: Chinese Breathing Exercises, Vegetable Juices, and Coffee Enemas

ROBERT A. KYLE

Robert Kyle is Professor of Medicine, Laboratory Medicine and Pathology at Mayo Clinic College of Medicine. He is President of the International Myeloma Society, immediate Past-President of the International Society of Amyloidosis, Chairman of the Scientific Advisory Board of the International Myeloma Foundation, and Chairman of The Scientific Advisory Committee of the International Waldenstrom's Macroglobulinemia Foundation.

The Oxford don developed a chill and night sweats. After five days, he called a doctor who told him to continue paracetamol and drink plenty of fluids and then “rang off”. A physician friend found anemia and arranged for a specialist. Following blood tests and a bone marrow examination, he was told that he had multiple myeloma and that he must begin treatment. He was told that he would become “immobilized by his disease,” which he interpreted as bullying. His friends arranged a consultation with a Harley Street specialist. He reviewed the records, agreed with the diagnosis and said, “Face up and have treatment.”

His devoted former students and friends contacted Professor Ernst Wynder in New York who stated, “If your friend touches chemotherapy, he is a goner.” His hemoglobin increased from 9.4 to 11.3 g/dL. He then consulted two hematologists who advised chemotherapy.

His friends found the Gerson diet which consists of 10 eight-ounce glasses of fresh carrot, apple, and green vegetable juice daily. This would utilize some 1800 pounds of carrots, 125 pounds of green peppers, 145 cabbages, and 1300 oranges per year. He began acupuncture therapy and was told that detoxification is essential. This is achieved by coffee enemas – consisting of two pints of coffee four times daily. He began “a grueling regimen of alternative treatments” consisting of the Gerson diet, Chinese breathing exercises, vegetable juices and acupuncture.

I received an e-mail one day from his consulting physician asking if I would look at something one of his patients had written. I said, “Yes,” but as I printed the attachment, a 4-inch stack of paper emerged. It was “Living Proof: A Medical Mutiny by the don,” Michael Gearin-Tosh. I read the first few pages and could not put it down. I sent a number of comments to his consultant and thought no more of it until I received a copy of the book from Mr. Gearin-Tosh. I was surprised to see that a number of my comments were published in the book as well as in a review of the book in the London Times. My British friends chastised me for my apparent role in this.

It so happened that I had a medical meeting in Oxford and contacted Mr. Gearin-Tosh. He had graduated in English Literature and was an authority on John Donne. He was offered a position of don (tenured at the age of 23!) without benefit of either a Master's or Doctoral degree. I told him that I thought he had smouldering multiple myeloma and furthermore, there was no evidence that his vigorous regimen was of any benefit. He agreed but said that he was reluctant to change since he was doing well.

Eleven years after the diagnosis of multiple myeloma, he had dental work performed without antibiotic coverage and a week later developed chills and fever. He did not seek medical advice and developed a gangrenous area on his left thumb. His friends urged him to go to the hospital, but he refused. When he became so ill that he could not refuse, he was admitted in a coma with gangrene of his hand. He was considered terminal and died two days later. Blood cultures revealed a sensitive streptococcus. There was no clinical evidence that his disease was progressing; indeed, he had been working until the dental surgery.

His British physician felt that he chose to die. He said that Mr. Gearin-Tosh had Ciprofloxacin in his flat but had not taken it. He speculated that the patient was trapped in a dreary and rigorous regimen occupying all of his waking and thinking time that ultimately became unbearable. He never finished his second book, so we will never know. He is missed by all of us.

Learning Objectives:

1. List the components of the Gerson diet.
2. Recognize the presence of smoldering multiple myeloma.
3. Describe the therapeutic regimen that the patient followed for 11 years.

The Pithotomy Club at Johns Hopkins: R.I.P.

WILLIAM H. JARRETT

Dr Jarrett was educated at Yale and Johns Hopkins Medical School; he trained at The Wilmer Eye Institute and practiced ophthalmology in Atlanta for 40 years.

The Pithotomy Club was founded by members of the first class at Johns Hopkins Medical School. in 1897. Its hand-written constitution states that "The object of this Society is the promotion of vice among the virtuous, virtue among the vicious, and good fellowship among all)." The club functioned as a medical fraternity and eating club. But one feature distinguished Pithotomy from the other medical school fraternities on scene at Hopkins: the infamous Pithotomy Show

The club's name reflects the classical knowledge of its founders. The Greek word *Pithos* means keg, or barrel; the suffix --*Otomy* of course is a medical term meaning to open. Thus, Pithotomy is Greek for "tap a keg."

Max Broedel, the noted medical illustrator at Hopkins, provided the club with its logo, a plump cherub seated upon a beer keg, attired in a loin cloth and mortarboard, surrounded by medical impedimenta, various animals, and properly-discarded examination papers. A Pithotomy tie with broad stripes of black, blue, and green was traditionally worn on Wednesdays. There was even a Pithotomy flag, stitched by a Geneva sail-maker, which was flown on special occasions.

The club became notorious for its annual Pithotomy Show, a male-only affair in which faculty members were mercilessly parodied in song and story. The show was vulgar, boisterous, rowdy, irreverent, disrespectful and occasionally bordered on the obscene. The audience loved it. The show concluded with a seemingly endless ditty called "3000 Years Ago," a tune which allegedly originated in a Baltimore bawdy house. H.L. Mencken, the curmudgeonly Baltimore writer, admired the show and attended whenever he could. F. Scott Fitzgerald featured a Pithotomy show and "3000 Years Ago" in one of his short stories.

Gradually, social mores changed, curriculum changes did away with the necessity for eating clubs, the neighborhood environment continued to decline, the club was forced to move to smaller and less-desirable quarters, until eventually the club ceased operations in 1992, after a 95 year existence at Johns Hopkins. *Requiescat in pace*

Learning Objectives:

1. State the hand-written purpose of the Pithotomy Club.
2. Describe the origin of the name of the club.
3. Discuss the function for which the Pithotomy Club is best known.

Two of “The Four Doctors” and Their Role in Covert Autopsy Techniques

JAMES R. WRIGHT

James Wright received his MD, PhD (Experimental Pathology), and MA (Medical History) degrees from The Ohio State University and was the recipient of the AAHM William Osler medal in 1984 for an essay on the history of surgical pathology. After completing a residency in anatomical pathology at Washington University/Barnes Hospital, he moved to Dalhousie University in Halifax, Nova Scotia where he established an active research laboratory doing experimental pancreatic islet transplantation, and rose through the ranks to Professor of Pathology, Surgery, and Biomedical Engineering. Since 2005, he has been Professor and Head of the Department of Pathology & Laboratory Medicine at the University of Calgary. He is currently the chair of the AAHM William Osler Medal Selection Committee.

In 1905, John Singer Sargent painted “The Four Doctors” commemorating the four great founding physicians of Johns Hopkins Medical School. The passion for post-mortem pathology of the two doctors on the right hand side of the painting (Osler and Kelly) is well-known. Less known, perhaps is their zeal in obtaining autopsies.

In 1883, Dr. Howard Kelly, while he was a resident physician at the Episcopal Hospital in Kensington, a poor working class mill district in Philadelphia, published a paper on techniques he had developed for performing autopsies without making either an abdominal or a thoracic incision (i.e., per vagina, per rectum, and per perineum). Although Kelly did not directly advocate doing autopsies without consent, some of the cases included in his “methods paper” were clearly “consentless”. Osler, while still at McGill, became aware of Kelly’s radically new technique to perform a minimally invasive autopsy; in fact, according to Kelly biographers Allen and Setze, this was how Osler first heard of the talented and innovative young Philadelphia surgeon. In 1884, Osler relocated to Philadelphia and was able to observe Kelly more closely. At this time, autopsy consent processes at charity hospitals such as lockley, where Osler performed all of his Philadelphia autopsies, were both controversial and loosely followed. However, despite a general laxity, Osler’s practice was noticeable. In 1889, Osler was recruited to Johns Hopkins and he was influential in the decision to recruit Kelly. Interestingly, Osler, whose reputation had been so linked to performing autopsies in Montreal and Philadelphia (but whose disregard for the autopsy consent process at Blockley was also well-known), never performed a single autopsy while at Johns Hopkins, where William Welch ultimately controlled access to the autopsy suite. Osler’s and Kelly’s somewhat cavalier approach to obtaining autopsies will be delicately examined in the context of the paternalistic approach to the practice of medicine typical of their time and the need to obtain pathologic specimens to teach gross pathology and clinico-pathological correlation to medical students, as well as the medical museum movement of the early 20th Century. Finally, through examination of textbooks on autopsy pathology technique in the 19th and 20th Century, I will also discuss the brief history of the “arm’s length” technique these “Two Doctors” pioneered.

Learning Objectives:

1. Explain the roles of Howard Kelly and William Osler in the origin of three covert techniques to remove thoracic and abdominal organs at autopsy.
2. Explain the historical need for medical museums holding collections of diseased organ specimens for teaching clinico-pathological correlations to medical trainees.
3. Outline the general rules pertaining to autopsy consent in 19th Century North America and how they were circumvented to obtain teaching specimens

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THE AMERICAN OSLER SOCIETY has been founded for the purpose of bringing together members of the medical and allied professions who are, by their common inspiration, dedicated to memorialize and perpetuate the just and charitable life, the intellectual resourcefulness, and the ethical example of William Osler (1849-1919). This, for the benefit of succeeding generations, that their motives be ever more sound, that their vision be on ever-broadening horizons, and that they sail not as Sir Thomas Browne's Ark, without oars and without rudder and sails and therefore, without direction.
