

Anesthesia History Association



19th Annual Spring Meeting
May 2-4, 2013 • Hartford, CT

19th Annual Spring Meeting Anesthesia History Association

May 2 – 4, 2013

Hartford Marriott Downtown,
200 Columbus Boulevard, Hartford, CT 06103

Program Chairs

Manisha S. Desai, M.D., Clinical Associate Professor of Anesthesiology, University of Massachusetts Medical School, UMass Memorial Health Care, Worcester, MA

Sukumar P. Desai, M.D., Assistant Professor of Anaesthesia, Harvard Medical School, Brigham and Women's Hospital, Boston, MA

Overview

The program is intended to present work related of historical events and individuals who contributed to advances in anesthesia, medicine, ethics, and the allied health sciences. Meetings of the Anesthesia History Association offer a mechanism for celebrating, recognizing, and documenting significant contributions in these fields.

Target Audience

This meeting is designed primarily for physicians, nurses, medical students, historians and anyone interested in medical history.

Objectives

At the completion of this meeting, participants should be able to:

1. Learn about contributions made by individuals to the development of anesthesia.
2. Learn about key events related to history of anesthesia.
3. Develop useful perspectives on ethics as related to medical experimentation during World War II.
4. Develop new skills related to research methodology as applied to historical investigations.

Director for Continuing Medical Education

Sivasenthil Arumugam, M.D., Department of Anesthesiology, Saint Francis Hospital and Medical Center, Hartford, Connecticut

Docents for the History of Anesthesia Tour

William A. MacDonnell, D.D.S., Dentist Anesthesiologist, Assistant Clinical Professor, University of Connecticut School of Dental Medicine, West Hartford, Connecticut

Antonio Aponte-Feliciano, M.D., Assistant Professor of Anesthesiology, University of Massachusetts Medical School, Worcester, Massachusetts

Accreditation for Physicians

Saint Francis Hospital & Medical Center is accredited by the Connecticut State Medical Society to sponsor continuing medical education for physicians. This Conference has been approved by Saint Francis Hospital & Medical Center for a maximum of 16.5 hours of Category 1 credit towards the AMA Physician's Recognition Award™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Invited Speakers (in order of presentation)

James C. Rouman, M.D., Assistant Professor of Anesthesiology (Retired), University of Connecticut School of Medicine – Hartford Hospital Hartford, Connecticut

Rafael A. Ortega, M.D., Professor of Anesthesiology, Boston University School of Medicine, Boston, Massachusetts

Sherwin B. Nuland, M.D., Clinical Professor of Surgery (Retired), Yale School of Medicine New Haven, Connecticut

Julie M. Fenster, B.S., Author, *Ether Day*

Casey B. Wiley, M.D., Winner of the 2012 C. Ronald Stephen, MD Resident Essay Competition. Department of Anesthesiology, University of Texas Health Science Center, San Antonio, Texas

Melvin E. Smith, B.A., M.L.S., Reference Librarian, History & Genealogy, Connecticut State Library, Hartford, Connecticut

Laura G. Prescott, B.A., Professional genealogist, researcher, writer, and speaker.

Melissa J. Grafe, Ph.D., John R. Bumstead Librarian for Medical History, Cushing/Whitney Medical Library, Yale University, New Haven, Connecticut

On Behalf of the Anesthesia History Association, the Program Directors gratefully acknowledge financial support received from the following individuals, departments, and institutions:

Lance J. Lichtor, M.D.

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Department of Anesthesiology, Boston University School of Medicine, Boston, Massachusetts

International Anesthesia Research Society

Wood Library-Museum of Anesthesiology

Connecticut State Society of Anesthesiologists

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19th Annual Spring Meeting of the Anesthesia History Association

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200 Columbus Boulevard, Hartford, Connecticut 06103

Program

Thursday May 2, 2013

- 8:00 – 15:30 **History of Anesthesia Tour. Docents - William MacDonnell, D.D.S. and Antonio Aponte-Feliciano, M.D.**
- 15:30 – 16:30 Meeting of the Council (Anesthesia History Association)
- 17:45 – 21:30 **Welcome Reception-Cruise**

Friday May 3, 2013

- 7:45 - 8:00 **Welcome and Introductory Remarks**
Sukumar P. Desai, M.D., and Bradley E. Smith, M.D.
- 8:00 - 8:30 *Hartford: A Marriage of History and Place.*
Invited Speaker - James C. Rouman, M.D.
Introduction by Alan M. Harvey, M.D.

Session 1A

Moderator - Susan A. Vassallo, M.D.

Theme - AHA Origins, Menczer, Chloroform

- 8:30 - 9:00 *You Are There! History of the Anesthesia History Association.*
Selma H. Calmes, M.D.
- 9:00 - 9:30 *Remembering Horace Wells with Leonard Menczer.*
John A. Wildsmith, M.D., F.R.C.A.
- 9:30 - 10:00 *When and Where did J. Julian Chisolm, Inventor of the Nasal Chloroform Inhaler, Witness His First Chloroform Anesthetic?*
Raymond C. Roy, M.D., Ph.D.

Session 1B

Moderator - Douglas R. Bacon, M.D.

Theme - Horace Wells

- 8:30 - 9:00 *Preparation for Arguing Priority in General Anesthesia's Discovery?: The long-lost Debating Club Proceedings Handwritten by Horace Wells.*
By George S. Bause, M.D., M.P.H.

9:00 - 9:30 *Horace Wells: An Assessment of his life as Bipolar Personality Disorder.*
Ramon F. Martin, M.D., Ph.D.

9:30 - 10:00 *Horace Wells' Death Mask: From Connecticut to Kansas.*
Anthony L. Kovac, M.D.

10:00 – 10:15 **COFFEE BREAK**

Session 2A **Moderator - George S. Bause, M.D., M.P.H.**
Theme - Notable Names, Ethics, Publication Trends

10:15 - 10:45 *Background to Notable Names in Anaesthesia.*
J. Roger Maltby, M.B., B.Chir., F.R.C.A., F.R.C.P.

10:45 - 11:15 *The Doctors' Trial at Nuremberg: Ethics, Causes, and Lessons.*
Anne L. Craig, M.B.Ch.B., F.A.N.Z.C.A.

11:15 – 11:45 *Research Trends in Anesthesiology: A Geographical Review.*
Christian Peccora, M.D.

11:45 - 12:15 *Publication Trends for Articles Related to History of Anesthesia.*
Avenir Mulita, M.D.

Session 2B **Moderator - Mark E. Schroeder, M.D.**
Theme - Films and Novels

10:15 - 10:45 *Learning History of Anesthesia Through Popular Literature.*
Bronwyn Cooper, M.D.

10:45 - 11:15 *Physicians' Negative Portrayal in Film.*
Molly B. Perini, B.A.

11:15 – 11:45 *The Portrayal of Anesthesiologists in Fiction: False Impressions Causing Misrepresentations.*
Molly B. Perini, B.A.

11:45 - 12:15 *Strange Case of Dr. Jekyll and Mr. Hyde – Was Robert Louis Stevenson Inspired by Horace Wells?*
Rini A. Vyas

12:15:13:00 **Lunch and 3rd Patrick Sim Memorial Lecture**
The Ether Monument.

Invited Speaker – Rafael A. Ortega, M.D.
Introduction by Karen Bieterman, M.L.I.S.

Session 3A

Moderator - David B. Waisel, M.D.

Theme – Anesthesia Theory, Respiration, Monitoring

- 13:00 - 13:30 *How Anesthesia took the Wrong Turn in the Yellow Brick Road.*
Lewis S. Coleman, M.D.
- 13:30 - 14:00 *Thirty Years lost in Anesthesia Theory.*
Lewis S. Coleman, M.D.
- 14:00 - 14:30 *Evolution of Modern Airway Management.*
Analee Milner, M.B.B.Ch., F.F.A. (SA), F.R.C.P (C)
- 14:30 - 15:00 *Evolution of Respiratory Gas Monitoring Standards.*
Michael B. Jaffe, Ph.D.

Session 3B

Moderator - David J. Wilkinson, M.B.,B.S., F.R.C.A., Hon F.C.A.R.C.S.I.

Theme - Biographical Investigations

- 13:00 - 13:30 *Hua Tuo and Mafeisan.*
Kathy D. Schlecht, D.O.
- 13:30 - 14:00 *The Work of William S. Halsted: From Local Anesthesia to Regional Anesthesia.*
Vijay Patel, M.D.
- 14:00 - 14:30 *William K. Hamilton: A Leaf on the Waters Tree.*
Franklin L. Scamman, M.D.
- 14:30 - 15:00 *The Legacy of Betty Grundy.*
Kathy D. Schlecht, D.O.

15:00-15:15

COFFEE BREAK

Session 4A

Moderator - Martin Giesecke, M.D.

Theme - Certification, Pediatrics, Innovation

- 15:15 - 15:45 *Milestones in Board Certification.*
David B. Waisel, M.D.
- 15:45 - 16:15 *History of Pediatric Anesthesia Timeline: A Multimedia Approach to Documenting Pediatric Anesthesia History.*
Christine L. Mai, M.D.
- 16:15 - 16:45 *Early Use of Epidural Analgesia at Peter Bent Brigham Hospital.*
Robert N. Pilon, M.D.

Session 4B

Moderator - Anthony L. Kovac, M.D.

Theme - Museums, Structures, and Historic Sites

15:15 - 15:45

Homes Associated with WTG Morton – His Birthplace, Waters-Morton House, and Etherton Cottage.

Mary A. Camosse, R.N. and Kathleen J. Menard, R.N.

15:45 - 16:15

Search Function of Books Stored in The Japanese Museum of Anesthesiology.

Hirosato Kikuchi, M.D., Ph.D.

16:15 - 16:45

A Lost Monument to Anaesthesia in Chicago.

David J. Wilkinson, M.B.,B.S., F.R.C.A., Hon F.C.A.R.C.S.I.

16:45 - 17:00

Announcements

Sukumar P. Desai, M.D.

Session 5

18:00-19:00

Reception

19:00-19:45

Special Guest Lecture by Sherwin B. Nuland, M.D.

Introduction by Douglas R. Bacon, M.D.

19:45-21:00

Dinner

Saturday May 4, 2013

7:45 - 8:00

Introductory Remarks

Sukumar P. Desai, M.D.

8:00 - 8:30

Invited Speaker, and author of *Ether Day*

Julie M. Fenster, B.S.

Introduction by Manisha S. Desai, M.D.

Session 6A

Moderator - Antonio Aponte-Feliciano, M.D.

Theme - Chloroform, Eponyms, Innovation

8:30 - 9:00

How Did J. Julian Chisolm Administer Chloroform Before He Invented His Inhaler?

Raymond C. Roy, M.D., Ph.D.

9:00 - 9:30

Eponyms of U.S. Origin.

Matthew Giuca, M.D.

9:30 - 10:00

The First Successful Ligation of a Patent Ductus Arteriosus.

Mark A. Rockoff, M.D.

Session 6B

Moderator - Robert A. Strickland, M.D.

Theme - Mythology, Anesthetic actions, Poisons

8:30 - 9:00

Prometheus in Our Midst.

John H. Demenkoff, M.D.

9:00 - 9:30

Coagulation of the Protoplasm as a Mechanism of Anesthesia: Seventy Years of Research in East and West in the footsteps of Claude Bernard. A Contribution Occasioned by his 200th Birthday.

Misha Perouansky, M.D.

9:30 - 10:00

Pretty Poisons & Powerful Anesthetics: Selected Botanicals from the Wood Library-Museum of Anesthesiology.

Susan A. Vassallo, M.D.

10:00 - 10:15

COFFEE BREAK

Session 7

Moderator - Bradley E. Smith, M.D.

Theme - Winner Resident Essay Contest, Death under Chloroform, Discovery of Oxygen

10:15 - 10:45

Anesthesia and the Lone Star State.

Casey B. Wiley, M.D.

Winner of the C. Ronald Stephen, MD Resident Essay Competition

10:45 - 11:15

Hannah Greener and Chloroform. A Better Explained Death.

Raymond C. Roy, M.D., Ph.D.

11:15 - 11:45

A Revised History of the Discovery of Oxygen.

John W. Severinghaus, M.D.

11:45 - 12:00

Concluding Remarks

Sukumar P. Desai, M.D., and Bradley E. Smith, M.D.

Session 8

Optional Course for Registered Delegates Research Methods in History Workshop

- 12:00 - 12:45 Lunch
- 12:45 – 13:30 *Genealogy Research in Connecticut.*
Melvin E. Smith, B.A., M.L.S.
- 13:30 – 14:15 *Timelines: Placing Your Heritage in Historical Perspective.*
Laura G. Prescott, B.A.
- 14:15 – 15:00 *Research Methods and Resources in the History of Medicine.*
Melissa J. Grafe, Ph.D.
- 15:00 – 15:15 **COFFEE BREAK**
- 15:15 – 16:00 *Framing Historical Questions: From Idea to Research Project.*
Melissa J. Grafe, Ph.D.
- 16:00 – 16:45 *Publishing Your Work.*
Julie M. Fenster, B.S.
- 16:45 – 17:00 **Discussion and Concluding Remarks**
Sukumar P. Desai, M.D.

Thursday, May 2; 12:00 – 13:00

History of Anesthesia Tour

At the Connecticut Historical Society, Hartford, Connecticut

Contributions of the Horace Wells Club of Connecticut; Founded in 1894 on the Fiftieth Anniversary of Horace Wells' Discovery of Anesthesia in Hartford 1844
William A. MacDonnell, D.D.S.

The Horace Wells Club of Connecticut was founded in 1894 to honor Horace Wells' Discovery of Anesthesia in Hartford. The club coordinated the placement of a bronze tablet marking the site of Wells' Discovery. Dr. James McManus, a Hartford dentist, who championed Wells' contribution to humanity, was a founder of the Horace Wells Club. In 1875, McManus with two Hartford physicians, Hunt and Sterns, convinced the City of Hartford and State of Connecticut to contribute \$10,000 for the statue of Horace Wells in Bushnell Park. The Wells Statue was the first statue in the first public park in the United States. McManus was present when the newly formed American Dental Association declared Wells the Discoverer of Anesthesia in 1864. The American Medical Association followed in 1870 and 1944 declaring Wells Discoverer of Anesthesia. December 7, 2013 will be the 119th Wells Club meeting honoring Horace Wells. The Wells Club coordinated both Wells centennial (1944) and the Sesquicentennial (2004) celebrations honoring Wells' Discovery of Anesthesia.

The Wells Award is granted to distinguished physician or dentist anesthesiologists including Drs. Little, Vandam, Barash, Richter, Dougherty, Conrad, Phero, Rosenberg, Gross, Bennett, and Malamed.

In the 1960's Dr. Alfred Gengras and his son E. Clayton Gengras started the Horace Wells Trust with a contribution of \$50,000. The Trust has granted several hundred scholarships to Connecticut dental students. Multiple grants have been made to help increase access to dental care in Connecticut as well as third world countries. The Wells Trust restored the Tiffany Wells' window in the Center Church. In 2000 the Wells Club helped with the restoration and rededication of the Wells' Statue in Bushnell Park. In 2004 the Wells Club raised \$55,000 for the restoration and replacement of the missing "angels" of the Wells Memorial

Assistant Clinical Professor OMFS & Behavioral Science, University of Connecticut School of Dental Medicine

in Cedar Hill Cemetery.

Learning Objectives:

1. The participant will understand the contributions made by the Horace Wells Club of Connecticut honoring Horace Wells' Discovery of Anesthesia in the past one hundred and nineteen (119) years.
2. The participant will identify how a small organization can perpetuate the importance of anesthesia and memory of one of Connecticut's greatest humanitarians to the public and the profession through scholarships, grants and preservation of the Wells' Statue and Memorial.

NOTES:

Hartford: A Marriage of History and Place

James C. Rouman, M.D.

Although the history of modern anesthesia is beset with disparate issues of discovery both in the United States and abroad, the story relative to the growth and development of the specialty of anesthesiology in America is more clearly defined. Pursuant to that narrative and perhaps less appreciated, is the role which specific hospitals and clinics played in the training of anesthesiologists during the formative years of the specialty, as opposed to what is now regarded as normative following the ubiquitous emergence of quality university programs. A place of historical significance relative to early anesthesia training and to the grounding of the specialty in America is the city of Hartford, which not only proudly honors its native son, Horace Wells, but which, over time, has also given the specialty four presidents of the American Society of Anesthesiologists, two presidents of the American Board of Anesthesiologists, and many other physicians who have contributed to the specialty in important, though less conspicuous ways. Central to the city's unique historical role are Hartford Hospital and the pioneering efforts of the founder of its anesthesia department, Dr. Ralph M. Tovell. Enumerating the contributions of this important figure in the context of the history of anesthesia in America serves as a prelude to recalling memories of his well-known disciple, Dr. David Mason Little, the person honored annually by the Anesthesia History Association with the granting of a prize bearing his name.

Learning Objectives:

1. Early Specialty Training in non-university settings.
2. Two Local Heroes: In Praise of Both

Friday, May 3; 8:00–8:30

NOTES:

Moderator: Susan A. Vassallo, M.D.

*AHA Origins,
Menczer, Chloroform*

You Are There! The History of the Anesthesia History Association (AHA)

Selma Harrison Calmes, M.D.

A popular TV series hosted by Walter Cronkite in the 1950s took viewers to important historical events, such as the discovery of anesthesia. Its title was “You are There!” and it existed in various formats until 1972. This paper uses the “you are there” theme to discuss the founding of the Anesthesia History Association. Since this is a meeting about writing history, it will also ask the fundamental questions of history: *Why* did this happen? *Why* did it happen *then*? *Who* was involved, and *why* them? And *what happened next*? It ends with the question, “what next,” a question that historians should always think about. It is appropriate to discuss the AHA’s founding because this is our 30th year of existence; our first official meeting was in 1983 in Atlanta.

Our specialty blossomed with the needs of WW II. Enough had been accomplished by the early 1980s for anesthesiologists to start to reflect on our progress, and many of us did, although there was no forum to do this. We found each other informally. Interestingly, this was a world-wide phenomenon. Europeans (Dr.s Wilhelm Erdmann and Josef Ruprecht of Erasmus University in Rotterdam) stepped up to organize a meeting on anesthesia history in Rotterdam in May, 1982. This was the first IHSA. An amazing number of anesthesiologists from around the world (including Australians, Japan and Eastern Europeans) appeared. Many leaders of the specialty were present: Sir Robert MacIntosh, William Mushin, J. Alfred Lee, John Severinghaus and Poul Astrup, among many others. Their presence and the papers they presented demonstrated their interest in reflecting on “where have we been? And, “what next?”

The papers presented were published, and many are still of interest. The meeting also led to organizations for anesthesia history, and I’m proud to say we were the first. European meetings always have a fancy banquet and this one was preceded by a reception at Rotterdam’s City Hall, a glorious building. Many were dressed in evening wear and waiters in fancy dress passed by with silver trays filled with little glasses of Dutch gin. The glasses were small, and the drink went

Co-founder of the AHA, (with Drs. Rod Calverley and Jacob Mainzer) Department of Anesthesiology, The David Geffen School of Medicine at University of California at Los Angeles, Los Angeles, California

down all too easily. Soon, everyone was very happy. Jacob Mainzer (Albuquerque), Rod Calverley (San Diego) and I (Los Angeles) found ourselves together at one point. Jacob made the remark, “We should organize” and Rod and I readily agreed, perhaps thinking of having similar parties nearer home.

After returning to the U.S., we began work. Rod knew everyone, and we made a list of people with possible interest and sent query letters. The response was overwhelmingly positive. Then, we sent a questionnaire about possible structure and functions. Fifty-one of the 79 questionnaires were returned, an amazing 66% return rate, and 50/51 said we should organize! So, many anesthesiologists were thinking of history at the same time. We set up an organizational meeting at the next ASA meeting, in 1982. Forty-seven attended. The name was tentatively chosen, and Rod and I were elected Co-Chairs. A committee was appointed to write Bylaws. The first AHA Newsletter appeared in December 1982. Announcements were placed in the ASA newsletter, and soon the mailing list was 175.

The first official meeting was in Atlanta in 1983. Retired Mayo Clinic Librarian Tom Keys, author of the first significant modern text on the history of anesthesia, was the first Honorary Member. The tradition of the before-dinner toast to Dr. Ralph Waters, the father of academic anesthesia, using glasses of water, was begun. An Aqualumnus always gave the toast until recently.

Numerous people have helped the AHA survive. Vital people were Debbie Lipscomb (wife of Denham Ward of FAER) who produced the newsletter for years, and A. J. Wright (librarian for the UAB Anesthesia Department) who maintained our early web site and provided helpful searches in the days before Google. AHA President Doris Cope recruited her secretary Debbie Bloomberg for the many secretarial duties and newsletter production, and she did a heroic job. If time allows, we will identify future issues for the organization.

Learning Objectives:

1. Review how the Anesthesia History Association was founded.
2. Discuss why the AHA was formed when it was.
3. Note people who contributed to AHA and what they did.

NOTES:

Moderator: Susan A. Vassallo, M.D.

*AHA Origins,
Menczer, Chloroform*

Remembering Horace Wells with Leonard Menczer

J. A. W. Wildsmith, M.D., F.R.C.A.

Background: In 1983 the author started a sabbatical at the Brigham & Women's Hospital in Boston, primarily to undertake laboratory research on local anesthetics, but with the secondary intention of visiting the 'shrines' of anaesthesia in New England. After advice from Leroy Vandam, one of the places visited was the Historical Museum of Medicine and Dentistry in Hartford, Connecticut whose curator, Leonard Menczer, was an avid supporter of Horace Wells' claim to be the true 'discoverer' of anaesthesia.

Aim: The aim of the paper is to draw attention to the work of Menczer in promoting both the Museum and Wells' claim to priority.

Method: Review of personal records and relevant literature.

Narrative: An initial enquiry about museum opening times for a visit was met with the response that the museum would be open when I visited! This led, first, to a guided tour of the museum's artifacts and all the sites associated with Wells in and around Hartford. Second, our discussions resulted in collaboration on a paper on Wells for the dental literature¹, and then the search for the background to a certificate in the Museum's collection (and originally sent from England) of previously unknown provenance².

A dentist by profession, Menczer's career was in public health, starting with water supply fluoridation, but then pursuing a range of projects. He also worked tirelessly to develop the Hartford museum and to achieve full recognition for Wells. Menczer was a 'direct' character, frustrated by delay and those who did not share his views, especially in regard to Wells and Hartford's priority over Morton and Boston, not something which endeared him to that city's medical establishment! He had a wide circle of contacts (I was but one) spread around the World who were regularly entreated to write to third parties to support his latest project. The biggest of these was an attempt to persuade the US postal service to issue a sesquicentennial stamp in 1994, but bureaucracies do not respond well to 'direct' approaches and this one failed, sadly not long before his death.

*Professor Emeritus, University of Dundee, Ninewells Hospital & Medical School,
Dundee, UK*

Fortunately, his successes were many, the most significant being a collection of essays on Wells co-edited with Richard Wolfe³. However, perhaps the most startling was to act the part of Wells during the award of a posthumous Doctorate in Dental Surgery by the Baltimore College of Dental Surgery – this taking place in the Ether Dome of all places!

References:

1. Menczer LF, Mittleman M, Wildsmith JAW. Horace Wells. *Journal of the American Dental Association* 1985; 110: 773-6
2. Wildsmith JAW, Menczer LF. A British footnote to the life of Horace Wells. *British Journal of Anaesthesia* 1987; 59: 1067-9
3. Wolfe RJ, Menczer LF. *I Awaken to Glory*. Boston: Boston Medical Library 1994

Learning Objectives:

1. To draw attention to the work of the late Leonard Menczer in promoting Horace Wells
2. To emphasize the 'international' importance of the historical artifacts held in Hartford

NOTES:

Moderator: Susan A. Vassallo, M.D.

*AHA Origins,
Menczer, Chloroform*

When and Where Did J. Julian Chisolm, Inventor of the Nasal Chloroform Inhaler, Witness His First Chloroform Anesthetic?

**Raymond Roy, M.D., Ph.D.,¹ Mark Erickson,² M.D.,
Annie Jenkins,³ Debra Chisolm Ruhlman⁴**

Background: J. Julian Chisolm (1830-1903) is well-known as the author of “A Manual of Military Surgery for the Use of Surgeons in the Confederate Army,” the inventor of an efficient nasal inhaler to administer chloroform anesthesia in the field during the American Civil War, and a founding father of American Ophthalmology, who was an early advocate of local anesthesia with cocaine for eye surgery. In March 1850 he graduated from the Medical College of the State of South Carolina. Wide-spread clinical application of inhalational anesthesia occurred after 1846 for ether and 1847 for chloroform. Ether is the most likely anesthetic he would have observed administered in medical school (1). Ether was the anesthetic of choice in the Mexican-American war (1846-48); chloroform, in the Crimean War (1853-56) and the Civil War (1861-65) (2). When and under what circumstances did Chisolm first observe the administration of chloroform anesthesia? *“In accordance with the established custom of young professional debutants in this country, Dr. Chisolm went abroad to prosecute his medical studies in Paris (3).”* We hypothesize that it occurred during his first trip to Europe in 1850-51.

Methods: In 1851 Chisolm and two Charleston friends, William Edward Aiken, also a recent medical school graduate, and his brother David Wyatt Aiken, met in Paris to travel together through Europe. All three kept handwritten journals. Chisolm’s is lost, but that of W. Edward Aiken survives as an heirloom of one of the authors (AJ). This journal documents the activity of the trio from June 14 – August 5, 1851 (4). The journal entries begin in Paris.

Results: It is not clear whether Aiken travelled with Chisolm from the US or met him in Paris (more likely) where both ether and chloroform were well established. The first recorded use of chloroform in Paris was on November 23, 1847

¹Professor of Anesthesiology, Wake Forest School of Medicine; ²Resident in Anesthesiology, Wake Forest School of Medicine; ³Great granddaughter of William Edward Aiken; ⁴Great great granddaughter of J. Julian Chisolm

(1). However, we have little information regarding Chisolm's medical experience in Paris. But in Berlin the journal entry of August 4, 1851 is significant. "We then returned to our hotel for a short time and at 2 o'clock went to the clinique of the great surgeon Langenbeck." "His second patient was a little child with a distorted femur. It seemed as if the thigh had at one time been broken and bad union had taken place, leaving the leg somewhat shorter than its fellow and the bone crooked and prominent. The little patient was put under chloroform and the bone was forcibly straightened and the leg extended as high as practicable to the proper length." Later in Berlin "Dr. Chisolm left us here as he took his route to Gollingen where he expected to remain a month."

Conclusions: A candidate for the first chloroform anesthetic witnessed by Dr. J. Julian Chisolm is presented.

References:

- 1 Wedgwood JJ, Spence AA. The rise and fall of chloroform anaesthesia. *Proceedings of the Royal College of Physicians Edinburgh* 1997; 27:575-91
- 2 Albin MS. The use of anesthetics during the Civil War, 1861-1865. *Bulletin of Anesthesia History* 2001; 19:1, 4-11, 26
- 3 *Virginia Medical Monthly* 1879; V:51; (4) Aiken WE. Personal journal. 1851

Learning Objectives:

1. Discuss Chisolm's most likely anesthetic experience while he was in training.
2. Propose a candidate for his first witnessed chloroform anesthetic.

NOTES:

Moderator: Douglas R. Bacon, M.D.

Horace Wells

Preparation for Arguing Priority in General Anesthesia’s Discovery? — The Long-Lost Debating Club Proceedings Handwritten by Horace Wells

George S. Bause, M.D., M.P.H.

Which 19th-century American “discovered” general anesthesia? The debate usually revolves around two dentists, Dr. Horace Wells and William T. G. Morton, M.D. (*h.c.*); and around two physicians, Crawford W. Long, M.D. and Charles T. Jackson, M.D. Of these four claimants as discoverers of anesthesia, dentist Horace Wells was the least formally educated and was awarded no academic degrees in his lifetime. Regarded, like Charles Jackson, as an intellectual genius, Wells passed through a series of excellent private schools and academies in Massachusetts and New Hampshire before completing his two years in dental preceptorship(s) in Boston.(1) Having never attended a university or a professional college, how then did Wells manage to argue his case against Morton, Jackson, and Long— all of whom attended or completed post-secondary educational institutions?

An answer may now have been revealed within a recent curatorial acquisition for the Wood Library-Museum of Anesthesiology. While bidding in his capacity as the WLM Honorary Curator, the author won at auction a handwritten volume from a vendor in Baltimore, Maryland (who had recovered the item from a New Hampshire family with links to Walpole, New Hampshire). This fragile volume is titled *A Record of the proceedings of the Philologian Society; together with the Constitution, and By-laws &c.* This item details proceedings of the debating society formed by students during the inaugural 1831-32 session of the Walpole Academy in Walpole, New Hampshire.(2) Dated October 6, 1831, the volume’s initial entry referred to the student debating organization as the “Philologian Society.” As students phased out of the Society, their replacements voted a mere 10 weeks later— on December 12— to rename the organization the “Social Union.”

Young Horace Wells was eventually elected Secretary of the debating society, so not surprisingly this newly uncovered piece of Wellsiana is filled with signatures

Honorary Curator, Wood Library-Museum of Anesthesiology, Park Ridge, Illinois Schools of Medicine and Dental Medicine, Case Western Reserve University, Cleveland, Ohio

by Wells. Indeed, there are whole entries handwritten by young Horace. Debate topics ranged through all sorts of contemporary concerns, and young Wells had an astonishing success rate in winning debates in which he participated. In later years— had his mental health not suffered— could Horace Wells’ intellectual genius and debating prowess have won him the most important debate of his life, the controversy over “who discovered general anesthesia”?

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Learning Objectives:

1. Define how educational opportunities prepared Horace Wells professionally.
2. List debate topics which may have prepared Horace Wells for arguing his priority in discovering general anesthesia.

NOTES:

Moderator: Douglas R. Bacon, M.D.

Horace Wells

Horace Wells: An Assessment of His Life as Bipolar Personality Disorder

Ramon F. Martin, M.D., Ph.D., Sukumar P. Desai, M.D.

Problem: Horace Wells was a brilliant dentist, whose life's work was to provide care to not only adults, but also children. He espoused preventive dental care, crafted dental instruments as well as prosthetic devices and used gold as fillings. He taught his craft to aspiring dentists and nurtured them. His concerns about the discomfort that his patients felt led him to explore and be the first to use nitrous oxide to achieve analgesia/anesthesia for painless dentistry. Outside of dentistry, he also had interests in ornithology, fine arts (acquisition of paintings) and developing/constructing household devices.

On the other hand, after the failed demonstration of nitrous oxide for a dental extraction to students at the Massachusetts Medical College at Harvard University, Horace Wells closed his practice for several months. There were two other occasions where he closed his practice for a brief period of time and moved to another location. His self experimentation with nitrous oxide was followed by ether and then chloroform, to which he became addicted. His suicide followed a period where he closed his practice in Hartford, Connecticut moved to New York City and opened a practice to purportedly relieve pain for patients during procedures. Instead, he spent his time inhaling chloroform. His interest and exploration of areas other than dentistry, while intense, was short-lived.

A retrospective psychiatric analysis of Horace Wells' life was undertaken to better understand his actions, particularly his addiction and suicide.

Methods: Historical texts about Ether Day, a biography of Horace Wells and his day book/diary were used to explore the details of Wells' life. The Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV) classification of Bipolar Personality Disorder, as well as clinical reviews about Bipolar Personality Disorder were used to frame Wells' life.

Results and Findings: Bipolar Personality Disorder is characterized by mood swings (from mania or hypomania to depression), elevated energy levels, cognition and mood, with or without depressive episodes. It is also associated with substance abuse and suicidal ideation.

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Conclusion: Bipolar personality disorder contributed to Horace Wells' hypomanic drive to be innovative in dentistry and other fields. This explains as well the periods of depression when he would retreat and shut down his dental practice. Bipolar personality disorder possibly contributed to his self-experimentation with inhalation agents, addiction to chloroform and eventual suicide.

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2. Wolfe, RJ and Menczer, LF, *I Awaken to Glory*, 1994, Boston, MA, Boston Medical Library.
3. Diagnostic and Statistical Manual-Text Revision (DSM-IV-TR), 2000, Washington, DC, American Psychiatric Association.

Learning Objectives:

1. Assess Horace Wells as having Bipolar Personality Disorder
2. Demonstrate how this may have been an integral part of his approach to life, the periods of withdrawal, addiction, and suicide.

NOTES:

Moderator: Douglas R. Bacon, M.D.

Horace Wells

Horace Wells' Death Mask: From Connecticut to Kansas

Anthony Kovac, M.D.¹ and Dawn McInnis, B.S.²

Background: A copy of Horace Wells' death mask was donated to the museum of the History of Medicine Department at the University of Kansas Medical Center in 1965.

Purpose: To determine how a copy of Wells' death mask came from Connecticut to Kansas.

Methods: We performed a literature and Internet search as well as contacted libraries and museums in Park Ridge, IL, Hartford, CT, Farmington, CT, Pittsburgh, PA, Boston, MA, and Washington DC.

Findings: Key individuals were John Riggs, Charles T. Wells, Truman Howe Bartlett, W. Harry Archer DDS, and Ralph Edwards DDS. John Riggs was a colleague and peer of Horace Wells who participated with Wells in the 1st dental operation under nitrous oxide on December 11, 1844. On January 27, 1848, three days after Wells' suicide in New York City and before his burial, Riggs made a plaster cast of Wells' face with permission of the family. The location of the original plaster cast is unknown. Presumably, the mask remained with Riggs until 1872 or 1873 when it was loaned or given to T. H. Bartlett, a sculptor who used the mask to authenticate Wells' face in his design of the statue of Wells erected in 1875 and presently located in Bushnell Park in Hartford, CT. It is believed that a bronze cast of the mask was probably made when Wells' son, Charles T. Wells, went to Paris in January 1874 to observe the casting of Bartlett's statue that was being completed in Paris. Bartlett may have paid for the casting of the death mask and retained it until June 1877, a year after Riggs' death, at which time he donated it to the Boston Medical Library. In the 1940s, W. Harry Archer (1805-1980) was considered to be the world's foremost promoter and history expert on Wells. From the bronze cast at the Boston Medical Library, Archer arranged for several plaster copies to be made as gifts to be presented to specific individuals or institutions with special collections on anesthesia history, especially Horace Wells. He gave one to the University of Pittsburgh Dental School, where he was chair of Oral Surgery, one to his "long time dear friend Joseph H. Johnson" and

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one to the University of Kansas Medical Center Clendening Library & Museum in Kansas City, Kansas. The existence and location of other copies is not known. At the University of Kansas Medical Center, Logan Clendening (1884-1945) had assembled a unique anesthesia collection including the works of Wells, Long, Morton, Jackson and Colton. Ralph Edwards DDS was an anesthesia historian, Wells enthusiast and dentist at the University of Kansas Medical Center in the 1960s who received the plaster copy from Archer for the Clendening Library & Museum.

Summary: Preserved death masks of prominent individuals from the mid-19th century are relatively common. Death masks of anesthesia pioneers are rare. W. Harry Archer was a significant anesthesia historian and expert on Wells in the mid-20th century. He was instrumental in having copies made of Wells' death mask and donated one to the Clendening Library & Museum.

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Learning Objectives:

1. To describe the purpose of Death Mask and Horace Wells in the 19th century.
2. To learn the story of W. Harry Archer DDS, the biographer of Horace Wells.
3. To describe how Wells' death mask came from Connecticut to Kansas.

NOTES:

Moderator: George S. Bause, M.D., M.P.H.

*Notable Names, Ethics,
Publication Trends*

Background to Notable Names in Anaesthesia

J. Roger Maltby, M.B., B.Chir., F.R.C.A., F.R.C.P.

Background: Bailey and Bishop's *Notable Names in Medicine and Surgery* stimulated my interest in medical eponyms during my clinical years at the London Hospital Medical College 1958-61. Thirty years later, on re-reading that book, I discovered that not a single anesthesiologist was mentioned and decided to rectify the situation.

Aim: Few practitioners in any specialty show interest in its history and evolution. My aim was produce a book of brief, illustrated biographies of men and women whose eponymous equipment, technique, scoring system or memorial lecture was already well-known to anesthesiologists.

Resources: A variety of 19th and early 20th century anesthesia textbooks histories of anesthesia provided biographical information, as did obituaries in medical journals. I spent time at the Association of Anaesthetists of Great Britain and Ireland in London and at the Wood Library-Museum. University of Calgary librarians were enthusiastically helpful, and several living, world-renowned anesthesiologists kindly wrote their own contributions

Methodology: Each 1,000-word chapter had a similar format. All entries, from the most famous names to those who made just one eponymous item, were edited to be equal in length to fit three pages. Each began with portrait photograph, date and place of birth, education, and career details. Then came how, when, where and why the individual had made the contribution to anesthesia that became eponymous. The text was interspersed with up to three additional photographs that were obtained from a variety sources.

Results: More than seventy biographies of anaesthesiologists, plus a few surgeons and equipment manufacturers, mostly from Great Britain and North America were included. The Royal Society of Medicine Press provided excellent editorial support and published *Notable Names in Anaesthesia* in 2002. The following year it was awarded the AHA's David M. Little prize and the Basics of Medicine prize in the British Medical Association's book competition.

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Conclusions: Librarians were invaluable in searching for and printing old information. Living eponymous individuals, most in their 80s or 90s, were willing to write their own chapter or provide important information. A good editor is invaluable to ensure a well-produced book.

Reference:

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Learning Objectives:

1. Stimulate interest in who, what, when, where and how.
2. Those aims related to well-known names – eponyms.
3. Describe manner in which research was done.

NOTES:

Moderator: George S. Bause, M.D., M.P.H.

*Notable Names, Ethics,
Publication Trends*

The Doctors' Trial at Nuremberg – Ethics, Causes and Lessons

**Anne L. Craig¹, M.B.Ch.B., F.A.N.Z.C.A.,
Sukumar P. Desai², M.D.**

Background: At the conclusion of World War II in Europe, officials and agents of the German Regime were tried for crimes against humanity in the Palace of Justice, Nuremberg, Germany. The main Nuremberg Trial took place before the International Military Tribunal and 23 political and military leaders were tried between November 20, 1945 and October 1, 1946. Of the subsequent series of 12 trials, we focus our attention on the Doctors' Trial where 23 physician and non-physician defendants were tried for human experimentation and mass murder. We examine details of their actions, their defense strategy, their verdicts, and offer explanations for how members of the medical profession could possibly participate in the unethical practices they stood accused of. We examine subsequent ramifications from these trials, and note whether or not aberrant behaviors persist in modern society when institutions or groups of individuals feel they have absolute power over others.

Methods: We examine accounts of personal narratives from survivors, material in the public domain, and documents available at the Holocaust Memorial Museum and collections at Harvard Law School. One weakness of reviewing these documents, and of the trials themselves, is that these offer only a partial victor's or survivor's view of the events. We invited native German speaking researchers and historians familiar with descriptions these events in German to comment on the accuracy of our observations.

Results: Of the 23 defendants, 7 were acquitted, 7 were executed, and the rest received prison sentences. We were able to identify one individual who remained a conscientious objector and did not participate in the conduct of these experiments, even though these actions could have cost him his life. Seventy experiments involving over 7000 subjects were carried out by the defendants. We describe the nature of some of the experiments, and the alleged benefits from information derived from such trials. The Doctors' Trials gave the impetus

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to the rest of the world to devise a formal mechanism for the protection of human subjects, and Harvard anesthesiologist Henry K. Beecher was a major proponent of such reform. We explain aberrant behavior displayed by many of these defendants on the basis of mass indoctrination, brain washing, group behavior, and fear of reprisal.

Conclusions: This dark chapter in military and medical history gave birth to a movement to protect human experimental subjects. This process began slowly and gathered impetus several decades later, and has evolved into the process we now recognize as Institutional Review Boards. Over 100 countries have rules and regulations that govern medical experimentation on human subjects. One would have hoped that such gross violations of human rights could not possibly exist in the modern world, but regrettably, such is not the case. Bullying in schools, hazing or ragging in institutions, abuse of prison inmates, police brutality, ethnic/religious cleansing during recent political conflicts, and other similar examples offer ample evidence that we live in an extremely cruel world. Violations of human rights will likely continue as long as one group of individuals or an institution or a nation feels that it has overwhelming power over others, and can abuse such power without consequence.

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http://www.ushmm.org/research/library/bibliography/?lang=en&content=medical_experiments

Learning Objectives:

1. To better understand the nature of medical experiments in Nazi Germany during the Holocaust.
2. To learn the possible causes and ethical lessons of these experiments.

Moderator: George S. Bause, M.D., M.P.H.

*Notable Names, Ethics,
Publication Trends*

Research Trends in Anesthesiology – An 80-Year Geographical Review of Articles Published in 2 US Journals Devoted to Anesthesiology

**Christian Peccora, M.D., Richard Hsu, M.D.,
Jessica Shanahan, M.D., and Sukumar P. Desai, M.D.**

Introduction: Research programs benefit from institutional, departmental, and external support – administrative, financial, and the availability of laboratory facilities. The aim of our investigation was to determine trends in the geographical distribution of institutions from which articles were accepted for publication in two mainstream US journals devoted to the specialty of Anesthesiology.

Methods: We obtained information about every article ever published in the journals *Anesthesia & Analgesia*, and *Anesthesiology*. Variables studied included name of authors, topic studied, and location of department where research was conducted. Excluded from examination were editorial comments, communications, case reports, and review articles. We obtained information about funding trends from the National Institutes of Health for the past 70 years, and support extended to departments of Anesthesiology. We also obtained data on research funding in other countries.

Results: Analysis of articles from these journals suggest two clear trends in both the journals. Authorship from outside the US has increased steadily since 1960 and reached a plateau with the turn of the millennium. Simultaneously, the % of articles originating in the US has steadily declined from over 90% 50 years ago, to under 50% currently. Data from the National Institutes of Health suggests no decrease in funding over the decades, and there is no evidence to suggest that NIH grants to support research in departments of anesthesiology have declined during this period.

Conclusions: No one factor was identified in the changing geographical distribution that is evident for research efforts that result in publication of articles in these two journals. We suggest this to be due to increased research activity in other countries and globalization of research publications, rather than a de-

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crease in funding or research activity in US departments of anesthesiology.

References:

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2. Knight PR, Warltier DC. Anesthesiology residency programs for physician scientists. *Anesthesiology* 2006;104:1-4
3. Culley DJ, Crosby G, Xie Z, Vacanti CA, Kitz RJ, Zapol WM. Career National Institutes of Health funding and scholarship of chairpersons of academic departments of anesthesiology and surgery. *Anesthesiology* 2007;106:836-42

Learning Objectives:

1. Determine what countries publish the most anesthesia research.
2. Determine historical trends in what countries and continents have published most anesthesia research.
3. Compare anesthesia research's geographical trends to those of other fields.

NOTES:

Moderator: George S. Bause, M.D., M.P.H.

*Notable Names, Ethics,
Publication Trends*

Publication Trends for Articles Related to History of Anesthesia: A 10-year Analysis from Six Journals

**Avenir Mulita¹, M.D., Xiaoxia Liu², M.S.,
Sukumar P. Desai², M.D.**

Background: In an earlier report on the careers of anesthesia historians, respondents identified as an obstacle difficulty in getting their work published in peer reviewed journals devoted to anesthesiology. To test the hypothesis of whether such publication bias exists, we conducted a review of all articles published in 6 journals.

Methods: All articles published between January 2001 and December 2010 in the following journals were reviewed for the purposes of our investigation – *Anesthesiology, Anesthesia and Analgesia, Canadian Journal of Anesthesia, British Journal of Anaesthesia, Anaesthesia, and Anaesthesia and Intensive Care*. Publishers of these journals categorize articles according to the nature of their contents; however, in order to enable comparison among journals we re-categorized the articles and examined whether there were differences in the percentage or number of articles devoted to history of anesthesia [HOA] among these 6 journals. We also examined whether there were trends in publication over the 10 year period.

Results: During this 10 year period, 30,600 articles were published in these journals (range 2573 to 8563). In order to achieve simplification and uniformity, we reclassified the categories chosen by the journals (range 5-15) into major or minor articles. Of all articles published, only 382 (1.25%) were related to HOA (range among journals, 0.41% to 2.87%). The proportion of all articles related to history showed a significant difference with time ($p < 0.001$), a difference primarily due to differences in minor articles ($p < 0.001$). Analysis of the number of history related articles published shows no obvious difference with time ($p = 0.25$), but a significant difference among journals ($p = 0.005$). For major articles, there was a significant effect with time ($p = 0.046$) and journal ($p < 0.001$).

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Minor articles revealed no significant effect with time ($p = 0.15$), but significant differences among journals ($p = 0.017$).

Conclusions: On the basis of our analysis of 30,600 articles published in 6 mainstream journals devoted to anesthesiology, we found that considerable differences exist in the percentage of articles published in each of the categories – original article, communication, and other, among the journals.

Learning Objectives:

1. Publication trends of articles related to history.
2. Differences between journals.
3. Bias in publication.

NOTES:

Learning History of Anesthesia through Popular Literature

Bronwyn Cooper, M.D and Manisha Desai, M.D.

Background: One can learn about History of Anesthesia (HOA) from didactic lectures, the reading of chapters devoted to history in mainstream textbooks of anesthesia, from scholarly works devoted specifically to the topic, and from tours or movies related to HOA. Teaching outside of the operating room and outside the realm of anesthetic techniques is a challenge in a busy didactic schedule. The next generation of anesthesia residents should know how pioneers of anesthesia were able to conquer pain and how this was a great discovery within the context of the history of medicine.

Methods: Seventeen books that are included in the genre of novels and popular literature were examined for style and content. The utility of each was determined by examining content, accuracy, easy of reading, errors, topics and individuals covered, as well as documentation of sources.

Results: The vast majority of books dealt with the discovery of ether, nitrous oxide, chloroform, and stories about the protagonists involved in these discoveries. A few were devoted to history of medicine, while one was devoted to the discovery of curare. In general the books were accurate, and provided an informal mechanism by which the reader may become familiar with and interested in HOA. All the books are readily available in libraries, bookstores, or sellers of used books. Many of the books are no longer in publication. Nine of the books were deemed particularly useful.(1-9) A short synopsis of each is presented.

Conclusions: The nine books we recommend most are very easy and quick to read, while providing much useful and interesting information related to HOA. We find that popular literature in the form of the historical novel is a useful means of learning about HOA, and that these books may be suitable for inclusion in departmental libraries where residents and faculty members may benefit from their availability.

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Learning Objectives:

1. Learn about different sources of history of anesthesia
2. Learn methods of reviewing history of anesthesia literature.
3. Review some particularly useful historical novels in history of anesthesia.

NOTES:

Negative Portrayal of Physicians in Feature Films: The Role of Patients' Perceptions, Physicians' Personality, and Public Perspective

**Molly B. Perini, B.A.¹, Yvon F. Bryan, M.D.¹,
Cristina Bryan, Joseph Bryan, B.S., M.A.**

Introduction: Films and movies made for television have historically portrayed physicians in a positive light especially in documentaries (1). Certain specialties within medicine have fared even better - such as surgeons being represented as heroes or academicians as noble scholars in pursuit of the truth. However, in the last decades movies have probed uncomfortable subjects and controversial areas. Physicians, their personal motivations along with their roles in society have been questioned in depth and exposed (2). Other professionals such as attorneys, law enforcement officials and politicians have also been portrayed negatively in many films (3). Numerous reasons exist as to why professions are not seen positively - ranging from having non-conformist attitudes to having beliefs not accepted by society at large. We reviewed American and foreign films to determine how physicians have been portrayed negatively in movies and attempted to characterize the reasons why this may have occurred.

Methods: We reviewed American and non-English language movies in which physicians were not portrayed positively. In addition to viewing films and consulting books, we also searched several sources of films and their reviews. Negative personal characteristics were classified according to patients' or colleague's views (competency, malpractice, knowledge, empathy, compassion, vocation), physician attributes (cold, arrogant, ignorant,) and the public's perspective (unethical, scientific advancement or experimenting on patients)

Results: Twelve films, from 6 countries, and released between 1964 and 2010 met our criteria. The countries were as follows - United States, Canada, Spain and France. Three films were produced within multiple countries (US/UK, UK/Spain, and US/UK/Australia). Negative attributes followed 3 main themes; patient, physician and public. Patients' perceptions suggested either an interest in professional advancement or materialism. A few films were associated with

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negative personal characteristics such as uncaring and distant. The public's negative view of physicians was attributed to performing unethical experiments on fellow humans without their consent for purely selfish or scientific purposes. Some films showed physicians as having mental illness, sociopathic or psychopathic tendencies.

Discussion: Feature films portraying physicians negatively may be based on three themes; patients' views of physicians relating to malpractice and knowledge base; the physician's character traits and attributes such as dedication or materialism or other character flaws. Another factor was the physician's role as a public intellectual or voice in society. In light of the current issues facing healthcare, public opinion based on feature films may not accurately judge the majority of caring and compassionate physicians.

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Learning Objectives:

1. Discuss how physicians are portrayed negatively in movies.
2. Describe different types of negative characteristics seen in physicians.

NOTES:

The Portrayal of Anesthesiologists in Fiction: False Impressions Causing Misrepresentations

Molly B. Perini, B.A. and Yvon F. Bryan, M.D.

Introduction: Anesthesiologists play an essential and intricate role in medicine, especially in surgical procedures. Anesthesia as a medical specialty is relatively new when compared to the profession of surgery (1). However, it is undeniable that modern advances in surgery could not exist without the development of airway and anesthetic techniques. Though, it is the surgeons who are usually recognized as passionate heroes with interesting careers (2). We reviewed fiction from literature to determine how the writers have portrayed anesthesiologists and examine the literary relationships between anesthesiologists and surgeons.

Methods: We searched for literature in which an anesthesiologist was a character portrayed among other medical colleagues in the setting of a hospital. Focus was placed on fiction depicted in a modern hospital setting. Anesthetic techniques using chloroform or ether were avoided since often the role of anesthesiologist was not well defined and the surgeon was involved and/or responsible for the care of the patient. The works of fiction examined were published between 1962 and 1998. References were drawn from larger scholarly publications or the original print.

Results: There were nine works of fiction reviewed between 1962 and 1998. The relationships portrayed between the anesthesiologist and the surgeon is that of servant and master. Anesthesiologists were depicted as servile, lazy, inferior in the hierarchy of hospital medicine, and prone to error. One author characterized the anesthesiologist as cowardly. Even when the surgeon liked the anesthesiologist the attitude is that “[the anesthesiologist] is clearly inferior... and he knows his place”, perpetuating the theme of servility. Three of writers were authors by profession and five writers were physicians.

Discussion: Over the thirty-year period reviewed, the prevailing theme in fiction was the subservience and inferiority of the anesthesiologist, especially in comparison to the surgeon. The field of anesthesia was considered to be beneath the surgical profession in fiction (7). Five themes characterizing anesthesiolo-

gists emerged in the literature: inferiority, error prone, lazy, cowardly, and servile (2). However, these were inaccurate portrayals of anesthesiologists and the importance of the anesthesiologist in surgery was not addressed in the reviewed fiction. These distortions fail to distinguish that it is the anesthesiologist's job to keep the patient alive during surgery; the anesthesiologist is present during the perioperative period – when the patient is sedated to awakening with no room for laziness or lack of attention to safety. The misrepresentations of anesthesiology likely stemmed from the writers lack of exposure to anesthesia practice. A few of the authors are physicians but of the literature reviewed, none of the authors were anesthesiologists. Anesthesiologists should clear up the confusion by either writing their own fiction or pointing out the errors in fiction.

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Learning Objectives:

1. Discuss how anesthesiologists are portrayed in fiction.
2. Describe reasons why anesthesiologists are portrayed negatively.

NOTES:

Horace Wells, Robert Louis Stevenson, Henry Jekyll, and Edward Hyde: Was RLS' Masterpiece Inspired by Wells' Tragedy?

Rini A. Vyas¹ and Sukumar P. Desai², M.D.

Background: It has been suggested that Robert Louis Stevenson's [RLS] masterpiece *Strange Case of Dr. Jekyll and Mr. Hyde* derived inspiration from the real life tragedy that was played out in the final days of the life of Connecticut dentist Horace Wells, discoverer of the anesthetic properties of nitrous oxide. The aim of this investigation is to determine whether or not this could be true.

Methods: We examined RLS's letters, biographies, and other references in the literature, press, and online to determine whether any factual basis exists for RLS to be aware of Wells' life, and also if it played any role in the creation of the plot of his famous novel.

Results: RLS was born in Scotland, after Wells had committed suicide at the Tombs, a notorious prison in New York. Coverage of Wells' life and death received widespread coverage in northeastern United States, but there is no evidence that it was printed in newspapers or periodicals in England or Scotland. RLS travelled widely, and spent many years in the US, mostly on the west coast, far away from Connecticut. It is unlikely, that material related to Wells' life was published in local newspapers or magazines while RLS was in the US. There is evidence to suggest that novelists of the period, psychologists, and the lay public were quite interested in the concept of split personalities and the dual nature of man. There is evidence that RLS dreamt about episodes similar to those depicted in his novel. All claims to any relationship between Wells and the novel have come from the US, and none of them are backed up by evidence.

Conclusion: In the absence of evidence supporting a relationship between the behavior exhibited by Wells during the last few days of his life and any inspiration that RLS might have derived it, we conclude that there is insufficient evidence to suggest any relationship between them.

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References:

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2. Hartford Courant. *Closeup on the Horace Wells Monument*. [Online]. Available from http://articles.courant.com/2010-07-08/community/hc-townname-info-horace-wells-monument_1_jail-cell-anesthesia-nitrous.
3. Swearingen R. *The Prose Writings of Robert Louis Stevenson: A Guide*. Hamden: Archon Books; 1980.

Learning Objectives:

1. To investigate whether Robert Louis Stevenson was inspired by the life of Horace Wells.
2. To assess the claims that 'Strange Case of Dr. Jekyll and Mr. Hyde' derives inspiration from Horace Wells.

NOTES:

Friday, May 3; 12:15 – 13:00

3rd Patrick Sim Memorial Lecture

Third Patrick Sim Memorial Lecture: The Ether Monument

Rafael A. Ortega, M.D.

The purpose of this lecture is to review the history, significance and current state of the Ether Monument which is located in the Boston Public Garden. No other monument related to the origins of American medicine is so rich in history, controversies, and allegories. Many people do not know that a monument exists to commemorate the first public demonstration of ether anesthesia on October 16, 1846. There are even some in the specialty of anesthesiology who are unaware of the existence of this magnificent structure.

The Ether Monument was erected to recognize the impact of anesthesia on society. The rich details of the monument serve as symbols of the medical profession and the intended use of ether.

Although there was great reason for the Ether Monument to be built, it was not without its controversies and opposition. Morton wanted credit for the discovery, but Horace Wells and Morton's advisor, chemist Charles T. Jackson, M.D. both claimed the distinction belonged to them. This dispute is often referred to as the "Ether Controversy".

Twenty years after Morton's first public demonstration of the anesthetic properties of ether, Thomas Lee, Esq. commissioned Boston architect Henry Van Brunt, of the distinguished Ware and Van Brunt firm, to build the Ether Monument.

For decades after the structure was erected, The Ether Monument was a tourist destination and an important attraction in Boston. However by the 1960s, without appropriate upkeep the Monument, which included a fountain, had deteriorated significantly. The water line broke, and the fountain needed a new pump. The structure was stained with graffiti and the pool became a refuge for litter and stagnant rainwater.

Fortunately, in the mid-1990s, a new generation of anesthesiologists initiated a fund-raising campaign for the monument's restoration and the City of Boston committed to the monument's complete restoration.

The book, *Written in Granite: An Illustrated History of the Ether Monument*, writ-

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ten by the presenter of this lecture, was conceived to help with funding the restoration of the Ether Monument and to assure its continuing maintenance.

Today, the Ether Monument is fully restored with working fountains and illuminated by night. It is again one of the most important attractions of the beautiful Public Garden and a required destination for anyone interested in the history of anesthesia.

This lecture, which will use many historical photographs, illustrations and videos, will explain the past, present and future of the Ether Monument.

Learning Objectives:

1. To present the history of the Ether Monument
2. To explain the architecture, design and symbolism of the Ether Monument
3. To emphasize the importance of the Ether Monument for anesthesiology as a medical specialty

NOTES:

Moderator: David B. Waisel, M.D.

*Anesthesia Theory,
Respiration, Monitoring*

How Anesthesia Took the Wrong Fork in the Yellow Brick Road

Lewis S. Coleman, M.D., D.A.B.A.

I reviewed historical anesthesia literature to learn about the habit of hyperventilation. Early research confused CO₂ with hypoxemia and narcosis[1]. Early “open circuit” devices were designed to prevent CO₂ accumulation. CO₂ absorption was incorporated in the earliest “circle system” machines[2]. Ironically, anesthesia machines were commonly equipped with “bypass valves” that injected CO₂ into the inspired gas mixture to stimulate breathing, increase cardiac output, and accelerate ether induction[3]. Their overenthusiastic use occasionally caused unexplained cyanosis, violent convulsions, and deaths. Removing the valves eliminated the problems[1, 4-7], but mechanical hyperventilation was subsequently embraced to abolish CO₂ toxicity. Researchers reinforced the fear by mistakenly attributing their observations to CO₂ narcosis and toxicity[8, 9]. Meanwhile, critical care specialists re-discovered the benefits of mild “permissive hypercarbia” nearly 30 years ago; modern research has demonstrated that CO₂ lacks narcotic effects and is harmless and beneficial; and capnography has arrived[10]. Hyperventilation undermines respiratory drive, damages lung tissues, reduces cardiac output, causes “opioid hypersensitivity,” necessitates prolonged respiratory support, and confers no benefits. Capnography enables safe and practical opioid based general anesthesia that optimizes surgical outcome[11].

References:

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11. Coleman, L.S., 30 Years Lost in Anesthesia Theory. *Cardiovasc Hematol Agents Med Chem*, 2012.

Learning Objectives:

1. Clarify opioids pharmacology
2. Clarify CO₂ physiology
3. Explain how incorrect beliefs (about the two points raised above) distort anesthesia practice.

NOTES:

Moderator: David B. Waisel, M.D.

*Anesthesia Theory,
Respiration, Monitoring*

30 Years Lost in Anesthesia Theory

Lewis S. Coleman, M.D., D.A.B.A.

Within living memory, Hans Selye was the most important physician in the world. He originated medical stress theory. In 1951, he hypothesized that diseases and disease relationships are most simply explained by the presence of a single physiologic mechanism that governs both tissue repair and hemodynamic physiology[1]. This hypothetical mechanism is commonly called the “stress mechanism”. Selye believed that stress mechanism hyperactivity induced by diseases and stresses would explain the nature of disease and disease relationships. Therefore, he believed that the discovery of the stress mechanism would enable a revolutionary “Unified Theory of Medicine” that would explain the nature of physiology, pathology, stress, and their relationships. Only three years later, DNA was discovered. This caused tremendous excitement, and it was widely believed that Selye’s mechanism functions as a “companion mechanism” that converts DNA information into embryological development and then maintains and repairs body structure for the duration of life while DNA resumes quiescence. Many expected that the discovery of Selye’s mechanism would be the next major advance in medicine and biology. This inspired a massive search for the stress mechanism. It also became the main focus of anesthesia clinical research that sought to discover a means to alter anesthesia technique to optimize surgical outcome. The frustrating and fruitless search for the stress mechanism was abandoned after 30 years, and stress theory is now either forgotten or regarded as a sibling of the Unicorn. Anesthesia stress research lasted a little longer and produced a substantial body of evidence that anesthesia supplemented by analgesia improves surgical outcome, but it too was abandoned because combinations of anesthesia and analgesia seemed risky and impractical, and no theory or mechanism could explain how to optimize outcome. Now, 30 years after Selye’s theory was abandoned, relevant information from unrelated research has belatedly enabled a crude but testable description of Selye’s putative stress mechanism. A description of this “Stress Repair Mechanism” has now been published[2]. It enables Selye’s Unified Theory of Medicine and confers a new theory of anesthesia, analgesia and allostasis that enables the long-sought means to alter anesthesia technique to optimize surgical outcome[3]. In retrospect, the

anesthesia research failed because the entrenched and near universal habit of mechanical hyperventilation renders opioid based general anesthesia unpredictably dangerous and impractical.

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Learning Objectives:

1. Explain how stress research theory inspired anesthesia research.
2. Introduce theory of anesthesia based on stress research.

NOTES:

Moderator: David B. Waisel, M.D.

*Anesthesia Theory,
Respiration, Monitoring*

Evolution of Modern Airway Management

Analee Milner, M.B.,B.Ch., F.F.A. (SA), F.R.C.P. (C)

Unquestionably, the horrors of the First and Second World Wars resulted in significant airway manipulations and inventions that lead the way for modern airway management.^{1,2}

Although the use of the endotracheal tube has been curtailed due to the introduction of the extraglottic airway³ (LMA[®] was devised and patented by Archie Brain in 1982), it is estimated that in many countries, the average anesthetist still inserts ~ 20,000 endotracheal tubes in a working career spanning 40 years. Many of the original 'red rubber' endotracheal tube designs from the 1950's are currently used, but are now disposable and made from plastic polymers or silicone.

The laryngoscope was patented by Albert Kirsten in Berlin on 23rd April, 1885. For 128 years this invention enabled easy placement of endotracheal tubes in ~82% of patients. The Glidescope[®](a digital videolaryngoscope) was introduced in 2001, and allows intubation in 98% of patients. Videolaryngoscopes may eventually replace Kirsten's original invention.⁴

The use of the fiber-optic bronchoscope in the 1975, enabled the intubation of previously inoperable patients. Stiles and Ovassapian perfected and published techniques that made fiber-optic intubation a universal aide for difficult airways.⁵ This device also allows easy visualization of the trachea and this application is used to check the placement of double lumen endotracheal tubes. Videobronchoscopes are now replacing fiber-optic bronchoscopes.

Imaging techniques have improved with the advances in CT and MRI scanning technology. Pathology in the airway can now be visualized with a degree of accuracy and allows improved assessment of potential pitfalls in advanced airway management.

Surgical techniques for the diseased airway have improved with the refinement of tracheostomy (percutaneous), laser surgery, microvascular and tracheal transplant surgery.⁶

In the last 30 years, the advancement in safe airway management has paral-

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leled the exponential increase in patients with difficult airways due to obesity and HIV/Aids epidemics. Undoubtedly increased litigation and the inception of difficult airway societies have also driven the trend for improved airway safety and management.

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6. Wippold II, Fras J. Head and neck imaging- the role of CT or MRI. *Journal of magnetic resonance imaging.* 2007;25:453-65

Learning Objectives:

1. To show the inventiveness of past anaesthetists.
2. To highlight the progression towards 'safe' management.

NOTES:

Moderator: David B. Waisel, M.D.

*Anesthesia Theory,
Respiration, Monitoring*

Evolution of Respiratory Gas Monitoring Standards

Michael B Jaffe, Ph.D.

Standards have been applied to increase the safety of anesthesia equipment since the introduction of color coded anesthetic gas cylinders in 1941 (1). Resulting in part from chaos and deaths associated with the use of both British and US anesthesia machines during the Second World War, each requiring different gas cylinders and accessories led to recommendations to the Surgeon General to promote uniformity and standardization with anesthesia equipment (1). However, it took efforts of the American National Standards Institute (ANSI) and the ASA to finally budget for and approve the sponsorship of Committee Z79 (1956). (2) The oxygen “analyzer” standard was the first of the respiratory gas monitoring standards to be developed. As it became a required element of an anesthesia machine (per ANSI Z79.8), the impetus to form a standards writing group and develop a safety and performance standard resulted in ANSI Z79.10 1979. (2) The differences in the accuracy in various anesthetic vaporizers and desire to monitor at or near the Y (or in the expiratory limb) what was being delivered to and expired by the patient help lead to the development of an anesthetic gas monitoring standard.(3) This was complicated by the fact that the calculation of delivered anesthetic concentration often wasn’t straightforward (e.g. determining the concentration of ether with the Copper kettle was dependent on the flow of oxygen and gas flow). (3) Carbon dioxide monitors, available for clinical use since the 1950s, became more readily available about the same time that the ASA first published Standards for Basic Anesthetic Monitoring (1986). This and the need for monitoring exhaled respiratory gases (since only inspired oxygen was monitored) help lead to the development of the first carbon dioxide gas monitoring standard.(3,4)

The standards for oxygen, carbon dioxide and anesthetic agents evolved separately from 1970s through 1990’s before these “standards” were merged into a single standard, ISO 21647 in the mid-2000s. This merged standard replaced previous international and national standards for anesthetic gas monitors (ISO 11196:1995, ASTM F1452-92, EN 11196), carbon dioxide monitors (ISO

Secretary, Joint ISO/TC 121/SC 1- IEC/SC 62D Working Group: Respiratory gas monitors, Cheshire, Connecticut, USA

7767:1997, ASTM F 1456-92, EN 864) and oxygen monitors (ISO 9918:1993, ASTM F1462-93, ANSI Z79.10-1979, EN 12598) The impetus for this merger of standards, driven by industry, was to eliminate the need to create nine test reports for a multi-gas monitor in order to satisfy the regional requirements (ASTM (US), CEN(Europe) and ISO (international)) for each of three gas monitoring standards.(5) It turned out that although the requirements of these standards were not harmonized, the differences were not as large as perceived and ISO 21647 was published in 2004.(5) These differences included harmonizing different units for accuracy (e.g. mm Hg, vol. %).

The latest international standard for respiratory gas monitors, ISO 80601-2-55:2011 (1) (prepared by ISO/IEC Joint Working Group 6 of TC 121 SC/1 and IEC 62D) cancels this standard and specifies the “particular requirements for the basic safety and essential performance of a respiratory gas monitor (RGM) intended for continuous operation for use with a patient.” This standard was the first respiratory gas monitoring standard to be harmonized with the risk management based 3rd edition of general standard (IEC 60601-1, 2005).

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4. Personal communication – Greg Welyczko.
5. Personal communication – David Osborn.

Learning Objectives:

1. Discuss the need and use of standards in anesthesia.
2. Discuss the historical context of the different gas standards.

NOTES:

Moderator: David J. Wilkinson,
M.B.,B.S., F.R.C.A., Hon F.C.A.R.C.S.I.

Biographical Investigations

Hua Tuo and Mafeisan

Dennis Kuo and Kathy D. Schlecht, D.O.

Background: The first historical account of anesthesia being practiced in the Western Hemisphere was recorded at the beginning of the 19th century. However, Eastern historical documents record the practice of anesthesia as early as the 2nd century AD. An ancient Chinese physician named Hua Tuo was the first to use “Mafeisan” to provide general anesthesia nearly 1,600 years before the discovery of anesthesia in European Western culture.

Aim: The first administration of anesthesia in China will be reviewed.

Resources: Literature, Internet, Chinese Department at Wayne State University.

Results: Hua Tuo lived from 140–208 AD, during the Han Era of China. Born into a family of poverty, Hua Tuo’s parents sent Hua Tuo to study medicine with a close friend of his father’s, Dr. Cai. After years of apprenticeship and diligent studies, Hua Tuo became well-known for his clinical acumen throughout the Eastern Han Dynasty. He developed many innovative procedures in internal medicine, surgery, gynecology, acupuncture, parasitology, and physiotherapy. Of notable significance, Hua Tuo developed a general anesthetic medication known as “Mafeisan.” (麻沸散). The literal English translation from Chinese characters is: “cannabis boil powder.” Historical Chinese documents record Hua Tuo as the first doctor to provide his patients with “Mafeisan” which would make them insensate permitting him to perform surgery.

Conclusion: The ingredients of Mafeisan remain largely mysterious to this day. Most of Hua Tuo’s medical texts were lost upon his death. Hua Tuo was executed by the tyrannical ruler Cao Cao of the Cao Wei Dynasty when Hua Tuo refused to treat Cao Cao’s condition of chronic headaches. Many scholars and sinologists have speculated on the recipe of ingredients used to make Mafeisan. It has been ascertained that Mafeisan was concocted from a combination of Chinese herbal plants mixed in *chiu*; 酒 an alcoholic beverage or wine. Some theorize that Hua Tuo may have used cannabis, while others have suggested opium. It has also been proposed that the word “mafei” appeared to transcribe similarly to the European word “morphine.” Friedrich Sertürner isolated morphine from opium in 1804, but the history of Hua Tuo and “Mafeisan” may have influenced Sertürner’s discovery.

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Learning Objectives:

1. To review the first administration of anesthesia in China.
2. To provide a biographical sketch of Hua Tuo and his use of Mafeisan.

NOTES:

Moderator: David J. Wilkinson,
M.B.,B.S., F.R.C.A., Hon F.C.A.R.C.S.I.

Biographical Investigations

The Work of William S. Halsted: From Local Anesthesia to Regional Anesthesia

Vijay Patel, M.D., Jeff Gadsden, M.D., F.R.C.P.C., F.A.N.Z.C.A.

Dr. William S Halsted is one of the more fascinating figures of modern medicine not only because of his staggering contribution to the fields of anesthesia and surgery, but because of his controversial battle with drug addiction. Remarkably, it was Halsted's rigorous pursuit of excellence in the field of surgical anesthesia that precipitated his drug abuse and eventually led him to become the forefather of Regional Anesthesia. Utilizing the newly discovered pharmacologic properties derived from aqueous solutions of cocaine, Halsted is credited as being the man who bridged the knowledge gap between local anesthesia, utilizing transdermal injection, to regional anesthesia, utilizing intraneural or perineural injection.

During the German Ophthalmological Congress in September of 1884, a breakthrough moment in anesthesia occurred when a paper by Dr. Karl Koller describing the anesthetic qualities of cocaine as a topical anesthetic for the mucosa of the eye was presented¹. This first formal publication regarding the possibilities of local anesthesia opened the floodgate for further investigation into applications in a wide variety of surgical fields. The outpouring of new information on topical cocaine use was not lost on Dr. Halsted as he began his first academic studies while working as the director of outpatient surgery at Roosevelt Hospital. However, instead of focusing on the topical application of the drug, Halsted took the process one step further and began hypodermic injections of the drug into the subcutaneous tissues and dermis, describing a more dense analgesia than topical administration alone². Halsted was steadfast in his conviction that proper intradermal injection of the drug had the greatest practical importance. He also realized that the action of the drug was at the level of the nerve, claiming "Injected under the skin, cocaine probably produces anaesthesia of the same only when made into or very near a nerve-filament or nerve trunk"³. He furthered the opinion that the location of deposition of local anesthetic was the most important facet of success in this technique by further demonstrating that a similar effect to local anesthesia could be obtained when distilled water was instilled

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into the intradermal space⁴. This remarkable discovery was only made possible by the self-experimentation in which Halsted and Hall became addicted to injecting the drug in both subcutaneous and intravenous form.

Although the majority of his contributions to the field of anesthesia occurred during the early part of his career, Halsted continued on to become one of the premier surgeons of his time, pioneering sterile techniques and adapting a methodological approach to surgical dissection. It is unfortunate that his foray into the application of cocaine as an anesthetic ultimately led to a lifetime of substance dependence, but it is truly remarkable that despite his affliction, he accomplished so much. Although he was not initially credited for many of his insights into the field of regional anesthesia, history revealed Dr. Halsted to be a critical part of the advancement of this field. Perhaps it was his own self-awareness of the dangers of his experiments that limited the true scope of work that he ultimately was unable to publish.

References:

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Learning Objectives:

1. Provide insight to the work of a historical figure in anesthesia.
2. Describe the events leading to the discovery of regional anesthesia.
3. Comment on the addiction that hampered Dr. Halsted's work.

NOTES:

Moderator: David J. Wilkinson,
M.B.,B.S., F.R.C.A., Hon F.C.A.R.C.S.I.

Biographical Investigations

William K. Hamilton, A Leaf on the Waters Tree

Franklin L. Scamman, M.D.

As one takes a look at the Aqua Alumni Tree of Ralph Waters, one is amazed at how many academic chairmen are “leaves”. One of these leaves belongs to William K. Hamilton, MD.

William Kennon Hamilton was born in 1922 in Guthrie Center, Iowa. After public schooling, he graduated from the University of Iowa in 1943 and received his MD degree there in 1946. After an internship in Duluth, Minnesota and 2 years in the Army, he returned to Iowa for his anesthesia training under Dr. Stuart Cullen, finishing in 1951 and joining the faculty as an instructor. He became an associate professor in 1955. When Dr. Cullen left for the University of California San Francisco (UCSF) in 1958, Hamilton became professor and head of the section of anesthesia under the department of surgery. When Cullen accepted the deanship at UCSF in 1966, Hamilton, being no stranger to UCSF due to a fellowship there in 1961, left in 1967 to replace Cullen as chair and served in that position until 1983 when he became vice dean for clinical and professional affairs. He became professor emeritus in 1992.

At Iowa, due to his efforts, in 1963, anesthesia became its own department and where he recruited over 6% of the medical students into anesthesia. He convinced the administration and the departments of medicine and surgery to establish the first intensive care unit. In the 16 years he was head at UCSF, he established the premier anesthesia research department in the USA and a distinguished professorship has been established in his name.

During his distinguished career, Hamilton has served as a director of the American Board of Anesthesiology and as president in 1973 and 3 NIH study sections. He served as president of the Association of University Anesthetists, a director of the American Board of Anesthesiology, a member of the National Research Council's Committee on Anesthesia, on the board of the American Association of Medical Colleges and its task force on Medical Education and on the editorial boards of *Contemporary Surgery* and *Survey of Anesthesia* and as an associate editor of *Survey of Anesthesia*. He received the Royal Society of Medicine

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Medal. In 1996, he received both the Iowa Distinguished Alumni Award and the American Society of Anesthesiologists' Distinguished Service Award.

During his interview with Dr. Phil Larson, Hamilton said, "It is better to teach questions than to teach answers." Dr. Hamilton projects an unparalleled warmth and good humor, tinged with Iowa naiveté and charm. He has said that his day-to-day joy comes from the relationships he maintains with the over 300 residents he has trained. I know because I was one of them.

References:

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- 3 *Anesthesia and Analgesia*: We salute William K Hamilton, MD. 50:47, 1971
- 4 Wood Library-Museum Living History Collection. Hamilton-Larson interview 1983

Learning Objectives:

1. Learn about one of America's finest anesthesia educators.
2. Appreciate the anesthesia heritage of Iowa and UCSF.

NOTES:

Moderator: David J. Wilkinson,
M.B.,B.S., F.R.C.A., Hon F.C.A.R.C.S.I.

Biographical Investigations

The Legacy of Betty Lou Bottoms Grundy, M.D.

Shereen Matto, M.D. and Kathy D. Schlecht, D.O.

Background: There is a paucity of literature about Dr. Betty Grundy. The publication with the most effusive information was written by Maurice Albin, M.D., *Celebrating Silver: The Genesis of a Neuroanesthesiology Society NAS -+ SNAN-SC -+ SNACC*: “We were also cognizant of the capabilities of our female members long before the term, ‘glass ceiling,’ was coined, with...Betty Grundy...making substantial contributions.” (1)

Aim: To provide a biographical sketch of Dr. Grundy and highlight her contributions to the profession of anesthesiology.

Resources: Dr. Grundy’s published writings and curriculum vitae were the main source of information. Librarians were queried for assistance; Ms. Felicia A. Reilly and Karen Bieterman, at the Wood Library Museum, provided every document containing Dr. Grundy’s name at the museum and referred the authors to Dr. Selma Calmes who provided recommendations and recollections. Dianna Roth, a librarian at William Beaumont Health System, provided Dr. Grundy’s curriculum vitae, retrieved from the department of Anesthesiology at UFL. Finally, our deepest gratitude goes out to Jennifer Stokley, Dr. Grundy’s daughter, who permitted us to submit this abstract.

Results: On January 3, 1940, Betty Lou Bottoms Grundy was born in Dothan, Alabama. Her quote in her high school yearbook was: “Better to be ignorant of a matter than half know it.”(2) In 1990, Dr. Grundy received the Alumni Achievement Award from her alma mater, Huntingdon College. She attended the University of Florida College of Medicine and graduated at the upper ten percent of the class of 1963. Her internship year was at General Rose Memorial Hospital in Denver. Dr. Grundy completed her anesthesiology residency at Peter Bent Brigham Hospital, in Boston from 1965-1967. She entered the profession as Moderator for the Department of Anesthesiology at St. Luke’s in Saginaw, Michigan. Dr. Grundy held numerous positions during her accomplished career. She was a guest reviewer on fifteen editorial boards. She was the editor of two books and contributed to many more. Dr. Grundy has a prolific list of refereed publica-

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tions, abstracts, invited articles, and editorials; which are often cited in current studies. Her primary focus was intraoperative monitoring.

Conclusion: During a lecture, a neurologist referred to Dr. Grundy as: ‘The Mother of Intraoperative Monitoring.’ Though Dr. Grundy has made significant contributions to the field of medicine; it seems she has not received the recognition she deserves. This abstract is the first in a series of intended submissions to preserve the legacy of Betty Lou Bottoms Grundy, M.D.

References:

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2. Columbus High School-Cohiscan Yearbook Columbus, GA, Class of 1956, p. 76. www.e-yearbook.com Web. 26, Feb. 2013.
3. Alumni Awards Ceremony, Huntingdon College. Sep. 24, 2010. http://www.huntingdon.edu/uploadedFiles/Alumni_and_Friends/Annual_Events/Homecoming/alumni%20awards%20program_sixth%20and%20final%20revision.pdf Web. 26, Feb. 2013.

Learning Objectives:

1. The preservation of the legacy of Betty Grundy, M.D.
2. To provide a biographical sketch of Dr. Grundy and her contributions to the field of anesthesiology.

NOTES:

Moderator: Martin Giesecke, M.D.

*Certification,
Pediatrics, Innovation*

Milestones in ABA Board Certification

David B. Waisel, M.D.

Specialty boards in the United States award board certification to physicians who have achieved a defined level of expertise. Specialty boards developed in the early 20th century in part to distinguish professionally trained physicians from charlatans and in part to establish a mechanism to ensure the knowledge and skills of a specialty physician. Boards are intended to be independent of membership societies to minimize influence of political and practice matters and to make the public the true customers of the specialty boards.

The American Board of Anesthesiology (ABA) began as an affiliate of the American Board of Surgery in 1937 and was approved as a separate primary Board in 1941. The ABA now offers board certification in 6 specialties and publishes the required professional standards in a Booklet of Information (BOI).

Professional standards include when board certification may be revoked. In 1939, the Board advised that “All certificates issued by the Board shall be subject to revocation by the board at any time, in case it shall determine in its sole judgment, a candidate, who has received a certificate, either was not probably qualified to receive it or has become disqualified since its receipt.”¹

The 1950 BOI had additional reasons for revocation.² These included 1) improper receipt of certification because of a violation of the ABA bylaws/certificate of incorporation, 2) improper receipt of certification because of a misstatement of fact to the Board (regardless of whether the Board was aware upon awarding certification), 3) failure to limit clinical practice to anesthesiology, 4) failure to maintain a moral or ethical standing satisfactory to the board, and 5) failure to maintain membership in the AMA.

By 2007, the requirements to limit clinical practice to anesthesiology and to maintain membership in the AMA had long been deleted.³ “Moral and ethical standing” was replaced by “professional standing,” such that the clause read “fail to maintain a professional standing.”

In 2010, following increasing publicity about the practice of lethal injection, the ABA incorporated the AMA policy regarding physician participation in capital

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punishment into reasons for revocation.⁴ For the first time in recent history, the ABA has reserved the right to revoke certification from a physician for performing a legal action.

The historical relevance is that a specialty board prohibited a legal action. The specific board and action are less relevant. The development and history of specialty boards suggest that prohibiting certain legal actions is probably within the concept of defining professionalism. But there are significant implications of a specialty board functionally prohibiting a legal action by imposing life-changing consequences. This event demands attention and reflection.

References:

1. American Board of Anesthesiology. 1939
2. American Board of Anesthesiology Booklet of Information. 1950.
3. American Board of Anesthesiology Booklet of Information. 2007.
4. American Board of Anesthesiology Booklet of Information. 2010.

Learning Objectives:

1. To understand how/why the process of board certification developed.
2. To understand the importance of the recent changes in the ABA Booklet of Information.

NOTES:

Moderator: Martin Giesecke, M.D.

Certification,
Pediatrics, Innovation

History of Pediatric Anesthesia Timeline: A Multimedia Approach to Documenting Pediatric Anesthesia History

Christine L. Mai¹, M.D., Zulfiqar Ahmed², M.D., Paul G. Firth¹, M.B.,Ch.B., B.A., Larry Chu³, M.D., and Myron Yaster⁴, M.D.

Background: Many of the achievements that shaped modern pediatric anesthesia practice, such as improved perioperative monitoring, understanding the anatomical and physiological differences between children and adults, the creation of neonatal and pediatric intensive care units, and the development of pain services, are the accomplishments of pioneering practitioners, many of whom are alive today. With the current age of technology, we propose a way to archive and preserve their contributions using multimedia techniques. In cooperation with the Society for Pediatric Anesthesia (SPA) and the Wood Library-Museum of Anesthesiology, the authors sought to collect a living video history of pediatric anesthesia practice for current and future generations of practitioners.

Methods: A list of pioneers of pediatric anesthesia, critical care and pain medicine was compiled from published histories in journal and textbooks, and from the lists of the American Academy of Pediatrics Robert M. Smith award winners and Board of Directors of SPA. These physicians were contacted and underwent high-definition, videotaped interviews focused on major defining moments in the pioneer's life and career. These interviews were conducted at SPA annual meetings or in the pioneer's hometown. Videos were recorded using Sony® HDR-XR200 and Sony® HDR-XR160 camcorders, and SONY® ECM-HW2(2) wireless microphone. Using video editing software, Final Cut Pro X, the videos were processed into 5-10 minute video podcasts. Working with the Editors and Publishers of *Pediatric Anesthesia*, we have developed the concept of an online, virtual history "Timeline" where submissions will be archived to specify the dates of when important discoveries were made and the pioneers who were associated

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with the innovations. The podcasts will be published online in 2013 in *Pediatric Anesthesia* as a series in the special features section in the journal entitled, “History of Pediatric Anesthesia.”

Results: To date we have conducted videotaped interviews with: George Gregory, John Downes, Mark Rogers, Frederic Berry, Theodore Striker, Alvin Hackel, Eric Furman and Robert Friesen. The first published video podcast, “Dr. George Gregory and the development of continuous positive airway pressure” tells us about his work in a primitive neonatal intensive care unit and his innovation for developing continuous positive airway pressure, which revolutionized the treatment of hyaline membrane disease. This podcast is the first in a series and is currently available on *Pediatric Anesthesia’s* journal website and potentially at other university websites the future. Interviews are continually being conducted at annual SPA meetings to populate this timeline in order to tell the story of the history of pediatric anesthesia through the wisdom of our pioneers.

Discussion: The documentation of the history of pediatric anesthesia is crucial in order to define and preserve our legacy to help educate, develop, and inspire future generations of pediatric anesthesiologists. Our group created a multimedia approach combining history with video techniques to present our past in a format that future generations can embrace and appreciate. Future submissions from anesthesiologists in North America, Europe, Australia, Asia, Africa and worldwide will help populate this virtual history “Timeline.” This is a novel approach in defining and documenting a subspecialty’s history using multimedia technologies

References:

1. Mai C, Ahmed Z, Firth P, Yaster M, Chu L. Dr. George Gregory and the development continuous positive airway pressure. *Pediatric Anesthesia*. January 2013
2. http://onlinelibrary.wiley.com/journal/10.1111/%28ISSN%291460-9592/homepage/history_of_pediatric_anesthesia.htm

Learning Objectives:

1. The learner will be able to articulate the history of pediatric anesthesia.
2. The learner will be able to list some key contributors to the field of pediatric anesthesia.
3. The learner will be introduced to novel multimedia techniques to teach concepts in pediatric anesthesia history.

Moderator: Martin Giesecke, M.D.

*Certification,
Pediatrics, Innovation*

Early Use of Continuous Epidural Analgesia at Peter Bent Brigham Hospital, Boston

Robert N. Pilon, M.D. and Sukumar P. Desai, M.D.

Background: During the early 1970s, treatment did not exist for satisfactory long-term treatment of the severe pain associated with metastatic disease involving the spine. Spinal cord stimulation had been introduced a few years earlier but had not proven to be effective. We explored the possibility of using an implanted device with a reservoir from which local anesthetics could be infused over extended periods of time into the epidural space to provide pain relief to these patients. Continuous spinal anesthesia was first described in 1944, and a ureteral catheter was first used for epidural anesthesia in 1949. Ommaya described a long term sterile technique to access the cerebrospinal fluid using an implanted device in 1963.

Methods: Placement of an implanted epidural catheter for long term use was a new approach. We used catheters and tubing that was already in use in patients requiring ventriculo-peritoneal (VP) shunts. An Ommaya reservoir was modified to serve as a reservoir for the analgesic agent.

Results: Our patient had severe pain due to spinal metastases. Increasing doses of narcotic analgesics were ineffective. A lumbar epidural catheter was inserted, and ventriculo-peritoneal shunt tubing was connected to the catheter which was then tunneled subcutaneously to the anterior abdominal area. A subcutaneous pocket was created for the modified Ommaya reservoir. The system was used for several months with intermittent addition of local anesthetic to the reservoir. The device was equipped with a one way valve, and the drug was administered by manual compression of the device.

Conclusions: We describe our experience in the use of long term epidural analgesia for treatment of pain related to terminal cancer using an implanted modified Ommaya reservoir system. We believe this is the first time such treatment was employed clinically.

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References:

1. Ommaya AK, Subcutaneous reservoir and pump for sterile access to ventricular cerebrospinal fluid. *Lancet.*;2:98 3–984; 1963
2. Lemmon, WT, Hager, HG. Continuous spinal anesthesia: Observations in 2000 cases. *Ann. Surg.*1944;120:129-142
3. Martinez-Curbelo M. Continuous peridural segmental anesthesia by means of a ureteral catheter. *Curr Res Anesth Analg.* 1949;28:13-23

Learning Objectives:

1. Feasibility of long term epidural catheter placement demonstrated.
2. Modification of pain by this method.
3. Reconfiguration of Ommaya Shunt Reservoir for subcutaneous implantation with epidural catheter.

NOTES:

Moderator: Anthony L. Kovac, M.D.

*Museums, Structures,
and Historic Sites*

Homes Associated with WTG Morton – His Birthplace, Waters-Morton House, and Etherton Cottage

**Mary A. Camosse, R.N., Kathleen J. Menard, R.N.,
Manisha S. Desai, M.D.**

Background: William Thomas Green Morton was born in Charlton, Massachusetts on August 9, 1819. We describe three homes closely associated with him – the home where he was born, the home where his family moved when he was 8 years old, and the mansion he built in 1845 – Etherton Cottage.

Methods: Material from the public domain was examined for information for this study. In addition, consultations were obtained with staff at the historical societies and public libraries in the towns of Charlton and Wellesley.

Results: WTG Morton's father, James Morton, was a farmer, with no formal education. The family lived modestly in the small home in which WTG Morton was born. This structure burned down in a fire and was rebuilt. To enable young Morton to attend school regularly, the family bought and moved to a larger structure located closer to his school. This house is called the Waters-Morton House, in memory of former owner Israel Waters, who ran a successful tanning business in this location. In later years, Morton built a grand home in West Needham (now Wellesley), and named the mansion Etherton Cottage. He conducted experiments here, and the family lived here for at least 10 years. We provide information about the fate of that estate. Some of the structures associated with Morton have been captured in a set of 4 watercolor paintings by Leroy D. Vandam, M.D., chief anesthetist at Harvard Medical School's Peter Bent Brigham Hospital for a quarter century.

Conclusions: Homes associated with the life of the man most closely identified with the dissemination of the discovery of anesthesia can be visited in central and eastern Massachusetts. Watercolor renditions of these homes are on view at Wood Library-Museum of Anesthesiology, Park Ridge, Illinois.

*University of Massachusetts Medical School, UMass Health Care, Worcester,
Massachusetts*

Learning Objectives:

Describe the geographical location in which Morton was raised.

Discuss the boyhood homes of Morton, and the estate he acquired later.

NOTES:

Moderator: Anthony L. Kovac, M.D.

*Museums, Structures,
and Historic Sites*

Search Function of Books Stored in The Japanese Museum of Anesthesiology

Hirosato Kikuchi, M.D., Ph.D., Koji Fujio, M.D., Ph.D.

In 2009, the Japanese Society of Anesthesiologists (JSA) founded the Archives of JSA which changed into the Japanese Museum of Anesthesiology (JMA) in 2011. The Museum consists of three sections, 1) archives (the collection of historical documents of the JSA), 2) museum (the collection of anesthetic equipment and its related things) and 3) library (the collection of books, journals, leaflets and related materials). One of the aims of the library section is the collection of anesthesia related books published in Japan. Every item is collected by donations. The Home Pages (HP) of the JMA is a part of those of the JSA, and the English pages are now under construction.

Services: At the end of January, 2013, Japanese books related to anesthesia were collected to 2,537 and foreign books, to 1,569. Most of the Japanese books published from 1796 to 2008 are listed about 9,000, and can be searched through the HP. The result is shown whether the JMA stores the books or not.

By searching through the HP, foreign books stored in the JMA can be found. The JMA is a new member of the Japanese Medical Library Association (NPO, established in 1927) and the JMA has to serve as a library including mutual credits of materials.

Problems to be solved: Although the collection of anesthesia related books in the JMA is the largest among the libraries except National Diet Library (Japan), only one fourth of the books published in Japan are stored. One idea is that in case authors donate their books, the JSA will give them a credit when they update the board certification.

Further exhibition: The pictures of landmarks related to anesthesia history would be exhibited including the data of their locations and memos.

*Department of Anesthesia, Abiko Toho Hospital, Abiko, Chiba, Japan. Visiting Professor,
Department of Anesthesiology, Saitama Medical University Hospital, Saitama, Japan*

Learning Objectives:

1. Find the anesthesia museum in Japan.
2. Search and find anesthesia related books stored in the Japanese Museum of Anesthesiology
3. Will study the history of anesthesia in Japan.

NOTES:

Moderator: Anthony L. Kovac, M.D.

*Museums, Structures,
and Historic Sites*

A ‘Lost’ Monument to Anaesthesia in Chicago

David J. Wilkinson, M.B.,B.S., F.R.C.A., Hon F.C.A.R.C.S.I.

In 1903 the grandson of an early pioneer in anaesthesia presented the City of Chicago with a monument to commemorate his Grandfather. After some initial hesitation the City devolved responsibility for the artefact to the Parks Department who said they did not want it. There were numerous objections to this approach both by the relatives of the donor and the Chicago Medical Society. After five years of legal review during which time the monument was moved several times a position in Washington Park was arranged.

In 1931 the Chicago Medical Society arranged for the monument to have words engraved to explain its reason for being there. In the late 1950’s the monument moved again.

The memorial received wide publicity when it first arrived in Chicago and innumerable newspaper articles have been written about it over the years. Since its last move it seems to have been lost from anaesthesia’s memory.

The WLM in Park Ridge were unaware of its existence when initial enquiries were made but over the past few months several unique scrapbooks have been discovered which relate to the monument. The Chicago Medical Society Archives contain further material and the curator of that collection is still in contact with descendants of the family. Spectacular family documents are held by a library in Provo, Utah which have provided further insights into the story of this anaesthesia pioneer.

The paper will describe this amazing story in further detail and show the 40-70 ton monument’s current resting place. There is a need to make a commitment in time and money to restore the monument to its former glory and a need for it to become a major focus for anaesthesia historians to attend when in Chicago.

Emeritus Consultant Anaesthetist, Boyle Department of Anaesthesia, St. Bartholomew’s Hospital, London, U.K.

Learning Objectives:

1. To reacquaint the profession with a missing part of their country's anaesthesia heritage.
2. To ensure greater awareness of the artefact and look for future renovation and preservation.
3. To provide information about an early monument to anesthesia.
4. To enable a judgment of this monument's importance.

NOTES:

A Medical History by Serendipity

Sherwin B. Nuland, M.D.

Dr. Nuland has been requested by the organizers of the meeting to talk about how he became interested in history of medicine. In addition, he would provide information about history related projects he has undertaken. He will also talk about books and articles he has authored, identifying those he considers special. He will then address difficulties medical historians encounter when they attempt to publish their work. He will examine the role of the amateur medical historian, as opposed to physicians or non-physicians who have completed formal training in history. Furthermore, he will discuss a most important topic – why we should study history, and how one can encourage medical students, residents, fellows, and faculty members to become interested in history.

Learning Objectives:

1. To describe the role of the clinician historian.
2. Teaching medical history to undergraduates, medical students, and house-staff.

NOTES:

Saturday, May 4; 8:00 – 8:30

Invited Guest Lecture

The Most Human of Inventions

Julie M. Fenster, B.S.

The organizers of this meeting have asked Ms. Fenster to discuss how she became interested in the history of anesthesia, and how she conducted research into the subject matter. She will tell us how she obtained information, what resources she found useful, and how she put these together to form one cogent story.

Learning Objectives:

1. Identify personalities and the drama behind the origin of surgical anesthetics.
2. Researching the non-medical aspects of the story.
3. Universal appeal of the developments, and their relation to American history.

NOTES:

Author: Ether Day

Saturday, May 4; 8:00–8:30

Moderator: Antonio Aponte-Feliciano, M.D.

*Chloroform,
Eponyms, Innovation*

How Did J. Julian Chisolm Administer Chloroform Before He Invented His Inhaler?

**Raymond Roy, M.D., Ph.D.,¹ Mark Erickson,² M.D.,
Debra Chisolm Ruhlman,³ Annie Jenkins⁴**

Background: During the American Civil War chloroform was the most commonly administered anesthetic in field hospitals because, compared to ether, it provided faster inductions, required less volume (and transport weight), because it was more potent, and was not inflammable.¹ But it was caustic to the lips, face, and eyes of patients and hands of providers and associated with unexplained deaths. Although many different inhalers were devised prior to the war, the most common technique for administration remained the open or Edinburgh method of Simpson from 1847. We researched how Chisolm modified his chloroform administrations prior to his invention of a nasal inhaler and sought insight into what problems he perceived he was addressing with his inhaler.

Methods: We reviewed all articles appearing in the *Confederate States Medical and Surgical Journal* (CSMSJ) and military manuals authored by Chisolm - *A Manual of Military Surgery, for the Use of Surgeons in the Confederate Army; with an Appendix of the Rules and Regulations of the Medical Department of the Confederate Army* [1st Ed 1861; unrevised 2nd Ed 1862] and a revised 3rd Ed, *A Manual of Military Surgery, for the Use of Surgeons in the Confederate States Army; with Explanatory Plates of All Useful Operations* [1864]. The indices mention chloroform but not diethyl ether, ether, sulphuric ether, or sweet vitriol. The words related to the administration of chloroform - pp 381-384 in the 1st ; pp 427-29 in the 3rd - are identical. A new paragraph in the 3rd comments on two chloroform deaths.

Results: No article addresses chloroform administration techniques in the CSMSJ. Chisolm describes a precursor in his military manual. *"Finding much chloroform is wasted by evaporation from the handkerchief, I have for some years used a common funnel as my inhaler, which protects the hands of the*

^{1,2}Department of Anesthesiology, Wake Forest School of Medicine, Winston-Salem, North Carolina. ³Great great granddaughter of J. Julian Chisolm; ⁴Great granddaughter of William Edward Aiken, a Chisolm colleague

person administering the chloroform, and prevents loss from general evaporation. If a piece of heavy wire or a small bar of tin be attached across the interior of the funnel, about half-way toward its throat, the sponge containing the chloroform can be supported between this bar and the side of the funnel, leaving a space on one side for the air to rush over the surface of the sponge as it comes through the elongated end of the apparatus... The funnel should be large enough to cover the lower half of the face, including the nose and mouth, and the sponge should not come within two inches of the face, for should it touch the skin it would blister. The eyes, being excluded from the apparatus are not annoyed by the evaporation of chloroform.” There is no mention of his nasal inhaler.

Conclusions: Chisolm describes a precursor to his nasal inhaler that protects both patient and provider and minimizes the total amount of chloroform required per anesthetic, thereby conserving an agent that was progressively more difficult to obtain in 1864 and after.

References:

- 1 Albin MS. The use of anesthetics during the Civil War, 1861-1865. *Bulletin of Anesthesia History* 2001; 19:1, 4-11, 26
- 2 Chisolm JJ. *A Manual of Military Surgery, for the Use of Surgeons in the Confederate Army; with an Appendix of the Rules and Regulations of the Medical Department of the Confederate Army.* Richmond, Virginia, West & Johnston, 1861
- 3 Chisolm JJ. *A Manual of Military Surgery, for the Use of Surgeons in the Confederate States Army; with explanatory plates of all useful operations.* Columbia, Evans and Cogswell, 1864

Learning Objectives:

1. Describe chloroform inhalation before, during, and after the Civil War.
2. Describe Chisolm’s precursor to his now famous inhaler.
3. Discuss advantages/disadvantages to his inhaler.

NOTES:

Moderator: Antonio Aponte-Feliciano, M.D.

*Chloroform,
Eponyms, Innovation*

Eponyms of US Origin

Matthew Giuca¹, M.D., and Sukumar P. Desai², M.D.

Eponyms are a means by which the medical profession honors and remembers individuals who have made outstanding contributions. Most profuse in the late 19th and early 20th century, their use appears to be on the wane.

Eponyms enable us to commemorate achievements of individuals in a variety of disciplines. Many are familiar with Newton's laws, Hofmann rearrangement, Pythagoras' theorem, and the Gaussian curve. However, eponyms are especially abundant throughout the medical specialties, be it Addison's disease, Billroth's procedure, Esmarch's bandage, Hunter's canal, or the Shirodkar stitch. Eponyms have been used to describe normal anatomical structures [the ligament of Trietz], congenital malformations [Fallot's tetralogy], histopathologic techniques [Giemsa staining], histologic structures [islets of Langerhans], clinical findings [Austin-Flint murmur], medical conditions [Graves' disease], surgical disorders [Spigelian hernia], surgical techniques [McBurney's incision], classification of clinical findings [Glasgow Score], and equipment used in the operating room [Buckwalter retractor] or the Intensive Care Unit [Swan Ganz catheter]. Three of the eponyms discussed in this lecture appear as tools used to facilitate anesthesia and two as methods of assessment — one pre-operatively on all patients and the other specifically for children. All of the American eponymous physicians to be discussed were trained as anesthesiologists. This lecture is a corollary to a previous article about European Eponyms. In addition to describing circumstances that led to their contributions, I will comment on why some contributions result in eponymous recognition, while others do not.

The aforementioned abstract is derived from a paper accepted for publication in the *Bulletin of Anesthesia History*, titled *Eponyms in the Operating Room, Careers of Five American Physicians*.

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²Department of Anesthesiology, Perioperative and Pain Medicine, Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts

Reference:

1. Giuca, MS Desai SP- Eponyms in the operating room: careers of six European physicians. Bull Anesth Hist. 2010 Jul;28(2):17, 20-5.

Learning Objectives:

1. To understand what types of contributions may have allowed some individuals to be remembered eponymously.
2. To describe the lives and careers of selected American eponyms used in modern anesthesia practice.

NOTES:

Moderator: Antonio Aponte-Feliciano, M.D.

*Chloroform,
Eponyms, Innovation*

The First Successful Ligation of a Patent Ductus Arteriosus

Lindsay Murray, B.S. and Mark A. Rockoff, M.D.

Seventy-five years ago a landmark surgical procedure was performed and subsequently reported in the *Journal of the American Medical Association*.¹ A seven-year-old girl underwent ligation of a patent ductus arteriosus, the first successful surgery for congenital heart disease. The procedure transformed her health and was a milestone in the development of cardiac surgery.

The operation was performed by Dr. Robert Gross, the surgical chief resident at Boston Children's Hospital. Dr. William Ladd, the Moderator of the Department of Surgery and one of the most distinguished pediatric surgeons of his time, was not supportive of his young trainee attempting such a dangerous and groundbreaking procedure. But when Ladd left for his summer vacation, Gross proceeded anyway.²

The patient received cyclopropane by mask while lying on her side.^{1,3} Betty Lank, the hospital's chief nurse anesthetist, provided the anesthesia; it was not until after WWII that Dr. Robert Smith joined the staff of the institution.^{3,4}

The patient did well and Gross became famous. They kept in contact until Gross died in 1988 at the age of 83.

This presentation will discuss details about this event as well as the people involved.^{3,5,6} The patient is now a great-grandmother in her 80s. Her 75-year follow-up makes her the oldest known survivor of cardiac surgery in the world.

References:

1. Gross RE, Hubbard JP. Surgical ligation of a patent ductus arteriosus: Report of first successful case. *JAMA* 1939;112(8):729-731.
2. The First Steps Forward: Boldness and Delicacy. In: Cooper D. *Open Heart: The Radical Surgeons Who Revolutionized Medicine*. New York: Kaplan; 2010:9-25.
3. Betty Lank. Oral history interview. Conducted by Mark Rockoff. September 16, 1999. Boston Children's Hospital Archives.

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4. Galvin S, Dewan J, Rockoff MA. Betty Lank: A kind and gentle anesthetist devoted to children. *AANA* 2009;73(3):176-180.
5. Lorraine Sweeney Nicoli. Oral history interview. Conducted by Julia Hesel with W. Hardy Hendren, Mark Rockoff. May 10, 2012. Boston Children's Hospital Archives.
6. Lorraine Sweeney Nicoli. Oral history interview. Conducted by Lindsay Murray, Mark Rockoff. July 5, 2012. Boston Children's Hospital Archives.

Learning Objectives:

1. Describe the surgical procedure.
2. Discuss the surgeon and anesthetist involved.
3. Document the event from the patient's perspective.

NOTES:

Moderator: Robert A. Strickland, M.D.

Mythology, Anesthetic actions, Poisons

Prometheus in Our Midst

John H. Demenkoff M.D. Ph.D(c).

Background: Evolution has made certain choices that many of us, including clinicians, have largely taken for granted. This paper tracks the Promethean mythos woven into the story of how our planet became oxygenated. A mythic perspective is used to shed further light on the price we as carbon-based creatures pay by living in an environment enriched to 21% oxygen.

Abstract: The story of how our planet first became oxygenated some 2,500 million years ago is one of a long and incestuous process of lateral gene transfers resulting in the appearance of a chimeric organism, the prokaryotic cyanobacteria, that could, by transforming photonic energy from the sun, cleave a water molecule and in the process generate oxygen (O₂). In a recapitulation of the Greek myth of Prometheus, fire (photons from the sun) had been stolen resulting in an oxygenated planet thus fostering an ascending spiral of evolutionary complexity. Keeping with the mythic theme we note that there is a price to be paid for such Promethean audacity. Taking advantage of earth's newly oxygenated atmosphere the human genome had cobbled together an array of macromolecules that utilized oxygen in the production usable energy (ATP). In the intracellular process of shuttling electrons to and from molecular oxygen a number of highly reactive oxygen species were generated as byproducts of oxidative phosphorylation. The biological consequence of these toxic free radicals is explained by the theory of "disposable soma" and the concept of "antagonistic pleiotropy". Both phenomena cause cellular damage that result not only in certain disease states but also play important roles in the aging process and in the overall reduction in life expectancy. The eukaryotic cells of earthlings play with fire in much the same way their prokaryotic ancestors have done for millennia. This presentation is a reminder that there is a price to be paid for our historical dependence on oxygen. Prometheus is forever in our midst.

Objectives: 1. To understand the importance of mitochondrial physiology within the larger context of evolutionary studies. 2. To understand the role that aerobicity plays in the production of free-radicals and ROS-induced diseases. 3. To appreciate parallels between archetypal modes of understanding and biological modeling of cell injury and repair. 4. To reflect upon the adjunctive role of ancient wisdoms and myths in medical education.

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2. Lane, Nick, *Oxygen: The Molecule that Made the World* Oxford UP, Oxford, 2004.
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Learning Objectives:

1. Review the history of planetary oxygenation.
2. Present human patho-biology from an evolutionary perspective.
3. Deconstruct medical anthropocentrism.

NOTES:

Moderator: Robert A. Strickland, M.D.

Mythology, Anesthetic actions, Poisons

Coagulation of the Protoplasm as Mechanism of Anesthesia: Seventy Years of Research in East and West in the Footsteps of Claude Bernard. A Contribution Occasioned by His 200th Birthday.

Misha Perouansky¹, M.D., Vladimir V. Matveev², Ph.D.

Claude Bernard has recently been rediscovered as the author of a unified theory of anesthetic mechanisms that served for generations as the unquestioned paradigm for research in this field.¹ In addition to this overarching framework, Claude Bernard also proposed a specific theory of anesthetic action that mirrored the contemporaneous fascination with the mysteries of cell biology. Bernard's observations on visible changes in cell structure that were at the core of his 'protoplasm coagulation' theory of anesthesia led to the mutually independent involvement of scientists in both the Soviet Union and the United States in theories of cell activity and anesthesia. Coagulation-based theories of anesthetic action were pursued into the 1950s across the ideological divide. While the Western direction is almost completely forgotten, the Russian line of research has never been well recognized in the West.

In the East, multiple laboratories pursued a "denaturation theory of excitation, damage and narcosis" of the living cell. This collective endeavor was attributed to the influential authority of D.N. Nasonov.² Nasonov interpreted visible changes in the protoplasm (termed 'coagulation') as a reversible denaturation affecting the solubility of cellular proteins. Using equilibrium distributions of vital dyes between the cell and its surrounding, Nasonov's school collected a large amount of experimental data that was interpreted as suggesting that different forms of physiological cellular activity (muscle contraction, synaptic transmission, secretion etc.) were accompanied by changes in the state of cytoplasmic proteins similar to (partial) denaturation occurring under conditions of physiological stress.³ A substantially revised version of 'physiologic' protein denatur-

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ation has recently been published.⁴

In the West, W. D. Bancroft, G.H Richter (1930s) and later W. Seifriz (1941, 1950) proposed theories that were in essence updated versions of Bernard's coagulation theory. Only the term used to describe the underlying change in optical properties of the cytoplasm differed. Bancroft and Richter vigorously defended the notion that 'flocculation' of the cytoplasm occurred at clinically relevant concentrations of anesthetics especially in electrolyte-containing colloidal solutions. In their opinion the cellular protoplasm was poised in a 'critical' state, hovering on the verge of a reversible phase transition into a coagulated/flocculated state. Seifriz rebranded the same phenomenon into 'gelatinization' and also saw it as underlying anesthesia. In summary, Bernard's idea of reversible 'coagulation' of protoplasm as a physiologic phenomenon appears to have been discarded without appropriate investigation.

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Learning Objectives:

1. The learner will be able to appreciate Claude Bernard's role in anesthetic research.
2. The learner will be acquainted with the long-term pursuit of coagulation as mechanism of anesthesia.

NOTES:

Moderator: Robert A. Strickland, M.D.

Mythology, Anesthetic actions, Poisons

Pretty Poisons and Powerful Anesthetics: Selected Botanicals from the Wood Library-Museum of Anesthesiology

Susan A. Vassallo, M.D.

The domestication of plants is one of the truly miraculous achievements in civilization. To take the earth's gifts and transform them into healing potions transcends the boundaries of soil and water. Over millennia, this magical triumph has changed the world for all of mankind.

The Wood Library-Museum of Anesthesiology Rare Book Collection holds many items with historical relevance to botanical art and medicine. This talk will describe four plants with special significance to anesthesia. The discovery and original accounts of these plants' medicinal effects are highlighted. I share with you the treasures of The Wood Library-Museum and invite you to visit our beautiful collection.

Papaver somniferum

Papaver (Greek 'poppy') *somniferum* (Latin 'sleep inducing') has been cultivated since antiquity. By scoring the seed pod with a knife, the milky white sap known as opium is harvested. Morphine, codeine and papaverine are a few of the alkaloids found in opium. This plant has influenced medicine and the world for thousands of years— think of the Anglo-Chinese Wars ("Opium Wars") and the Afghanistan Wars. Friedrich Wilhelm Adam Sertürner (1783-1841) isolated morphine from opium in 1806 and named the substance "morphium" after the Greek god of dreams, "Morpheus." Morphine was the first alkaloid extracted from a plant. Sertürner described his process in "Über das Morphinum: eine neue salzfähige Grundlage, und die Mekonsäure, als Hauptbestandtheile des Opiums" (1817).

Digitalis purpurea

Digitalis (Greek 'finger') *purpurea* (purple) is the best-known species of the genus *Digitalis*. The plant's tubular flowers resemble bells and may have inspired its common name "Folks-gloves" or "Foxglove." In 1785, William Withering (1741-1799) described the use of *Digitalis* for the treatment of "dropsy" or con-

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gestive heart failure. The plant leaves contain cardiac glycosides which increase myocardial contractility. A first edition of Withering's *An Account of the Foxglove, and some of its Medical Uses...* is a treasure of medical botany.

Atropa belladonna

Atropa belladonna is named for *Atropos*, a Greek goddess who was one of the three Fates; by cutting the thread of life, she ushered in death. The leaves and berries of *Atropa belladonna* are toxic; in ancient times extracts were used as an anesthetic and as a poison. In the Middle Ages, Venetian women ingested *Atropa*; its parasympatholytic action dilated pupils; hence the plant's common name "Deadly Nightshade." Scopolamine and morphine were given together to induce "Twilight Sleep," a practice described by Wm. Osborne Greenwood in 1918 in *Scopolamine-morphine: semi-narcosis during labour*.

Chondrodendron tomentosum

Chondrodendron tomentosum (Curare) grows as a large vine in the Amazon basin. Native South Americans used a mixture made from its roots and stems, which, when placed on the tips of hunting arrows or blowgun darts, paralyzed its victims. The English explorer, Charles Waterton (1782-1865) traveled to the New World, injected animals with curare and used mechanical ventilation to keep his subjects alive. Waterton described his findings in *Wanderings in South America, the north-west of the United States, and the Antilles, in the years 1812, 1816, 1820, and 1824*.

Learning Objectives:

1. Review the discovery and identification of botanicals critical to the practice of medicine and anesthesiology
2. Understand the techniques used by chemists and botanists to isolate plant alkaloids essential to medicine.

NOTES:

Winner Resident Essay Contest,
Death under Chloroform, Discovery of Oxygen

Moderator: Bradley E. Smith, M.D.

History of Anesthesia in Texas

Casey B. Wiley, M.D., Winner of the 2012

C. Ronald Stephen, M.D. Resident Essay Competition

The history of modern anesthesia is relatively short compared to other medical specialties, but has many interesting stories and figures. While the origins of anesthesia may have begun far from the borders of Texas, the Lone Star State has made many contributions and produced many important pioneers to the field. This article attempts to chronicle the evolution of anesthesia in Texas and highlight several colorful pioneers in the field.

Though records are scarce, the Native American tribes that settled Texas depended on the Medicine Man for medical care. He often used a combination of spells, religious ceremonies, hypnotism, and herbal medications to treat the ailing. Ancient peyote buttons have been found in Texas that date back to 3780-3660 BC. As people in the United States migrated westward, medicine in Texas was mostly practiced in frontier military forts. George Cupples is credited for being the first to administer both ether and chloroform in Texas. By the 1860s, the benefits of ether and chloroform were widely known and their use was common throughout the state when supplies were available. The University of Texas Medical Branch opened its doors in 1891, and for decades anesthesia care was the responsibility of the surgeon and administered by whoever was available. After much difficulty, the first independent department of anesthesia in Texas was established in 1942. Dr. Claudia Potter, despite not having any formal training in anesthesia, was the first anesthetist hired at Scott and White Sanitarium and is credited as the first person to administer gas anesthesia in Texas in 1908. Dr. Robert Miller, designer of the Miller laryngoscope blade, created the blade in San Antonio, Texas. Dr. M. T. "Pepper" Jenkins promoted the use of balanced salt solutions for volume resuscitation, but was made world famous after treating President John F. Kennedy for his fatal gun shot wound in Dallas, Texas. Dr. Anthony DiGiovanni, stationed in San Antonio, Texas, published several articles that helped to popularize the use of the blood patch to treat post-dural puncture headaches.

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As the field of anesthesiology continues to advance, it is important to look back on our predecessors for inspiration. Their incessant drive, ingenuity, and resourcefulness have helped to mold anesthesiology into the specialty that we know today. We must use these same traits to continue to advance the field of anesthesiology and ultimately improve the care of our patients.

Learning Objectives:

1. Chronicle the evolution of anesthesia in Texas.
2. Note major contributions to anesthesia that have originated in Texas.
3. Highlight several important figures in Texas anesthesia.

NOTES:

Winner Resident Essay Contest,
Death under Chloroform, Discovery of Oxygen

Moderator: Bradley E. Smith, M.D.

Hannah Greener and Chloroform; A Better Explained Death

Raymond C. Roy, M.D., Ph.D.

Background: In their 2002 article entitled “An Unexplained Death. Hannah Greener and Chloroform” Knight and Bacon reviewed the evidence and suggested that the more likely cause of death was a fatal cardiac arrhythmia, as finally championed by Snow, rather than pulmonary aspiration, as championed by Simpson (1). They were heavily influenced by research from 1911 demonstrating that the injection of epinephrine intravenously in cats lightly anesthetized with chloroform induced ventricular fibrillation.

Methods: Recent research on the effect of chloroform on isolated rat hearts and tissue (2) and recent autopsies of three chloroform-related deaths (3,4) were reviewed and compared with the findings in the Greener case.

Results: Zhou *et al* demonstrated that chloroform can induce bradycardia and ventricular fibrillation in isolated rat hearts the absence of epinephrine and that it inhibits multiple ionic currents through calcium and potassium channels (2). Contraction band necrosis (CBN) was found in the cardiac muscles of all three individuals autopsied (3,4). In the case of “forced suicide” of an elderly, wheelchair bound woman by chloroform inhalation administered by her husband and subsequent suicide by chloroform inhalation by the husband [think *Amour*, a recent French film nominated for multiple academy awards this year] Ago *et al* write: “*In both the wife and husband, macro- and microscopic examinations revealed extensive CBN of the cardiac muscles and pulmonary edema, suggesting that the direct cause of their death was acute heart failure. We did not observe evidence in favor of sudden cardiac death or ischemic heart disease in either victim.... It is probable that fatal arrhythmia induced by chloroform led to acute heart failure* (3).”

Conclusion: A cardiac cause appears even more likely based on this new information

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References:

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2. Zhou Y, Wu H-J, Zhang Y-H, Sun H-Y, Wong T-M, Li G-R. Ionic mechanisms underlying the cardiac toxicity of the organochloride solvent trichloromethane. *Toxicology* 2011; 290:295-304
3. Ago M, Hayashi T, Ago K, Ogata M. Two fatalities associated with chloroform inhalation. Variation of toxicological and pathological findings. *Legal Med* 2011; 13:156-60
4. Flanagan RJ, Pounder DJ. A chloroform-related death: Analytical and forensic aspects. *Forensic Sci Int* 2010; 197:89-96

Learning Objectives:

1. Review the controversy regarding the death of Hannah Greener.
2. Present newly published laboratory information that support the cardiac mechanism.
3. Present information from 2010 and 2012 autopsies of recent chloroform deaths that support the cardiac mechanism.

NOTES:

Winner Resident Essay Contest,
Death under Chloroform, Discovery of Oxygen

Moderator: Bradley E. Smith, M.D.

A Revised History of the Discovery of Oxygen

John W. Severinghaus, M.D.

Michel Servetus, a Spanish-French physician and anatomist, in 1553 wrote that blood passes through the lung where inspired air cleanses it and changes its color, 75 yrs before Harvey. His discovery was hidden in a book attacking church doctrines. Declared a dangerous heretic by both Catholics and Protestants, he was arrested, tried and burned at the stake in Geneva by Calvin in 1553. John Mayow in Oxford in 1668 wrote 2 books reporting that one fifth part of air was a gas needed for fire and life. He called it 'spiritus igneo aereus'. He was ignored due to the false phlogiston theory of fire. Cavendish made flammable air (H₂) and reported in 1766 that, when it was burned, water appeared. Because it was not understood it was ignored. In 1771 Carl Scheele and in 1774 Joseph Priestley independently discovered methods of generating a gas that supports flame and life, and both separately informed Lavoisier in Sept. 1774. Lavoisier used their methods without crediting either one. He named it oxygen, but couldn't understand what it was for 10 years. In 1784, urged by the Royal Society, he repeated and confirmed Cavendish: Water appeared. He suddenly understood and published that oxygen was an element and water was a compound. He demolished the phlogiston error and initiated the chemistry of oxidation. He tried to claim the discovery of oxygen, and frequently failed to credit other scientists.

IMPORTANT RECENT EVENTS: 1) In 1993, Scheele's letter to Lavoisier, hidden for 219 years by Lavoisier's wife's descendants, became public, proving Lavoisier to be a plagiarist. 2) In 2009, Servetus's hidden discovery of the pulmonary circulation and gas exchange with air was published (in English) in the *Hellenic J. of Cardiology*. 3) In 2011 the Geneva town council finally agreed to mount a stele and sculpture of Servetus languishing in their prison before being murdered by the 16th century Calvinists. We can now properly spread the fame for the discovery of oxygen among these 6 scientists.

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Learning Objectives:

1. Teaching history of medicine.
2. Correction of common mistakes in who discovered oxygen.
3. Interesting students in pursuing history of anesthesia.

NOTES:

Research Methods in History Workshop

Optional Course for Registered Delegates

Genealogy Research in Connecticut**Melvin E. Smith, B.A., M.L.S.**Home and Family Sources:*Begin With Yourself...*

- Begin with yourself and go backwards through the generations, collecting as much information as you can from family members and records. This provides a solid basis for future searching and gives clues on the dates and localities in the lives of earlier generations.
- Gather together all the sources of family information that you have at home, such as birth certificates, photos, diaries, military records, and newspaper announcements of births, marriages, and deaths. Use family artifacts such as old address books, family Bibles, and other personal family objects such as jewelry to help tell your families story.

Record the Information

- Use standard genealogical forms. Two of the most common standard genealogical forms are the pedigree chart and the family group sheet.
- Keep long or detailed stories on individuals or families in a separate binder for that person or surname. The pedigree charts and family group sheets are only designed to hold basic facts.
- Above all, be patient. Undertaking a family history has been compared to putting together a jigsaw puzzle. Sometimes hours or days may go by without finding a piece that fits, but gradually bits of information from here and there are pieced together to produce an overall picture of a family.

Original Sources:

Many sources, both primary and secondary, may be used to fill in information on your family charts. Such resources include, but not limited to:

- Published family histories
- Church, Land, Probate, and Vital records
- Newspaper resources and city directories

Reference Librarian, History and Genealogy, Connecticut State Library, Hartford, Connecticut

- United States Federal Census records
- Immigration records such as ships' passenger lists, naturalization records and passports
- Military and other governmental records

Connecticut Institutions for Genealogical Research

Connecticut State Library
231 Capitol Ave., Hartford, CT 06106
History & Genealogy Unit
Phone: 860 757-6580
Website: <http://www.ctstatelibrary.org>

Connecticut Historical Society
1 Elizabeth St., Hartford, CT 06105
Phone: 860 236-5621
Website: <http://www.chs.org/>

Godfrey Memorial Library
134 Newfield St., Middletown, CT
06457
Phone: 860 346-4375
Website: <http://www.godfrey.org/>

Connecticut Society of Genealogists
175 Maple St., East Hartford, CT
06118-2634
Phone: 860 569-0002
Website: <http://csginc.org/>

Useful Introductory Books

The following lists include useful genealogical books with suggestions on how to organize your material. They also discuss various types of records to search to find missing pieces of family information:

Beard, Timothy Field with Denise Demong. *How to Find Your Family Roots*. New York: McGraw-Hill Book Company, 1977 [CSL call number CS 16 .B35]. This volume is very extensive and includes sections on genealogy for different ethnic groups, a listing of books and resources for each state, and a similar listing for most of the countries of the world.

Clifford, Karen, *The Complete Beginner's Guide to Genealogy, the Internet, and Your Genealogy Computing Program*, Baltimore: Genealogical Publishing Company, 2001 [CSL call number HistRef CS14.C56 2001].

Crandall, Ralph. *Shaking Your Family Tree: A Basic Guide to Tracing Your Family's Genealogy*. Dublin, NH: Yankee Publishing Co., 1986 [CSL call number CS 16 .C77 1986]. A well-written book that presents basic methods clearly.

Doane, Gilbert H. and James B. Bell. *Searching for Your Ancestors*. 5th Edition, revised. Minneapolis: University of Minnesota Press, 1980 [CSL call number CS 16 .D6 1980]. This is recognized as one of the best general books for family history.

Research Methods in History Workshop

Optional Course for Registered Delegates

Hansen, Holley, *The Researcher's Guide to American Genealogy*. 11th edition. Baltimore: Genealogical Publishing Company, 2006 [CSL call number HistRef CS 47 .H36 2006]. One of the best books available in the area of genealogical records. Each type of record (census, for example), is described in detail, with emphasis on the function of the record in genealogical research, i.e., how it uncovers a particular type of information.

Westin, Jeane Eddy. *Finding Your Roots*. Los Angeles: J. P. Tarcher, Inc., 1977 [CSL call number CS 16 .W46 1977]. Covers all aspects of genealogy and is widely available in bookstores.

The Handybook for Genealogists: United States, Logan, Utah: Everton Publishers, 2006 [CSL call number HistRef CS47 .H36 2006].

Computer Sources

Many free genealogical websites may be found online. Examples of free websites include:

FamilySearch: <http://www.FamilySearch.org>

Free access to millions of records, indexes and primary source materials online.

Roots Web: <http://www.rootsweb.ancestry.com/>

The oldest genealogical website, home to dozens of free searchable databases.

USGenWeb: <http://www.usgenweb.org/>

Volunteer generated genealogical materials for the United States which are arranged by state.

Cyndislist: <http://www.cyndislist.com/>

An exhaustive listing of Genealogical websites found on the internet.

ICONN: <http://www.iconn.org>

Connecticut resident access to valuable online resources such as: Heritage-Quest and the Historical Hartford Courant 1764-1922.

Learning Objectives:

1. Provide a basic outline for beginning genealogical research.
2. Provide organizational strategies, along with the introduction of primary and secondary resources for genealogical research.
3. Promote and highlight Connecticut institutions that will aid the family researcher.

NOTES:

Research Methods in History Workshop

Optional Course for Registered Delegates

Timelines: Placing Your Heritage in Historical Perspective**Laura G. Prescott, B.A.**

This topic stresses the importance of placing ancestors within their historical, social, and political environment. Events and customs shaped their lives. If we understand where they fit in and the circumstances that impacted their lives, we understand a little more about who they were, where they lived, what they did, and how they interacted with colleagues, peers, and relations. Some genealogy software programs have basic timeline potential. Excel spreadsheets, basic word processing programs, and mapping software can also add to a better understanding of a person's place in history. All these possibilities will be reviewed and applied.

What events shaped the lives of our ancestors? From simple to difficult, the questions are always in a genealogist's mind: Who was president when my immigrant ancestor arrived in Boston? Where was my great-great grandfather living when his future wife was born? Why did they marry so late? What brought one family into contact with this other family in my lineage? Did a war or epidemic cause a change in quality of life for my ancestors in this location, in this time period? Many questions can be answered when we place events, migration patterns, and customs on a visual plane beside a record of our ancestors' life events.

Create chronological outlines of your ancestors' lives to solve problems and place them in historical perspective.

Learning Objectives:

1. How to create a timeline.
2. How timelines can help prove or disprove family stories.
3. How timelines place a person in historical perspective.

Laura G. Prescott is an internationally recognized researcher, writer, and speaker. She offers a unique mix of history, genealogy, and technology to find answers and ancestors. Her specialties include manuscripts and online research. She is a professional genealogist, past president of APG, and a consultant at Fold.com. More at lauraprescott.com.

NOTES:

Research Methods in History Workshop

Optional Course for Registered Delegates

Research Methods and Resources in the History of Medicine**Melissa J. Grafe, Ph.D.***Locating Resources in the History of Medicine*

Interested in the history of medicine? Looking for resources beyond Google? In this talk, Dr. Grafe, a historian of medicine and Yale's Medical Historical Librarian, will discuss ways to find materials in the history of medicine, from 12th century books to 20th century visual resources. She will take you through the process of identifying historical materials, and provide guidance on finding the best resources for your project.

Learning Objectives:

1. To help identify resources for historical research in medicine.
2. To guide participants in using historical resources.

NOTES:

John R. Bumstead Librarian for Medical History, Cushing/Whitney Medical Library, Yale University, New Haven, Connecticut

Research Methods in History Workshop

Optional Course for Registered Delegates

Framing Historical Questions: From Idea to Research Project**Melissa J. Grafe, Ph.D.***Framing Historical Questions: from Idea to Research Project*

Many people have great ideas that they want to develop into research projects, but don't know where to start. Dr. Grafe, a historian of medicine and Yale's Medical Historical Librarian, will take participants through the process of historical research. Beginning with framing historical questions, she will explore the different pathways scholars take to finally write on a medical historical topic.

Learning Objectives:

1. To discuss steps in doing historical research.
2. To help participants craft historical questions.

NOTES:

John R. Bumstead Librarian for Medical History, Cushing/Whitney Medical Library, Yale University, New Haven, Connecticut

Research Methods in History Workshop

Optional Course for Registered Delegates

Publishing Your Work**Julie M. Fenster, B.S.**

The organizers of the meeting have asked Ms. Fenster to discuss aspects of the publishing world that all aspiring authors need to be familiar with.

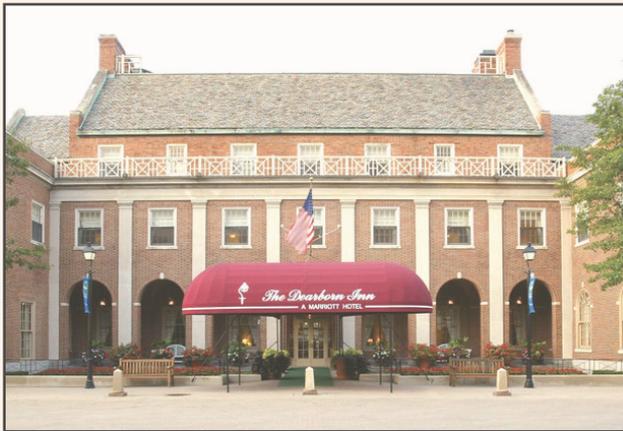
What happens after the first draft of the manuscript is written? In fact, should you first contact an agent or publisher with just one chapter or a summary of your work? What is the role of an agent? How do you find a suitable publisher? How do you deal with a publisher? How is the publishing industry changing? What is the role of self-publishing? These and other publishing related matters will be discussed during her lecture.

Learning Objectives:

1. How do authors move from manuscript to published book?
2. How to interact with agents and publishers?

NOTES:

Please join us for the
20th Annual Spring Meeting
May 1–3, 2014



at the Dearborn Inn, Dearborn, MI

**Program Chairman,
Douglas R. Bacon, M.D.**