The 18th Annual Spring Meeting
of the
Anesthesia History Association

May 3-5, 2012
Hampton Inn & Suites, Country Club Plaza
Kansas City, Missouri

Jointly sponsored by Anesthesia History Association, The University of Kansas Medical Center Department of Anesthesiology, Department of the History and Philosophy of Medicine and University of Kansas Medical Center Continuing Education

Course Director
Anthony L. Kovac, MD
Kasumi Arakawa Professor in Anesthesiology
Department of Anesthesiology
Kansas University Medical Center
Kansas City, KS
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AGENDA

Thursday, May 3, 2012

09:00 a.m.  Shuttle pickup & transfer from hotel to KU Medical Center (KUMC)
09:30 a.m.  Tour of Clendening Library & Museum and KUMC Archives
11:30 a.m.  Box Lunch (Clendening Foyer)
12:30 p.m.  Shuttle transfer back to hotel &/or National World War 1 Museum
01:00 p.m.  Tour “Liberty Memorial” National World War 1 Museum (shuttle provided)  
(Admission fees - $12.00 adults & $10.00 seniors 65+)
04:00 p.m.  AHA Council Meeting (Clendening Library Jager Room, KUMC)
06:00 p.m.  Clendening Library Amphitheatre, KUMC
Welcome by History & Philosophy of Medicine Chair, Chris Crenner, MD
and Course Director, Anthony Kovac, MD

06:15 p.m.  “Ralph Major and Logan Clendening”
Frederick Holmes, MD

06:45 p.m.  Welcome Buffet Dinner Clendening Foyer (barbecue, vegetarian option available)

09:00 p.m.  Shuttle transfer to Hampton Inn Hotel

Friday, May 4, 2012

07:00 a.m.  Registration, Hampton Inn & Suites

07:45 a.m.  Announcements & Welcome
Course Director, Anthony Kovac, MD
Dept. of Anesthesiology Interim Chair, Talal Khan, MD
Presiding: Anthony Kovac, MD

08:00 a.m.  “Orval Cunningham: The Man, His Machine, His Tank in Kansas City & Cleveland”
  Anthony Kovac, MD & George Bause, MD

08:30 a.m.  “Ralph Waters and Thomas Irving in Kansas City: Mentors to Future Generations of Anesthesiologists”
  Rob Strickland, MD

09:10 a.m.  “The Development of Respiratory Care, an Allied Health Profession, and the Role of the Department of Anesthesiology at the University of Kansas”
  LeRoy Misuraca, MD

09:30 a.m.  Panel: “The History of the National Board of Respiratory Care”
  Moderator: LeRoy Misuraca, MD
  Joan Taylor, EdD, PhD, RRT
  Steven Bryant, PhD
  Louis Sinopoli, EdD, RRT
  Homer Rodriguez, BA, RRT, FAARC

10:00 a.m.  Break

Presiding: Rob Strickland, MD

10:30 a.m.  “The Nurse Anesthesia Profession – Past, Present and Future”
  Carolyn Nicholson, CRNA, B.S.Ed. & Sukumar Desai, MD

11:00 a.m.  “Informed Consent in Clinical Research: A Half-Century after Beecher”
  Dinesh Kumar Jagannathan, MD & Sukumar P. Desai, MD

11:30 a.m.  “Claude Bernard and Henry K. Beecher: Animal Subjects in Experimental Medicine”
  Matthew Edwards, BS

12:00 p.m.  Box Lunch
Presiding: Anthony Kovac, MD

12:15 p.m. 2nd Patrick Sim Memorial Lecture:
“The Most Kissed Girl in All the World”
David J. Wilkinson, MBBS, FRCA, Hon FCARCSI

01:15 p.m. Break

Presiding: William McNiece, MD

01:30 p.m. “How Classicists View Physician Historians Using the Iliad as a Model”
RC Roy MD, CS Roy PhD, & WA Tortorelli PhD

02:00 p.m. “Mr. Pott Determined Upon the Operation: Surgeons, Patients and Pain in 18th Century London”
Lynda Payne, RN, PhD

02:30 p.m. “A Consideration of Charles Thomas Jackson’s Life as a Manifestation of Attention Deficit Hyperactivity Disorder”
Ramon Marton, MD, Ajay Wasan, MD & Sukumar Desai, MD

03:00 p.m. “The Forestalled Discoveries of Ether Anesthesia by William E. Clarke and Crawford W. Long: The Long Shadow of Professor George B. Wood and Suspicion of Mesmerism”
Ernest Hook, MD

03:30 p.m. Break

Ronald Stephen, MD, Resident Essay Competition Presentations

Presiding: William Hammonds, MD

03:45 p.m. “A History of Ethics in Anesthesiology”
Sarah Smith, MD

04:15 p.m. “Walter Sutton: Physician, Scientist, Inventor”
Gregory Ramirez, MD

04:45 p.m. Adjournment
06:15 p.m.  Reception, Hampton Inn & Suites

07:00 p.m.  Dinner & Lecture:
“A Very Personal Tale of Bloody Conflict: Kansas versus Missouri from 1855 to 1865”
Bradley E. Smith, MD

Saturday, May 5, 2012

07:00 a.m.  Registration, Hampton Inn & Suites

07:45 a.m.  Announcements & Welcome
Course Director, Anthony Kovac, MD

Presiding: Martin Giesecke, MD

08:00 a.m.  “Stuart Cullen: A Strong Second Limb of the Waters’ Tree”
Franklin Scamman, MD

08:30 a.m.  “Lucian E. Morris MD: Introduction to the Inventor and Aqualumnus”
Mark Schroeder, MD

09:00 a.m.  “Aldolph Hartung ‘Buddy’ Giesecke, Jr. MD”
Martin Giesecke, MD

09:30 a.m.  “A History in Teaching the Sellick Maneuver (Cricoid Pressure): Distinguishing between Man, Myth and Legend”
Lauren Hoke, BS CCRC, Joseph May, BS & Yvon Bryan MD

10:00 a.m.  “400 Years in the Making: The Discovery of Curare and its Role in Transforming Anesthesia”
Adam Toth, BS

10:30 a.m.  Break
Presiding: Mark Schroeder, MD

11:00 a.m.  “Gas Injuries at Base Hospital #28 in World War I”
Jason Gregory, BS & Anthony Kovac, MD
11:30 a.m.  “Military Anesthesia Trainees in WWII – Madison, WI”  
Colby Parks, MD & Mark Schroeder, MD

12:00 a.m.  “Alternative Methods to Teach History of Anesthesia”  
Manisha Desai, MD & Sukumar Desai, MD

12:30 p.m.  “History of Anesthesia Related Sites in Hartford, Connecticut”  
Antonio Aponte-Feliciano, MD & Manisha S. Desai, MD

1:00 p.m.  Meeting Adjournment
MEETING INFORMATION

Overview
The program is intended to enhance knowledge of historical events in anesthesia. Great advances have been made in the field of anesthesiology and it is important that practitioners recognize the historical roots of current practice. Meetings of the Anesthesia History Association offer a mechanism for disseminating and archiving the achievements that have been made in the field over the years.

Target Audience
This meeting is designed for primarily physicians, nurses, respiratory therapists, historians and anyone interested in medical history.

At the completion of this meeting, participants should be able to:
1. Identify the historical aspects of anesthesia and medical techniques as they relate to present-day practice, medical theory, disease co-morbidities, scientific innovation and doctor-patient relationships.
2. To analyze the history and development of key medical discoveries as they relate to modern-day issues and practice.
3. To employ historical analysis to discover useful perspectives on modern-day problems as they relate to the delivery of medical, nursing, anesthesia and respiratory care issues.
4. To learn how the biographies of anesthesia pioneers and practitioners influenced the development of current anesthesia theory, practice and management.

Accreditation The KU Medical Center Office of Continuing Medical Education designates this live activity for a maximum of 12.5 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

All participants are required to sign attendance rosters at the beginning of each day. A certificate of completion will be provided to all activity participants based on documentation of actual attendance time, meeting minimum attendance requirements specific to the activity.

Physicians: The University of Kansas Medical Center Office of Continuing Medical Education is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.
GOALS AND OBJECTIVES

5. To review general history and personal experience to illustrate the scope and development of Respiratory and Critical Care in a non-university community hospital.
6. To explain the role of KUMC in the formation of the National Board for Respiratory Care (NBRC) that replaced various prior certifying activities, defining and legitimizing the profession through universal state licensure, an astonishing political achievement.
7. To review the life and influence of Stuart Cullen on the development and practice of modern anesthesia.
8. To analyze how lectures and works of Percivall Pott revealed the workaday existence of a London hospital surgeon, his pupils and his patients in the 18th century. The focus is on operations, how surgeons prepared for and carried them out, how patients endured them (or did not), how spectators behaved toward them and what all this reveals about attitudes toward pain before general anesthesia.
9. To illustrate how physician historians make incorrect medical assumptions compared to modern day practice.
10. To illustrate how historic sites in Hartford, CT, relate to Horace Wells’ contributions of nitrous oxide to modern-day anesthesia.
11. To familiarize the participants with the evolution of policies and regulations that affect informed consent in human subjects.
12. To discuss an alternate approach to teaching the history of anesthesia as it relates to modern practice to new millennium residents.
13. To design a curriculum to teach history of anesthesia outside the operating room.
14. To provide a concise history of nurse anesthesia and its importance to the development of the modern-day practice.
15. To examine factors that led nurses to get involved in the administration of anesthesia and describe the activities of some of the leading pioneers in the field of nurse anesthesia.
16. To describe how close relationships between these pioneers of anesthesia and surgery encouraged the development of their professional activities.
17. To examine how formal training programs contributed to the development of modern-day anesthesia.
18. To assess how disorders such as attention deficit disorder and oppositional defiant disorder can interfere and hinder the development of ideas and medical workplace environments.
19. To understand why and how scientific concerns about claims for the existence of a physiological force, “animal magnetism” by practitioners of mesmerism, delayed the introduction of inhalation anesthesia.
20. To describe the discovery of curare and its role in transforming modern-day anesthesia.
21. Identify the historical aspects of anesthesia and medical techniques as they relate to the present day practice of scientific innovation and doctor-patient relationships.
22. To analyze the history of issues and development of key medical discoveries as they relate to modern-day practice.
23. To employ historical analysis to discover useful perspectives on modern-day problems as they relate to the delivery of medical, nursing and respiratory care issues.
24. To learn how the biographies of anesthesia pioneers and practitioners influenced the development of anesthesia practice today.
25. To assess how the invention of the resuscianne has helped in the development of simulation and CPR resuscitation practice today.
FACULTY

Course Director

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Kasumi Arakawa Professor of Anesthesiology
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akovac@kumc.edu

Guest Speakers

Bradley E. Smith, MD
Professor Emeritus
Department of Anesthesiology
Vanderbilt University School of Medicine
Nashville, TN

David J. Wilkinson, MBBS, FRCA, Hon FCARCSI
Emeritus Consultant
Boyle Department of Anesthesia
St. Bartholomew's Hospital
London, UK

Frederick Holmes, MA, MD, FACP
Professor, Department of the History and Philosophy of Medicine
Hashinger Distinguished Professor of Medicine Emeritus

Moderators

Anthony L. Kovac, MD, Kasumi Arakawa Professor of Anesthesiology and Director of Clinical Research, University of Kansas Medical Center, Kansas City, Kansas

Rob Strickland, MD, Department of Anesthesiology
Wake Forest University School of Medicine, Winston Salem, NC

LeRoy Misuraca, MD, Director of Critical Care & Respiratory Services (RET)
Presbyterian Intercommunity Hospital, Whittier CA

William McNiece, MD, University of Indiana Medical Center, Indianapolis, IN

William Hammonds, MD, Emeritus Professor, Emory University, Atlanta, GA

Martin Giesecke, MD, The University of Texas Southwestern Medical Center, Dallas

Mark Schroeder, MD, University of Wisconsin School of Medicine and Public Health, Madison, WI
Thursday, May 3, 2012

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04:00 p.m.  AHA Council Meeting (Clendening Library Jager Room, KUMC)

All Registrants

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Dept. of Anesthesiology Interim Chair, *Talal Khan, MD*

**Presiding: Anthony Kovac, MD**

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*Anthony Kovac, MD & George Bause, MD*

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*LeRoy Misuraca, MD*

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**Moderator: LeRoy Misuraca, MD**  
*Joan Taylor, EdD, PhD, RRT*
*Steven Bryant, PhD*
*Louis Sinopoli, EdD, RRT*
*Homer Rodriguez, BA, RRT, FAARC*
Orval Cunningham: The Man, His Machine, His Tank in Kansas City & Cleveland

Anthony L. Kovac, M.D.
Kasumi Arakawa Professor of Anesthesiology
University of Kansas Medical Center, Kansas City, Kansas

George S. Bause, M.D., M.P.H.
Clinical Associate Professor, Schools of Medicine and of Dental Medicine
Case Western Reserve University, Cleveland, Ohio

Introduction
Orval James Cunningham, born in 1880 in Enid, OK, attended the Enid, OK High School (1891), Universities of Oklahoma (1898-1899) and Nebraska (1899-1900), graduating from the University of Chicago in 1902. He received his MD degree from Rush Medical College in 1904, with an internship at South Chicago Hospital (1904-1905). He was an associate professor of physiology at University Medical College (1905-1907) and lectured in physiology at General Hospital (1906-1907). He had published articles on anesthesia, administration of ether and nitrous oxide and oxygen in 1908, 1909 and 1913, respectively (1). He was appointed as an associate professor (surgery) at the University of Kansas in January 1916. As a proponent of the use of nitrous oxide anesthesia and active as an inventor, he designed his own nitrous oxide/oxygen anesthesia machine (2).

The O. J. Cunningham Nitrous Oxide and Oxygen-Ether Sequence Apparatus. In April of 1908, Cunningham presented his namesake apparatus to the world in an illustrated JAMA article.(1) His machine featured double-yokes each for compressed cylinders of oxygen and of nitrous oxide. These gases were mixed in a dial-controlled chamber which then passed through a dial-controlled ether chamber. The last was warmed by a hot water bath. Cunningham included the option to switch from N2O-O2 induction to ether-air maintenance anesthesia. Gases traveled through a 3.5 foot length of wide-bore tubing to a low-deadspace face mask with expiratory valve. Considered the first popular anesthesia machine manufactured west of the Mississippi River, the Cunningham Apparatus provided swifter inductions (with fewer asphyxial signs) and minimized or economized use of (warmed) ether, while supposedly producing less postoperative nausea and pulmonary complications. The apparatus had structural flaws which, combined with competitors’ advances, led to significant decreases in market share for Cunningham. Yet, it was the 1918 pandemic of influenza which would divert Cunningham’s attention from “Anesthetic” to “Therapeutic [Hyperbaric] Apparatus.” (2,3)

The Cunningham “Tank Treatment” at Kansas City
Having noticed that patients with lung disease appeared to improve when they changed altitude and moved from Denver, CO to Kansas City, MO, he reasoned that this was due to the increase in oxygen at the lower altitude. Procuring a tank from a Kansas City engineering firm, he designed and constructed a hyperbaric air/oxygen tank located at the University of Kansas hospital on Goat Hill in Rosedale, KS. This first pressure chamber in 1918 was an instant success by saving the lives of two seriously ill pneumonia patients. Following the success of treating patients with lung problems, he tried hyperbaric treatment for hypertension, diabetes and syphilis.
The Next Cunningham Sanitarium: The “Timken Tank” at Cleveland.
Among those serviced successfully by Cunningham at his sanitarium in Kansas City was a uremic patient, the powerful “Baron of Bearings”, millionaire H. H. Timken. Thus, uremia was added to the long list of ailments (diabetes mellitus, pernicious anemia, syphilis, hypertrophic arthritis, and carcinoma) which Cunningham believed 1) could be caused by “anaerobic infections or diseases” and 2) could be remedied or cured by hyperbaric air treatments.

After Cunningham’s cylindrical tank had “rescued” Timken from a uremic crisis, the tycoon began building a 64-foot-diameter, 5-story sphere in early 1928 near the lakeshore of Cleveland, Ohio as Cunningham’s newest sanitarium. By May of 1928, the AMA Bureau of Investigation was already questioning whether Cunningham’s treatments seemed “tinctured more strongly with economics than with scientific medicine?”

That scathing JAMA article and the Great Depression combined to force economic failure upon his Cleveland sanitarium, and the great steel sphere would be passed through a series of owners. Cunningham’s death, from a stroke in 1937, spared him from witnessing the sale five years later of his “Timken Tank” as wartime scrap.

Ironically, some of Cunningham’s hyperbaric concepts would be validated in later years—for theoretical reasons he had not entertained. Perhaps future physicians can learn a lesson from this poor businessman, this absent-minded professor, O. J. Cunningham, M.D., who allowed, perhaps, his personal zeal for fame and fortune, and, certainly, the opinions of patients and business partners, to sway his professional judgment.

Summary
Although controversial at the time, the early work of Orval Cunningham was destined to have an important place in history because his original work set the precedent for the development of the iron lung, US Navy diving advances and submarine rescue work. He is considered to be one of the first practitioners to make use of hyperbaric oxygenation in the US. As such, his experimentation with hyperbaric therapy can be considered to be truly pioneering.

References:
Dr. Ralph Waters is one of the most recognized individuals in the field of anesthesiology. Because of the department at the University of Wisconsin that he established, he is often referred to as the founder of academic anesthesiology in the United States, if not in the world. He was the chairperson of anesthesia for 22 years, and his residents and trainees came from all areas of Europe and the Orient. He also was a founding member of the American Board of Anesthesiology and an early or founding member of several other anesthesia societies and organizations.

Prior to his move to the University of Wisconsin in January, 1927, Waters had been in private practice in Sioux City, IA, for approximately 11 years and in Kansas City for 3 years. His private practice years were notable for his “Down-Town Anesthesia Clinics,” an early form of the outpatient surgical center.

This presentation will look at the places in Kansas City where he lived and practiced as they existed at that time and adds to information previously published. According to Gillespie, Waters and his family moved to Kansas City in the autumn of 1924. This is consistent with information found in the Kansas City phone book and city directory because Waters has an address (in the Hotel Buckingham) and a phone number in those resources for 1924. He probably did not practice medicine in Kansas City until very late in 1924 or early in 1925 because he did not receive his Missouri state medical license until December 9, 1924.

Waters initial address was in the Hotel Buckingham, 31st and Forest, and this building was demolished many years ago. His second address was at 6112 The Paseo, a small bungalow in what were the suburbs at that time.

His first office was in the Wirthman Building at 31st and Troost, and in 1926 he moved his office to the Argyle Building in downtown Kansas City at 12th and McGee. The Wirthman Building was razed in 1997, but the Argyle building stands today, although in a state of significant disrepair.

The hospital that Waters was affiliated with is Research Hospital at its former location at 23rd and Holmes. In Waters’ day this was an excellent hospital, one of the best in the Midwest.

Unfortunately, specific materials related directly to Dr. Waters' anesthesia practice at that time cannot be located and may no longer exist.

Dr. Thomas Irving (1931-2011) was born in Saxonburg, Pennsylvania. After his college graduation he was a naval aviator flying P-2 reconnaissance patrol aircraft. He then went to Hahnemann Medical College, graduating in 1961. Following his residency in anesthesia at Penn, where Dr. Robert Dripps was chair, he went to Wichita, Kansas, in 1964. In Wichita he joined Dr. Ray Parmley at St. Francis Hospital. In 1965 Dr. Irving went to the University of Kansas Medical Center when Dr. Parmley assumed the chairmanship at that institution. In 1967 Dr. Irving became the chairman at North Carolina Baptist Hospital/Bowman Gray School of Medicine in Winston-Salem. He had a very successful chairmanship, building the department from one other faculty member at that time to more than 25 members when he stepped down on December 31, 1982. A number of other anesthesiologists had come and gone, either to other academic institutions or private practice. By that time he had built one of the best departments in the US with excellent clinical care, resident education, and research endeavors. He was a valued mentor to many individuals, and at least ten of his faculty recruits went on to be chairs at other academic departments.
THE DEVELOPMENT OF RESPIRATORY CARE, AN ALLIED HEALTH PROFESSION, AND THE ROLE OF THE DEPARTMENT OF ANESTHESIOLOGY AT THE UNIVERSITY OF KANSAS

LeRoy Misuraca, MD

Director of Critical Care
& Respiratory Services (RET)
Presbyterian Intercommunity Hospital
Whittier California

This two-part presentation is in honor of the University of Kansas Department of Anesthesiology’s seminal role in credentialing and defining a profession and of course for hosting this AHA 2012 Spring Meeting.

Respiratory care (RC) as an allied health profession under medical direction is largely a United States development with some 50,000 practitioners in the USA, and now spreading to the Latin American countries of Mexico, Central and South America, and beyond as Homer Rodriguez will report during our panel. Functions of the Respiratory Care Practitioner (RCP is the accepted legal equivalent of RN) in other countries are variously performed by physicians, nurses, pulmonary function personnel, and physical therapists. Japan has clinical engineers who perform some similar roles. The political organization, schooling, and credentialing/licensing are today provided by three cooperating organizations specific to each function, though in the past the functions overlapped. Labels have changed over 60 years: respiratory has replaced inhalation and pulmonary; care has replaced therapy.

The medical supervision and impetus for the profession came from anesthesiologists and internists, mostly chest physicians, even ENT. Anesthesiologists were more prominent 60 years ago because of their connection with mechanical ventilators; however pulmonologists and intensivists are more common now as anesthesiologists have mostly retreated back to their operating rooms.

First I would like to review general history and my personal experience to illustrate the scope and development of Respiratory and Critical Care in a non-university community hospital.

Second will be a panel discussion starting with Joan Taylor explaining the role of KU in the formation of the National Board for Respiratory Care (NBRC) that replaced various prior certifying activities, defining and legitimizing the profession through universal state licensure, an astonishing political achievement that Steve Bryant will discuss.

Early credentialing exams consisted of a multiple-choice exam available in major cities and an oral exam usually concurrent with a national AARC congress in various cities. The oral had two parts: one of basic science and clinical procedures and another focused on equipment physically present for the exam. Each session had a therapist and a physician examiner from hospital sites of excellence scattered around the country. Examiners were allowed to audit exam sessions during their free periods. Because the examiners came from many different locations, usually not knowing the examiners they audited, these oral exams proved to be a giant blender allowing examiners to observe what and how others were asking and grading. Also at the end of the day a review with examiners and examining board officials
produced the important unappreciated result of gradually standardizing expectations that helped to define the profession.

The inherent unfairness of oral exams, gambling on which examiner a candidate might draw, and the steadily increasing numbers of candidates finally forced computerization that Lou Sinopoli will discuss during our panel. But many of us missed the collegiality and education that the orals provided. Examiners had to carefully plan questions that would fairly reveal a candidate’s competence. All of us cherished stories we shared after the exams, and that made us better examiners and teachers.

The NBRC Panel

KU and THE NBRC
Joan P. Taylor, EdD, PhD, RRT(retired)
40+ years in Health Care from the Bedside to the Boardroom
Past Respiratory Therapist & Program Director KU Respiratory Care Program
Past Director Organizational Development Kaiser Permanente
Past Trustee NBRC

BEGINNING and MATURATION of the NBRC
Steven K. Bryant, PhD
Springfield, MO
Former Chief Executive Officer
National Board for Respiratory Care, Inc. and
Applied Measurement Professionals, Inc.

REPLACING the ORAL EXAMS
Louis M. Sinopoli, EdD, RRT
Program Director of Respiratory Care
El Camino College. Torrance, Ca. 91750
Online Educational Evaluator & Consultant to International Council for Respiratory Care
Past Trustee NBRC & Robert Miller Award Recipient

INTERNATIONAL EXPANSION of the NBRC
Homer L. Rodriguez, B.A. RRT,FAARC
Executive Director
Latin American Board for Professional Certification in Respiratory Therapy

National Board for Respiratory Care
18000 W 105th Street
Lenexa KS 66061
Friday, May 4, 2012 (10:30 a.m. to 11:30 p.m.)

Presiding: Rob Strickland, MD

10:30 a.m.  “The Nurse Anesthesia Profession – Past, Present and Future”
Carolyn Nicholson, CRNA, B.S.Ed. & Sukumar Desai, MD

11:00 a.m.  “Informed Consent in Clinical Research: A Half-Century after Beecher”
Dinesh Kumar Jagannathan, MD & Sukumar P. Desai, MD

11:30 a.m.  “Claude Bernard and Henry K. Beecher: Animal Subjects in Experimental Medicine”
Matthew Edwards, BS
The Nurse Anesthesia Profession – Past, Present, and the Future

Carolyn Nicholson, * C.R.N.A., B.S.Ed. and Sukumar P. Desai, # M.D.
*Department of Anesthesiology, University of Cincinnati College of Medicine
#Department of Anesthesiology, Perioperative and Pain Medicine
Brigham and Women’s Hospital, Harvard Medical School, Boston

**Background:** After the first successful public demonstration of general anesthesia on October 16, 1846, by William T.G. Morton, a wide variety of practitioners administered anesthesia. These included physicians, dentists, medical students, nurses, and others. Although residency programs in anesthesia first began in the 1920’s with the pioneering efforts of Ralph Waters in Madison, Wisconsin, anesthesia educational programs for nurses were being developed as early as 1909 by Catholic nuns in reputable hospitals such as St. Mary’s (Mayo Clinic) in Rochester, Minnesota. By 1915, training for nurse anesthetists became more formalized under the guidance of Agatha Cobourg Hodgins at Lakeside Hospital in Cleveland, Ohio.

**Past:** We examine factors that led nurses to get involved in the administration of anesthesia and describe the activities of some of the leading pioneers in the field of nurse anesthesia. We also describe the close relationships between some of these pioneers and surgeons who encouraged their professional activities. We then proceed to examine how formal training programs in anesthesia were developed for nurses. We explore the role played by nurses in the civil war, World War I, World War II, and their current role in the US Military.

**Present:** The current status of training, certification, and practice for nurse anesthetists is explored next. We discuss the important role nurse anesthetists play in the overall delivery of anesthesia care in the United States.

**Future:** Although beyond the scope of this historical investigation, we briefly comment on the nature of the controversies and challenges that face the professions of physicians, nurses, and other practitioners who provide anesthesia care.

**References:**

1. Thatcher VS. History of anesthesia with emphasis on the nurse specialist. 1953, Lippincott and Co., Philadelphia

**Goals and Objectives:**

To provide a concise history of the profession of nurse anesthesia.
Dinesh Kumar Jagannathan, M.D. and Sukumar P. Desai, M.D.
Department of Anesthesiology, Perioperative and Pain Medicine
Brigham and Women’s Hospital, Harvard Medical School, Boston, Massachusetts

Background:
In 1966, Henry Knowles Beecher, Professor of Anaesthesia at Harvard Medical School, and Chairman of the Department at Massachusetts General Hospital published a landmark article\(^1\) that exposed gross violations of what we consider today to be ‘ethical conduct of clinical research.’ Acknowledging the difficulty in obtaining truly informed consent, he maintained that one must strive towards this goal for sociological, ethical and clear-cut legal reasons. Over the next half century many changes have occurred in an attempt to protect human research subjects, with informed consent forming the backbone. We examine the evolution and role of informed consent, specifically 1) societal response to the exposé, 2) the current status of informed consent, 3) associated shortcomings and the attempts to improve it, and 4) future directions and challenges.

Methods:
Beecher’s published writings and personal notes\(^2\) formed the basis of our exploration. These were supplemented by significant contributions by others. Documents, policies and guidelines generated by regulatory agencies were consulted, as were policies currently in force at our institution and medical school.

Results:
Informed consent procedures, and other protections extended to human research subjects have evolved post facto, as knee jerk responses to revelations by the likes of Beecher. Enhanced readability of information presented on forms is one of the many steps taken to improve the consent process, however considerable controversy still exists\(^3\). Regulatory and legal mandates have made informed consent effective in preventing large scale abuses, however they place undue emphasis on the consent forms, and may degrade the process to a mere ritual. With globalization of research initiatives, concern about exploitation of people alien to the concept of informed consent has emerged. Other challenges include the applicability of informed consent when conducting certain new types of research such as data mining and genomic studies.

Conclusions:
The requirement of informed consent, in conjunction with other regulations, has evolved into a durable safety mechanism for protecting human research subjects as envisioned by Beecher. Yet, the process remains far from perfect, and considerable room for improvement exists. It has become cumbersome and increased regulation may be counterproductive, especially if the process becomes ritualistic, thereby meeting the letter, but not the spirit of Beecher’s initial outrage. Technological advances and globalization present new challenges as society balances the opposing needs of supporting clinical research, while at the same time protecting human research subjects.

References:

Goals [For CME purposes] Upon completion of this lecture, the attendee should become familiar with the evolution of policies and regulations that affect informed consent in human subjects.
Claude Bernard and Henry K. Beecher: Animal Subjects in Experimental Medicine
Matthew L. Edwards Jr., University of Texas Medical Branch at Galveston, TX

Goals/Objective: This paper provides an historical overview of Claude Bernard and Henry K. Beecher's shared perspectives on medical research and traces how these perspectives led to their different views on human and animal subjects in medical research.

Abstract: Henry K. Beecher (1904-1976) was an American World War II anesthesiologist well-known for his attempts to express pain relief in quantitative terms and understand drug action. Beecher's endorsement of physiology as a requisite for anesthesiology's basis as discipline was similar to Claude Bernard's (1813-1878) endorsement of physiology as the basis of experimental medicine. Both Beecher and Bernard's observations from their work in anesthesia involved recognition of the complexity inherent in the study of biological organisms. Beecher argued that human subjects gave rise to complications in experimental method because some responses were not entirely reducible to physical and chemical properties (e.g., the reaction component of pain). Beecher reasoned that although experimentally produced pain was not readily reducible to pathological pain, "the spontaneity of living beings is no obstacle to the use of experimentation." Coincidentally, the aforementioned words were not Beecher's, but Claude Bernard's nearly 100 years earlier, in his groundbreaking work An Introduction to the Study of Experimental Medicine. Bernard disagreed with physiologists who did not readily endorse experimental method in biology because they believed that living beings possessed vital and inner forces that were constantly at odds with physical and chemical properties, ultimately depriving biological science of the facility of experimentation that physical and chemical sciences possessed. Although Beecher and Bernard agreed that complex organisms did not deprive medicine of determinism, they differed substantially on whether humans and animals should be used in medical research. Bernard argued against the use of humans in experimental research. He felt that similar conditions across species yield similar phenomena and thus, organisms behave differently only when subjected to different conditions. For Bernard, differences in animal species were not qualitative, or the result of "evolutionary differences in complexity and organization". Bernard reasoned that the causes governing effects in animals are identical to the causes governing effects in humans after quantitative (e.g., weight surface area, metabolism etc.) differences were accounted for.

Beecher argued that although humans were "essential" to certain experiments of disease etiology, human experimentation is only necessary "when the desired ends cannot be obtained in other ways, such as by experimentation in animals." Experiments with new techniques, drugs, and other agents could only often be carried out in man. For Beecher, human experiments demanded that rigorous ethical, moral, and precautionary principles were satisfied. Moreover, he argued that "there is a difference in reactions between species, so that ultimately the experiment must be made in man," and consequently "medical research... is dependent upon experiments in man which deliberately alter bodily and mental functions." Beecher's concept of the reaction component of pain contradicted Bernard's belief that species differences were merely quantitative, leading to their different views on the use of human subjects in medical research.

Works Cited:


NOTES
Friday May 4, 2012 (12:15 p.m. to 3:00 p.m.)

Presiding: Anthony Kovac, MD

2nd Patrick Sim Memorial Lecture: “The Most Kissed Girl in All the World”
   
   David J. Wilkinson, MBBS, FRCA, Hon FCARCSI

Presiding: William McNiece, MD

01:30 p.m.  “How Classicists View Physician Historians Using the Iliad as a Model”
   
   RC Roy MD, CS Roy PhD, & WA Tortorelli PhD

02:00 p.m.  “Mr. Pott Determined Upon the Operation: Surgeons, Patients and Pain in 18th
   Century London”
   
   Lynda Payne, RN, PhD

02:30 p.m.  “A Consideration of Charles Thomas Jackson’s Life as a Manifestation of
   Attention Deficit Hyperactivity Disorder”
   
   Ramon Marton, MD, Ajay Wasan, MD & Sukumar Desai, MD

03:00 p.m.  “The Forestalled Discoveries of Ether Anesthesia by William E. Clarke and
   Crawford W. Long: The Long Shadow of Professor George B. Wood and
   Suspicion of Mesmerism”
   
   Ernest Hook, MD
18th Annual Spring Meeting
Anesthesia History Association

2nd Patrick Sim Memorial Lecture
May 4, 2012

David Wilkinson MBBS, FRCA,
Hon FCARCSI
WLM Laureate in the History of Anesthesiology 2008-2012

“The Most Kissed Girl in All the World”
How Classicists View Physician Historians Using the Iliad as a Model

Roy RC*, Roy CS**, Tortorelli WA***
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Several articles have appeared in the surgical literature over the last decade critiquing wound care during the Trojan War as described in the Iliad (1-6). Although classicists are delighted when physicians show interest in their field, there is an underlying concern that these forays are not always undertaken with the rigor that is employed when these same physicians research disease. "Medical training is often helpful for making sense of ancient healing practices, but it does not take the place of a thorough knowledge of the cultural context in which they develop....Particularly questionable are assertions that ancient physicians in many cases prescribed what we know to be medically efficacious treatment (7).” “...’s book in particular shows the naïve approach often characteristic of medico-historical research undertaken by retired doctors with no classical or historical training (8).”

Direct quotes from the physician authored papers unfortunately support the classicists’ concerns. “We are amazed by Homer’s meticulous account of the wounds inflicted to combatants...(1).” “…these writings constitute evidence of early basic knowledge of the nervous system more than 700 years before the time of Hippocrates and 900 years before the establishment of studies of anatomy and physiology (2).” “Numerous findings indicate that Greek physicians were present on the battlefield (3).” “… Iliad contains a variety of lucid information about the advanced practice of Medicine and particularly of Surgery in Greece in the 10th century BC...(4).” “It may therefore be inferred that Homer was a witness of the war and that he even participated in it: he may have been one of the people appointed to nurse the wounds of the injured warriors (5).” “… the idea underlying any anesthetic procedure was already present in ancient Greece (6).”

Common mistakes made by physicians include assumptions that: 1) Homer was an eyewitness, front-line reporter of actual events and real injuries; 2) accurate extrapolation to modern day medical care may be based on one or two descriptions; 3) there is a one-to-one relationship between ancient Greek and modern English medical terms; 4) medical care was organized then as it is now; and 5) physicians actually provided care to wounded heroes. Examples will be provided and discussed for each of these assumptions.

“’Mr. Pott determined upon the operation’: Surgeons, Patients, and Pain in 18th. Century London”

Lynda Payne, R.N., Ph.D., Sirridge/Missouri Endowed Professor of Medical Humanities and Bioethics, School of Medicine & Professor of History, History Department, UMKC, paynel@umkc.edu

Most of the surgical cases in mid to late 18th century London came to St. Bartholomew’s Hospital, one of the seven London teaching hospitals. There, patients, if lucky, were treated by Percivall Pott (1714-88) considered the best practical surgeon of his day. At the age of 15, Pott was apprenticed to Edward Nourse, a surgeon and lecturer at St Bartholomew’s Hospital. Despite being nauseated from the work of preparing Nourse’s teaching specimens, Pott credited his early training in cutting up rancid human body parts with giving him the dexterity – and the strong stomach – that a surgeon needed. At the age of 22, he was admitted to the Company of Barber Surgeons. Pott was skillful at surgery, had a good bedside manner, and was well mannered – all of which led to success. He became the senior surgeon at Barts and had the largest and richest private practice in London.

At Saint Bartholomew’s Hospital, apprentices and pupils followed Pott on his rounds of patients, wrote cases up, attended lectures on surgery and anatomy, and admitted patients. They learnt how to let blood – by lancet, fleam or leech, to apply wet and dry bandages, to mix up poultices, to apply heated cups and to create an issue with a pea or a bean to create a persistent sore. They also observed and assisted at operations that took place generally between 11 and 1pm. when the light was at its best. The location for the surgery was usually the patient’s bed or in some cases, surgery rooms off the ward. The times of operations of special interest were advertised beforehand on posters attached to the doors of the wards.

Pott was a prolific author. He published on head wounds, hernias, cataracts, polyps, tumours, ulcers, curvature of the spine (Pott’s tubercular spondylitis) and Chimney Sweeper’s Cancer (cancer of the scrotum) later to be known as Pott’s disease. His case histories were elegantly recorded and give glimpses into the lives of the poor in Georgian London.

This paper analyzes the lectures and works of Pott in order to reveal the workaday existence of a London hospital surgeon, his pupils, and his patients in the 18th century. The focus is on operations, how surgeons prepared for and carried them out, how patients endured them (or did not), how spectators behaved at them and what all of this reveals about attitudes toward pain before general anesthesia.
A Consideration of Charles Thomas Jackson’s Life as a Manifestation of Attention Deficit Hyperactivity Disorder
Ramon Martin, MD, Ajay Wasan, MD and Sukumar Desai, MD
Department of Anesthesiology, Perioperative and Pain Medicine, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA

Problem: Charles Thomas Jackson was a brilliant analytical chemist and geologist, whose interests ranged from electricity to the chemical composition of substances. His ideas were formative in the development of the telegraph and anesthesia. However, a fellow geologist once wrote of Jackson: “He had too many irons in the fire to do as he would with all of them.” Professor Bouve wrote: “Dr Jackson was a man of great genius, and his intuitive perception of scientific truths was remarkable; but for some peculiarities hard to comprehend, he often contented himself to enunciating what he recognized as fact without striving to substantiate it.” This retrospective psychiatric analysis of Charles Jackson’s life was undertaken to define the “peculiarities” and use this as a framework to understand why Jackson did not pursue his ideas further. This will also be used to evaluate Jackson’s relationship with William Thomas Green Morton.

Methods: Historical texts of Ether Day, a biography of Charles Thomas Jackson and collections of papers from the Massachusetts Historical Society were used to explore details of Jackson’s life. The Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV) classification of Attention Deficit Hyperactivity Disorder (ADHD), as well as clinical reviews about ADHD were used to frame Jackson’s life. One of the investigators is a psychiatrist and assisted in the analysis.

Results and Findings: ADHD is a developmental disorder that is characterized by the co-existence of attention problems and hyperactivity, with symptoms starting before age 7. The three subtypes of ADHD are: 1) predominantly hyperactive-impulsive, 2) predominantly inattentive, and 3) combined hyperactive-impulsive and inattentive. This examination of Charles Jackson’s life will demonstrate symptoms of ADHD that probably place him in the category of combined hyperactive-impulsive and inattentive. A comorbid disorder, Oppositional Defiant Disorder (ODD), will also be explored in an attempt to explain the stubbornness, deceitfulness and lying that were also characteristics of Jackson and eventually undermined his claims of discovery. The interaction with William Thomas Green Morton, whom we postulate had a Narcissistic Personality Disorder, will also be explored.

Conclusion: Attention deficit hyperactivity disorder contributed to Charles Thomas Jackson’s wide-ranging interests, the intensity to which he pursued some, but also to the lack of substantive follow-up. Oppositional defiant disorder caused him at times to lie and be deceitful about his actions and intentions.

Goals and Objectives: Assess Charles Jackson as having a developmental disorder and demonstrate how this may have led to his inability to pursue further some of his ideas.

References:
Crawford W. Long of Jefferson, Georgia first used ether to achieve anesthesia in 1842, four years before William T. G. Morton did so publicly in 1846 in Boston. Long applied it successfully numerous times, but did not report his use until 1849. Long was not the first to use ether successfully for this purpose. Two months before Long, in January 1842, William E. Clarke, a medical student, used ether for a dental extraction in Rochester, New York. Although Clarke was successful, he did not persist, because his mentor, Edwin Mott Moore, a distinguished physician in Rochester, was concerned about the implications of the procedure. Moore thought the achieved effect was due to hysteria not ether. Moore cautioned Clarke “to make no more experiments in that direction.” And Long later explained why, although he did persist with what he called his “experiments” with ether, he felt reluctant to report his results quickly. This derived from skepticism about the mechanism of an entirely different but then popular method of achieving anesthesia: “mesmerism”, later denoted “hypnotism”. As Long wrote in 1849 “At the time I was experimenting with ether there were physicians 'high in authority', and of justly distinguished character, who were the advocates of mesmerism, and recommended the induction of the mesmeric state as adequate to prevent pain in surgical operations. … I was an unbeliever in the science, and of the opinion that if the mesmeric state could be produced at all it was … to be ascribed solely to the workings of the patient’s imaginations. Entertaining this opinion, I was the more particular in my experiments in etherization.” The theory of mesmerism proposed by Franz Anton Mesmer in the 1700s postulated a physiological force, “animal magnetism”, and claimed those trained in procedures he described could achieve clinical effects using this force. As Long testifies, a debate raged within establishment medicine, in the first half of the 1800s as to whether 1) animal magnetism as a physiological force existed; 2) the use of mesmerism achieved any clinical effects whatsoever; 3) if it did so, the mechanism by which they were achieved. There were well attested reports of successful anesthesia with mesmerism in France in 1821 and 1828, and in the 1830s and 1840s increasing claims of successes. Skeptics attributed the reported successes, if real, to the power of suggestion or imagination. Crawford Long in essence stated that he wanted to be certain the effects achieved were consequences of the use of ether, and not due to the patients’ “imagination” before reporting his experiments. Of pertinence, both Edwin Mott Moore, Clarke’s mentor, and Crawford W. Long graduated from the University of Pennsylvania, Moore in 1838, Long in 1839. At the time both were students, they were lectured by George Bacon Wood, Professor of Materia Medica and Pharmacy, a venerable figure and later to become almost legendary for outstanding achievements. In his lectures he emphasized the need for rigor in evaluation of therapy. Indeed note both Moore and Long refer to “experiments” in use of ether, not “observations”. Wood expressed strongly his own belief that any results achieved with “animal magnetism” were due to the “mental agency” of the subject. It appears to have been the widespread use of mesmerism to achieve surgical anesthesia, strong disagreements within establishment medicine at the time, and the influence of Wood upon his students, inculcating in them the need for “proper” evaluation of therapy and his beliefs about mesmerism, that indirectly stopped Clarke from proceeding, and forestalled Long’s report of his usage.
Friday, May 4, 2012 (3:45 p.m. to 6:15 p.m.)

Presiding: William Hammonds, MD

03:45 p.m.  “A History of Ethics in Anesthesiology”
Sarah Smith, MD

04:15 p.m.  “Walter Sutton: Physician, Scientist, Inventor”
Gregory Ramirez, MD

04:45 p.m.  Adjournment

06:15 p.m.  Reception, Hampton Inn & Suites
Friday, May 4, 2012

7:00 p.m.  Dinner & Lecture

“A Very Personal Tale of Bloody Conflict: Kansas versus Missouri from 1855 to 1865”

Bradley E. Smith, MD
Saturday, May 5, 2012 (7 a.m. to 10:00 a.m.)

07:00 a.m.  Registration, Hampton Inn & Suites

07:45 a.m.  Announcements & Welcome
            Course Director, Anthony Kovac, MD

Presiding: Martin Giesecke, MD

08:00 a.m.  “Stuart Cullen: A Strong Second Limb of the Waters’ Tree”
            Franklin Scamman, MD

08:30 a.m.  “Lucian E. Morris MD: Introduction to the Inventor and Aqualumnus”
            Mark Schroeder, MD

09:00 a.m.  “Aldolph Hartung ‘Buddy’ Giesecke, Jr. MD”
            Amy wood, MD, Martin Giesecke, MD

09:30 a.m.  “A History in Teaching the Sellick Maneuver (Cricoid Pressure): Distinguishing between Man, Myth and Legend”
            Lauren Hoke, BS CCRC, Joseph May, BS & Yvon Bryan MD

10:00 a.m.  “400 Years in the Making: The Discovery of Curare and its Role in Transforming Anesthesia”
            Adam Toth, BS
As one takes a look at the Aqua Alumni Tree of Ralph Waters, it is obvious that one of the very strong limbs of the Rovenstine branch belongs to Stuart C. Cullen. Of all of the Waters’ descendents, only Rovenstine and Drips have more academic chairman “leaves” than Cullen.

Stuart Chester Cullen was born in Milton Junction, WI in 1909. His undergraduate and medical degrees were from the University of Wisconsin. While in medical school, he had a rotation in anesthesia under Waters and found it a very satisfying experience. After trying general practice in Wisconsin and finding it disastrous, he “decided the only thing I really knew, or cared about, was anesthesia.”

On the advice of Waters, Cullen went to Bellevue Hospital in New York City to study under Emery Rovenstine, one of Waters’ own early trainees. After finishing his training in 1938, Cullen came to the University of Iowa to become the third chief of the anesthesia section of the surgery department and founded the second academic department in the Midwest. He “fathered” 18 future department chairs.

Cullen’s early research was on the association of curare and general anesthesia. He wrote, as single author, “Anesthesia in General Practice”, first published in 1946 that went through 7 editions and authored over 100 manuscripts. He was an instructor for the World Health Organization and taught in Denmark, Austria, Norway and India. During his life, he was a member of the editorial board of Anesthesiology, an editor of the anesthesia edition of the Yearbook of General Surgery, a director of the American Board of Anesthesiology, an editor of the Manual of Medical Emergencies and an honorary member of the anesthesia associations of Vienna, Norway, Austria and Great Britain. He received the ASA Distinguished Service Award in 1964.

After leaving Iowa in 1958, he became chair of anesthesia at the University of California in San Francisco and Dean of that school in 1966. He retired in 1973 where he promptly entered politics where he became mayor of his local town until his death in 1979.

Personally, while I was a resident at UCSF, Dr. Cullen staffed me twice. Both times, we did open-drop ether on inguinal hernia cases, my only experience with this technique.

References:

www.asahq.org accessed on 28Feb12
Archives, Department of Anesthesia, University of Iowa
Lucien E. Morris, MD: Inventor and Aqualumnus
Mark E. Schroeder, MD
University of Wisconsin School of Medicine and Public Health

Lucien E. Morris died peacefully at his home in Seattle on November 15, 2011, two weeks shy of his 97th birthday. He will be remembered for inventing the first precision anesthetic vaporizer, the Copper Kettle, and for being a member of the Aqualumni, those physicians who trained in anesthesia with Ralph M. Waters at the University of Wisconsin. This paper will discuss Morris' formative years and early career.

Lucien was born November 30, 1914, the first child of a biochemistry professor at Washington University in St. Louis. The family moved to Chicago and then Cleveland when Lucien's father was named Head of Biochemistry at Western Reserve University School of Medicine. Occasionally, Lucien would go with his father to the laboratory and was once conscripted to chew paraffin so saliva could be collected for a study on the enzyme ptyalin. Tragically, Lucien's father was diagnosed with pulmonary tuberculosis, entered a New York sanitarium, and died following a pulmonary lobectomy in 1926. Lucien was eleven and felt the weight of being the sole surviving Morris male. With no income the family made do with monthly support from his paternal grandmother.

Lucien attended Oberlin College. He supported himself by working in food service and he joined the fencing team. He graduated with a chemistry degree and pursued graduate work in biochemistry at Western Reserve supported by a teaching fellowship. He began taking courses in the Medical School to understand what his students needed to learn and eventually elected to get an MD to improve his options. Because of WW II, he graduated under an expedited schedule in February, 1943.

Internship was at Grasslands Hospital in Valhalla, NY where Lucien first observed physician anesthesia. Awaiting a call to active duty, he began a residency in gynecology at St. Mary's Hospital in Madison, WI on January 1, 1944. Because of his interest in anesthesia, a Wisconsin medical student suggested Lucien meet Dr. Ralph Waters, Chief of Anesthesia at Wisconsin General Hospital across town. With orders pending, Lucien met Waters and they agreed Lucien would return after the war for a residency.

Sent to England in July, 1944 with the 103rd General Hospital, Lucien was made Chief of Anesthesia and Operating Rooms. He administered more than 700 of the total 5000 anesthetics given over the next nine months. He left the Army in the summer of 1946, moved to a new house in Madison, and began his residency on September 1.

The Waters' department was a stimulating environment for learning and research. One project was to evaluate chloroform on the centenary of its introduction as if it were a new agent. Lucien was frustrated with the imprecise vaporizers in use and commented to Waters, "Anyone ought to be able to make a better vaporizer than this." Later, while vacationing in Florida, Waters sent a postcard with a single sentence, "Has Morris made a new vaporizer yet?" Lucien's background in teaching university level biochemistry uniquely prepared him for meeting this challenge, developing a new precision vaporizer design and successfully shepherding the design to market.

References
Personal communication with LE Morris.
Adolph Hartung “Buddy” Giesecke, Jr., M.D., 1932-2011

Amy Wood M.D. and Martin Giesecke, M.D.
The University of Texas Southwestern Medical Center, Dallas

Adolph Hartung “Buddy” Giesecke, Jr., M.D. passed away at his home in Irving, Texas, on December 24, 2011. My father and colleague, Buddy was born in Oklahoma City, Oklahoma, April 19, 1932. He grew up in Cotulla and San Antonio, Texas. His undergraduate education was taken at the University of Texas in Austin, where, under a special program for expedited matriculation to a medical school, he left without a degree in 1953. He attended the University of Texas Medical Branch, in Galveston, Texas and received his M.D. in 1957. Buddy Giesecke then entered a three year tour of duty in the United States Army. The exposure Dr. Giesecke received while in the Army stimulated his interest in trauma.

In 1960, Dr. Giesecke began his career in anesthesiology when M.T. “Pepper” Jenkins, M.D. hired him as an anesthesiology resident at UT Southwestern Medical School/Parkland Memorial Hospital. Upon completing his residency in 1962, Dr. Giesecke undertook a Fellowship in Anesthesia Research, also at UT Southwestern. In 1963, with his fellowship completed, Dr. Giesecke became a member of the faculty of the Department of Anesthesiology at UT Southwestern. It was in that position that Dr. Giesecke experienced the tragic events of Friday, November 22, 1963.

In addition to trauma, Dr. Giesecke became an expert in obstetrical anesthesia. He authored the first paper in the United States suggesting the technique of rapid sequence induction with Sellick’s maneuver and endotracheal intubation for general anesthesia in the parturient (1). He was the originator of the name for the Society for Obstetric Anesthesia and Perinatology (2). He published on the interaction of magnesium sulfate and muscle relaxants (3, 4). In 1970, Dr. Giesecke took a sabbatical from UT Southwestern to teach anesthesia at Johannes Gutenberg University in Mainz, Germany.

Over his nearly fifty-two year career as an anesthesiologist, Dr. Giesecke lived up to the adage that “the meaning of life is service to mankind.” He was active in academic medicine, organized medicine and his community. He received the Distinguished Service Award from the Texas Society of Anesthesiologists in 2003. And he became focused on anesthesia history, becoming a Fellow of the Wood-Library Museum of Anesthesiology in 2006 and the Anesthesia History Association’s Inaugural Patrick Sim Memorial Lecturer in 2011. He will be remembered as an inspiration to thousands of anesthesiologists (5).

References:

(2) Giesecke AH. What’s in a name?—S.O.A.P. SOAP 40th Anniversary Pamphlet, 2008.
Title: A history in teaching the Sellick maneuver (cricoid pressure): Distinguishing between man, myth, and legend

Authors: Lauren Hoke, BS, CCRC, Joseph May, B.S., Yvon Bryan, M.D.
Affiliation: Department of Anesthesiology, Wake Forest School of Medicine, Winston-Salem, NC 27157-1009

Abstract
Brian Sellick first described the use of the “Sellick maneuver” in 1961 to prevent aspiration (1). This maneuver occluded the esophagus by softly holding the cricoid ring between the thumb and second finger and exerting pressure by the index finger; this would ultimately be known as “cricoid pressure” (CP) (1). Most major textbooks and journal articles from the 1960s either did not mention or did not elaborate on specific instructions in the application of CP/the Sellick maneuver (2-3). Certain authors in the 1970s began to adapt the maneuver for different purposes (preventing insufflation of the stomach) or attempted to improve the maneuver from its original purpose (preventing aspiration) (4-5). However, this lead to discrepancies in teaching and describing CP.

Other problems were described in the literature after the 1980s stating that CP may not prevent aspiration and may cause airway obstruction, difficult bag mask ventilation, and difficult laryngoscopy and/or difficult intubation (6 – 8). Anesthesiology textbooks and journal articles providing instructions and illustrations regarding the application of CP were found to differ from Sellick’s original work (Table 1). Differences have been due to the lack of instructions provided with illustrations of differing techniques, such as which fingers used during application (“thumb and second finger,” middle finger, little finger,” etc), one versus two-handed techniques, and neck positioning (extended position, positioning for tonsillectomy, etc).

Problems found during the application of CP were often blamed on Sellick’s original publication(s), including the lack of recommendations regarding the necessary applied force (9). Investigators began studying the amount of force required to apply during CP in attempts to address these concerns (9). While many studies regarding the amount of force have since been published, few studies have focused on teaching step-by-step instructions to develop standardized guidelines (10-12). This may be due to biases in teaching CP, anatomical differences (varying patient ages and sizes) and confusion over goals (preventing aspiration vs gastric insufflation) in performing CP. As a result, Sellick’s original work has often been misinterpreted or misapplied.

Though it is necessary to improve and continually re-evaluate maneuvers used in every day clinical care, caution must be taken in correctly interpreting original studies. In conclusion, there are differences between what the “man” (Sellick) said and the myths that have emerged. Teaching techniques and clinical studies may differ regarding how to apply CP, but Sellick’s legend continues to be preventing aspiration.

References
400 Years in the Making: The Discovery of Curare and its Role in Transforming Anesthesia
Adam Toth
Osteopathic Medical Student
Des Moines University
Des Moines, IA

There is a certain level of mystery and fascination behind poisons, even more compelling if the poison originates from exotic lands. In the 16th century, as the Spanish and Portuguese were vying for control of South America, explorers returned home with tales of native Indians using poison-coated arrow tips to stun and kill their prey. Historian Pietro Martire d’Anghera of Spain, described incidences of South American Indian tribesmen attacking invading Spaniards with the arrows that, once pierced the skin, caused a prolific paralytic state followed hastily by death.\(^1\)

Since prehistoric times, there have been records of primitive communities using arrow poisons. Some exerted their effect by acting on the heart, others induced convulsions - but only in South America was there a poison that triggered profound paralysis - known as ‘woorari’ or ‘curare’ by local Indian tribes. Gathered from a climbing plant in the Amazon jungle, its preparation was vastly kept secret by local tribesmen.\(^2\)

It wasn’t until French naturalist Charles de la Condamine brought back samples to Europe in 1743, that investigations into its unique properties would be discovered by the scientific community\(^3,4\). Of the numerous scientists and physicians involved in understanding curare’s mode of action, it was English surgeon Benjamin Brodie who, in 1812, provided the key to its future clinical use in anesthesia. While it was already known that curare generates respiratory paralysis without affecting cardiac performance, Brodie went one step further and demonstrated that he could keep an animal alive on curare by intermittently forcing air through the lungs via a bellows.\(^5\)

The pharmacologic properties of curare remained a mystery until 1842, when “founder of experimental medicine” Claude Bernard demonstrated in curare-paralyzed frogs that muscles continued to respond to direct electrical stimulation.\(^6\) This led to the conclusion that curare must block the nerve impulse from the nerve to the muscle fibers. Years later, in the 1930s, Sir Henry Dale would describe acetylcholine and its role in the muscle endplate, and how curare acts by occupying acetylcholine receptor sites.\(^7\)

Before curare and newer muscle relaxants found their niche in the anesthesia world, a purified preparation of curare, called Intocostrin, was being used to treat muscle spasms related to strychnine poisoning, epilepsy, tetanus, rabies, and also in psychiatric convulsion therapy.\(^8\) Much of the credit for the introduction of curare into anesthesia goes to Lewis Wright and Harold Griffith, who, in the 1940s, found great success using Intocostrin to produce muscle relaxation without the need for heavy anesthetics.\(^9\) These discoveries transformed the practice of anesthesia, as the term “balanced anesthesia” became popularized.

Bibliography
3) Brocklesby RA. Letter to the President of the Royal Society concerning the Indian poison, sent over from M. de la Condamine. Philosophical Transactions of the Royal Society of London 1747;44(ii):408.
4) Herissant M. Experiments made on a great number of living animals, with the poison of Lamas, and of Ticunas. Translated from the French by Tho. Stack. Philosophical Transactions of the Royal Society of London 1750;47:75.
5) Brodie BC. Experiments and observations on the different modes in which death is produced by certain vegetable poisons. *Philosophical Transactions of the Royal Society of London* 1811;101:194-5.


Saturday, May 5, (11:00 a.m. to 12:30 p.m.)

Presiding: Mark Schroeder, MD

11:00 a.m.    “Gas Related Injuries at Base Hospital #28”  
              Jason Gregory, BS & Anthony Kovac, MD

11:30 a.m.    “Military Anesthesia Trainees in WWII – Madison, WI”  
              Colby Parks, MD & Mark Schroeder, MD

12:00 p.m.    “Alternative Methods to Teach History of Anesthesia”  
              Manisha Desai, MD & Sukumar Desai, MD

12:30 p.m.    “History of Anesthesia Related Sites in Hartford, Connecticut”  
              Antonio Aponte-Feliciano, MD & Manisha S. Desai, MD

1:00 p.m.     Meeting Adjournment
Gas-Related Injuries at Base Hospital #28
Jason Gregory, BS, 2LT US Army HPSP, MS3
Anthony Kovac, MD, Kasumi Arakawa Professor of Anesthesiology
Department of Anesthesiology
University of Kansas Medical Center

World War I saw the rise of more advanced, more lethal weaponry. Few of these innovations altered combat as profoundly as did chemical warfare. The psychological effects on soldiers were devastating and the drain on medical resources required to treat the injured were immense. Although weaponed gases were not especially lethal, they did cause a high morbidity rate. Recovery from a gas injury could take weeks or even months.

The treatment and recovery period from gas injuries were dependent on both the location of the wound and the type of the gas used. Blistering agents tended to cause more diffuse injuries, often involving damage to a combination of integumentary, ocular, and even pulmonary systems. Additionally, although vesicant gas injuries tended to be localized to the lungs, these injuries generally required longer recovery times than did blistering agent injuries.

Already over-tasked with treating conventionally wounded soldiers, the U.S. military base hospitals were also the treatment and recovery sites for those unfortunate enough to be gassed. One such hospital was Base Hospital #28 in Limoges, France. During its time of operation, Base Hospital #28 treated nearly 9000 soldiers including hundreds of gas victims. Due to the preservation of the hospital’s patient ledger, the numbers and types of gas-related injuries and their lengths of treatment have been brought to light, thus providing valuable historical data regarding medicine in the First World War. The data demonstrates that the more powerful and effective aspects of gas warfare in World War I was in the widespread fear and ensuing panic it engendered in soldiers and the burden it placed on medical resources, as opposed to the gases’ actual lethality.
Military Anesthesia Trainees in WWII – Madison, WI
Colby L. Parks, MD, Mark E. Schroeder, MD
Department of Anesthesiology - University of Wisconsin Hospitals and Clinics, Madison, WI

Background: The decade prior to World War II saw great advances in the organization and support of anesthesiology as a specialty in the United States. The New York Society of Anesthetists became the American Society of Anesthetists (later the American Society of Anesthesiologists) in 1936, and the American Board of Anesthesiology was established by the AMA in 1938. With WWII looming, The National Research Council in cooperation with the ASA, developed a subcommittee in 1940 that was given the task of developing an accelerated anesthesia training program and evaluating the available anesthesia resources among United States physicians. Over the next two years, a 12-week course was developed to train military physicians in anesthesia at selected academic institutions across the country. One of these was the State of Wisconsin General Hospital with an anesthesia department chaired by Ralph M. Waters, MD. A total of 17 military officers in three groups participated in the course in Madison, WI between September 1942 and December 1943.

Methods: The Ralph Waters Collection at the University of Wisconsin Archives was searched for information on the 12-week course and the men who participated. ASA and AMA membership directories were searched with the help of the staff of the Wood Library-Museum. Finally, the ABA website was used for information regarding board certification.

Discussion: The training schedule was strenuous and included daily operating room experience, multiple didactic sessions each week, pre- and post-operative rounds, and consultations as well as other conferences, staff meetings, and literature reviews. In Dr. Waters’ words, “As much of the officers’ time as could be used profitably in observation and practical experience in the operating rooms was scheduled for each day. The remainder of their time was taken up in didactic work, quizzes, demonstrations, etc. They were expected to spend the remainder of the time available in reading and discussions in their study room (#100), Wisconsin General Hospital.”

The men came from a variety of backgrounds, but what they accomplished in such a short time was truly remarkable. Not only were they able to administer anesthesia safely and effectively using a variety of techniques, but they led military anesthesia departments across the country and throughout the world during World War II. The men greatly valued their time in Madison. They developed lasting relationships with each other and with Dr. Waters that cultivated learning beyond the end of the 12-week course. After the trainees left Wisconsin for their duty assignments, the department provided them with journals and textbooks while the trainees contributed case reports and questions for discussion at departmental case conferences.

Eight of the 17 men became ASA members and four became board-certified anesthesiologists. Notably, Virgil K. Stoelting, future chair of anesthesiology at Indiana University, was a member of this group. Through practicing and teaching the knowledge and skill they acquired, they certainly contributed to the growth of anesthesiology as a specialty.

References
3. Ralph Waters Collection, University of Wisconsin Archives, Madison, WI.
4. ASA and AMA membership directories, Wood Library-Museum of Anesthesiology, Park Ridge, IL.
Alternative Methods to teach History of Anesthesia
Manisha S. Desai, M.D and Sukumar P. Desai, M.D.

Background: For over twenty years, anesthesia residents graduating from the University of Massachusetts were not exposed to topics related to the origins and history of our specialty. History of Anesthesia (HOA) may be taught by lectures, small group discussions, or by one on one teaching. HOA competes for scarce time in a busy didactic schedule and for coverage in mainstream medical journals devoted to anesthesiology. These efforts are hampered by the fact that HOA related teaching does not have any direct impact on the delivery of modern anesthesia.

We describe three modalities to teach HOA to anesthesia residents that have been successfully employed by the Department of Anesthesiology at the University of Massachusetts.

1. Tours: Many events related to HOA occurred in New England, and sites related to individuals and events are amenable to individual visits and tours, especially since Worcester, Massachusetts is located midway between Boston, MA and Hartford, CT. At University of Massachusetts, we have established an informal, 3-year curriculum to teach HOA to our residents using three modalities – tours; books and novels; and movies/videos related to HOA. We have devised three separate tours conducted over three years. Such tours provide excellent coverage of sites in Massachusetts as well as Connecticut.¹

2. Historical narratives and novels: Topics related to HOA receive scant coverage in modern textbooks of anesthesia, and are often relegated to an introductory chapter. In the past, each major category of topics would have a brief discussion of its history, but regretfully, this practice too has been abandoned in the interest of space. We encourage our CA-1 residents to go through the extremely readable and informative ‘Ether Day: The strange tale of America’s greatest medical discovery and the haunted men who made it,’ by Julie M. Fenster.² In addition, there are many historical narratives and novels that cover other important aspects of HOA in the popular literature.

3. Movies and video clips: Without disrupting the prime-time schedule of grand rounds and other departmental lectures, we screen the 1944 Hollywood movie ‘The Great Moment,’³ starring James McCrea as William T. G. Morton, sometime in August for CA-1 residents. In addition, we plan on screening ‘The Yankee Dodge,’ narrated by Leroy D. Vandam, M.D. from Harvard Medical School, and produced by the Wood Library-Museum of Anesthesiology.⁴

Conclusions: It is difficult to impart information using lectures due to time constraints and a very busy didactic schedule in residency programs. HOA related material does not get adequate coverage in standard textbooks of anesthesiology. We describe successful use of three modalities of imparting interesting information in an informal setting. Such efforts provide a unique experience during residency training. From preliminary reports we are confident that details from such tours, novels and movies remain imprinted in their memory for many years, perhaps permanently. These individuals are likely to remain advocates of history, and may choose to devote a part of their academic career towards exploration of HOA.

Reference List

Goals and Objectives:
1. To discuss an alternate approach to the teaching of history of anesthesia to new millennium residents.
2. To design a curriculum to teach history of anesthesia outside the operating room.
History of Anesthesia Related Sites in Hartford, Connecticut
Antonio Aponte-Feliciano, M.D., Manisha S. Desai, M.D.
University of Massachusetts Medical School Worcester, MA.

Introduction
Hartford, capital city of Connecticut was home for most of Horace Wells’ work with the only anesthetic gas still use in the clinical practice since the XIX century. Hartford recognized the novel discovery and throughout the city there are multiple icons to recognize his work that has otherwise been outdone by the ether demonstration on October 16, 1846. Earlier in January, 1845 Horace Wells failed to demonstrate painless dentistry at the Massachusetts General Hospital. Many monuments, articles, and icons are on public display in Hartford to recognize his contributions to improve dental and medical care.

Methodology
We performed a literature search of current bibliography, and online media review of different monuments and memorabilia dedicated to Horace Wells throughout Hartford, Connecticut. Several visits were made to Hartford to examine and study various sites and artifacts. In addition we visited the Connecticut Historical Society, where many of the original works of Wells are kept.

Results
Hartford is the city where Horace Wells conducted his work related to nitrous oxide’s anesthetic properties. Monuments and articles showing and honoring Horace Wells’ work are located throughout this historical city. These landmarks will be presented pictorially with a full historical description. Horace Wells was a dentist which humanism led him to find ways to perform procedures without the painful experience associated with them. On 1847 he wrote a pamphlet titled History of the Discovery of the Application of Nitrous Oxide Gas, Ether and Other Vapors to Surgical Operations. One of the original copies of that work is located in the Connecticut Historical Society. In 1848, after his death, a death mask was made believed by John Riggs and a few copies are available in different places. One copy of such a death mask is at the Connecticut Historical Society, displaying a sense of a sleeping Wells. This mask was used by T. H. Bartlett in 1874 to sculpt a bronze statue of Horace Wells with a cap and a cane, which was placed at Bushnell Park. Horace Wells’ house was located on 128 Main Street in Hartford. At present there is a plaque in the building located there in memory of his living place. He was buried initially at Hartford’s Old North Cemetery. In 1908 Charles T. Wells (Horace’s only son) disinterred his parents from Old North Cemetery and reinterred at Cedar Hill Cemetery. He commissioned sculptor Louis Potter to create a fitting memorial which consisted of a large granite grave marker with a bronze plaque on the face and two angel figures on either end that depict the glory of the discovery. Charles’ efforts to recognize his father’s findings led him also to order Louis C. Tiffany to design a stain glass window located at Center Congregational Church. The Spanish Dental Society honored Wells by giving the city of Hartford a silver coat of arms plaque in 1907. This plaque is kept at the Connecticut Historical Society. Charles Noel Flagg (1848-1916) painted a portrait of Horace Wells which is kept at Wadsworth Atheneum Museum of Art. There is also a pew in the chapel of Trinity College that has Horace Wells name carved at the end.

Conclusion
Horace Wells’ discovery led to a recognition that surpassed his living time on Earth. Recognized not only in America, his findings were also welcome in Europe. The city of Hartford, Connecticut houses these historical monuments, gifts, books and paraphernalia to remember Horace Wells and his novel discovery of nitrous oxide induced anesthesia and analgesia.
History of Anesthesia Related Sites in Hartford, Connecticut

Objectives:
1. At the conclusion of the activity participants will be able to recognize historical sites in Hartford related to Horace Wells’ contributions to anesthesia.
2. At the conclusion of the activity participants will be able to list the history of anesthesia related sites in Hartford, Connecticut.
Save the Date for 2013!

19th Annual Spring Meeting of the Anesthesia History Association

May 2 – 4, 2013, Downtown Marriott Hotel, Hartford, CT

Preliminary Highlights:

Thursday, May 2

Morning / Afternoon
- Tour of Horace Wells statue in Bushnell Park
- Tour of Wells’ grave in Cedar Hill Cemetery
- Tour of Connecticut Historical Society

Evening
- Welcome Reception for registrants and guests
  Downtown Marriott Hotel

Friday, May 3

Morning / Afternoon
- Discussion Forum
- Free Paper presentations

Evening
- Dinner Lecture; Speaker: Sherwin Nuland, MD

Saturday, May 4

Morning
- Free Paper presentations

Lectures
- James C. Rouman, MD
  Hartford Hospital and History of Anesthesia
- William MacDonnell, DDS
  The Horace Wells Society
- Dinner Lecture; Sherwin Nuland, MD
  Author of The Origins of Anesthesia
  Distinguished Medical Historian, Retired Surgeon
  Yale University School of Medicine

Sponsored by the Anesthesia History Association

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