40th Annual Meeting of the AMERICAN OSLER SOCIETY



MONDAY – THURSDAY, APRIL 26-29, 2010

KAHLER GRAND HOTEL ROCHESTER, MINNESOTA

Jointly Sponsored with Mayo Clinic

MAYO CLINIC

On the Cover

A lithograph print of St. Cosmos and St. Damian was given as a gift to Dr. Will Mayo from William Osler. The original lithograph is located in the Mayo Clinic History of Medicine Library.

Below is the letter addressed to Dr. Will Mayo from William Osler that accompanied the print.





40th Annual Meeting of the AMERICAN OSLER SOCIETY

MONDAY THROUGH THURSDAY, APRIL 26-29, 2010

KAHLER GRAND HOTEL ROCHESTER, MINNESOTA

Course Objectives

Upon conclusion of this program, participants should be able to:

- Describe new research findings in the history of medicine.
- Outline the evolution of medicine in a particular disease.
- List professional contributions made by others in medicine.

Intended Audience

The target audience includes physicians who research and write on a range of issues. Attendees will acknowledge the diversity of topics discussed and the spectrum of research techniques employed to investigate hypotheses, frame arguments, and draw conclusions. The themes addressed are comprehensible to all health care providers, making the content and conclusions accessible to the participants regardless of their main professional identity.

Continuing Education Credit

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of College of Medicine, Mayo Clinic, and the American Osler Society. College of Medicine, Mayo Clinic, is accredited by the ACCME to provide continuing medical education for physicians.



College of Medicine, Mayo Clinic designates this educational activity for a maximum of 17.5 *AMA PRA Category* 1 *Credits*™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

CME Record of Attendance

A Record of Attendance is provided with on-site registration materials. The Record of Attendance allows course attendees to calculate their own credits of participation in the educational activity.

The total number of credits participants can earn per day is noted on the Record of Attendance. Below each day is a line to record the actual number of credits during which you participated in the educational activity. It is recommended that you record your actual credits daily as you proceed through the course.

Upon conclusion of the course, please total the number of credits you have recorded on the top half of the form, sign it, and return it to the registration desk.

The bottom half of the form represents your Record of Attendance, which you must retain for your records. Please make sure the number of credits claimed in both sections coincide.

Course Evaluation

A complete evaluation will be distributed electronically after the course. Your feedback is very important to us and will be used for planning future programs.

Smoking Policy

In keeping with Mayo Clinic policy, smoking is not permitted in any of the meeting rooms or course facilities during Mayo-sponsored activities.

Taping of Sessions

Audio or visual taping by participants is not permitted.

Electronic Devices

As a courtesy to other attendees, please turn off or place in silent mode all cell phones, pagers, PDA's, laptop computers, etc.

Disclaimer

The material presented in this continuing medical education program is made available by the College of Medicine, Mayo Clinic, for educational purposes only. This material is not intended to represent the only, or necessarily the best, methods or procedures appropriate for the medical situation discussed, but rather is intended to present an approach, view, statement or opinion of the authors or presenters that may be helpful or of interest to other practitioners. As an attendee, you agree to participate in this medical education program sponsored by the College of Medicine with full knowledge and awareness that you waive any claim you may have against the College of Medicine or Mayo Clinic for reliance on any information presented in this educational program. The approval of the U.S. Food and Drug Administration is required for procedures and drugs that are considered experimental. Instrumentation systems discussed and/or demonstrated in or at this program may not yet have received FDA approval.

All of the proceedings of this program, including the presentation of scientific papers, are intended for limited publication only, and all property rights in the material presented, including common-law copyright, are expressly reserved by the speaker, the College of Medicine or Mayo Clinic. No statement of presentation made is to be regarded as dedicated to the public domain. Any sound reproduction, transcript or other use of the material presented at this course without the permission of the College of Medicine is prohibited to the full extent of common-law copyright in such material.

Attendance at this Mayo course does not indicate nor guarantee competence or proficiency in the performance of any procedures that may be discussed or taught in this course.

Disclosure Summary

As a provider accredited by ACCME, College of Medicine, Mayo Clinic (Mayo School of CPD) must ensure balance, independence, objectivity and scientific rigor in its educational activities. Course Director(s), Planning Committee Members, Faculty, and all others who are in a position to control the content of this educational activity are required to disclose all relevant financial relationships with any commercial interest related to the subject matter of the educational activity. Safeguards against commercial bias have been put in place. Faculty also will disclose any off label and/or investigational use of pharmaceuticals or instruments discussed in their presentation. Disclosure of this information will be published in course materials so those participants in the activity may formulate their own judgments regarding the presentation.

Listed below are individuals with control of the content of this program who have disclosed...

Relevant financial relationship(s) with industry:

None

No relevant financial relationship(s) with industry:

None of the participants as listed on pages 13-65 had any relationships to disclose.

References to off-label usage(s) of pharmaceuticals or instruments in their presentation: None

OFFICERS AND BOARD OF GOVERNORS AMERICAN OSLER SOCIETY

OFFICERS

JOHN NOBLE President

CHARLES S. BRYAN First Vice President

MICHAEL BLISS Second Vice President

PAUL S. MUELLER Secretary

R. DENNIS BASTRON Treasurer

JOSEPH B. VANDERVEER, JR Editor, Oslerian

BOARD OF GOVERNORS (Expiration of Term)

PAUL BERMAN (2012) CHARLES S. BRYAN (2014) LAUREL E. DREVLOW (2012) CONRAD C. FULKERSON (2011) PHILIP W. LEON (2011) JOSEPH W. LELLA (2012) ROBERT G. MENNEL (2010) PAUL S. MUELLER (2010) T. JOCK MURRAY (2010) FRANCIS A. NEELON (2011) JOHN NOBLE (2013) STEVEN J. PEITZMAN (2010) BARRY D. SILVERMAN (2012) JAMES B. YOUNG (2011) JOSEPH B. VANDERVEER, JR (Ex-officio)

Monday, April 26, 2010

2:00 – 5:00 p.m.	Registration Kahler Grand Hotel, Heritage Foyer, subway level
3:00 – 5:00 p.m.	Recitations Moderator: Frank Neelon Kahler Grand Hotel, Centennial Room, mezzanine level
5:45 – 6:45 p.m.	Past Presidents Meeting Kahler Grand Hotel, Vikings Room, mezzanine level
7:00 – 9:00 p.m.	Board of Governors Meeting Plummer Building, Historical Suite, 3rd floor
7:30 – 8:30 p.m.	Creative Writing Session Moderator: David Cooper Kahler Grand Hotel, Regency Room, mezzanine level

Tuesday, April 27, 2010

7:00 – 7:45 a.m.	Registration & Continental Breakfast Kahler Grand Hotel, Heritage Foyer, subway level
7:45 a.m.	JOHN NOBLE Welcome and Announcements
	General Session No. 1 (John Noble, Moderator) Kahler Grand Hotel, Heritage I, subway level
	Osleriana, Part I
8:00 a.m.	CHARLES T. AMBROSE William Osler's Harvard Connections
8:20 a.m.	LEONARD H. CALABRESE The Birth of Immunology at the Turn of the 20th Century: What Did Osler Think?
8:40 a.m.	J. MARIO MOLINA Marcia Noyes and William Osler, the Patron Saint of Medical Librarians
9:00 a.m.	PHILIP W. LEON Osler and Doctor Thorne: The Other Trollope Novel
9:20 a.m.	ELENORE PATTERSON William Osler's "Man's Redemption of Man" – 100 Years Later
9:40 a.m.	REFRESHMENT BREAK Kahler Grand Hotel, Heritage Foyer, subway level
7.10 a.m.	Kahler Grand Hotel, Heritage Foyer, subway level

Practice of Medicine, Part I

10:10 a.m.	MICHAEL BLISS A Virus and Vaccination: Smallpox in Montreal, 1885
10:30 a.m.	DAVID K. C. COOPER The Floodgates Open - Vasilii Kolesov, Mason Sones, Rene Favaloro, and Surgery for Coronary Artery Disease
10:50 a.m.	IAN A. CAMERON All We Could Do Was Wait: A Home Delivery in 1892
	The John P. McGovern Award Lectureship
11:10 a.m.	NUALA KENNY Selling Our Souls: Commercialization and Medical Professionalism
12:00 p.m.	LUNCHEON Kahler Grand Hotel, Heritage II, subway level
	General Session No. 2 (Charles S. Bryan, Moderator) Kahler Grand Hotel, Heritage I, subway level
	Personalities and Role Models, Part I
1:00 p.m.	SANDRA W. MOSS Brief Encounter: William Thalhimer and the Artificial Kidney
1:20 p.m.	JOSEPH W. LELLA Abraham Verghese: An Exemplary 21st Century Oslerian in Three Volumes
1:40 p.m.	CYNTHIA PATTERSON A Minority Voice: Howard Burchell and the Establishment of the Army Air Force Research Center, Heidelberg 1945
2:00 p.m.	S. ROBERT LATHAN Caroline Hampton Halsted: The First to Use Rubber Gloves in the Operating Room
2:20 p.m.	REFRESHMENT BREAK Kahler Grand Hotel, Heritage Foyer, subway level
	The Mayo Clinic
2:50 p.m.	MEGHAN A. FEELY The Mayo Brothers and the History of Continuing Medical Education at the Mayo Clinic – In Pursuit of Lifelong Learning
3:10 p.m.	W. BRUCE FYE What's in a Word? How the "Mayo Clinic" Evolved from a Hospital-based Teaching Event into the Prototypical Multispecialty Group Practice

🦢 Program Schedule 🛸

3:30 p.m.	ROBERT G. MENNELL The Mayo Clinic: 1883 to 1939: The Early Years
3:50 p.m.	DARRYL D. BINDSCHADLER Henry Stanley Plummer and the Mayo Clinic
4:10 p.m.	ROBERT A. KYLE Mayo Clinic Hematology and Sir William Osler
4:30 p.m.	CARL E. LUNDSTROM The Brothers Mayo – Mythic Twins?
4:50 p.m.	ADJOURN
4:50 p.m.	MAYO CLINIC HISTORICAL MOVIES Kahler Grand Hotel, Heritage I, subway level
4:50 – 6:00 p.m.	SELF-GUIDED TOURS OF THE HISTORICAL SUITE & MAYO CLINIC HERITAGE HALL MUSEUM Plummer Building, 3rd floor and Mayo Building, lobby level
6:30 – 8:30 p.m.	RECEPTION Rochester Art Center "Medicine in Art"– This exhibit features more than 250 prints and engravings depicting a broad range of medical subjects. The works, spanning five centuries, are from the collection of Bruce and Lois Fye.

Wednesday, April 28, 2010

7:00 – 8:00 a.m.	Registration & Continental Breakfast Kahler Grand Hotel, Heritage Foyer, subway level
7:40 – 8:10 a.m.	Annual Business Meeting
	General Session No. 3 (Michael Bliss, Moderator) Kahler Grand Hotel, Heritage I, subway level
	Practice of Medicine, Part II
8:10 a.m.	JACALYN DUFFIN Medical Rhetoric in the 21st Century: When Doctors Change Their Minds
8:30 a.m.	CHRYSSA N. MCALISTER Peering into Peer Review
8:50 a.m.	CHRISTOPHER J. BOES Glycine in Myasthenia Gravis
9:10 a.m.	HERBERT M. SWICK A Cautionary Tale?: Montana's Experience with the 1918 Influenza Epidemic
9:30 a.m.	REFRESHMENT BREAK Kahler Grand Hotel, Heritage Foyer, subway level

Osleriana, Part II

10:00 a.m.	KERSTIN BETTERMANN From William Osler to George Harrell: The Importance of the Humanities for Modern Medicine or Are They Important?
10:20 a.m.	LAUREL E. DREVLOW "Teacher and Student" - Osler, Education, and the University of Minnesota
10:40 a.m.	THOMAS L. SNYDER William Osler's Evolving View of Military Medicine
11:00 a.m.	VIVIAN MCALISTER Osler and the Role of the Physician Within a Military Medical Service
11:20 a.m.	GORDON FRIERSON The International Medical Congress of 1881
	William B. Bean Student Research Award Lectureship
11:40 a.m.	CHRISTOPHER F. DIBBLE Osler and Trudeau: Leaders in the North American Campaign Against Tuberculosis
12:00 p.m.	LUNCHEON Kahler Grand Hotel, Heritage II, subway level
1:00 – 5:00 p.m.	Mayo Book Exhibit Kahler Grand Hotel, Heritage Foyer, subway level
	General Session No. 4
	(Sandra Moss, Moderator) Kahler Grand Hotel, Heritage I, subway level
	Personalities and Role Models, Part II
	William B. Bean Student Research Award Lectureship
1:00 p.m.	COURTNEY PENDLETON Harvey Cushing's Early Forays Into the Field of Neurological Transplant Surgery
1:20 p.m.	ROB STONE Dr. Earl Nation: The Humble Giant
1:40 p.m.	T. JOCK MURRAY The Life and Times of Dr. John H. Watson
2:00 p.m.	MARTIN L. DALTON James D. Hardy and the First Lung Transplant
2:20 p.m.	J. MICHAEL FULLER Hunter Holmes McGuire – Stonewall Jackson's Surgeon and Icon of Virginia's First Family of Medicine
Page 10	

🖉 Program Schedule 🛸

2:40 p.m.	REFRESHMENT BREAK Kahler Grand Hotel, Heritage Foyer, subway level
3:10 p.m.	R. DENNIS BASTRON Dr. Thoralf Sundt, Jr.: A Hero on Many Fronts
3:30 p.m.	THOMAS G. BENEDEK The Waxing and Waning of Colles' Law
	Patients
3:50 p.m.	THORNE S. WINTER Robert Burns – His Life and Death and 18th Century Medicine in Scotland
4:10 p.m.	RICHARD J. KAHN Art and the Amputee Alderman
4:30 p.m.	KENNETH SWAN The Death of Gen. Albert Sidney Johnston at the Battle of Shiloh, 1862
4:50 p.m.	ADJOURN
4:50 – 6:00 p.m.	SELF-GUIDED TOURS OF THE HISTORICAL SUITE & HISTORY OF MEDICINE LIBRARY Plummer Building, 3rd floor and Plummer Building, 15th floor
6:00 – 7:00 p.m.	RECEPTION Plummer Building, 14th floor, Plummer Hall
6:00 – 6:30 p.m.	CARILLON BELLS PRESENTATION Plummer Building, 14th floor, room 1440
6:30 – 6:50 p.m.	CARILLON BELLS GUIDED TOUR Plummer Building, 14th floor, room 1440
6:45 – 7:00 p.m.	CARILLON CONCERT
7:00 – 9:00 p.m.	BANQUET Gonda Building, Landow Atrium, subway level
	JOHN NOBLE Presidential Address

Thursday, April 29, 2010

7:00 – 8:00 a.m.Registration & Continental Breakfast
Kahler Grand Hotel, Heritage Foyer, subway level

General Session No. 5

(Philip Leon, Moderator) Kahler Grand Hotel, Heritage I, subway level

🦢 Program Schedule 🛸

Practice of Medicine, Part III

8:00 a.m.	ALLEN B. WEISSE A Fond Farewell to the Foxglove?
8:20 a.m.	ROBERT I. LEVY Reception of Richard Bright's "Report of Medical Case" in Linking Coagulable Urine, Dropsy with Renal Pathology as a Clinical Entity – Robert Christison in Scotland and Pierre Rayer in Paris
8:40 a.m.	BARRY COOPER The Origins of Bone Marrow as the Seedbed of Our Blood: From Antiquity to the Time of Osler
9:00 a.m.	LAURA P. MCLAFFERTY The Enduring Presence of Nostalgia in the Twentieth Century and Its Implications for Military and Immigration Psychiatry
9:20 a.m.	SCOTT H. PODOLSKY Harvard University's Committee on Pharmacotherapy, 1939-1943, and Paths not Taken
9:40 a.m.	REFRESHMENT BREAK Kahler Grand Hotel, Heritage Foyer, subway level
	Writers and Artists
10:10 a.m.	PAUL BERMAN Letters Home: An American Surgeon in France 1943-1945
10:30 a.m.	MARVIN J. STONE George Bernard Shaw and Doctors
10:50 a.m.	JOSEPH B. VANDERVEER, JR Max Brödel: The Man Who Almost Got Away
	Ethics and Values
11:10 a.m.	P. PRESTON REYNOLDS The Racial Integration of Hospitals and Its Impact on Durham's Black Physicians
11:30 a.m.	ROBERT R. NESBIT, JR The "God Committee"
11:50 a.m.	JOHN D. BULLOCK The Blind Leading the Blind: The Story of Louis Braille
12:10 a.m.	CHARLES S. BRYAN Oliver Wendell Holmes and the <i>Religio Medici</i>
12:30 p.m.	ADJOURN
12:30 – 5:00 p.m.	BOOK EXHIBIT Kahler Hotel, Windsor Hall, subway level

William Osler's Harvard Connections

CHARLES T. AMBROSE

Charles Ambrose is a 1955 graduate of the Johns Hopkins Medical School. He completed a residency in infectious diseases in Boston and was a research immunologist at Harvard Medical School for the next 14 years. Currently, he is a professor in the Department of Microbiology, College of Medicine, University of Kentucky, Lexington, and recently has written widely on the history of medicine and immunology.

Osler had two connections to Boston – one was by marriage to Grace Linzee Revere, the great grand-daughter of Paul Revere, and the other was through medicine to Harvard University. It is the latter which is the focus of this talk. Osler visited Harvard and its medical institutions at least ten times, spanning the period from 1876 to 1913. His earliest visits focused on the advances in medical matriculation and instruction initiated by President Elliot. Twice Osler was offered senior Harvard appointments – the Chair of Clinical Medicine in 1891 and an endowed professorship in hygiene in 1904. He was awarded an L.L. D. degree by Harvard in June 1904 a month after he had delivered the Ingersoll Lecture in Memorial Hall. This talk provides insight into Osler's later religious thought. In 1910, his visit to a clinical ward of MGH was later doubly documented in articles in the New England Journal of Medicine by Joseph H. Pratt (1927) and by the younger Reginald Fitz (1946). In 1911, while visiting the Hunterian Library of Glasgow, he found a list of early Harvard graduates and their theses for 1646-53. Harvard University then had no student records before 1670 and welcomed photocopies of the documents Osler provided. Finally, it is little appreciated that Osler's textbook of medicine played an indirect role in procuring the millions needed in 1903 to construct the Harvard medical complex of buildings in Brookline on Longwood Avenue.

- 1. Identify Osler's various Harvard connections
- 2. Examine the sentiment of Osler's Ingersoll Lecture
- 3. List Osler's contributions to Harvard

The Birth of Immunology at the Turn of the 20th Century: What Did Osler Think?

LEONARD H. CALABRESE

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.

Immunity as a scientific discipline grew out of advances in the germ theory of medicine, contributed to by many and firmly established by 1888 with the opening of the Pasteur Institute. By 1894 the technology to culture organisms, isolate toxin and, as ultimately demonstrated by Kitasato and von Behring, raise anti-toxin gave birth to the field of "serotherapy." This work led to von Behring receiving the first Nobel Prize in Medicine in 1900. The underlying nature of these serologic reactions, however, remained unknown; their elucidation by Ehrlich's proposal of the "side chain theory" led to the emergence of the field of immunology. In 1908 Ehrlich, too, received a Nobel Prize for his work. In the background a titanic battle over the nature of immunity raged between Metchnikoff, allied with Pasteur supporting phagocytosis, and Koch and followers in Germany supporting the primacy of humoral immunity. Some have commented that these battles had not only scientific but important nationalistic implications as well. Ultimately both Metchnikoff and Koch also received Nobel Prizes for their work. During this time William Osler was in ascendancy as an international medical authority, and it is intriguing to speculate on what his views were of this evolving discipline. The current study utilizes a series of strategies for investigation. By examining the 1st edition, published in 1892, and 7th edition, published in 1907, of Osler's Principles and Practice of Medicine, we can glean how he translated these advances into care. These texts suggest a measured acceptance of "serotherapy." By examining his biographies we can place him at key international meetings where the giants of this new field presented information and now reflect on his comments. These biographies also document that Osler was also personally acquainted with many of the giants in the field, and was friendly with Ehrlich and Almoth Wright (whose theories on immunity attempted to bridge the cellular humoral positions). Through the examination of his publications we find several articles written with immunologic ramifications, especially in the area of phagocytosis, which was one of the few subjects in which he engaged in experimental work as early as 1875. In 1889 he publicly weighed the pros and cons of cellularism versus humoralism, eschewing both sides of the vitriol and, in typical Oslerian fashion, publicly called for additional data. Limiting the interpretation of Osler's views of immunology were several factors, including the delayed introduction of the term *immunology* and the gradual acceptance of it as an applied science in the early 20th century. Attempting to compensate for the slow pace of dissemination of scientific information, I suggest that Osler was indeed aware of the field, and while initially unimpressed came to respect the debate over its scientific nature. While not engaged in describing the science of immunology, Osler did appear to grasp the significance of these developments and both personally and publicly endorsed many aspects of serotherapy and the emerging field.

- 1. To describe the key events in the birth of immunology from 1885 to 1908
- 2. To critically appraise Osler's writings on these events in his textbook and manuscripts
- 3. To describe his personal views and relationships with the giants of the field of immunology

Marcia Noyes and William Osler, the Patron Saint of Medical Librarians

J. MARIO MOLINA

Mario Molina is chairman and CEO of Molina Healthcare. He also serves as chairman of the Aquarium of the Pacific and a trustee of Johns Hopkins Medicine.

If St. Jerome is the Patron Saint of librarians, and some have called Andrew Carnegie the Patron Saint of libraries, then Sir William Osler is certainly the Patron Saint of medical librarians.

Marcia Crocker Noyes was born in New York in 1869. She moved to Baltimore after the death of her parents, and took a job with the Enoch Pratt Free Library where she acquired her library skills. Three years later, the librarian recommended her to Osler.

Osler began campaigning to improve the library of the Maryland Medical and Chirurgical Faculty in 1891. By 1896 he had secured funding for the library from Frank Frick, a Baltimore merchant, but felt that a full-time librarian was needed to meet the library's increasing use. Osler appointed Noyes as librarian, a position she would hold for the next 50 years. She lived on the top floor of the building and was on duty 24 hours a day. While she understood libraries, she relied on Osler to help fill in gaps in her knowledge of medical terminology and literature and guide her in understanding the needs of the doctors. Like her mentor, she had an instinctive tendency to give credit to others. Over the years a deep friendship developed between Osler and "Sister Marcia" as evidenced by this unpublished letter from Osler to Noyes written November 27, 1917, shortly after the death of his son Revere:

"Thanks for your kind letter of sympathy. It has been a heavy blow. You would have loved the dear laddie's enthusiasm for his old books & his keeness [sic] for all that is best in literature. This makes it doubly hard for me, as there were so many interests in common. He had begun to collect a very interesting library in English literature. I knew this would happen – a man could not expect to have as much in life as I have without a heavy blow before the end came."

Unlike many other letters written by Osler, this one makes no mention of the need to "bear up" stoically under the loss. He freely shares his pain with Noyes and speculates that his son's death was Fate's way of balancing the scales of a man who had experienced so much success in life.

Credit for the original idea for the Medical Library Association (MLA) goes to Margaret Charlton, McGill's medical librarian, and Dr. George Gould, editor of the famous medical dictionary. Noyes and Osler were charter members. Osler became its second president. Medical librarians had traditionally been physicians. Osler promoted the careers of many women who became professional medical librarians. He maintained correspondence with them and generously donated to their libraries. Noyes took charge of the MLA exchange, became editor of the Bulletin of the MLA and became the first female president in 1933. After her death in 1946, the MLA created the Marcia Noyes prize, its highest honor.

- 1. Describe Osler's role in supporting the development of professional medical librarians.
- 2. Describe Marcia Noyes' role in the developing years of the MLA.
- 3. Describe the relationship between Marcia Noyes and William Osler.

Osler and Doctor Thorne: The Other Trollope Novel

PHILIP W. LEON

Philip W. Leon is professor emeritus of English at The Citadel, Charleston, South Carolina. He is the author of two books on Osler and five other books. He currently serves as a member of the Board of Governors of the American Osler Society.

Bibliotheca Osleriana contains only two entries for novels by Anthony Trollope (1815–1882). About the first, *The Fixed Period* (1882), we need say little. Most Oslerians know about the firestorm Osler created in 1905 when he jokingly alluded to the efficacy of chloroforming old men after a year of peaceful contemplation. My purpose is to discuss the other Trollope novel in Osler's collection, *Doctor Thorne* (1858). "I love Dr. Thorne," said Osler, but does Thorne merit such affection? Further, would this novel appeal to modern-day Oslerians? As a Victorian novel, *Doctor Thorne* has several predictable plots and motifs.

A typical theme of Victorian novels is the quest for upward social mobility; every major character in this novel, except Dr. Thorne, is concerned with marrying well, meaning marrying someone with a title or money, preferably both. Dr. Thorne is best friends with two contrasting characters: Squire Frank Newbold Gresham who is "old money," and who, through his ineptness in managing his inherited estate, is heavily indebted to Sir Roger Scatcherd, Bart, representing "new money," a rough, alcoholic commoner who was created a baronet because of his skill at contracting railway and canal projects. Thorne stands as a foil between these two social opposites.

A romantic entanglement is essential to a Victorian novel. Gresham's son, Frank, Jr., loves Mary Thorne, Dr. Thorne's niece and ward, but his family refuses to allow him to marry her because she has no money. Sir Roger's son, Louis Philippe, also loves Mary and can offer her a fortune, but he, like his father, is a confirmed alcoholic. The contrast of Frank's unfettered love for Mary with Louis Philippe's coarse, drunken desire creates literary tension.

Another important Victorian-era theme is temperance. The deathbed scene of Sir Roger with Dr. Thorne in attendance is graphic. Having destroyed his body with alcohol, Scatcherd (whose name is anagrammatic for "scratched" or flawed), begs Thorne for one last drink of brandy. Scatcherd dies immediately after drinking a glassful that Thorne provides.

Osler found attractive the depiction of Dr. Thorne as a good country doctor mediating complicated financial and romantic affairs, all the while dutifully attending to the medical needs of his community.

- 1. Discuss how *Doctor Thorne* contains themes pervasive in Victorian novels
- 2. Evaluate the merits of Osler's affection for Dr. Thorne as a literary character
- 3. Contrast Dr. Thorne's professional qualities with modern medical practice

William Osler's "Man's Redemption of Man" - 100 Years Later

ELENORE PATTERSON

Elenore Patterson was born in Manhattan, but grew up in Atlanta, GA. She completed her BA at the University of Wisconsin, majoring in biology and graduating Phi Beta Kappa (and also playing varsity soccer for four years). After graduation, she returned to Atlanta for medical school at Emory University. She was able to spend an additional year in the Rollins School of Public Health studying epidemiology and in May 2009 graduated AOA with an MD/MPH degree. Ms. Patterson is now in her first year of residency in the NYU internal medicine-primary care program, and is excited to see what will come next.

On July 2, 1910, William Osler delivered a lay sermon entitled "Man's Redemption of Man" to students of Edinburgh during a meeting of the National Association for Tuberculosis. Beginning with a quotation from Isaiah and ending with a poem of Shelley, Osler speaks of medical science as the "gospel of the body" that brings relief – or redemption – to the suffering and diseases of mankind. He describes great advances in our knowledge of diseases and sanitation.

In this paper, I offer a new look at Osler's idea of the ethical potential of medicine from the perspective of a new doctor just entering the profession. One hundred years after it was delivered, the sermon is still very relevant in overarching themes and goals of the medical profession, as well as in specific points such as the importance of vaccinations and preventative medicine. We are still fighting some of the same diseases today (tuberculosis, cholera in certain areas) and have many new ones as well (HIV, cancer, heart disease). In comparison to 1910, there is more bureaucracy and much more paper work involved in patient care. This can sometimes distract us from the essential mission of caring for patients and bringing the fruits of research and clinical trials into clinical practice. I hope to show that Osler's awe of scientific achievements was appropriate and that fulfillment of his expectations for further breakthroughs and elimination of disease is ongoing and should be in the minds of all physicians.

- 1. Summarize the depth of William Osler's analysis of the advances of medicine
- 2. Identify key similarities and differences between 'then and now' in the medical environment and academic thinking
- 3. Renew commitment to the social mission of medicine

A Virus and Vaccination: Smallpox in Montreal, 1885

MICHAEL BLISS

Michael Bliss is university professor emeritus at the University of Toronto and the author of <u>William Osler: A Life in Medicine</u> (1999), <u>Harvey Cushing: A Life in Surgery (2005)</u>, and <u>Plague: How Smallpox Devasted Montreal</u> (2nd ed., 2003), among other books. In autumn 2010 the University of Chicago Press will publish his next book, <u>From Fatalism to Mastery: Studies in the Coming of Modern Medicine</u>.

In February 1885 a porter on a Pullman car brought the smallpox virus into Montreal. Through a series of events that amounted to what Osler called "a negligence absolutely criminal" the virus escaped into the streets of the city, sparking an epidemic that ought to have been contained by vaccination. The initial vaccine available to public health authorities was contaminated, a fact that reinforced great suspicion of vaccination among the French-Canadian majority in the city. Efforts to contain the contagion through isolation and quarantine also failed. The result was a raging epidemic of smallpox in Canada's largest city. Attempts to make vaccination compulsory led to rioting and the calling out of the military to keep order. By the time smallpox burned itself out in December, some 3,300 deaths had occurred in a city of 167,000 people, and as many more in its suburbs.

This was the last epidemic of smallpox in a major city in the Western world. The deaths were entirely preventable. They took place because of a breakdown of public health procedures in an atmosphere poisoned by fear, ignorance, and fatalism. We see echoes of 1885 in some of the issues involving the campaign against the H1N1 virus. The paper draws on the author's book, *Plague: How Smallpox Devastated Montreal* (1991, rev. ed., HarperCollins, Toronto, 2003).

- 1. Summarize the historical study of smallpox
- 2. Describe some of the dilemmas of attempts to contain epidemics and pandemics
- 3. Give examples on the resistance to vaccination

The Floodgates Open - Vasilii Kolesov, Mason Sones, Rene Favaloro, and Surgery for Coronary Artery Disease

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 will be published in 2010.

Coronary artery bypass grafting has become one of the most common operations performed in the western world. It is usually carried out for anginal chest pain resulting from one or more localized obstructions in the major coronary arteries.

Vasilii I. Kolesov (1904-1992) was born in 1904 in Russia, where he graduated in medicine in 1931. When German troops invaded the Soviet Union in 1941, he was appointed surgeon-in-chief in a Leningrad hospital. During the 872-day siege of the city, almost one million citizens died of cold and starvation, including Kolesov's brother, with whom he shared a room in the hospital basement. Kolesov himself became bedridden, but survived. After the war, he carried out experimental work in dogs using an artery in the chest (the internal mammary artery) to bring a new blood supply to the heart muscle by joining this artery to one of the coronary arteries. He emphasized the advantages of using an artery rather than a vein, and artery grafts are now preferred worldwide. He performed the first successful coronary bypass graft in a patient in February 1964, and published an entire book on coronary revascularization (in Russian) in 1966. From February 1964 until May 1967, his department was the only place in the world where coronary artery bypass operations were regularly performed. Remarkably, between 1964 and 1974, only 18% of his coronary artery operations were performed with the help of the heart-lung machine. Because most of his studies were published in Russian, Kolesov remains little known and inadequately appreciated outside of eastern Europe.

F. Mason Sones, Jr. (1918-1985), a Cleveland Clinic cardiologist, was a workaholic, sometimes spending the night asleep on the catheterization table in his laboratory. In 1958, he inadvertently injected radio-opaque dye through a catheter that had slipped from the root of the aorta into one of the two major coronary arteries. He anticipated this would result in a fatal cardiac arrest. Although the heart temporarily stopped beating, to his great relief normal rhythm resumed after he thumped the patient's chest. The idea immediately came to him that a catheter could be designed to purposely investigate obstructions in the coronary arteries.

Rene Favaloro (1923-2000) was born in Argentina and studied medicine in Buenos Aries, graduating in 1949. Because he refused to sign a paper stating that he supported the Peronist regime, he was not given a position in his own teaching hospital. Instead, he opened a small clinic with his brother in a rural community, where he spent 12 years gaining immense surgical experience. Wanting to train in heart surgery, in 1962 he moved to Cleveland without any definite offer of a job. First a volunteer, he was subsequently appointed resident, chief resident, and then a member of the staff. He spent many hours with Sones reviewing coronary angiograms, and then determined to carry out vein grafts to bypass obstructed coronary arteries, the first operation being performed in May, 1967. He became a leader in establishing coronary artery surgery in the western world. In 1971 he returned to Argentina to head a foundation that would provide state-of-the-art surgical services and train local surgeons. In this respect, he was largely successful, but his foundation developed serious financial problems, and he committed suicide by shooting himself in the heart.

- 1. Recognize the physiology of coronary revascularization procedures
- 2. Evaluate the contributions of Kolesov, Sones, and Favaloro to the development of coronary artery surgery
- 3. Evaluate the impact of coronary artery revascularization on modern health care

All We Could Do Was Wait: A Home Delivery in 1892

IAN A. CAMERON

Ian Cameron is a former professor of family medicine at Dalhousie University and long time president of the Dalhousie Society for the History of Medicine. He is currently working as a rural physician in the village of his ancestors, where he also writes and enjoys the seasons on the St. Mary's River.

Dr. Charles Webster was the fourth in a continuous line of Webster physicians to practice in Yarmouth, Nova Scotia. Dr. Isaac Webster, his great grandfather, immigrated to Nova Scotia from Connecticut in 1791. Charles Webster graduated from the College of Physicians and Surgeons of New York (later Columbia University) in 1886.

On the evening of July 3, 1892, he set out on horseback in the midst of a gale to deliver a lady he had never seen on an island he had never visited.

His account, which he published in 1932, involved patient risk, physician risk, the question of infanticide and the process of change in medicine.

This presentation will tell Dr. Webster's story and discuss the issues he raises.

Has the Roman Catholic Church's position on infanticide changed since 1892?

- 1. Explain the process of effecting change in medicine
- 2. Discuss the ethical dilemma of physician risk vs physician responsibility
- 3. Outline the benefits of the appropriate use of obstetrical forceps

Selling Our Souls: Commercialization and Medical Professionalism

NUALA KENNY

Nuala Patricia Kenny was born in New York and entered the Sisters of Charity of Halifax in 1962. She received her BA, Magna Cum Laude, from Mount Saint Vincent University in 1967, an MD from Dalhousie in 1972 and did postgraduate training in pediatrics at Dalhousie and Tufts-New England Medical Centre, during which she held a Killam Scholarship. In 1975, she became a fellow of the Royal College of Physicians and Surgeons of Canada and in 1976 was certified by the American Board of Pediatrics. She has received five honorary doctorates (Mount Saint Vincent (1992), the Atlantic School of Theology (2000), Regis College, Toronto (2000), St. Francis Xavier University (2000), and The College of New Rochelle (2008). In 1999, she was appointed an Officer of the Order of Canada for her contributions to child health and medical education. She has received a Queen's Jubilee Medal and in 2006 was elected a fellow of the Canadian Academy of Health Sciences. She has received the distinguished service award and the lifetime achievement award of the Canadian Bioethics Society, the distinguished service award from the Canadian Health Association, the Catholic Health Association of Canada's Performance Citation Award, the Canadian Medical Association's Marsden Ethics Award and the 2009 Dalhousie University Alumni Achievement Award.

Doctor Kenny joined the Department of Pediatrics at Dalhousie in 1975 as the coordinator of Regional Pediatric Services. In 1982, she became director of medical education at the Hospital for Sick Children and the University of Toronto. In 1985 she was appointed professor and chairperson of the Department of Pediatrics at Queen's University, Kingston, Ontario. She returned to Dalhousie as professor and head of the Department of Pediatrics and chief of Pediatrics at the Izaak Walton Killam Hospital in 1988. In 1995, she became the founding chair of the Department of Bioethics of Dalhousie Faculty of Medicine. From February to November 1999, Dr. Kenny was seconded as deputy minister of health for the Province of Nova Scotia.

Author of over one hundred papers and two books, Dr. Kenny is nationally recognized as an educator and physician ethicist. She has travelled extensively as a distinguished lecturer. In 1991 and 2005, she was a visiting scholar at the Hastings Centre for Ethics and in 1993 held a Royal College of Physicians and Surgeons of Canada fellowship in continuing medical education at the Kennedy Institute of Ethics at Georgetown University. In 2001, she was a scholar in residence at the Rockefeller Foundation Study Centre in Bellagio, Italy.

She has served on the Committees on Biomedical Ethics of the Royal College of Physicians and Surgeons of Canada and the Canadian Pediatric Society, the National Council for Bioethics in Human Research, the Tri-Council Working Group on Guidelines for Research with Human Subjects and the National Science Advisory Board. She was chair of the Values Committee of the 1997 National Forum on Health and is past president of both the Canadian Pediatric Society and the Canadian Bioethics Society. She was a founding member of the Governing Council of the Canadian Institutes of Health Research (CIHR), the Health Council of Canada and Canadian Doctors for Medicare.

In 2009 she turned formally to faith-based ethics and is now professor emeritus Dalhousie University Department of Bioethics, health policy advisor to the Catholic Health Alliance of Canada and on the Board of Covenant Health, Alberta.

Doctors make their living from suffering, pain, fear and hope. The public profession of the physician's commitment to the patient's welfare has been a cardinal feature of the Hippocratic tradition and medical professionalism. The ethic developed in a time when payment was direct from patient to doctor, interventions were limited and there was no system of healthcare delivery. Contemporary practice has changed significantly. Patients are knowledgeable, informed consent is required and the patient's welfare is often complex and contested because medicine almost always has something else that *could* be done. Moreover, when *more* diagnostics, drugs and interventions make the "consumer" of health care happy and benefit the physician financially, there are real challenges to the fiduciary and professional ideal.

- Continued on next page.

Selling Our Souls: Commercialization and Medical Professionalism - continued

NUALA KENNY

The rhetoric of renewed professionalism rings through the halls of academia and professional societies. Witness to these altruistic ideals is seen in stories of doctors serving among the poor and marginalized and responding selflessly to humanitarian disasters such as the Haiti earthquake. At the same time the public imagination is captured by billboard images of doctors selling beauty (and life-transforming fulfillment), talk show doctors using the aura of white coat and scrubs to provide a wide array of advice and hucksterism, and headlines of celebrity doctors aiding and abetting self-destructive behaviors.

Medicine has always had its saints and sinners. However, the challenges to medical professionalism today do not come primarily from the errors and weaknesses of individual practitioners. I propose that the increasing commercialization of medicine and commodification of care offer crucial challenges to the very possibility of professionalism.

- 1. Summarize the centrality of the altruistic (fiduciary) commitment to patient welfare in the notion of professionalism
- 2. Identify some crucial challenges to professionalism inherent in the current commercialization of medicine and commodification of care
- 3. Critically assess some of the practices within modern medicine itself that foster commercialization and commodification

Brief Encounter: William Thalhimer and the Artificial Kidney

SANDRA W. MOSS

Sandra Moss is past president and program chair of the Medical History Society of New Jersey. Her interests include New Jersey's medical history and the history of dialysis and renal disease.

William Montefiore Thalhimer (1884-1961) was a New York pathologist who devoted his career to blood banking and serum therapy. His research led logically, if not inevitably, to critical hemodialysis ("artificial kidney") and exchange transfusion experiments in the late 1930s.

Suitable semipermeable membranes and safe anticoagulation were the greatest barriers to successful human dialysis. As J. Stewart Cameron, a prominent historian of dialysis, pointed out, "heparin and cellulose [came] together for dialysis in Thalhimer's laboratory." Pertinent aspects of Thalhimer's life and career, hitherto uninvestigated, shed light on his brief investigations into dialysis and exchange transfusion in dogs for the purpose of reducing azotemia.

Thalhimer's intellectual connections to more familiar dialysis pioneers, including John Jacob Able of Hopkins, allow a further assessment of his role in the history of hemodialysis. During the war years, when scientific communication was difficult or impossible, Willem Kolff in occupied Holland and Nils Alwell in Sweden both developed first generation clinical dialysis machines for use on humans. Both men worked in intellectual isolation and were familiar with Thalhimer's pre-war work; and each assumed that Thalhimer was proceeding with artificial kidney experiments and perhaps even with human dialysis. (Gordon Murray, a Canadian surgeon, began lengthy investigations into dialysis membranes during the war years, but largely ignored Thalhimer. Murray undoubtedly knew Thalhimer, since both had worked with Charles Best in Toronto.)

Why did Thalhimer, having made such a brilliant start, not continue with investigations into the artificial kidney and exchange transfusion? Certainly, he was soon busy with important wartime work on practical applications of convalescent serum therapy, volume expansion and blood banking. He clearly recognized that the road to practical hemodialysis would be a long and hard one – and far outside his training and expertise. Most importantly, Thalhimer was not a clinician with a compelling drive to treat acute renal failure; he had no direct access to uremic patients or control over their treatment. Nevertheless, he frequently collaborated with clinicians in his blood banking and serum work. Had there been a clinician in New York with the interests and drive of Kolff, Alwall or Murray, it is quite possible that Thalhimer would have formed a productive partnership progressing toward clinical hemodialysis in the early 1940s.

- 1. Identify two key technologies necessary for the development of practical dialysis
- 2. Explain the influence of laboratory experiments on successful construction of an artificial kidney
- 3. Discuss intellectual barriers to practical application of early dialysis experiments to humans

Abraham Verghese: An Exemplary 21st Century Oslerian in Three Volumes

JOSEPH W. LELLA

Joseph W. Lella is professor emeritus of sociology and professor of the history of medicine, King's College, and Faculty of Medicine, University of Western Ontario. He is past president of the American Osler Society and of the Association for Behavioral Science in Medical Education. He often interprets Sir William Osler's life in papers, lectures and dramatic performances.

My acquaintance with Abraham Verghese (Professor, Department of Medicine, Stanford University) began with his 2007 McGovern Award Lecture now published by the AOS. Citing Osler, the talk describes the benefits for patients of "Touching Where It Hurts: The Role of Bedside Examination." It stresses even more its advantages for teaching students. In his books, however, Verghese's human and artistic sensitivity speaks to a broader range of modern pedagogical issues.

In the novel, *Cutting for Stone* (2009), the author, a naturalized American citizen, writes in the voice of a surgeon, Marion Stone, who like Verghese, was born in Ethiopia of Indian background, who received an MD from an Indian university and migrated to the United States to complete training and pursue a career. Through Marion, the author mines his own experience of marginality and enters into that of physician immigrants and the neglected and dispossessed among patient groups. Osler, despite occasional flashes of Victorian race and gender bias, was mostly color and gender blind in dealing with individuals. He also honored the historical medical traditions of world cultures and preached against chauvinism-in-medicine, broadly interpreted as an illiberality of spirit. Through Marian Stone, however, Verghese our contemporary shares his experiences in fictionalized detail, illustrating the personal effects of stereotyping and prejudice in situations that Osler and his contemporaries could not dream of.

Verghese speaks directly to the reader in his two memoirs, *My Own Country: A Doctor's Story* (1994), and *The Tennis Partner* (1998). It is in these works that we learn of Verghese's personal and professional evolution in journeying through US medicine. Also, in discussing his own internal state and describing his teaching of medical students, residents and interns, the author presents numerous examples of ways of communicating the benefits of: a) a medical historical and literary consciousness in clinical situations; b) skilled probing of patients' psychological and cultural background; c) awareness of the organization of the structure and functioning of the broader health care system and its culture. He does all this with a keen awareness of difficulties and almost *en passant* in a naturalistic style that is in no way pedantic. The descriptions are accessible to anyone with or without a medical background. This is so despite or perhaps because of the often heartbreaking character of what he describes. *My Own Country* explores experiences with HIV patients in a small mountain city in Tennessee; *The Tennis Partner* describes the horrifying re-descent of an intern and close friend into drug addiction and death.

In addition, his intensely reflective, personalized descriptions of medical conditions, diagnostic processes, treatment modalities and their plusses and minuses, as well as the lives, stresses, joys and sorrows of a medical life establish his voice in an authentic 21st century mode. "Listening" to this voice enabled this reader to empathize with him and those whom he describes, and I believe can open the door to an empathy that could enrich anyone's own life and work.

These books are an engrossing read. In *William Osler: A Life in Medicine,* Michael Bliss has said that "the mask of cheerful equanimity almost always hid [Osler's] deeper emotions." Verghese is extraordinarily open about his. This makes his writing and his style of being a physician, I believe, eminently accessible to modern readers— young and old—and eminently suitable for humanities in medicine seminars and discussion groups.

The presentation will flesh out the above outline by readings from and analysis of specific examples in Verghese's works.

- 1. List three examples of medical historical and literary references made by Verghese in his books and teaching
- 2. Explain how Verghese uses his own 'marginality' as an immigrant from Ethiopia to understand immigrant physicians and patients
- 3. Discuss Verghese's experiences with HIV patients in Tennessee and his sensitivity to their cultural backgrounds in the early days of the 'AIDS' epidemic

A Minority Voice: Howard Burchell and the Establishment of the Army Air Force Research Center, Heidelberg 1945

CYNTHIA PATTERSON

Cynthia Patterson is a daughter of Howard Burchell (November 1907-October 11, 2009) and a 1967 graduate of Mayo High School. She teaches history at Emory University with a specialty in ancient Greek history (and an interest in ancient Greek medicine). The discovery of the Burchell correspondence with Detlev Bronk and with Margaret Burchell during the months July-December 1945 prompted the preparation of this paper.

Howard Burchell served with the U.S. Army Air Force Medical Corps from 1942-1945, becoming an expert in the area of aviation medicine, working with fellow Mayo Clinic staff members as well as others, first at Randolph field in San Antonio, Texas, and then in England as medical consultant to the 8th Air Force. The defeat of Germany in May 1945 resulted in his military career taking a new direction – and entering a chapter that he allowed to drop out of the published biographical sketches. Major Burchell became a member of the Air force team sent to Germany with instructions to investigate German medical aviation research with the purpose of 'exploiting' it for allied purposes; in August of 1945 he oversaw the establishment a research program employing German scientists at the Kaiser Wilhelm Institute in Heidelberg (now the Max Planck Institute). These were his orders, not his preference – and as he wrote his colleague Detlev Bronk on August 10: "I cannot drown the little bastard [the institute] having pledged to bring it up."

I have recently discovered two sets of letters written by Dr./Major Burchell in these months, the first to Detlev Bronk, now in the Rockefeller Archive and used by Paul Weindling in his recent book *Nazi Medicine and the Nuremberg Trials* (2004), and the second more plentiful set to his wife Margaret Burchell in Rochester. Although the letters reveal his unhappiness and feelings of depression about the project, and his longing to return to clinical medicine outside of army control, they also – especially those to Margaret – provide a colorful window into an important historical and biographical moment. His descriptions of local scenery and events bring to life a critical period of history, and his accounts of conversations with German scientists about science, and the social responsibility of science, reveal much about his own ideals and his 'Oslerian' character.

- 1. Recognize historical perspectives on military involvement in and oversight of medical research during and after WWII
- 2. Analyze the social responsibility of physicians
- 3. Quote an important 'moment' in the life of Howard Burchell (1907-2009)

Caroline Hampton Halsted: The First to Use Rubber Gloves in the Operating Room

S. ROBERT LATHAN

Robert Lathan is a retired internist from Atlanta, Georgia. He is a graduate of Johns Hopkins University School of Medicine and has presented papers at the AOS on the great surgeon Dr. William Stewart Halsted, who was one of the "Great Four," along with Osler at Hopkins.

Caroline Hampton was the niece of famed Confederate General Wade Hampton III, who was later governor of South Carolina and a U.S. Senator. She was born in l86l at Woodlands, adjacent to Millwood, Hampton's plantation home near Columbia, S.C. Her mother, Sally Baxter of New York, died of tuberculosis at age 29 in l862 and her father, Colonel Frank Hampton, Wade's younger brother, was killed 9 months later at the Battle of Brandy Station in Virginia.

Caroline was raised by her 3 aunts (the Hampton sisters) in a small house behind the ruins of Millwood, which had been burned by General Sherman's troops. In 1885, Caroline moved to New York City to enter nursing school, graduating from New York Hospital in 1888. When the Johns Hopkins Hospital opened in 1889, Dr. William Halsted appointed her chief nurse of the operating room and she became his scrub nurse. When her sensitive hands could not tolerate mercuric chloride disinfectant, she developed a contact dermatitis. Halsted then requested the Goodyear Rubber Company to make rubber gloves to protect her hands. This marked the beginning of the use of rubber gloves in the operating room in this country. And thus Caroline was the first medical professional to wear them.

In 1890, Halsted and Caroline were married in Columbia. It was a merger of the wealthy merchant class of the North with the planter aristocracy of the South. Dr. William Welch was best man, and the newlyweds honeymooned at the Hampton Hunting Lodge in Cashiers, N.C. Dr. Halsted became enthralled with the beauty of the Hampton estate and soon purchased over 400 acres from Caroline's aunts and called the property "High Hampton." It was an ideal retreat for Halsted, who loved solitude. He would leave Baltimore around June 1st. He spent part of his sojourn from Hopkins at meetings in Europe and returned around October 1st. Caroline, who generally arrived in May and stayed until Thanksgiving, literally ran the farm, directed the hired hands, and supervised the planting of the garden and crops. She greatly preferred the outdoor life at High Hampton to the social amenities of Baltimore.

The Halsteds were described as opposites in appearance but were well suited to each other, each being reserved and self-sufficient and somewhat "eccentric." Caroline and Halsted took great interest in their mountain neighbors, who depended on Dr. Halsted for their medical needs. He sent many patients to the Johns Hopkins Hospital, frequently paying their expenses. After Dr. Halsted died of complications of GB disease in September 1922, Caroline wrote to Dr. William Welch requesting help with Halsted's books and papers. Welch's reply expressed his admiration for his "dearest friend and comrade over the 40 years." Caroline Halsted was "exhausted" after her loss and died of pneumonia in November 1922, less than 3 months after Dr. Halsted.

- 1. Describe Caroline's background as a southern aristocrat and how she later ended up in Baltimore
- 2. Explain how Caroline became the first medical professional to wear rubber gloves in the operating room
- 3. Contrast the different appearances of the Halsteds but also define their similar personalities

The Mayo Brothers and the History of Continuing Medical Education at the Mayo Clinic – In Pursuit of Lifelong Learning

MEGHAN A. FEELY

Meghan Feely is a second year medical student at the Mayo Clinic College of Medicine and serves on the Medical School Education Committee and as an officer in the Boerhaave History of Medicine Society. She graduated Summa cum Laude and Phi Beta Kappa as a history major from Dartmouth College. She was a finalist for the Rhodes and Marshall Scholarships and was named to the USA TODAY 2007 All-USA College Academic Team Program.

This novel study traces the history of the continuing medical education (CME) program at the Mayo Clinic, its present operations and changes envisioned for CME in the future. It is the first comprehensive review of lifelong learning at the Mayo Clinic and draws upon a wealth of primary and secondary resources in the archives of the Mayo Historical Unit.

For the physician at the end of the nineteenth century, the provider of the modern era and the practitioner of the future, staying informed about current medical practice is an essential part of the provision of quality medical care. The Mayo brothers strove to remain abreast of new developments reported in the medical literature, and surgical techniques used around the world. They left a distinct record of their efforts. As their reputation grew, countless surgeons from across the globe traveled to Rochester to watch and learn from the Mayo brothers. Of their own volition, these visiting surgeons formed a Surgeons Club in Rochester and partook in vigorous daily discourse regarding new techniques being advanced in publications and the caseload.

Over the ensuing century medical education became more focused on the use of review courses and lectures. As the vast breadth of medical knowledge expanded, the need to remain up to date also increased. The prototype of the modern CME course was The Clinical Week, which began in 1927 and is in its current form known as Clinical Reviews. Educators from the Mayo Clinic, such as Hugh Butt, had a significant impact on the national CME front. As technology and the needs of providers change, the future of lifelong learning will continue to evolve. In this article we review the past, present and future of these educational efforts.

Remaining abreast of novel medical knowledge is paramount to delivering quality medical care. This tenet has not changed since medical practice at the end of the nineteenth century and will remain integral to the practice of future physicians. The Mayo Clinic was built upon a foundation that espoused a dedication to lifelong learning. Discourse on medical journals, attending medical society conferences and national and international travel were integral to the lifelong learning of the Mayo brothers. The storied history of the Surgeons Club testifies to the international attention that was paid to the Clinic for its embracement of continued medical education. Today the Mayo Clinic continues to innovate its CME program to foster this dedication to lifelong learning.

- 1. Evaluate the reasons for the success of the early continuing medical education efforts espoused by the Mayo brothers
- 2. Discuss the similarities and differences in lifelong learning during the nineteenth century versus today
- 3. Examine the current structure of CME and the changes envisioned to enhance its effectiveness in the future

What's in a Word? How the "Mayo Clinic" Evolved From a Hospital-based Teaching Event Into the Prototypical Multispecialty Group Practice

W. BRUCE FYE

Bruce Fye is a cardiologist and professor of medicine and medical history at the Mayo Clinic. A past president of the American Osler Society and the American College of Cardiology, he is president of the American Association for the History of Medicine.

The invention of the Mayo Clinic a century ago resulted in a new definition of the word "clinic" that had been in the medical lexicon for generations. Traditionally, the term referred to a teaching technique—a recurring event that took place in a hospital. The word "clinic" usually followed the name of a specific doctor who taught in a ward or an amphitheater. Physicians would interview or examine a patient. Surgeons would demonstrate a procedure on a cadaver or operate on a patient. The audience of medical students, residents or practitioners might consist of a few or a few hundred depending on the purpose, the place and the professor's popularity. Thomas Eakins memorialized the surgical amphitheater model in his paintings *The Gross Clinic* and *The Agnew Clinic*.

William Worrall Mayo began practicing medicine in Rochester in 1864. His sons, Will and Charlie, joined his general practice in the mid-1880s. By the turn of the century, they had achieved their goal of becoming surgeons. The brothers believed that accurate preoperative diagnosis was a critical first step in getting good surgical results. Between 1895 and 1905, they recruited a dozen doctors who devoted themselves to clinical or laboratory diagnosis. Henry Plummer, who joined them in 1901, was an internist with a passion for organizing the practice to make it more efficient. A dozen years later, he worked with a St. Paul architect to design the first purpose-built structure to house the growing group.

The phrase "Mayo Clinic" was carved in stone over the entrance of the building that opened in 1914. This signified a new meaning of the word "clinic." Doctors who visited Rochester before the building was completed used the term "Mayo Clinic" in the traditional sense. The clinic took place in an operating room gallery at St. Mary's Hospital, where visitors watched Will or Charlie perform surgery and listened to them explain what they were doing and why. After their outpatient facility opened in 1914, the phrase Mayo Clinic no longer signified a hospital-based teaching event. It described a concept of care that united a patient with a group of doctors supported by a large staff.

- 1. Describe what the term "clinic" referred to in the 19th century
- 2. Explain how the meaning of the phrase "Mayo Clinic" changed in 1914
- 2. Describe how Mayo Clinic's buildings reflected the group practice concept

The Mayo Clinic: 1883 to 1939: The Early Years

ROBERT G. MENNEL

Robert Mennel is director of clinical oncology at Baylor University Medical Center. A visit to the Mayo Clinic to research the Sister Mary Joseph node started his interest in the Mayo Clinic. The early history of the Clinic is the basis of this presentation.

How did an internationally recognized medical center start in rural Minnesota? The Mayo Clinic started with an unlikely union of nuns and physicians united by a natural disaster, the Rochester tornado of 1883. The nuns, teachers by trade, recognized that Rochester sorely lacked a hospital. They also recognized the quality of the Mayos and knew that the Mayos were the only physicians whom they would allow to staff the new hospital. St. Mary's Hospital, the backbone of the future Mayo Clinic, was born. Would the Mayo Clinic exist today without the nuns? The sisters ran every aspect of St. Mary's. This freed the Mayos to concentrate on the practice of medicine while the nuns gave excellent care to their patients. The timing of this experiment in health care occurred at the perfect time in history. Asepsis and anesthesia were new developments. Any physician could practice surgery, since there were no licensing boards. The Mayo brothers were facile, creative, open to new ideas and absolutely dedicated to anything that would improve their patients' care. They sought out education and were eager to educate. One brother would visit a medical center in the US or Europe, while the other brother would care for their patients at home. When he returned the travelling brother would teach the other brother what he had learned. They would then switch roles. Initially the medical establishment would not believe that these two brothers were doing what they said they were doing in rural Minnesota. However, when their accomplishments became legendary, they became the teachers with at least 20 physicians visiting each week. The nuns continued to facilitate their fame by continually expanding St. Mary's to meet the Mayos' needs and continuing their excellent patient care and hospital management.

With an idea well before their time, the Mayo brothers knew that medical knowledge was expanding so rapidly that no one physician could grasp all medical knowledge and apply it to the care of the individual patient. Therefore, they established one of the first multispecialty groups. The brothers Mayo also donated their salary to a foundation for the care of their patients. They led by example that all patients must be treated with respect and given the best care possible. Living the brothers legacy, the Mayo Clinic provides quality medical care, efficiently and equally to all patients.

- 1. Explain the relationship between the Mayos and the Sisters of St. Francis and how this led to the formation and the development of the modern day Mayo Clinic
- 2. List modern day principles of quality care that were pioneered by the Mayo brothers in their clinic
- 3. Discuss the historical factors that helped the Mayo brothers become outstanding physicians

Henry Stanley Plummer and the Mayo Clinic

DARRYL D. BINDSCHADLER

Darryl Bindschadler is a retired pulmonologist internist from Cheyenne, Wyoming. He recently completed his chairmanship of the University of Wyoming Library Development Board.

With the exception of Dr. Will and Dr. Charlie Mayo, no one has left a larger or more indelible imprint on the Mayo Clinic than Dr. Henry Stanley Plummer. Hired to the Mayo practice in early 1901, he initially modernized and expanded the clinical laboratories, which had been badly neglected. Next, he was tasked with developing a modern, functional diagnostic x-ray department free of any nonscientific frills and uses. Fearing that he would be labeled as an x-ray or lab tech, he refused to publish any of his accomplishments in those fields. In the area of clinical practice, Dr. Will put him onto the problem of obstructing diseases of the lower esophagus other than those due to lye ingestion. He developed methodology for the diagnosis of cardiospasm and diverticulae of the esophagus, and successful treatment methods for the former, receiving international recognition for his accomplishments in 1919.

At age 16 Henry became acquainted with the Mayos' first thyroid goiter patient, Mr. Strain, and this set in motion his lifelong interest in all that had to do with that intriguing gland. His meticulous and detailed clinical and pathologic descriptions, along with CP correlations, led to his being asked to write the section on thyroid disease for a new edition of *Oxford Medicine*. While organizing the material, he came to a conclusion regarding the use of iodine treatment in thyroid crisis that led him into forbidden territory. Iodine was known to be detrimental in the treatment of crisis or severe ophthalmic goiter. In 1922 he started treating with oral Lugol's solution. Immediate and dramatic improvement occurred and led to an overall reduction in thyroid crisis mortality from 3.5-4% to less than 1%. He carried out sophisticated pharmacodynamic studies of thyroxin using basal metabolic rate measurements.

Plummer's leadership and architectural expertise are manifest in the 1914 Clinic Building, the 1928 Plummer Building, the Franklin Heating Station and the underground tunnel system. His contributions to the enhanced functional capability of the Clinic are legion and include the 1907 medical record system, a dossier system that he developed from an in-depth study of business and industry practices, the earliest example of medical data warehousing; the pneumatic tube and conveyor system, the color-coded light system and the innovative telephone system, which together were early examples of networking in medicine.

Henry was an active participant in the development of the Mayo fellowship program and the formation of the Mayo Foundation. He was instrumental in bringing internal medicine and medical subspecialties into equal standing with surgery at the Clinic. Intensely interested in the scientific practice of medicine, noted for his clinical acumen and powers of observation and full of human empathy for his patients, he was known as "the best brain the Clinic ever had," "the diverse genius" and "Mayos ultimate renaissance man." Dr. Will Mayo once said that the hiring of Plummer was the best day's work he ever did for the Clinic.

- 1. List three innovations in medical practice that Henry Plummer put in place at the Mayo Clinic
- 2. Describe Plummer's architectural legacy at the Mayo Clinic
- 3. Outline Plummer's classification of thyroid disorders

Mayo Clinic Hematology and Sir William Osler

ROBERT A. KYLE

Robert A. 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 Committee of the International Waldenstrom's Macroglobulinemia Foundation, and chairman of the Scientific Advisory Board of the International Myeloma Foundation.

Herbert Z. Giffin, first Mayo Clinic hematologist, was born October 25, 1878, in Kirkwood, New Jersey, and received a bachelor of science degree from Princeton University in 1900. He obtained his medical degree from Johns Hopkins University in 1904. He was associated with Sir William as a medical student and as a house physician (intern) from 1904 to 1905. He was on the private ward with him in Osler's last year at Hopkins. Giffin stated that Osler was "a man of intellect and refinement and I do not remember his provoking antagonism or taking offense at the acts of others." He stated that Osler's "little tricks" were more of wit than of criticism.

Following another internship at Children's Hospital, Philadelphia, he came to Rochester, Minnesota, on July 4, 1906, as head of a section of medicine. At that time, the Mayo partnership ("Mayo Clinic") had only five "medical men." Giffin was particularly interested in anemia and diseases of the spleen. He played a major role in splenectomy for familial hemolytic anemia, as well as idiopathic thrombocytopenic purpura. Splenectomy for pernicious anemia was performed in 62 patients prior to 1925, but only 25% lived more than 3 years.

Drs. Giffin and H. Milton Conner at Mayo Clinic thought that pernicious anemia could be treated by feeding the patients large amounts of liver. In March 1926, Conner presented his findings before the Interstate Postgraduate Assembly. A visiting professor from one of the midwestern universities remarked, "Anyone who thinks he can treat pernicious anemia successfully by feeding patients liver must be out of his mind." Conner was so discouraged that he did not publish his observations.

As a medical student and house officer, Giffin may have been taught the following:

- Observe, record, tabulate, communicate
- Use your five senses
- Medicine is learned at the bedside
- Know typhoid fever and its complications and you would have a good knowledge of medicine
- Do not waste the hours of daylight in listening to that which you may read by night
- Always note and record the unusual
- Respect your colleagues
- Try to believe the best
- When you have made an unusual or original observation, publish it
- Remember how much you do not know
- Should your assistant make an important observation, let him publish it
- Through your students and disciples will come your greatest honor
- "Don't do too much from a therapeutic standpoint"
- Do not pour strange medicines into your patients

- 1. Attendees should list Giffin's contributions to clinical hematology
- 2. Evaluate the therapeutic approach of Osler
- 3. Contrast clinical medicine of Osler's time to that of today with its sophisticated (and expensive) diagnostic approaches

The Brothers Mayo – Mythic Twins?

CARL E. LUNDSTROM

Carl Lundstrom is a consultant in General Internal Medicine at the Mayo Clinic, Rochester.

After meeting William Osler in 1894 in the course of one his many "educational" trips, William J. Mayo came to appreciate Osler and carried on a friendship of many years until Osler's death in 1919. The friendship also included Mayo's brother and father. As a result, Osler sent a lithograph of the Catholic saints and twins *Cosmas* and *Damian* to W. J. Mayo in 1915. Later he referred to the brothers as "the American Cosmas and Damian."

When I first came to the Mayo Clinic 10 years ago and began to be fascinated with Mayo history, I heard a number of stories regarding the relationship between the brothers that caused me, the father of twins, to start. While the brothers are by no means actual twins, I recognized what might be termed "twin behavior." As I realized that many others had also noted these peculiarities, it occurred to me that further exploration of this pattern might illuminate in some way the unusual influence that these two individuals had on both the current Mayo Clinic and on the course of modern medicine. The synergy that existed between them was a force that exceeded what might have been expected in what started as a sort of family dynasty. And it led to much more than a dynasty over the succeeding years.

So, what are the unusual behaviors that might be considered twin-like? Some of these include the complementary way in which they operated (literally). There seemed to be very little sibling rivalry. Other more exceptional behaviors included items in their personal lives, such as the consistent time they spent with each other over their entire life spans, the issue of even considering living together in their early professional careers, the use of a single bank account and other similar issues. How might this closeness have influenced the future course of their (and our) practice?

As I considered this unusual closeness, a further question was: what led to this relationship? Was it something within the early history of the William Worrall Mayo family? This was a family with two older daughters and then two younger sons. In addition, we know that Louise Mayo, their mother, suffered a significant disability around the time of C. H. Mayo's birth and thereafter for a number of years. Could this account for some of the brotherly closeness?

The purpose then for this exploration is to try to uncover some of the possible family dynamics that must have played such an important part in the formation of our current practice milieu, the Mayo Clinic.

- 1. Review specific twin-like behavior patterns exhibited by the Mayo brothers
- 2. Explore possible etiologies for these behaviors as seen by contemporaries
- 3. Examine how these behaviors may have influenced the Clinic and modern medicine

Medical Rhetoric in the 21st Century: When Doctors Change their Minds

JACALYN DUFFIN

Jacalyn Duffin, MD (Toronto), PhD (Sorbonne), a hematologist and historian, occupies the Hannah Chair of the History of Medicine at Queen's University, Kingston, Canada. A former president of both the American Association for the History of Medicine and the Canadian Society for the History of Medicine, she is author of seven books and holds several awards for research, writing, teaching and service. Her most recent book is <u>Medical Miracles</u>; <u>Doctors, Saints, and Healing</u>, 1588-1999, Oxford University Press, 2009. Her current clinical activity is in breast cancer, and she participates in an award-winning research project on music memory and dementia.

Since the 1990s, evidence-based medicine (EBM) has promised to identify the "right thing to do" by privileging the rhetorical value of randomized double-blind controlled trials in generating "best practice guidelines." Some scholars believe that the trend has resulted in an entirely new form of medical practice. As much as the term irritates historians, EBM purports to resolve medical controversies like a final arbiter masquerading as a supposedly impartial judge.

To explore the recent history of medical rhetoric, I will analyze three major shifts in medical practice that have occurred since the year 2000. If best practice changed by 180 degrees, then some form of rhetoric must have preceded the change. I define a "significant" change as one that generated editorials in leading journals and resulted in a reversal in best practice. Using this criterion, three case studies are identified:

- 1. The decline of female hormones as so-called "replacement therapy"
- 2. The decline of Cox-2 inhibitors for arthritis
- 3. The advent of trastuzumab (Herceptin) for early breast cancer

For each topic, editorials will be searched, counted, read and analyzed.

These shifts will be set in the context of the uses of EBM. The goals are to identify recurring themes in the forces that drove the change and to assess the extent to which randomized controlled trials participated in those changes. Has EBM eliminated the protractedness, passion, and personal messiness of famous debates in a more distant past--or not?

- 1. To explore the role of randomized controlled trials (RCTs) in changing best practice since the year 2000
- 2. To identify factors other than RCTs in changing practice since the year 2000
- 3. To contrast the forces that result in rejection of established therapies with those that result in acceptance of new therapies

Peering Into Peer Review

CHRYSSA N. MCALISTER

Chryssa McAlister received her MD in June 2006 from Dalhousie University and is now training in ophthalmology at the University of Toronto. With a background in journalism and an interest in medical history, McAlister has researched several topics, including the life of Paul Brand and the medical history of the Halifax Explosion.

Sir William Osler was a strong supporter of medical journalism in physician education. In his early career in Montreal, he frequently published in the *Canadian Medical and Surgical Journal*, at times contributing most of the articles in the monthly record. After moving to Philadelphia and Baltimore, Osler continued to contribute to Canadian journals along with international publications like the *Lancet* and the *Journal of the American Medical Association*. Late in his career in Oxford, England, he became the founding editor of the *Quarterly Journal of Medicine*.

In Osler's time, submissions to journals were reviewed by the editor alone, leaving the editor prey to practical jokers such as Egerton Yorrick Davis. A peer-review process only became common practice after the Second World War. Dr Arnold S. Relman, emeritus editor-in chief of the *New England Journal of Medicine*, discussed the topic of peer-review journals with this society in 1989. This paper deals with the developments in the peer-review process since that time.

The current peer-review system has been questioned in the past two decades. Dr Relman was concerned with fraudulent research; today the emphasis is more on recognizing quality novel science. Researchers are evaluating alternatives to a system where authors' names are revealed to reviewers but reviewers remain anonymous. Several randomized controlled trials have looked either at a fully blind process where the authors' information is removed from manuscripts and the reviewer remains anonymous, or at a fully open process where the authors' information is included and the reviewer signs their report, or at a partially blind or partially open process. The current evidence for these peer-review models remains controversial. While the perception of bias may be reduced, the impact on the quality of journals has not been assessed. A randomized controlled trial of a mixed system using outcome measures of quality currently underway at the *British Journal of Ophthalmology* will be discussed.

- 1. List Sir William Osler's contributions to medical journals
- 2. Trace the evolution of peer-review publications
- 3. Outline the current evidence and future potential for various peer-review models

Walter Boothby's Film Showing the Efficacy of Glycine in Myasthenia Gravis

CHRISTOPHER J. BOES

Chris Boes is an assistant professor of neurology and neurology consultant at the Mayo Clinic in Rochester, Minnesota. He has been the neurology residency program director at Mayo Clinic Rochester for five years. He is president of the Mayo Foundation History of Medicine Society and a councilor of the Executive Committee of the American Academy of Neurology History Section. His research interests include the history of neurology and headache.

Walter Boothby graduated from Harvard Medical School in 1906, and completed surgical training at Boston City Hospital in 1909. He later shifted his interest to anesthesia, and in 1913 became supervisor of anesthesia and director of the respiratory/metabolism laboratory at the Peter Bent Brigham Hospital. He worked as Harvey Cushing's anesthetist. Boothby accepted an offer to start a metabolism lab at the Mayo Clinic in 1916, and established the standards of basal metabolism in health and its variation in disease. He also helped develop the B.L.B mask. At the suggestion of Mayo neurologist Henry Woltman, he decided in 1932 to carry out an extensive investigation of myasthenia in the hope of elucidating its mechanism and improving treatment. He became interested in using glycine to treat myasthenia after other investigators reported that oral glycine increased the excretion of creatine and caused clinical improvement in some patients with muscular dystrophy. He reported clinical improvement in six myasthenics in 1932. He stated in 1932 that he used motion pictures to record the clinical features of myasthenics. In 1934 he noted clinical improvement in 80% of his 47 patients, most of whom were treated with glycine and ephedrine. In 1935 he described consistent improvement following the use of glycine, both with and without ephedrine, and noted that the good effects of physostigmine and prostigmin were short lived. In a 1940 book chapter, he described treating 134 patients with myasthenia gravis.

A film entitled "Myasthenia Gravis," made by Boothby, was discovered in the Mayo archives. The film contains seven patients with myasthenia gravis and two patients with muscular dystrophy, all treated with glycine. Improvement in ptosis and strength is shown in the myasthenics. The film is undated, but was likely made in the 1930s, as it contains two patients whose photos were in a 1932 Boothby article, and because his last article on myasthenia was published in 1936.

Glycine was the first drug to be extensively studied in a large number of myasthenics, and this film shows the results of that uncontrolled study by the physician who championed its use. The results must be interpreted in light of the spontaneous remission rate of the disease. All patients in the film do appear to have myasthenia gravis, and Boothby reported that the diagnosis was confirmed by Mayo Clinic neurologists in every patient. Glycine was eventually abandoned after the efficacy of physostigmine and prostigmin were reported by Mary Walker in 1934 and 1935, and after Viets and Schwab reported in 1939 that glycine was not effective in their hands.

- 1. Present Walter Boothby's film of myasthenia gravis patients treated with glycine in the 1930s
- 2. Summarize the historical significance of this film

A Cautionary Tale? Montana's Experience With the 1918 Influenza Epidemic

HERBERT M. SWICK

Herbert Swick is the former director of the Institute of Medicine and Humanities. In retirement, he continues to be active in the WWAMI medical education program and in leading an institute of lifelong learning for adults over 50. He is research professor at the University of Montana and associate clinical professor of medicine at the University of Washington School of Medicine.

In 1918-1919, a global influenza pandemic wreaked havoc, killing over 50 million people and affecting the course of history. In 2009-2010, the H1N1 swine flu pandemic has again challenged us. Can Montana's experience with the 1918 pandemic serve as a cautionary tale about the risks of the current H1N1 pandemic?

The 1918 pandemic began in the spring among military troops, but by the autumn had spread widely to the civilian population. In Philadelphia, the death rate was 700 times normal. In New York City, 851 died of influenza on a single October day. In Chicago, the crime rate dropped 43%, because so many criminals were sick. If this was the situation in large cities, what was happening in a remote rural state like Montana?

In Montana, influenza's impact was felt quickly, and it was devastating; despite its largely rural nature, Montana was one of the states hit hardest by the epidemic. Throughout the state, quarantine measures closed saloons and bowling alleys, stores and theaters, schools and churches. Boarding houses and tents became hospitals. In one case, a doctor was held at gunpoint to make sure he visited a family with the flu.

The mining town of Butte, then Montana's largest and most sophisticated city, was severely affected by the epidemic, with 3500 cases in October 1918. Butte had the state's best developed public health system, but the increasing number of influenza cases nonetheless provoked a bitter political dispute about how to respond and what regulations to impose to control the outbreak. The outcome: schools, businesses and many other public places closed, but the bars stayed open.

The 1918 influenza was often most severe and most likely to be fatal in young adults, so college students were a population particularly at risk. State universities took extraordinary measures to protect their students. One anonymous wag kept an illustrated diary of his experiences, detailing his own illness ("this being sick isn't any fun at all") and complaining that all the girls were quarantined and all the food was insufficient.

During the influenza epidemic, about one-third of all the people in Montana became ill and at least 5000 died. The mortality rate in Montana, on a per capita basis, ranked just behind Pennsylvania, which had the highest mortality rate in the nation.

- 1. Examine the parallels between the 1918 influenza pandemic and the current H1N1 swine flu
- 2. List three common public responses to the 1918 pandemic
- 3. Explain why it was necessary to keep open the bars in Butte
From William Osler to George Harrell: The Importance of the Humanities for Modern Medicine or Are They Important?

KERSTIN BETTERMANN

Kerstin Bettermann is assistant professor of neurology at Penn State College of Medicine. She is a graduate of the University of Heidelberg and has trained and served as faculty at Wake Forest University, where George Harrell became the first appointed clinical faculty member. She wishes to acknowledge Drs. James Toole and Claus Pierach for their guidance and introduction to William Osler.

"The physician may possess the science of Harvey and the art of Sydenham, and yet may be lacking those finer qualities of heart and head which count for so much in life."

When candidates for medical school interviewing at Penn State College of Medicine (PSU) are asked what attracts them to the school, many answer, "The department of humanities and its emphasis on the humanitarian aspects of patient care." The humanities in medicine are especially relevant today, as they were when Osler first wrote about the art of medicine, or when George Harrell emulated the Oslerian tradition as dean and co-founder of the new Penn State College of Medicine in 1964. Harrell was founding member and president of this society. He has written extensively about Osler's practice, his family, his teachings and his philosophy. He was deeply involved in the humanities, the role of ethics and the understanding of the patient as a whole in states of disease and health. With humanities at its heart, he envisioned and established the first three departments of their kind in the US at PSU: the first departments of the humanities, behavioral sciences and the first family and community medicine program in the country, all designed to treat the patient as a whole and at the center of medical education instead of focusing on individual disease processes.

Although there is no question of how important it is to understand the background and values of a patient and his/her family ties for the disease processes and the patient's response to his/her disease, humanitarian aspects of medicine are no longer taught and are increasingly threatened by procedure and high-technology driven heath care as well as medical economics.

Harrell was well aware that resources were limited, but that despite limitless public expectations, priorities must be balanced. He serves as a role model in transitioning Oslerian values to a new generation of physicians, who must master the challenges of a medical system that is increasingly characterized by economic and resource limitations and by rapidly developing biomedical technology, with constant need for new ethical standards for the benefit of their patients.

- 1. Describe the influence of Osler on Harrell and his professional contributions
- 2. Outline Harrell's concepts and contributions to medical education, emphasizing the humanities
- 3. Examine the relevance of his philosophy for becoming physicians today

"Teacher and Student" – Osler, Education and the University of Minnesota

LAUREL E. DREVLOW

Laurel Drevlow is an associate professor of medicine at the University of Minnesota Medical School, a clinician and educator in the Abbott Northwestern residency program, and the director of student education at Abbott Northwestern Hospital in Minneapolis, Minnesota.

In 1888, Minnesota was part of the Western frontier of the United States. Although provisions had been made for a medical school in the territorial constitution in 1847, it required the powerful and persuasive leadership of Dean Perry H. Millard to make it a reality 41 years later. Formed through tactful and tactical maneuvering which united three independent medical schools in Minneapolis and St. Paul, one of them homeopathic, the new school made use of existing buildings until 1892. An interest free loan of \$20,000 from a person close to the dean made possible the construction of the first building dedicated solely for the use of the new college of medicine and surgery. To commemorate the opening, an invitation was sent to the most illustrious physician of the times and a veritable celebrity, William Osler, to speak at its dedication ceremony.

The invitation to Minnesota likely came about as a result of committee assignments within the Association of American Medical Colleges. In March of 1890, faculty from progressive medical colleges around the country, as well as Johns Hopkins hospital faculty, (the medical school was not yet in existence) had met in Nashville to develop educational standards for medical training programs in the country. Millard and Osler, who shared remarkably concordant views about what comprised rigorous medical training, were the two members of the by-laws and constitution committee.

Osler's fame was well-established by this time, in no small part owing to the 1892 publication of his textbook of medicine, *Principles and Practice of Medicine*. Now in Baltimore, a newly wed William Osler occupied himself with clinical practice, education of students and residents and developing his own unique plans for teaching in the field identified as internal medicine. The stage was set for Johns Hopkins to become a premier medical education facility in the world, but meanwhile, out on the western prairie, the University of Minnesota had the privilege of establishing their school of medicine first.

Osler's description of the Minnesota landscape may have been less than complimentary, but his address (later included in his essay collection "Aequanimitas") was memorable and clearly laid out his vision for excellence in medical education. This discussion will focus on the record of Osler's historic visit to Minnesota and the content of his famous lecture, "Teacher and Student," delivered the night of October 4, 1892. It will also examine Osler's concept of medical education and how it compares to our views of effective medical education more than 100 years later. Does his prescription for learning have any value in a highly technological era?

- 1. Evaluate medical school educational constructs of today against the scale of ideals set forth by Millard and Osler
- 2. Describe the historical setting for Osler's visit to Minnesota in 1892 and the title of his famous speech
- 3. Identify three elements from Osler's speech that describe education concepts that are still effective in 2010

William Osler's Evolving View of Military Medicine

THOMAS L. SNYDER

Tom Snyder is a retired Navy reservist and Kaiser-Permanente urologist. Upon retirement, he returned to his pre-medical interest in history (he began as a history major at Lafayette College), and seeks to combine his naval and medical backgrounds in researching and writing the history of, among other things, the first Navy hospital on the west coast at Mare Island, across the Napa River from his California home. This work, and interactions with others sharing these interests, led to his establishing the Society for the History of Navy Medicine, which, in the three years since its founding, has grown to more than 110 members from around the world.

Harvey Cushing tells us that while William Osler "hated wars," he was no pacifist; he took an active interest in the politics of the time and even expressed support for such military adventures as the British Boer War. But his concept of the role of the military physician was curiously naive. In his 1894 speech to the first graduating class of the Army Medical School, Osler contemplated the unique opportunities afforded the military surgeon for advancing the art and science of medicine; the more pragmatic notion of "combat medicine" wasn't entertained. Even as he matured in practice and experience, Osler's view of military medicine was the detached one of a public health officer, fighting against the microbes that he saw as a greater risk to the soldiery than the efforts of the human enemy. Even with the outbreak of World War I, he was early inclined to view infectious disease with greater alarm that bullets and artillery shells. The Germans' wanton destruction of the medieval university city of Louvain seems to have changed all that. Perhaps also because Osler, a volunteer colonel in the Oxfordshire Regiment, was now seeing men suffering combat injuries, Osler took on an almost evangelical tone when he discussed the care of war injured men. This new tone was captured in a newly discovered 1918 speech welcoming to England the Albany Medical School Base Hospital No 33. The author sketches out the evolution of William Osler's thoughts on military medicine utilizing biographical works already in print, Osler's published writing, archival material from Albany Medical College and Osler correspondence residing in the McGill library collection.

- 1. Contrast Osler's early notions about the role of the military physician with those influenced by the horror of war
- 2. Examine Osler's work supporting military medicine during the Great War
- 3. Explore, briefly, Osler's relationship with Albany Medical College, the author's medical alma mater

Osler and the Role of the Physician Within a Military Medical Service

VIVIAN MCALISTER

Vivian McAlister, a surgeon, is a professor in the University of Western Ontario and a major in the Canadian Forces Medical Service.

The Canadian Forces Medical Service (CFMS) was formed fifty years ago with the amalgamation of the medical services of each branch of the Canadian Forces. During World War 1 (WWI), Osler wore uniform as consultant to the Canadian Army Medical Corps (CAMC). In doing so, he was part of a tradition of medicine in Canada which combined civilian practice with military responsibility. This paper traces the development of military medicine in Canada over four centuries. Surgeons on the Cartier and Champlain expeditions performed autopsies in attempts to prevent further deaths from the then unknown disease of scurvy. In 1968 the settlement of St Croix (1604) was excavated and the surgeons' autopsy technique was found to parallel modern methods. Champlain's surgeon, Bonnerme, was accused of mutiny in 1608 and died of scurvy. Physicians during the French regime who were either military physicians or expected to support the army contributed to the development of the country. After the British conquest, a large proportion of physicians were demobilized military doctors who had been trained in Britain or France. Many of these doctors contributed to the development of indigenous medical education. At the time of Confederation, civilian physicians acted as regimental medical officers. The first integrated medical operation occurred in 1898 during the second North-West rebellion. A similar arrangement for the Boer War led to the development of a medical corps which was formally established as the CAMC in 1904. Officers continued to work in civilian practices when not on military tasking. In 1911, at London Ontario, Lcol Guy Carleton Jones organized the first training exercise in military medicine, a tradition that continues to this day. A scandal in 1917 led to his resignation as director general, much to Osler's dismay. In dispute was the thrust of CAMC: to be part of an international effort involving civilian and military physicians or to develop an independent and professional Canadian service. Osler favoured the former. Development of a professional military corps arose out of the extraordinary activity of the Royal Canadian Army Medical Corps in WWII. In the 1990s the concept of a dedicated medical corps working only in military hospitals lost favour, and specialists returned to work in the civilian sphere when not on military duties. This permitted the acquisition and maintenance of the skills required to deal with the trauma of modern warfare. In Afghanistan, Canadian military physicians are again in a multinational medical effort so enjoyed by Osler in WWI.

- 1. Explain the role of a modern military medical service
- 2. Discuss the role of practice in the acquisition and maintenance of skills by military physicians
- 3. List aspects of the development of modern military medicine

The International Medical Congress of 1881

J. 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.

The largest and most impressive medical congress ever organized was the Seventh International Congress of Medicine, held in London in 1881. Queen Victoria served as patron, the Prince of Wales opened the Congress and his cousin the crown prince of Prussia attended. There were over 3,000 registered participants, whose names included Joseph Paget (president of the Congress), Joseph Lister, Richard Owen, Thomas Huxley, Rudolf Virchow, Louis Pasteur, Robert Koch, Jean Marie Charcot, Richard von Volkmann, John Shaw Billings, Austin Flint and William Osler. Women, however, were excluded from the Congress, in spite of a petition signed by 43 female physicians requesting entry. The Congress was held at a time of explosion in medical knowledge, controversy over the germ theory, and aggressive antivivisection activity.

A recent British law impeding animal experimentation prompted three keynote speakers, including Virchow, to expound on the importance of vivisection to medicine. Pasteur discussed his recent success with chicken cholera and anthrax vaccines. Thomas Huxley traced the relation of biology to medicine, again emphasizing the importance of experimentation. Dr. Billings talked on the expanding medical literature. Robert Koch showed some of his groundbreaking microphotographs and, for the first time, demonstrated his solid plate culture techniques, at which Pasteur allegedly uttered his comment, "C'est un grand progress, Monsieur." Lister discussed his antiseptic technique, surprising everyone by hinting that the carbolic spray might not be necessary. There were hundreds of scientific sessions in English, French, and German. Osler delivered a paper on ulcerative endocarditis, in which the constant presence of bacteria in valvular vegetations was noted, but their causative role in the malady was questioned.

Osler recorded his impressions of the Congress in the Canadian medical press. He was impressed with the "museum" of the Congress. It featured live case demonstrations (he was particularly drawn to examples of the recently described myxedema), along with many pathological specimens and numerous instructive drawings, some of the latter made personally by Sir Charles Bell. He discussed various medical presentations, but did not appear enthusiastic about the papers on microbes. In addition to the scientific sessions there were numerous, sometimes extravagant, receptions, luncheons, banquets, excursions and hospital visits. Large services were held in Westminster Abbey and St. Paul's Cathedral. One exclusive event was a garden party for the more distinguished members of the Congress given by the Baroness Burdett-Coutts, among the wealthiest women in England. The Baroness commissioned a large painting of the reception, in which Osler is identified standing near Henry Jacob Bigelow. The painting currently hangs in the Welcome Institute for the History of Medicine.

The finale was a large supper in the Crystal Palace followed by a brilliant fireworks display, where fire-portraits of Paget, Charcot and von Langenbeck were displayed.

- 1. Trace important events in the history of the germ theory of disease
- 2. Define the importance of the Seventh International Congress of Medicine to the medical world
- 3. Evaluate the importance and the problems of vivisection in relation to medical science

Osler and Trudeau: Leaders in the North American Campaign Against Tuberculosis

CHRISTOPHER F. DIBBLE

Chris Dibble is a third year MD/PhD student at UNC-Chapel Hill and a 2009-2010 William B. Bean Research Award recipient. He graduated from Duke University with a minor in history and when not studying cell signaling is interested in the history of the Sanitarium Movement.

Sir William Osler and Edward Livingston Trudeau played crucial roles in the formation of tuberculosis therapeutic strategy and research in the late 19th and early 20th centuries; a time when the disease was the leading killer in industrialized societies. Both men were leaders in promoting clinical and scientific societies for fighting tuberculosis, yet came from very different medical backgrounds. Osler took advantage of superior post-graduate educational opportunities in Europe at the time, whereas Trudeau fell sick from tuberculosis at the end of his training and was confined to the Adirondacks, becoming a physician-consumptive far from any medical resources. Trudeau founded one of North America's first tuberculosis sanitaria in Saranac Lake, New York, in 1882, and the first laboratory for the study of tuberculosis in North America in 1895. His theories, a blend of European ideas and personal experience, became the basis for the "rest cure": the standard of care for tuberculosis treatment in the first half of the twentieth century. Osler's impact on medicine was far-ranging, yet less emphasized than his work in fields such as diagnosis and education is his contribution to tuberculosis treatment and policy involvement that led him into professional contact and eventually personal friendship with Trudeau.

Osler became aware of Trudeau's work around 1890, as a result of the publicity surrounding Robert Louis Stevenson's visit to the Saranac Lake Sanitarium. Osler was certainly the more famous of the two physicians, but he held great respect for Trudeau and was strongly influenced by his opinions on tuberculosis immunology and the Sanitarium Movement. Trudeau's therapeutic approach figures prominently in the tuberculosis section of Osler's *The Principles and Practice of Medicine*. Saranac Lake's appearance in this influential medical text lent great credibility to Trudeau's approach, especially in the years before widespread acceptance of Germ Theory. Trudeau wrote in his autobiography, "Dr. Osler was also keenly interested in my sanitarium experiment and always gave the obscure and struggling little institution the support of his approval...the support of his great name no doubt did much to attract attention to its work both here and abroad."

Yet Osler did not just support Saranac Lake in theory. He viewed Trudeau's methods as the best chance for curing tuberculosis, as evidenced by his advice to family members and afflicted medical students to travel to Trudeau for the rest cure. Among those Osler directed to Saranac Lake was Lawrason Brown, a third year medical student at Johns Hopkins who came down with tuberculosis. Brown was cured, and went on to become Trudeau's second-in-command, eventually becoming director of the sanitarium after Trudeau's death (and incidentally founding an early American Osler Society at Saranac Lake in 1925).

At a time when many physicians were skeptical of the new sciences of pathology and microbiology, Osler and Trudeau were among the first to grasp the importance of the new tools at their disposal. Each favored the initially controversial theory that tuberculosis had an infectious etiology, and both immediately realized the significance of Robert Koch's discovery of *Mycobacterium tuberculosis*. An especially telling episode was the reaction to Koch's "miraculous" cure for tuberculosis: tuberculin. Osler was the first in North America to receive a sample of the precious substance, and he promptly sent half of it to Trudeau. Together they were among the first to deny its effectiveness publicly, and their combined word was a powerful negation of Koch's flawed claim. Finally, perhaps the strongest professional bond between the two physicians was through the National Tuberculosis Association, today the American Lung Association. Founded in 1904, the organization became the driving force behind the anti-tuberculosis public health movement, and among officers and board members were the most distinguished physicians of the time. Trudeau was the first president, with Osler serving as vice president from 1905 until his death.

- 1. List how Osler's support for Trudeau affected the Saranac Lake Sanitarium, and describe how the representation of the Sanitarium changed through editions of *The Principles and Practice of Medicine*
- 2. Describe the professional links between Osler/Hopkins and Trudeau/Saranac Lake
- 3. Describe the events leading to the founding of the National Tuberculosis Association and the effects of the organization on the tuberculosis public health movement in America

Harvey Cushing's Early Forays Into the Field of Neurological Transplant Surgery

COURTNEY PENDLETON

Courtney Pendleton is a third year medical student at the Johns Hopkins School of Medicine. She graduated Magna cum Laude as a studio art major from New York University.

Dr. Harvey Cushing is widely regarded as the founder of modern neurosurgery. Many of his innovations in the field began during his time at Johns Hopkins Hospital, both as a resident and an attending, from 1896-1912. A significant body of work exists describing Cushing's career at Peter Bent Brigham Hospital and Yale School of Medicine; recent publications have reported in great detail on Cushing's surgical cases at both institutions. However, a similar body of work does not exist regarding Cushing's career at Johns Hopkins Hospital. References to his surgical cases at this institution are largely culled from his personal journals, correspondence, and publications, rather than the original records. A review of the original Johns Hopkins Hospital surgical case files, courtesy of the Chesney Archives at Johns Hopkins Hospital, revealed that Cushing pioneered the fields of human transplantation and neural plasticity long before they came to the forefront of medical practice.

Between 1902 and 1912, Cushing performed four notable transplantations, in three separate patients. In 1902, Cushing used a rabbit spinal cord to repair an 18cm defect in a 23 year old woman's popliteal nerve, which occurred during resection of a tumor. The patient appeared to have limited return of function over the next eight months; however, a recurrence of the tumor necessitated amputation of her leg. In 1907, Cushing attempted to create a shunt for the treatment of hydrocephalus in a 4 month old child, using a venous segment harvested from the child's father. And, in 1911, he performed a pituitary transplantation to permanently treat symptoms of hypopituitarism; the patient survived, symptom free, for six weeks, before returning to Johns Hopkins Hospital for a second transplantation.

Although considered revolutionary, both in his time and in our own, Cushing's early forays into transplant surgery were firmly rooted in his own laboratory experience, and research papers published by his contemporaries; further cementing his reputation as one of the early physician-scientists. While Cushing's procedures met with mixed success, even limited success is impressive, given the absence of HLA tissue typing, immunosuppressive therapies, and clinical application of ABO blood group matching.

The cases revealed by this review demonstrate Cushing's significant, albeit preliminary, understanding of the principles governing transplantation and neural plasticity. They offer new insight into the origins of transplant surgery, and provide a context in which to understand the evolution of the field over the past century.

- 1. Discuss the contributions of Harvey Cushing to the field of transplant surgery
- 2. Describe the role of laboratory research in Harvey Cushing's clinical practice
- 3. Summarize the evolution of transplant surgery throughout the 20th century

Dr. Earl Nation: The Humble Giant

ROB STONE

Rob Stone is a producer, writer and director at Vienna Productions, which specializes in documentary films and specials for television. His two-hour special on the legendary Blue Angels aired on the A&E network and was honored with a Cable Ace Award from the National Academy of Cable Programming. More recently, Stone produced the documentary, "Sir William Osler: Science and the Art of Medicine."

In 1938, Dr. Earl F. Nation was finishing his residency in urology, consisting of a six-month stint in the pathology department of Los Angeles County General hospital. One morning, one of his professors was demonstrating the results of an autopsy and accidentally dropped a tuberculous lung on the table, spraying Dr. Nation with fluid. Although his skin test and chest x-ray were normal, about a month later he came down with fever due to tuberculosis of his left upper lobe. He was admitted to Barlow Sanatorium in Elysian Park, California. Only two years into his marriage to Evelyn Poynter, a nurse, the Nations now faced an uncertain future.

During his 15-month stay at the Sanatorium, one of the ways Dr. Nation passed the time was by reading Harvey Cushing's monumental biography, *The Life of Sir William Osler*, sparking a lifelong interest in Sir William, as well as the medical humanities. He later wrote, "This influenced my life more than any other one thing."

Thankfully, Dr. Nation recovered and went on to have a very successful and satisfying career, contributing greatly to the field of urology. He held academic appointments at both the University of California and Loma Linda University. He served as president of the American Urological Association, wrote papers and achieved numerous honors and awards.

Throughout his celebrated career, Dr. Nation became a leading authority on the life of Sir William Osler. He was one of the founding members of the American Osler Society, and wrote extensively about Sir William in articles and books, including two illustrious volumes of *An Annotated Checklist of Osleriana* (with Charles G. Roland and John P. McGovern).

Despite his many accomplishments, Dr. Nation remained a humble and enthusiastic Oslerian. As Dr. Nation himself stated, "Every aspect about being a part of the Osler Society has been enjoyable to me...I've been amazed at the enthusiasm with which so many people have embraced it, and the dedication of the members; they are really devoted to everything that Oslerianism represents."

- 1. Explain how Dr. Nation discovered William Osler and illustrate why he dedicated much of his professional life to writing about Osler
- 2. Outline some of the many highlights of Dr. Nation's career
- 3. Integrate video highlights from Dr. Nation's extensive 2004 interview speaking about his life, career, and Sir William Osler

The Life and Times of Dr. John H. Watson

T. JOCK MURRAY

Jock Murray is a past president of the American Osler Society and of the Canadian Society for the History of Medicine. He is chairman emeritus of the American College of Physicians and a master of the College. He and his wife Janet are working on a book on the history of Dalhousie Medical School.

Characters created in literature take on a reality and existence that can be more lasting than most mortals. Sherlock Holmes is an example, but we know much more detail of the life of his friend, confidant and biographer, Dr. John H. Watson. Perhaps the richness of information about the life of Dr. Watson is due to the fact that he authored the many stories about Holmes (Holmesians maintain that his literary agent was a man named Arthur Conan Doyle). Dr. Watson, a graduate of Bart's Medical School, was born in 1852 and after his mother died, moved with his brother and father to the goldfields of Australia. After graduation from Bart's (MBBS, 1876) and training in obstetrics and surgery (MD University of London 1878), he entered the army as a military surgeon, serving in India and Afghanistan. He returned to London after a wound at the battle of Maiwand, and met Sherlock Holmes at Bart's on New Year's Day, 1880, where the detective was working on a test for hemoglobin for his forensic work. Holmes greeted the physician, "How are you? You have been in Afghanistan, I perceive," and they made an arrangement to share lodgings. This talk will explore the relationship of the two men, their differences about the reporting of the cases and the many medical illnesses encountered in the solving of crimes. Watson also had views on Holmes' similarity to a physician solving problems. I will postulate why Dr. Watson had a seven-year break from medical practice, and outline the pattern of his medical practice and therapies, and how he approached the addiction of Holmes. Finally, I will relate some remaining mysteries. Why did Watson's wife call him James? Why is Conan Doyle never toasted in Sherlock Holmes Clubs? How many times was Watson married? What illness did Holmes feign to appear to be dying? Where is Dr. Watson currently portrayed under another name?

- 1. Discuss the relationship of Dr. Watson to Sherlock Holmes
- 2. Explain why his role as a military surgeon affected his later interrupted medical practice
- 3. Contrast the different approaches of Dr. Watson and Sherlock Holmes to problem-solving the reporting of cases

James D. Hardy and the First Lung Transplant

MARTIN L. DALTON

Martin Dalton completed his surgical training under James D. Hardy and pursued an academic career ending with 16 years as chair of surgery and 3 years as dean of Mercer University School of Medicine. He currently serves as professor and dean emeritus and associate program director of the Mercer University Department of Surgery.

James Daniel Hardy was appointed as the first chair of surgery at the University of Mississippi when it opened in Jackson in 1955. After eminently successful careers at the University of Pennsylvania and the University of Tennessee in Memphis, Dr. Hardy was ready for new challenges in unexplored areas of surgical research. Significantly, at this time he was only 37 years old.

Transplant surgery was in its infancy in 1955. Joe Murray had performed the first successful kidney transplant between identical twins in 1954. By 1955, hardly any surgeon or transplant researcher had conceived the possibility of a lung transplant in a human. Nevertheless, Dr. Hardy began experimenting in his new environment with lung transplantation as one of his goals. Success would come after years of methodical and painstaking research with the first successful lung transplant performed on June 11, 1963.

I was honored to serve as a resident under Dr. Hardy from 1958-1963. Early in my residency I was asked by Dr. Hardy to participate in his lung transplant research. It saddens me to report that our experimental animal was the dog. However, after numerous canine experiments Dr. Hardy was ready to lead us into the human arena. I was most fortunate to be chosen to participate in the first human lung transplant, and I was assigned the task of obtaining the lung from an acceptable donor. Fate smiled on us to provide an ideal donor. In this era of no brain death laws we obtained a donor organ from a patient who suffered an irremediable cardiac arrest in our emergency center. I was never more excited than when I walked into the adjacent operating room to hand Dr. Hardy and his first assistant, Dr. Watts Webb, a left lung to be successfully implanted.

Retrospectively, the first lung transplant led to the first successful heart transplant in 1967 and ushered in the era of modern organ transplantation. Clinically, the success of organ transplantation was delayed until the employment of the first successful anti-rejection drug, cyclosporine, in 1980.

Dr. Hardy went on to become president of the American Surgical Association, the Southern Surgical Association and the American College of Surgeons, among many other honors. He retired in 1988 after 33 years as chairman of the University of Mississippi Department of Surgery and died in 2003.

- 1. Recognize the importance of the first successful human lung transplant
- 2. List the steps in the underlying necessary research
- 3. Validate James D. Hardy as a noteworthy individual in the history of surgery

Hunter Holmes McGuire – Stonewall Jackson's Surgeon and Icon of Virginia's First Family of Medicine

J. MICHAEL 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.

From his humble beginning in Virginia's Shenandoah Valley, Hunter Holmes McGuire would become a renowned and respected surgeon, educator and humanitarian. McGuire is probably best known as Gen. "Stonewall" Jackson's surgeon. Upon Virginia's succession, McGuire volunteered for service in the Confederate Army and was assigned to Gen. Jackson as the medical officer of the Army of the Shenandoah. His surgical skills were apparent to Jackson. McGuire further endeared himself to Jackson with his organizational skills, creating a Confederate Ambulance Corps, Infirmary Corps, and mobile field hospitals. Those days with the Stonewall Brigade paved the way for McGuire's career. He became known as a skilled surgeon, and his experiences during war provided practical application to new methods and theories.

McGuire was also important for US medical education. When intersectional tensions progressed while attending Jefferson Medical College, McGuire encouraged some 400 southern students to withdraw to a more congenial surrounding. At the direction of McGuire, many of these enrolled at the Medical College of Virginia. McGuire subsequently founded the University College of Medicine, later known as the College of Physicians and Surgeons. The rapid success and progressive curriculum of this school forced others to improve their educational quality. The heated rivalry between MCV and McGuire's College of Physicians and Surgeons was resolved after his death when the Flexner report caused the merger of the two schools.

McGuire's humanitarianism was also evident throughout his lifetime. During the war, he was able to influence both the Union and the Confederate armies to allow physicians to remain behind enemy lines to treat their wounded and then be released unconditionally. After the war, McGuire was very concerned about the lack of hospital facilities for indigents. He founded the Retreat Hospital for the Sick as well as St. Luke's Home for the Sick in Richmond, VA, both available to all medical professionals for indigent care.

McGuire suffered a stroke in 1900 and died six months later. He was buried in the famous Hollywood Cemetery following an elegant service at St. Paul's Episcopal Church. Among the honorary pallbearers was William Osler of Baltimore, his long-time friend. Hunter Holmes McGuire lived a life not only focused as a skilled surgeon, but on the advancement of medical education, the innate worth of humanity and the importance of public advocacy. For this, his legacy is worthy of our respect and study.

- 1. Describe how Hunter Holmes McGuire's surgical skills contributed to advancements in the field
- 2. List educational contributions of Hunter Holmes McGuire
- 3. Evaluate Hunter Holmes McGuire's humanitarian efforts

Dr. Thoralf Sundt, Jr.: A Hero on Many Fronts

R. DENNIS BASTRON

Denny Bastron is professor of clinical anesthesiology at the University of Arizona.

Thomas Carlyle's statement that "Our main business is not to see what lies dimly in the distance but to do what lies clearly at hand," profoundly affected William Osler as a student. Following that advice became one of Dr. Osler's personal ideals. I, too, was profoundly affected by Carlyle as a student. Carlyle wrote a series of essays on "Heroes and Hero Worship" in which he developed the concept that we should pick heroic figures as role models for our own lives. It seems particularly appropriate to tell you today about one of my heroes, Dr. Thor Sundt, my chief resident during my month on neurosurgery as an intern.

Already a legend, Thor was respected by everyone who knew him. A 1952 West Point graduate, he soon found himself in Korea. In July, 1953, 1st Lt. Sundt, then a 23 year old company commander, was the last American to get off of Pork Chop Hill. He was awarded the Bronze Star with an oak leaf cluster for valor. He later resigned his commission to attend medical school and become a neurosurgeon.

Pioneering the use of the operating microscope for neurosurgical procedures, and the intraoperative use of Xenon washout curves to measure cerebral blood flows, Dr. Sundt became one of the foremost neurosurgeons in the world. He was named chief of neurosurgery at the Mayo Clinic, where he attracted patients and trainees nationally and internationally. He treated each patient, from the rich and famous to the most unfortunate of society, with respect and compassion.

At the age of 55 Thor self-diagnosed his case of multiple myeloma. Outliving the most optimistic estimates, Thor not only continued to care for patients, but also edited a major neurosurgical journal and wrote two textbooks. He was inspired by his patients and gained strength from them. A year before his death, Thor was interviewed on "60 Minutes" and talked about his profession and dedication. Shortly before he died at 62, Dr. Sundt became one of the first four West Point graduates to be named "Distinguished Graduate."

Thoralf Sundt, Jr., was a war hero, a hero to his family, to his patients, to many neurosurgeons around the world, to his colleagues, to the members of the long gray line, as well as my personal hero. Sir William would have heartily approved of this heroic physician who was known for his devotion, dedication, and grace under pressure.

- 1. Name Dr. Sundt's contributions to neurosurgery
- 2. List three groups to whom he was heroic
- 3. Recognize his personal traits that made him heroic

The Waxing and Waning of Colles' Law

THOMAS G. BENEDEK

Thomas G. Benedek is a graduate of the University of Chicago and became a rheumatologist and medical historian. He is professor of medicine emeritus at the University of Pittsburgh School of Medicine and is past president of the American Association for the History of Medicine.

Abraham Colles (1773-1843) was professor of surgery and anatomy in Dublin. His 1837 textbook on syphilis contained the opinion: An asymptomatic woman who delivers a child in whom signs of syphilis develop soon after birth can nurse this child without becoming infected by it. However this child can infect anyone else, most often a wet nurse. These observations had previously been published by the Scottish surgeon Benjamin Bell, but began to be associated with Colles, probably in 1857. The fundamental errors on which Colles' statements were based were that absence of symptoms proved absence of syphilis, and his excessive confidence in patients' histories. The potential contagiousness of asympomatic syphilitics had been argued a century earlier by Jean Astruc, and contemporaneously, beginning in the 1840s, by the influential Philippe Ricord. Nevertheless, Colles' statement was acknowledged by prominent venereologists and began to be called a "law" in the 1860s. The contrary arguments that negative histories regarding syphilis were unreliable and that many physical examinations were performed inadequately, or were performed during an asymptomatic interval, had little traction. Leading clinicians, such as William Osler and the pediatrician Henry Koplik, unquestioningly subscribed to the "law," as did immunologists such as Paul Ehrlich and Eli Metchnikoff.

Modern syphilis research began in 1905 with the discovery of its pathogen, followed in 1906 by the discoveries that dark field microscopy is a reliable technique to identify the microbe, and the Wassermann test to identify a disease carrier, regardless of the presence of symptoms. In 1908 two Viennese pediatricians first applied the Wassermann test to women who had no history of syphilis and yet had delivered syphilitic infants. Their serum reacted positively and this observation began comprehension that laboratory support other than histopathology may be required to resolve clinical opinions regarding syphilis. Osler did not relinquish belief in Colles' law in the 1910 edition of his textbook, but stated in 1912: "The mother herself may be, and often is apparently quite healthy, but the Wassermann reaction is present and it is through her and not directly from the father that the disease is transmitted. We can now understand what is known as Colles' law..."

- 1. Identify Abraham Colles and some of his contributions to medical history.
- 2. Discuss the 19th century hypotheses for the transmission of syphilis to infants.
- 3. Discuss why the Wassermann test was more persuasive than clinical histories in disproving "Colles' law"

Robert Burns – His Life and Death and 18th Century Medicine in Scotland

THORNE S. WINTER

Thorne S. Winter was trained at Harvard Medical School, the Peter Bent Brigham Hospital, the National Cancer Institute and Emory Medical School. He was in the private practice of internal medicine and cardiology for forty-five years, and he is currently the medical director of the internal medicine division of the Multiple Sclerosis Center of Atlanta. He is past president of the Robert Burns Club of Atlanta.

Robert Burns (1759-1796) is the "National Bard of Scotland, the world's most popular love poet, and a Master Poet of Democracy." His works are largely in the Scottish dialect. In addition to writing original poetry, he collected fragments of old Scottish songs and ballads and reworked them into forms which have endured to this day. A recently published book titled *Osler's Bedside Library* contains a chapter by Dr. Paul Mueller on the "Poetry of Robert Burns." Burns was born in the rural town of Allway in Southwestern Scotland. Like his father, he spent much of his life as a farmer. He was educated by a local teacher and his father with supplementation by his love of reading. At age 27, he published in Kilmarnock a limited edition of his poems titled *Poems – Chiefly in the Scottish Dialect*. This was a success and was followed the next year by a larger Edinburgh edition of poems. During the last nine years of his life, he devoted much of his time without pay to collecting and preserving songs for Johnson's *Scots Musical Museum*.

As a teenager, Burns had episodes of headaches, palpitations, fainting and nocturnal shortness of breath. At age 22, he had a three months illness with fever and melancholy. He was treated with ipicac, rhubarb, opium and cinchona. At age 25, he suffered a relapse with fever, heart irritability and nocturnal faintness. He was treated with cold baths. At age 30, he had a severe bout of quinsey with prolonged fever. At age 36, he had a severe toothache. Subsequently, his health progressively declined, suffering from migratory arthritis, fever, rapid pulse, weakness, pallor, delirium and death at age 37. His treatment consisted of cold sea water baths up to his armpits in the Solway Firth. I feel that Burns' illness and cause of death was rheumatic fever and bacterial endocarditis.

Medicine in Scotland in the eighteenth century evolved in a positive manner, but the advances may not have filtered down to Burns. In the early 1800's, future physicians were trained by apprenticeships, had little formal teaching and had questionable examinations. Medications were unscientific. The *Edinburgh Pharmacopoeia* of 1737 listed 450 biologicals. Public teaching was begun at Edinburgh Medical School in 1726 and at Glasgow Medical School in 1750. Under the leadership of Dr. William Cullen, the theory and practice of medicine became more rational. The first modern pharmacopoeia, *Materia Medica Catalogue*, was published in 1776 with many of the old remedies removed. By 1800, the number of medical students at Edinburgh was 660.

William Osler extensively studied and catalogued bacterial endocarditis, Burns presumed cause of death, publishing papers from 1881-1909, notably the Gustonian lectures in 1885.

- 1. Discuss Robert Burns' medical illness and cause of death
- 2. Outline the state of medicine in 18th century Scotland
- 3. Describe Osler's contribution to the understanding of bacterial endocarditis

Art and the Amputee Alderman

RICHARD J. KAHN

Richard has been a member of the AOS since 1981 and president from 1998 to 1999. He feels the mastership in the ACP he received in 2006 proves the Peter Principle continues to function. His work on the Jeremiah Barker manuscript is again diverted, this time to sharks, tea parties and politics.

The tale of a fourteen-year-old orphan boy who in 1749 suffered and survived a shark attack in Havana Harbor, as well as a BK amputation.

The story takes us from Britain to Canada and the United States, and back again. It includes the Boston Tea Party, politics, war, public service, art and poetry. The boy, made famous by John Singleton Copley's painting, "Watson and the Shark," eventually became Lord Mayor of London, director of the Bank of England, held many other important positions in business and government and was the target of contemporary satire. Who was Brook Watson, and what does his story, and that of the famous painting, have to tell us about the possibilities of overcoming disability and adversity?

- 1. Describe the background, career and politics of Brook Watson
- 2. Name who commissioned the painting and how might we "read it"?
- 3. Explain the significance of Copley's painting, "Watson and the Shark"

The Death of Gen Albert Sidney Johnston at the Battle of Shiloh, 1862

KENNETH SWAN

Kenneth Swan received his AB from Harvard and his MD from Cornell. At New York Hospital, he did his internship and residency in general/cardiothoracic surgery. US Army (Active), 1968 - 1973, Vietnam and Walter Reed Army Institute of Research. He moved to his current position, professor of surgery, New Jersey Medical School, Newark, 1973. He married Betsy Ann Capwell, 1965; and they have three children, and seven grand children. He is a retired colonel, U.S. Army Reserve, 1998. Currently, he is incoming president of the Medical History Society of New Jersey and a member of the American Surgical Society, American Physiological Society, and AOA.

The Battle of Shiloh began 6 April 1862. It was the bloodiest battle, to date, in the American Civil War. The Confederate States Army, led by General Albert Sidney Johnston, the South's finest field commander and ranking general, faced Union armies commanded by newly appointed Brigadier Generals William Tecumseh Sherman and Ulysses Simpson Grant. The first day of the two day battle belonged to the South and was highlighted by the "Battle of the Peach Orchard." General Johnston was far forward, rallying his men in a final charge that would push the Northern soldiers into the nearby Tennessee River, when he sustained a gunshot wound behind his right knee. The bullet severed his popliteal artery and he died within the hour. The push lost momentum when the men heard news of Johnston's death. The Tennessee River neither claimed the lives of the Union troops nor forced their surrender. The day ended. Grant and Sherman regrouped and the second day belonged to the North.

Had the General's life been spared by judicious use of the field tourniquet in his uniform pocket, the battle likely would have been a Confederate victory. Grant and Sherman would have suffered a humiliating defeat; they had been surprised, not knowing that they were about to be assaulted. Both northern generals were young, relatively inexperienced, but so far highly successful. They were viewed with jealousy by their superiors, who would have been quick to take advantage of a glaring reversal of fortunes by two such promising leaders, together in the same battle!

Grant became commanding general of the Union armies and the first U.S. lieutenant general. Under his command, Major General Sherman won the Battle of Atlanta, dooming the South to defeat and rescuing President Lincoln's tenuous re-election campaign in 1864. His opponent, Major General George McClellan, a "Peace Democrat," had pledged to grant southern secession in his campaign. The west then would have followed and the U.S. would have become Balkanized.

If, on the other hand, a tourniquet had been placed on Johnston's right lower extremity, his life would have been spared. A field amputation would have been performed. He would have lived to fight another day. Generals on both sides had fought after field amputations of extremities. Hood, Ewell and Kearny are examples.

- 1. Define "tourniquet" and its objectives
- 2. Explain tourniquet principles and uses
- 3. List indications for tourniquet use in war and peace

A Fond Farewell to the Foxglove?

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. The endowed annual Weisse Lecture on the History of Medicine was initiated at the school in 2004. His most recent book, <u>Lessons in Mortality</u>, was published by the University of Missouri Press in 2006.

It was not until the beginning of the 20th century that a truly effective group of therapeutic agents began to become available to practicing physicians and their patients. The nostrums that preceded them were often useless or–worse-dangerous. A major exception to this was digitalis, introduced by William Withering in 1785. Even William Osler, sometimes called a "therapeutic nihilist," valued digitalis, as did his prime protégé George Dock and all who followed them. It is only in recent years that the usefulness of digitalis in congestive heart failure (CHF) and in rate control in atrial fibrillation (AF) has been questioned as newer potent drugs for both conditions have emerged. Current symposia, guidelines and other publications de-emphasize or even ignore digitalis despite continuing evidence appearing as to its effectiveness in both CHF and AF. This rejection prompted a look back at the publication that started it all, a review that proved quite revealing.

Withering's "Account of the Foxglove and Some of its Medical Uses" is more than an ordinary research report. It is a monograph over 200 pages in length covering Withering's personal observations in 163 patients over a period of 10 years (1775-1785). Withering not only had the botanical background to detect the true role of the foxglove among the 20 other ingredients employed by the old lady from Shropshire; he also determined the active part of the plant, when to harvest it and how to prepare it in various forms. He was the first to recognize the diuretic properties of digitalis as well as appreciate its action on the heart. He clearly recognized the visual and cardiac effects of toxicity as well as those related to the gastrointestinal tract. His overall success rate was 64%; in 44 patients unequivocally in CHF it was 89%. Withering knew nothing about prospective randomized trials and p values; his paper would undoubtedly be rejected by any modern medical journal. But his accomplishment must still be recognized as remarkable for the benefit of countless patients over the last 200 years and more.

- 1. Review the history of digitalis
- 2. Recognize the continuing usefulness of digitalis
- 3. Summarize 18th century concepts of "dropsy" and congestive heart failure

Reception of Richard Bright's "Report of Medical Case" in Linking Coagulable Urine, Dropsy With Renal Pathology as a Clinical Entity – Robert Christison in Scotland and Pierre Rayer in Paris

ROBERT I. LEVY

Robert Levy is a retired physician, nephrologist, interested in the history of nephrology, Pierre Louis and French medicine in the 19th century, as well as the correspondence between Logan Clendening, M.D. and H.L. Mencken.

Richard Bright's 1827 publication, *Report of Medical Cases* correlated the clinical findings of coagulable urine and dropsy with changes in the kidneys at autopsy. This paper documents the recognition and confirmation of Bright's findings by examining the contributions of Robert Christison in Edinburgh and Pierre Rayer in Paris.

Robert Christison in 1829, two years after Bright's report, was the first to confirm Bright's finding indicating that the condition was not limited to *"the scum alone of London's population"* but was to be found as well in Edinburgh. He emphasized the possibility of reversibility of the condition and isolated urea from the blood of oliguric patients in a long, convoluted procedure ending with the nitrate of urea described as *"a considerable number of brown crystal scales having the odor of urine."* He also described and quantitated the anemia associated with renal disease using a similar complicated extraction procedure. His publication in 1839 of *On Granular Degeneration of the Kidneys* greatly extended Bright's findings describing the clinical picture of uremia.

Pierre Rayer's *Traite des Maladies des Rein*, published in 1839 in two volumes of 2100 pages, as well as an accompanying atlas, documented a variety of renal pathology. The text has not been translated into English except for the last chapter on the "History of Nephrology to 1839" by Dr. Cameron. Rayer introduced Bright's findings to Europe. At the end of the first volume are six plates of hand drawings from microscopic appearance of abnormal urinary sediment, including casts and various crystals including Quinine and Hippuric acid. A two-page footnote just following the chapter title "Nephrite Albumineuse" discusses the naming of the condition, and after rejecting Chistison and others' designation, suggests that "the affliction be called Maladie de Bright (Bright's Disease) which dedicates the discovery of this famous doctor, would it not have seemed preferable to me to give it a significant scientific name." Rayer, using footnotes, comments favorably, and just as often unfavorably, on prior authors' opinions.

While the reception of Richard Bright's findings was slow as compared to the almost instantaneous reporting of medical findings in the twenty-first century, Robert Christison and Pierre Rayer did their part to vigorously defend and promulgate as well as extend Bright's findings.

- 1. Evaluate the reception of Richard Bright's publication of *Case Reports* in 1827.
- 2. Identify the contribution of Robert Christison in Edinburgh, who indicated that the condition was not limited to the *"scum alone of London,"* and who isolated urea from oliguric patients, quantifying the anemia as well.
- 3. Assess the work of Pierre Rayer in Paris who named the condition *Maladie de Bright*, used the microscope to record casts and crystals and introduced Bright's findings to Europe in a two volume work of over two thousand pages.

The Origins of Bone Marrow as the Seedbed of Our Blood: From Antiquity to the Time of Osler

BARRY COOPER

Barry Cooper is medical director of clinical hematology at Baylor University Medical Center: Charles A. Sammons Cancer Center in Dallas, Texas. His interests focus on coagulation, leukemia, lymphoma and the history of hematology.

The marrow is currently well defined as the seedbed of our blood, producing 200 billion red cells, 10 billion white cells, and 400 billion platelets on a daily basis. Yet, the role of the marrow was unknown in antiquity and only first experimentally defined during the latter 19th Century. Literature through the ages often alluded to marrow as the essence or central part, considered rich and nutritious as a food source, possessing warmth, energy and inner heat, as well as being the seat of vitality and manliness. Hippocrates considered marrow the nutrient source for bone, while Aristotle considered marrow to be an osseous waste product. Yet, its role in red cell production could not be conceptualized until cell theory was postulated in 1838, and the recognition of a finite life span for red cells that necessitated continuous replenishment.

Two contemporaries of Osler, Neumann and Bizzozero, are credited with making the initial observations leading to the recognition of the marrow as the seat of blood formation in 1868. Neumann thought proliferation of marrow cells occurred inside blood vessels in the marrow rather than in a fixed volume inside a rigid frame of bone, and considered nucleated red cells in the marrow to be the embryonic state of red cells. Bizzozero extended the blood forming function of the marrow to include production of white blood cells. Divergent theories for the origin of red cells included disintegration from white cell nuclei (Erb), hemoglobinic degeneration from white cells (Pouchet), formation from platelets (Hayem) or protoplasmic budding of a precursor cell. It was unclear that red cells were viable cells until the latter 19th century, as fixatives often leached the hemoglobin out of red cells until stains introduced by Ehrlich and Romanowsky.

In Osler's first edition of *The Principles and Practice of Medicine*, published in 1892, bone marrow is mentioned briefly only three times. He notes marrow hemorrhages in smallpox. In leukemia, "instead of fatty marrow, the medulla of the long bones may resemble the consistency of matter which forms the core of an abscess." In pernicious anemia, the marrow resembles that of a child, predominantly red marrow secondary to cellular hyperplasia. Nowhere in the text is the assumption that the marrow is the seedbed for production of red cells, although observations of Bizzozero and Neumann had been known for 25 years. Yet, in Osler's *Cartwright Lectures*, published six years before his textbook, he notes that red cells "neither die nor are born in the circulating fluid, but appear to enter it as perfect elements and are removed from it before they are so changed as to be no longer recognizable." He commented that there can be no doubt that nucleated red cells originate in the bone marrow, crediting both Neumann and Bizzozero, and speculates on the process in which these cells convert into the ordinary red disk. These lectures were his most definitive discussion of bone marrow function.

- 1. Review misconceptions concerning bone marrow function since antiquity
- 2. Evaluate experimental evidence defining the role of the bone marrow in blood cell production
- 3. Assess Osler's publications on bone marrow function and morphology

The Enduring Presence of Nostalgia in the Twentieth Century and Its Implications for Military and Immigration Psychiatry

LAURA P. MCLAFFERTY

Laura McLafferty is originally from Hudson, New Hampshire, and graduated from the Pennyslvania State University in 2006 with a bachelor of science degree in biology, with a minor and honors in French and Francophone studies. She will graduate from the University of Pittsburgh School of Medicine in 2010, with plans to complete a residency in general psychiatry followed by a fellowship in child and adolescent psychiatry. She has done research in Renaissance French literature, as well as qualitative analysis of illness narratives from children with depression and inflammatory bowel disease (IBD).

The first description of nostalgia appeared in 1688 in the medical dissertation of Johannes Hofer, De Nostalgia oder *Heimwehe*, in which he described a clinical syndrome in which the sufferer displays great longing for a place or people (s) he has left behind and then becomes physically ill from the intensity of this longing. By the eighteenth century nostalgia became a distinct disorder with associated physical symptoms, and Leopold Auenbrugger and other notable physicians studied its occurrence in the soldiers of the armies of western Europe. By the nineteenth century nostalgia came to be considered a variant of melancholia. It was a disease of interest to the medical officers of the American Civil War, as well as individuals studying prisoners of war and immigrant populations. By the early twentieth century, nostalgia began to disappear from standard psychiatry textbooks, and it was dismissed by one textbook as an "exaggerated or false simple reaction." Indeed, recent opinion states that nostalgia disappeared into the broader category of depression/melancholia and therefore disappeared as a clinical diagnosis by the beginning of the twentieth century. However, one underestimates the significance of nostalgia as a clinical diagnosis in the twentieth century when one fails to consider the attention that it continued to garner in the fields of military psychiatry and the psychiatry of immigrant populations. The sustained attention that nostalgia received in these two fields is due to the way in which it was perceived to impact the performance of soldiers in combat and also, its possible role in predisposing immigrants to other types of psychopathology. Using primary sources from US military psychiatrists and investigators researching the psychopathology of immigrant populations as well as general textbooks of psychiatry, one can trace nostalgia's supposed general "disappearance" and, at the same time, its continued presence in these two fields, through which it solidifies its role in the history of the development of the concept of depression. This enduring interest in nostalgia reflects the importance of understanding the various ways in which depression can present and the repercussions it has for different patient populations, which has been recognized since melancholia was first described in the ancient Greek world.

- 1. Describe the influence of nostalgia as a clinical diagnosis on nineteenth and twentieth-century American military psychiatry.
- 2. Evaluate the role of nostalgia in the psychopathology of immigrant populations in the early to mid-twentieth century.
- 3. Contrast the disappearance of nostalgia from general psychiatry textbooks to its continued presence in the fields of military and immigration psychiatry during the early to mid-twentieth century.

Harvard University's Committee on Pharmacotherapy, 1939-1943, and Paths not Taken

SCOTT H. PODOLSKY

Scott Podolsky is assistant professor of global health and social medicine at Harvard Medical School, and director of the Center for the History of Medicine at the Countway Library of Medicine. His most recent volume, co-edited with Charles Bryan, is entitled <u>Oliver</u> <u>Wendell Holmes: Physician and Man of Letters</u>.

Over a century ago, William Osler remarked in his "Teaching and Thinking" that "of all the difficulties inherent in the art [of medicine] not one is so serious as [that] which relates to the cure of disease by drugs." As pointed out by others, Osler begat Henry Christian, the first physician-in-chief at the Brigham and Women's Hospital, who begat his successor, Soma Weiss. And the "difficulties" enumerated by Osler had only intensified during the decades that followed.

From 1939-1943, Harvard University responded by creating a university-wide, degree-granting, industry-funded Committee on Pharmacotherapy. Initially pushed forth by University President (and chemist) James Conant, headed by Weiss, and including such luminaries as Fuller Albright and Walter Cannon, the Committee had no less ambitious an agenda than elevating pharmacotherapeutics on par with surgery as a means to alleviating suffering, rationalizing the relationship between the medical school and industry and revolutionizing the teaching of therapeutics at Harvard Medical School and nationally.

The Committee would be notable for such achievements as the discovery of polythiouracil (PTU) for the treatment of hyperthyroidism, the establishment of a Ph.D. program in "pharmacotherapy" and preliminary attempts to confront such issues as the role of university patents and the nature of the appropriate interface between industry and academia.

Within four years, however, the program had dissolved entirely, a casualty not only of such unpredictable events as the advent of World War II and the untimely death of Soma Weiss, but of such predictable factors as insufficient funding. The Committee's dissolution, moreover, seems to have precluded more comprehensive and strategic university-wide planning regarding therapeutics, on the very eve of the wonder drug (from antibiotics to steroids) and molecular revolutions. Osler's concerns regarding the problems and conflicts that beset attempts at achieving a rational therapeutics would persist throughout the remainder of the 20th century and beyond.

- 1. Recognize the origins, goals, and limitations of Harvard's Committee on Pharmacotherapy.
- 2. Review the Committee on Pharmacotherapy as part of the larger history of attempts to inculcate a rational therapeutics in medicine.
- 3. Examine the counterfactual history had Harvard's Committee persisted through the era of the wonder drug.

Letters Home: An American Surgeon in France 1943-1945

PAUL BERMAN

Paul Berman is a retired internist residing in Amherst, Mass. He is an associate professor of medicine at U. Mass. Medical School in Worcester, Massachusetts. Besides being a member of the Osler Society, he is a member of the AAHM and the Canadian History of Medicine Society. His primary historical interest is in 19th century American medicine, although this paper is quite different.

Between 1943 and 1945 my father, who was a general surgeon stationed initially in England and then France, wrote letters weekly to my mother. The letters talk of his day to day work and experiences, as well as the tolls of war on the civilian population. They cite humorous experiences—AWOL in Paris and moments of pathos—"ravages of metal on flesh." They express his love for the family and his loneliness. The letters are a part of medical and social history that we must continue to remember and hopefully learn from, although the recent past suggests we have not.

There are two major drawbacks to the letters. First, they were censored, as my father noted, "if you've noticed restraint in my letters it's because we have to submit them open and you know how I hate to make love on 5th Avenue. Secondly, I did not learn of their existence until after my father and his colleagues were deceased. However, I had the good fortune to find diaries written by two of his surgical colleagues, Dr. Mann from Wisconsin and Dr. Estrem from Minnesota.

In August of 1942, forty-five doctors (one being my father), six dentists, seventy nurses and three administrators from the area around Syracuse, New York, formed the 52nd General Hospital (GH). Subsequently, they were stationed in England, where they would remain until the end of the war. However, in 1944 my father was transferred to the 90th GH and appointed chief of surgery. He and his colleagues landed at Omaha Beach in August of 1944. They would proceed to a small town northwest of Nancy, France, named Bar-Le-Duc. There they would remain until September of 1945. The letters are a study of one surgeon's experience in World War II.

- 1. Describe the military triage system in WWII.
- 2. Contrast my father's thoughts with those of today's surgeon regarding medicine in the military and the plight of the wounded.
- 3. Discuss the importance of the written word.

George Bernard Shaw and Doctors

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 has received the distinguished service award from the University of Chicago and the lifetime achievement award from the International Society for the Study of Waldenström's Macroglobulinemia. He 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.

"The average doctor is a walking compound of natural ignorance and acquired witchcraft." — Shaw in *Saturday* Review (1896)

"As a matter of fact, the rank and file of doctors are no more scientific than their tailors." — Shaw in *Preface on Doctors* (1911)

During George Bernard Shaw's long life (1856-1950), he wrote 52 plays and playlets and numerous essays and letters. Born in Dublin, Ireland, Shaw came to London at age 20. He was an unsuccessful novelist but achieved renown as a music critic. Shaw was one of the early members of the Fabian Socialist Society, which was founded in 1884. His first play, *Widowers' Houses*, was produced in 1892. Shaw married Charlotte Payne-Townshend, an heiress and fellow Socialist, in 1898.

Shaw met the well-known British immunologist, Almroth Wright, and visited his laboratory at St. Mary's Hospital in London. The idea for a play arose during that visit when it was discovered that there were not enough treatments for a particular group of patients. How was the selection to be made? The resulting play, *The Doctor's Dilemma*, was first performed in 1906 and its leading character, Sir Colenso Ridgeon, was modeled after Almroth Wright. Although Shaw and Almroth Wright seldom agreed on anything, they were friends, debating each other and corresponding over a 40-year period.

A number of Shaw's plays had prefaces which amounted to small monographs. One of them, the Preface on Doctors, precedes *The Doctor's Dilemma*. This scathing attack on physicians included sections on the faults of doctors, the evils of poverty particularly in regard to doctors, inoculation, antivivisection, national health and medical training. Prefaces in other works dealt with Shaw's views on marriage, parenthood, education and Christianity.

Shaw was an expert at conveying strong opinions, sarcasm and satire. He also had enormous ability to create fascinating characters in his plays. Shaw was awarded the Nobel Prize for Literature in 1925. His career as a published writer exceeded 70 years. Some say that Shaw was the greatest English dramatist since William Shakespeare.

"It will do you no good if I get over this. A doctor's reputation is made by the number of eminent men who die under his care."

- Shaw (at age 94) to his doctor (1950)

Shaw was cited in the *Bibliotheca Osleriania* and his work is included in a new version of Osler's Bedside Library (Michael A. LaCombe, David J. Elpern, editors), published in October 2009 by the American College of Physicians.

- 1. Summarize how Shaw's Socialist views influenced his writing
- 2. State the circumstances leading to Shaw writing his play, The Doctor's Dilemma
- 3. List Shaw's multiple occupations

Max Brödel: The Man Who Almost Got Away

JOSEPH B. VANDERVEER, JR.

Dr. VANDERVEER is a retired general surgeon from Philadelphia. As a first-year resident, he acquired a first edition of Howard A. Kelly's monograph, <u>The Appendix and its Diseases</u>, superbly illustrated by the doyen of American illustrators, Max Brödel.

In January 1894 an 18-year-old pianist and illustrator from Leipzig stepped off the gangway of the *Dresden* to meet a young professor of anatomy from the recently formed Johns Hopkins Medical School. Both Franklin Mall and the new school's dean, William H. Welch, had studied under the renowned Leipzig physiologist Carl Ludwig, the man who had given Max Brödel his start.

Although he spoke almost no English, Brödel was winsome, talented and industrious, and soon was busy doing drawings for Howard A. Kelly, who was hard at work on the first of two volumes of *Operative Gynecology*, for which Max eventually provided 361 illustrations. He became close friends with two young physicians on the Hopkins staff who were only two years older than he, who became leaders in American surgery. Harvey Cushing became professor at Harvard, and Thomas Cullen became Kelly's successor at Hopkins.

Although Brödel did some freelance work, it appears that most of his income during his first decade at Hopkins came from a monthly stipend from Kelly, who also was instrumental in getting him a faculty appointment as "Instructor of Art as Applied to Medicine" – an appointment that carried no salary.

The great Baltimore fire of 1904 destroyed sixty-four warehouses, stores and office buildings belonging to the Hospital. That same year, Brödel visited the Mayo Clinic and, through a series of letters and personal visits by W.J. Mayo was encouraged to join their staff. Brödel was sorely tempted, for he wanted to not only be an illustrator, but also to leave a legacy and found a school. William Osler, from Oxford, sent cables and letters urging Max to stay at Hopkins.

Mayo's offer was only supplanted by Cullen's impassioned appeals to the Baltimore millionaire benefactor, Henry Walters, who initially provided funds to raise Brödel's salary for several years. Eventually, in 1921, Walters made a bequest of \$110,000 endowing the Department of Art as Applied to Medicine.

- 1. Recount the background and training of Max Brödel
- 2. Give three reasons he was considered the doyen of medical illustrators
- 3. Cite some examples of his medical and non-medical art

The Racial Integration of Hospitals and Its Impact on Durham's Black Physicians

P. PRESTON REYNOLDS

P. Preston Reynolds is professor of medicine at the University of Virginia. Her research focus throughout her career has been the history of race discrimination in healthcare, and the national effort to racially integrate hospitals and health professions schools that culminated in federal initiatives administered under the Johnson Administration in the mid-1960s. She currently is revising a book manuscript for publication on the history of Lincoln Hospital and healthcare for blacks in the Carolinas.

Nearly all community hospitals in the South were segregated well into the 1960s and 1970s and thus, openly denied admitting privileges to black physicians. All southern medical schools and teaching hospitals similarly refused admission to blacks as students, interns and residents and attending faculty until the 1960s.

Durham, North Carolina, was home to one of the leading black hospitals in the South as well as one of the top medical schools in the country. Lincoln Hospital, Durham's all-black hospital, opened in 1901. It emerged over the next several decades as a center for professional training in medicine and surgery, nursing, as well as radiology and laboratory technology, and as a center of clinical practice for black physicians throughout the region, many of them becoming board certified in the 1940s and 1950s.

From its opening in 1930, Duke University Medical School admitted black patients onto segregated hospital wards, but it denied blacks admission to medical school, internship and residency training and faculty positions. At the same time it explicitly assisted Lincoln Hospital in garnering resources from the Duke Endowment, in increasing its patient admissions and in improving the quality of its training programs. All this changed when institutional leadership, combined with pressure from the federal government pushed Duke along with other southern institutions to racially integrate.

This paper looks at the impact of these changes on the lives of six black physicians, three who practiced in Durham beginning in the 1930s and 1940s, and three who came to Durham during the transition from segregation and integration. The examples of their professional lives bear testimony to the struggles that black physicians faced in the effort to racially integrate medicine in the last half of the 20th century.

- 1. Summarize the extent of racial discrimination in hospital care in the US in the 1950s
- 2. Describe landmark court decisions and legislation that ended racial discrimination in healthcare in the US
- 3. Describe the impact of racial integration on the closing of black hospitals and on the careers of black health professionals

The "God Committee"

ROBERT R. NESBIT, JR.

Robert Nesbit is professor emeritus of surgery at the Medical College of Georgia. He was chief of vascular surgery until his retirement in April 2000. Although he is no longer involved in patient care, he continues to be active teaching at the Medical College. He has been a member of the American Osler Society since 2003.

When Belding Scribner devised a shunt which allowed patients with chronic renal failure to be kept alive indefinitely, and when he subsequently began an outpatient hemodialysis program, the selection of which few of the thousands of patients who required that therapy to survive created unprecedented practical ethical problems. By the time the seven bed community hospital-based Seattle Artificial Kidney Center opened in January 1962, the King County Medical Society had appointed a Medical Advisory Committee of physicians and psychiatrists to select patients judged medically and psychologically suited to have the best chance to benefit from the rigorous lifetime therapy. To decide who among that group of patients who could also afford the treatment would actually have the opportunity to be placed on hemodialysis, the Medical Society created another committee composed primarily of laypeople, the Admissions and Policy Committee. That committee developed and used what became known as "social worth criteria" to decide among eligible candidates. Soon the existence of the committee and its criteria became publicized in the popular press and on television. The question of how to allocate a scarce and expensive medical resource such as dialysis and other decisions brought about by the availability of organ transplantation have been credited with giving birth to the modern field of bioethics. The ultimate solution to some of these problems led to the creation of the End Stage Renal Disease Program under Medicare, creating a major new role for the federal government in providing health care in the United States. This paper will deal primarily with the "God Committee" and its makeup and function as depicted in the media of that time.

- 1. State the criteria used by the "God Committee" to select patients for the chronic hemodialysis program and why they were controversial
- 2. Summarize how the problems associated with end stage renal disease contributed to the development of the field of bioethics
- 3. Describe how funding of the chronic hemodialysis program became a model of government-run healthcare

The Blind Leading the Blind: The Story of Louis Braille

JOHN D. BULLOCK

Dr. Bullock is an infectious disease epidemiologist and professor of mathematics and statistics at the Wright State University Boonshoft School of Medicine in Dayton, OH. He was formerly professor and chair of Ophthalmology and The Brage Golding Distinguished Professor of Research at Wright State.

Louis Braille was born in the small village of Coupvray, France, in 1809. At the age of three, while playing in his father's cobbler shop with a piece of leather and a sharp tool, Louis punctured one of his eyes. A few months later, the fellow eye became inflamed due to sympathetic ophthalmia. Louis was totally blind by the time he was five. In spite of his blindness, his parents were insistent upon Louis' getting an education. His father hammered upholstery nails, in the shapes of letters, into blocks of wood; by feeling their round raised heads, Louis learned the letters of the alphabet. At the age of ten, he enrolled at The Royal Institute for the Blind Youth in Paris, where he was taught a form of raised Roman letter reading. Several years later, Charles Barbier, a retired artillery captain in Napoléon Bonaparte's army, came to the Institute to demonstrate his invention of "night writing," a code used by soldiers to send secret battlefield messages in complete darkness by means of a system of raised dots, representing the sounds of which words are comprised. By the age of 15, Braille had developed his own system of reading by touch, using a combination of dots representing actual letters of the alphabet, instead of sounds. Louis' code used fewer dots than Barbier's, making it easier to learn, and in a pattern small enough to fit under a single fingertip, making them faster to read. Each grouping of Braille's six dots, called a cell, is three dots high and two dots wide and allows for 64 (26) different characters including letters, numbers, punctuation and accent marks and later, mathematical symbols and musical notation. Braille's system was immediately accepted by the other blind students at the school. However, the teachers who were sighted refused to learn Braille's form of writing which they themselves could not read. The other students then contacted the French government, requesting them to recognize Braille's dot alphabet as the official system for the blind. However, neither the Institute nor the national government was particularly enthusiastic about his innovation. Even though Braille had demonstrated his dot system to the French King, Louis Philippe, he still struggled to convince the government to accept his system. It remained a continuous source of frustration for Braille that his method had not been formally recognized. Two years after Braille's untimely death at age 43, however, the French government finally approved the dot system, the method that became known eponymously as "Braille." By 1858, when the representatives of most of the European countries met at the World Congress for the Blind, they voted to make Braille the standard system of reading and writing throughout the world. In 1952, the centennial of his death, his contribution to the world finally was officially recognized by France. Braille's remains were then disinterred from the modest cemetery in Coupvray, for reburial in the Panthéon in Paris. Braille's hands, however, were disconnected from his wrists and reburied in a marble box which rests on his original tomb in Coupvray. These were the hands that had developed the method that would teach the blind all over the world to read. On the day of his re-internment at the Panthéon, all of the Paris church bells were ringing out as the coffin was carried through the streets. Behind the coffin marched the President of France, Vincent Jules Auriol, walking beside Helen Keller and then, row after row of unknown blind people tapping their white canes to say "Thank you" to Louis Braille. Braille's home in Coupyray is now a museum and monument to him. A marble tablet is affixed to the outside wall which modestly states: "In this house on January 4, 1809, was born Louis Braille, the inventor of the system of writing in raised dots for use by the blind. He opened the doors of knowledge to all those who cannot see." Conclusion: "...we, the blind, are as indebted to Louis Braille as mankind is to Gutenberg." Helen Keller

- 1. Explain the pathophysiology of sympathetic ophthalmia
- 2. List previous methods for blind reading
- 3. Describe the Braille dot system of finger reading

Oliver Wendell Holmes' Religio Medici

CHARLES S. BRYAN

Charles S. Bryan serves as director of the Institute of Internal Medicine and Family Practice at Providence Hospitals, Columbia, S.C., and is Heyward Gibbes Distinguished Professor of Internal Medicine Emeritus at the University of South Carolina.

William Osler told medical students: "Sir Thomas Browne's *Religio Medici* should be your pocket companion, while from the Breakfast Table series of Oliver Wendell Holmes you can glean a philosophy of life peculiarly suited to the needs of a physician." Osler's choice of Browne is obvious—Browne was after all Osler's "life-long mentor"—but why Holmes? I shall contend that Holmes, in his Breakfast Table series, rendered a late-nineteenth-century updating of Browne's *Religio Medici*. Indeed, Holmes's legacy includes an insight useful for our own troubled times: religion, like science, serves best when understood as a verb rather than as a noun—that is, a process for seeking and perhaps approximating "truth" which, however, can never be attained with absolute certainty.

Browne (1605–1682) wrote the *Religio Medici* (the religion of a physician) as a highly personal journal, a response to the increasingly rigid Church of England that he encountered upon his return from his studies on the Continent. Browne reconciled for himself his era's nascent tension between science and faith by explaining: "Thus there are two books from whence I collect my divinity. Besides that written one of God, another of His servant, nature, that universal and publick manuscript, that lies expansed unto the eyes of all." Browne chose to accept "the great wheel of the church" and to "assume the honourable style of a Christian." A recent critic suggests that "Browne's version of the harmonious coexistence of faith and reason is not a marriage, but a divorce settlement: each faculty gets custody of the issues proper to it—and so long as each stays out of the other's ways, all is well."

Holmes (1809–1894) returned from his studies in Paris to wrestle not only with the Calvinism of his youth but also with (1) a rigid "New England theology," (2) Transcendentalism; and (3) the challenge of Darwinism. Holmes, as intuited by Osler and indeed articulated by Holmes's first biographer, William Sloane Kennedy, dispensed his version of the *Religio Medici* bit by bit in the Breakfast Table series and elsewhere. Holmes's insights include the following: (1) "We are all tattooed in our cradles with the beliefs of our tribe"; (2) "Every man has a religious belief peculiar to himself"; (3) "The doctrine of evolution … changes the whole relations of man to the creative power. It substitutes infinite hope in the place of infinite despair"; and (4) "Every age has to shape the Divine image it worships over again."

Holmes's prose writings in aggregate evince a thorough understanding and updating of Browne's religious latitudinarianism laced with charity toward fellow humans. Holmes's poetry—notably, "The Deacon's Masterpiece, or the Wonderful 'One-Hoss Shay'" and "The Chambered Nautilus"—demonstrate the primacy of inner experience, of awe and wonder, in our perception of ultimate reality. In the same year (1858) that *The Autocrat of the Breakfast-Table* first appeared, Holmes told graduating medical students at Harvard: "We reach the Creator chiefly through his creatures.... If performed in the right spirit, there is no higher worship than the unpurchased service of the medical profession." In sum, an appropriate skepticism, exemplified by Browne and Holmes for their respective eras, recognizes that "faith" holds in dynamic tension both belief and doubt, with our search for truth being the endless cycle of thesis→antithesis→synthesis (new thesis), and that our overarching purpose should always be, as Osler put it, "to make the lives of others happier."

- 1. Compare and contrast the challenges to faith perceived by Sir Thomas Browne (1605–1682) and Oliver Wendell Holmes (1809–1894) during their respective eras
- 2. Evaluate whether Holmes's approach to religion and theology evinces his skepticism toward "truth" as absolute certainty
- 3. Examine the importance of awe, wonder, a sense of humor and poetic insight to the inner life

2010 Program Committee

Charles S.Bryan W. Bruce Fye Philip W. Leon Pamela J. Miller Sandra W. Moss Paul S. Mueller John Noble Joseph B. VANDERVEER, Jr. Renee E. Ziemer

John P. McGovern Lectureship Awards

1986	Albert Rupert Jonsen
1987	Edward Janavel Huth
1988	Joanne Trautmann Banks
1989	John Nicholas Walton
1990	E. A. Vastyan
1991	Daniel Michael Fox
1992	William C. Beck
1993	Anne Hudson Jones
1994	David Hamilton
1995	Sherwin B. Nuland
1996	David J. Rothman
1997	Roger James Bulger
1998	Paul Potter
1999	John David Stobo
2000	Gert Henry Brieger
2001	Kenneth M. Ludmerer
2002	James K. Cassedy
2003	Sir Richard Doll
2004	William F. Bynum
2005	Karen Hein
2006	Joseph Jack Fins
2007	Abraham Verghese
2008	Charles E. Rosenberg
2009	Patrick A. McKee
2010	Nuala Kenny

Lifetime Achievement Awards

2005	Earl F. Nation
2006	Charles G. Roland
2007	Lawrence D. Longo
2008	Richard L. Golden
2009	W. Bruce Fye
2010	Charles S. Bryan

Presidents of the American Osler Society

WILLIAM B. BEAN*	. 1970-1971
GEORGE T. HARRELL*	. 1971-1972
THOMAS M. DURANT*	.1972-1973
JOHN P. McGOVERN*	. 1973-1974
EDWARD C. ROSENOW, Jr.*	.1974-1975
A. McGEHEE HARVEY*	1975-1976
RAYMOND D. PRUITT*	1976-1977
MARTIN M. CUMMINGS	.1977-1978
EARL F. NATION*	. 1978-1979
IRVING A. BECK*	. 1979-1980
PETER D. OLCH*	. 1980-1981
WILLIAM C. GIBSON*	.1981-1982
R. PALMER HOWARD*	. 1982-1983
JEREMIAH A. BARONDESS	. 1983-1984
K. GARTH HUSTON*	. 1984-1985
WILLIAM B. SPAULDING*	. 1985-1986
CHARLES G. ROLAND*	1986-1987
ROBERT P. HUDSON	.1987-1988
W. BRUCE FYE	.1988-1989
RICHARD L. GOLDEN	.1989-1990
JACK D. KEY	. 1990-1991
PAUL D. KLIGFIELD	. 1991-1992
ALVIN E. RODIN*	. 1992-1993
ROBERT E. RAKEL	. 1993-1994
KENNETH M. LUDMERER	. 1994-1995
CHARLES F. WOOLEY*	. 1995-1996
BILLY F. ANDREWS	. 1996-1997
EUGENE H. CONNER	. 1997-1998
RICHARD J. KAHN	. 1998-1999
DEE J. CANALE	1000 2000
	.1999-2000
MARK E. SILVERMAN*	. 2000-2001
JOHN C. CARSON	. 2000-2001 . 2001-2002
JOHN C. CARSON LAWRENCE D. LONGO	.2000-2001 .2001-2002 .2002-2003
MARK E. SILVERMAN* JOHN C. CARSON LAWRENCE D. LONGO MARVIN J. STONE	.2000-2001 .2001-2002 .2002-2003 .2003-2004
MARK E. SILVERMAN* JOHN C. CARSON LAWRENCE D. LONGO MARVIN J. STONE CHESTER R. BURNS*	2000-2001 2001-2002 2002-2003 2003-2004 2004-2005
MARK E. SILVERMAN* JOHN C. CARSON LAWRENCE D. LONGO MARVIN J. STONE CHESTER R. BURNS* CLAUS A. PIERACH	2000-2001 2001-2002 2002-2003 2003-2004 2004-2005 2005-2006
MARK E. SILVERMAN* JOHN C. CARSON LAWRENCE D. LONGO MARVIN J. STONE CHESTER R. BURNS* CLAUS A. PIERACH T. JOCK MURRAY	2000-2001 2001-2002 2002-2003 2003-2004 2004-2005 2005-2006 2006-2007
MARK E. SILVERMAN* JOHN C. CARSON LAWRENCE D. LONGO MARVIN J. STONE CHESTER R. BURNS* CLAUS A. PIERACH T. JOCK MURRAY FRANCIS A. NEELON	2000-2001 2001-2002 2002-2003 2003-2004 2004-2005 2005-2006 2006-2007 2007-2008
MARK E. SILVERMAN* JOHN C. CARSON LAWRENCE D. LONGO MARVIN J. STONE CHESTER R. BURNS* CLAUS A. PIERACH T. JOCK MURRAY FRANCIS A. NEELON JOSEPH W. LELLA	2000-2001 2001-2002 2002-2003 2003-2004 2004-2005 2005-2006 2006-2007 2007-2008 2008-2009

* Deceased



Honorary Members

THOMAS G. BENEDEK Pittsburgh, Pennsylvania

GERT H. BRIEGER Baltimore, Maryland

SHIGEAKI HINOHARA Tokyo, Japan

MARIAN FRANCIS KELEN Ottawa, Quebec

JOHN D. STOBO Galveston, Texas

JOHN N. WALTON Detchant, Belford Northumberland, England

Charter Members

MARTIN M. CUMMINGS* Sarasota, Florida

ALFRED R. HENDERSON* Bethesda, Maryland

FRED B. ROGERS* *Trenton, New Jersey*

ILZA VEITH* *Tiburon, California*

Elected Members

JACK B. ALPERIN (2004) Galveston, Texas

CHARLES T. AMBROSE (1998) Lexington, Kentucky

BILLY F. ANDREWS (1972) Floyds Knobs, Indiana

STANLEY M. ARONSON* (1987) Providence, Rhode Island

JAMES O. BALLARD (2006) Hummelstown, Pennsylvania

JEREMIAH A. BARONDESS* (1975) New York, New York R. DENNIS BASTRON (2003) Tucson, Arizona

STEVEN L. BERK (1988) Lubbock, Texas

PAUL E. BERMAN (2002) Amherst, Massachusetts

DARRYL BINDSCHADLER (2007) Cheyenne, Wyoming

JOHN S.G. BLAIR (2003) Perth, Scotland

RICHARD K. BLAISDELL* (1973) Honolulu, Hawaii

MICHAEL BLISS (1996) Toronto, Ontario

W. BRYANT BOUTWELL (2005) Houston, Texas

CHARLES S. BRYAN (1994) Columbia, South Carolina

JOHN D. BULLOCK (2008) *Kettering, Ohio*

LEONARD H. CALABRESE (2008) Cleveland Heights, Ohio

DEE J. CANALE (1985) Memphis, Tennessee

RICHARD M. CAPLAN* (1988) Iowa City, Iowa

JOHN C. CARSON (1987) La Jolla, California

MICHAEL W. CATER** (2001) Santa Ana, California

WALTER R. CHITWOOD, JR. (1989) *Greenville, North Carolina*

CLIFTON R. CLEAVELAND (1999) Signal Mountain, Tennessee

EUGENE H. CONNER* (1980) Louisville, Kentucky BARRY COOPER (2002) Dallas, Texas

DAVID K. C. COOPER (2006) Pittsburgh, Pennsylvania

CHRISTOPHER CRENNER (2005) Kansas City, Kansas

JOHN H. CULE* (1973) Ceredigion, Wales

BURKE A. CUNHA (2002) Garden City, New York

MARTIN L. DALTON* (2000) Macon, Georgia

PETER E. DANS* (2002) Cockeysville, Maryland

SAKTI DAS (1998) Lafayette, California

ANAND P. DATE (2002) Muscat, Oman

ALLAN J. DENNIS, JR. (2005) Augusta, Georgia

NICHOLAS DEWEY (1981) Santa Barbara, California

LAUREL E. DREVLOW (2006) Lake Elmo, Minnesota

JACALYN M. DUFFIN (1998) Glenburnem, Ontario

PAUL G. DYMENT* (1982) Topsham, Maine

GEORGE C. EBERS (1985) Oxford, England

RICHARD EIMAS (1986) Reston, Virginia

ARNOLD EINHORN (2002) Chevy Chase, Maryland

* Emeritus ** Associate

MICHAEL EMMETT (2003) Addison, Texas

LYNN C. EPSTEIN (1999) Bristol, Rhode Island

JONATHON ERLEN (2002) Pittsburgh, Pennsylvania

WILLIAM H. FEINDEL* (1977) Montreal, Quebec

ANDREW Z. FENVES (2005) Dallas, Texas

GARY B. FERNGREN (1996) Corvallis, Oregon

JOSEPH J. FINS (2009) New York, New York

REGINALD H. FITZ* (1981) Woodstock, Vermont

EUGENE S. FLAMM (1998) New York, New York

HERBERT L. FRED* (1984) Houston, Texas

GORDON FRIERSON (2009) *Palo Alto, California*

ABRAHAM FUKS (1999) Montreal, Quebec

CONRAD C. FULKERSON (2001) *Durham, North Carolina*

J. MICHAEL FULLER (2009) Greenville, South Carolina

W. BRUCE FYE (1975) Rochester, Minnesota

CHRISTOPHER G. GOETZ (2000) River Forest, Illinois

JOHN T. GOLDEN (1999) Grosse Pointe Woods, Michigan

RICHARD L. GOLDEN* (1980) Centerport, New York JAMES T. GOODRICH (1982) Grandview, New York

RALPH C. GORDON (1998) Park Ridge, Illinois

JOHN L. GRANER (1997) Rochester, Minnesota

STEPHEN B. GREENBERG (1997) Houston, Texas

DAVID R. HABURCHAK (2002) Augusta, Georgia

JAMES F. HAMMARSTEN* (1981) Melrose, Minnesota

WILLIAM HAUBRICH* (1994) La Jolla, California

H. ALEXANDER HEGGTVEIT* (1982) Hamilton, Ontario

PERRY HOOKMAN (1999) Boca Raton, Florida

JOEL D. HOWELL (1987) Ann Arbor, Michigan

ROBERT P. HUDSON* (1970) Olathe, Kansas

J. WILLIS HURST* (1985) Atlanta, Georgia

GARTH HUSTON, JR. (1992) Leucadia, California

EDWARD J. HUTH* (1988) Bryn Mawr, Pennsylvania

BRUCE J. INNES (2001) Macon, Georgia

D. GERAINT JAMES* (1972) London, England

WILLIAM H. JARRETT, II (1998) Atlanta, Georgia

H. MICHAEL JONES (2006) Carrboro, North *Carolina* ROBERT J. T. JOY* (1981) Chevy Chase, Maryland

RICHARD J. KAHN (1981) Tenants Harbor, Maine

ANAND B. KARNAD (1998) San Antonio, Texas

JOHN A. KASTOR (2004) Baltimore, Maryland

JENNIFER KEAM (2002) Portland, Oregon

ELTON R. KERR (1989) Pasco, Washington

JACK D. KEY* (1979) Sandia Park, New Mexico

ROBERT C. KIMBROUGH, III (1987) Lubbock, Texas

PAUL D. KLIGFIELD (1980) New York, New York

ROBERT A. KYLE (2007) Rochester, Minnesota

S. ROBERT LATHAN (2002) Atlanta, Georgia

JOSEPH W. LELLA (1998) London, Ontario

PHILIP W. LEON (1996) Charleston, South Carolina

ROBERT I. LEVY (2007) Baltimore, Maryland

LAWRENCE D. LONGO (1976) Redlands, California

KENNETH M. LUDMERER (1983) St. Louis, Missouri

CHRYSSA N. K. McALISTER (2009) Toronto, Ontario

* Emeritus ** Associate

PAUL R. McHUGH (1990) Baltimore, Maryland

NEIL McINTYRE (1995) Woodford Green, Essex, England

WILLIAM O. McMILLAN, JR. (1995) Wilmington, North Carolina

ROBERT L. MARTENSEN (1997) *Bethesda, Maryland*

ROBERT U. MASSEY* (1980) Avon, Connecticut

ROBERT G. MENNEL (1999) Dallas, Texas

M. ALAN MENTER (2004) Dallas, Texas

PAMELA J. MILLER (2003) Montreal, Canada

J. MARIO MOLINA (2008) South Pasadena, California

MICHAEL E. MORAN (2004) Palm City, Florida

DANIEL D. MORGAN (2000) Fremont, California

ROBERT H. MOSER* (1974) Chama, New Mexico

SANDRA W. MOSS (2002) Metuchen, New Jersey

PAUL S. MUELLER (2003) Rochester, Minnesota

SEAN B. MURPHY* (2002) Montreal, Quebec

T. JOCK MURRAY (1992) Halifax, Nova Scotia

ANDREW T. NADELL (1986) San Francisco, California

FRANCIS A. NEELON (1992) Durham, North Carolina ROBERT R. NESBIT, JR. (2003) Augusta, Georgia

JOHN NOBLE (1993) Boston, Massachusetts

ROBERT K. OLDHAM (1982) Cape Girardeau, Missouri

MICHAEL F. O'ROURKE (1996) Sydney, Australia

BRUCE R. PARKER (1995) Houston, Texas

CLYDE PARTIN, JR. (1999) Atlanta, Georgia

STEVEN J. PEITZMAN (2002) *Philadelphia, Pennsylvania*

EDMUND D. PELLEGRINO* (1975) Bethesda, Maryland

CLAUS A. PIERACH (1991) Minneapolis, Minnesota

CYNTHIA D. PITCOCK (1992) Memphis, Tennessee

BETH PREMINGER (2002) New York, New York

MABEL L. PURKERSON (2003) St. Louis, Missouri

TONSE N. K. RAGU (1999) Gaithersburg, Maryland

ROBERT E. RAKEL (1983) Houston, Texas

MICHAEL A. E. RAMSAY (2006) Dallas, Texas

P. PRESTON REYNOLDS (1998) *Havre de Grace, Maryland*

C. JOAN RICHARDSON (2008) Galveston, Texas

HARRIS D. RILEY, JR.* (1990) Nashville, Tennessee CHARLES S. ROBERTS (2004) Winchester, Virginia

WILLIAM C. ROBERTS (2000) Dallas, Texas

LOREN A. ROLAK (1995) Marshfield, Wisconsin

GEORGE SARKA (2009) Laguna Hills, California

OM PRAKASH SHARMA* (1985) Alhambria, California

CHRISTOPHER B. SHIELDS (1989) Louisville, Kentucky

BARRY D. SILVERMAN (1997) Atlanta, Georgia

RUSSELL L. SILVERSTEIN (2005) Dallas, Texas

WILLIAM A. SMITH, JR. (2000) El Paso, Texas

WILLIAM A. SODEMAN, JR. (1998) Toledo, Ohio

R. TED STEINBOCK (1994) Louisville, Kentucky

MARVIN J. STONE (1990) Dallas, Texas

ROB H. STONE (2008) West Hills, California

HERBERT M. SWICK (2000) Missoula, Montana

JAMES E. TOOLE* (1976) Winston-Salem, North Carolina

JOHN T. TRUMAN (2000) New York, New York

ROBERT P. TURK (2008) Dayton, Ohio

* Emeritus ** Associate

JOSEPH B. VANDERVEER, JR. (2003) Devon, Pennsylvania

HECTOR O. VENTURA (1999) New Orleans, Louisiana

FERNANDO G. VESCIA* (1986) Palo Alto, California

JOHN W. K. WARD (2003) Abingdon, Oxon, England

C. PETER W. WARREN (1996) Winnipeg, Manitoba THOMAS A. WARTHIN* (1982) *Silverdale, Washington*

ALLEN B. WEISSE* (1997) Springfield, New Jersey

MARC E. WEKSLER (2004) Tenafly, New Jersey

DENNIS K. WENTZ* (2003) Avon, Colorado

JOHN B. WEST* (1995) La Jolla, California W. CURTIS WORTHINGTON (1999) Charleston, South Carolina

BENJAMIN CODY WRIGHT (2000) Whittier, California

JAMES B. YOUNG (1992) Cleveland, Ohio

* Emeritus ** Associate



Deceased Members of the American Osler Society

Honorary Members

WILBURT C. DAVISON (1892-1972)

WILDER G. PENFIELD (1891-1976)

EMILE F. HOLMAN (1890-1977)

GEORGE W. CORNER (1899-1981)

TRUMAN G. BLOCKER, JR. (1908-1984)

LLOYD G. STEVENSON (1918-1988)

HAROLD N. SEGALL (1897-1990)

EDWARD H. BENSLEY (1906-1995)

H. ROCKE ROBERTSON (1912-1998)

ALASTAIR H. T. ROBB-SMITH (1908-2000)

Charter Members

PAUL DUDLEY WHITE (1886-1973)

THOMAS M. DURANT (1905-1977)

WALTER C. ALVAREZ (1884-1978)

CHAUNCEY D. LEAKE (1896-1978)

EARLE P. SCARLETT (1896-1982)

SAMUEL X. RADBILL (1901-1987)

HOWARD L. HOLLEY (1914-1988)

WILLIAM B. BEAN (1909-1989)

R. PALMER HOWARD (1912-1990)

RAYMOND D. PRUITT (1912-1993)

THOMAS F. KEYS (1908-1995)

CECILE DESBARATS (1907-1998)

A. McGEHEE HARVEY (1911-1998)

WILLARD E. GOODWIN (1915-1998)

GEORGE T. HARRELL (1908-1999)

EDWARD C. ROSENOW, JR. (1909-2002)

WILLIAM K. BEATTY (1926-2002)

PALMER H. FUTCHER (1910-2004)

JOHN P. McGOVERN (1921-2007)

EARL F. NATION (1910-2008)

VICTOR A. McKUSICK (1921-2008)

CHARLES G. ROLAND (1933-2009)

WILLIAM C. GIBSON (1914-2009)

Elected Members

ARTHUR D. KELLY (1901-1976)

MARSHALL N. FULTON (1899-1977)

I. N. DUBIN (1913-1981)

GEORGE E. GIFFORD, JR. (1930-1981)

LAWRENCE C. McHENRY, JR. (1929-1985)

GEORGE E. BURCH (1910-1986)

K. GARTH HUSTON (1926-1987)

GORDON W. JONES (1915-1987)

CHARLES S. JUDD, JR. (1920-1987)

ROBERT J. MOES (1905-1988)

S. GORDON ROSS (1899-1990)

MAURICE A. SCHNITKER (1905-1990)

JAMES V. WARREN (1959-1990)

NICHOLAS E. DAVIES (1926-1991)

PETER D. OLCH (1930-1991)

JOHN Z. BOWERS (1913-1993)

WILLIAM B. SPAULDING (1922-1993)

LEWIS THOMAS (1913-1993)

RODERICK K. CALVERLEY (1938-1995)

Deceased Members of the American Osler Society

DYKES CORDELL (1944-1996)

LUTHER C. BECK (1909-1996)

HASKELL F. NORMAN (1915-1996)

JOHN W. SCOTT (1915-1997)

IRVING A. BECK (1911-1997)

THOMAS A. WARTHIN (1909-1997)

EDWARD W. HOOK, JR. (1924-1998)

JAMES A. KNIGHT (1918-1998)

NORMAN SCHAFTEL (1914-1998)

DANIEL B. STONE (1925-1998)

ALVIN E. RODIN (1926-1999)

GARFIELD J. TOURNEY (1927-1999)

R. CARMICHAEL TILGHMAN (1904-1999)

STANLEY W. JACKSON (1920-2000)

SAUL JARCHO (1906-2000)

LLOYD W. KITCHENS, JR. (1946-2001)

ROBERT E. BEAMISH (1916-2001)

ARNOLD G. ROGERS (1925-2001)

FREDERICK W. BARNES (1909-2001)

WALTER D. HANKINS (1910-2001)

ROY SELBY (1930-2002)

E. CARWILE LEROY (1933-2002)

ROBERT M. KARK (1911-2002)

CARTLETON B. CHAPMAN (1915-2002)

DAVID M. MUMFORD (1927-2003)

ALEX SAKULA (1917-2003)

FREDERICK B. WAGNER, JR. (1916-2004)

CLARK T. SAWIN (1934-2004)

A. BENEDICT SCHNEIDER (1914-2004)

STEWART G. WOLFE (1914 - 2005)

G. S. T. CAVANAGH (1923-2005)

G. R. PATERSON (1919-2005)

W. WATSON BUCHANAN (1930-2006)

CHESTER R. BURNS (1937-2006)

ROBERT AUSTRIAN (1916-2007)

CHARLES F. WOOLEY (1930-2008)

M. GEORGE JACOBY (1920-2008)

MARK E. SILVERMAN (1939-2008)

ARTHUR GRYFE (1935-2009)

LEON Z. SAUNDERS (1920-2009)

HOWARD B. BURCHELL (1908-2009)



Charles H. Mayo, William W. Mayo, and William J. Mayo



THE AMERICAN OSLER SOCIETY

was 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 Sir 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.