



National Board of Osteopathic Medical Examiners Annual Report 2008





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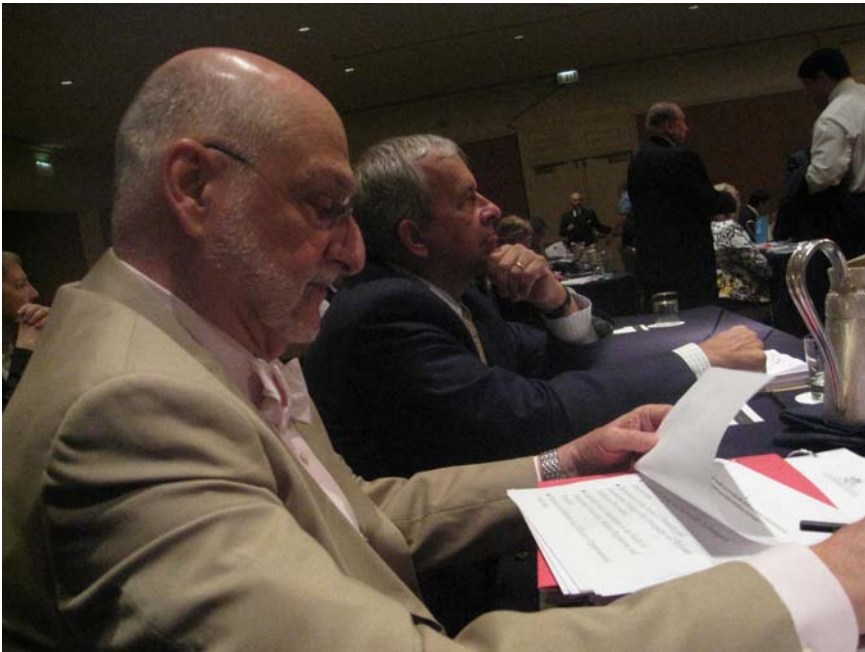
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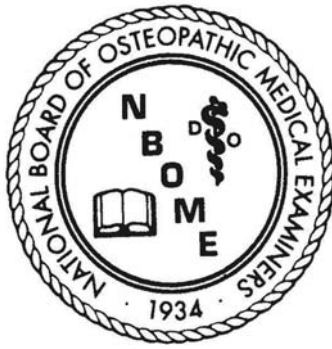
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A Message from the Chairman





It has been a year since I assumed the chairmanship of the NBOME. At that time I chose not to set a specific agenda for my stewardship, preferring to have it evolve. One goal was to involve all the board members as much as possible, and I am happy to report that the mid-year meeting has been reinstated and all Board members are assigned to at least one committee. Their input has proved invaluable. Another goal was to bring this Annual Report to our stakeholders, interested parties, and the public as a means to inform them of who we are, what we are doing, and what we plan to do.

As time progressed, it became clear that we would need to review our current examinations and make changes to meet the challenges of the 21st century. While the final decision has not been made as to the structural change, areas of improvement and new testing methods have been explored and are being adopted as our examination evolves.

The NBOME President's Report shows that this year has been a busy one as we expand our products to better serve the osteopathic profession and related healthcare professions.

As all of you know, our president, Frederick Meoli, D.O. has decided to retire. We will all miss him, but this is a well-deserved retirement. He has given so much of his time and energy to our organization that he has not been able to be involved as much as he would like with his expanding family or to satisfy his love of sailing.

In his almost 25 years with the NBOME, Dr. Meoli has brought a level of professionalism and leadership to the organization that is unparalleled. We are recognized internationally through his efforts, marvelous presentations, and research. Relationships with the AOA, NBME, AODME, ACCOM, Colleges of Osteopathic Medicine, AAOE, FSMB, SOMA, COSGP, and the specialty boards have reached a level that no one could have anticipated. The expansion of the NBOME, the addition of clinical skills testing, and the recognition of the validity and reliability of our examinations by the NBME and FSMB could not have occurred without his leadership.

I know that the Executive Committee and the Board wish to express their thanks to Dr. Meoli for all of his outstanding contributions and to wish him well as he spends time with his family. His continued support and counsel will help us through this period of transition as we continue to strive for excellence.

Fraternally,

William F. Ranieri, D.O.

William F. Ranieri, D.O., F.A.C.N.
Chair, NBOME
Clinical Professor of Psychiatry, UMDNJ

Board of Directors 2008 - 2009



Front row: John Becher, D.O.*, John Thornburg, D.O. (Vice-Chairman)*, William Ranieri, D.O. (Board Chair)*, Sheryl Bushman, D.O. (Immediate Past Chair)*, Janice Knebl, D.O. (Secretary/Treasurer)*, William Anderson, D.O.*, Gene Oliveri, D.O.*

Middle row: George Thomas, D.O., Dana Shaffer, D.O., Mr. Gary Clark, Brian Fulton, D.O., Gary Slick, D.O., Deborah Pierce, D.O.

Back row: John Gimpel, D.O., Craig Lenz, D.O., Michael Murphy, D.O., Stephen Shannon, D.O., Carman Ciervo, D.O.

Not pictured: Wayne Carlsen, D.O., Mr. Frederic Wilson, Frederick Schaller, D.O.

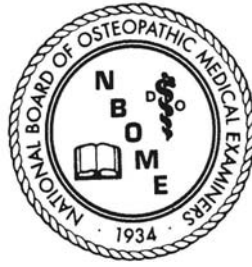
* Denotes Executive Committee Member





A Message from the President





The year 2008 has provided the NBOME with significant challenges. To deal with these challenges, there has been a great deal of activity at both the board and operational levels of the organization. For the first time in nearly 10 years, NBOME Board of Directors met at mid-year. This was an initiative on the part of the NBOME Board Chair, William Ranieri, to keep the Board better informed and more engaged in the increasingly broadening activities of the NBOME.

A key activity of the NBOME has been the In-Depth Assessment Process that followed the commission by the NBOME Board of Directors to conduct an audit of the existing blueprint specifications of the COMLEX-USA to assure that the examination sequence would continue to meet the mission of the NBOME and the needs of the osteopathic profession. This is part of the quality assurance and performance improvement program of the NBOME.

The study is still ongoing; however, a potential structural change to the examination is under consideration that would alter the present three-level assessment system to a two-stage assessment sequence with two assessment points; one at the undergraduate, monitored stage and the other at the postgraduate, unmonitored stage of the career of the candidate seeking licensure to practice osteopathic medicine. To explore this potential change in the structure and format of the sequence, the NBOME has conducted surveys, hosted focus groups, met with stakeholders, and utilized several committees to explore the benefits and detriments of making such a change in the sequence. A decision on this proposal is anticipated to occur in early 2009. A public statement regarding the In-Depth Assessment Process has been posted to the NBOME website.

The NBOME has continued to conduct research related to medical licensure testing and has made numerous presentations at national and international meetings during the course of the year.

The NBOME has also been working to upgrade its IT systems to meet the increasing volume of data and the need for more efficient and effective communication. As part of this process, the NBOME opened a newly created website to facilitate the access of information to our stakeholders. The new webpage became available in early January of 2009.

The NBOME has worked hard to maintain and enhance its cooperative and collaborative efforts with organizations in the professional, educational and regulatory arenas. To this end, the NBOME has reported and regularly communicated with the AOA Board of Trustees, the Bureau of State Government and International Affairs, the Federation of State Medical Boards of the United States, the American Association of Osteopathic Medical Examiners, the American Association of Colleges of Osteopathic Medicine, and student groups such as the Council of Osteopathic Student Government Presidents (COSGP) and Student Osteopathic Medical Association (SOMA). The NBOME has visited six of the osteopathic colleges or schools of osteopathic medicine during the year to present informational programs to students and/or faculty development programs for both basic science and clinical faculty. This service is offered to the schools at no cost.

The NBOME has been involved in international affairs through efforts including participation in the Osteopathic International Alliance (OIA) meeting in Chicago in November 2008. During that international meeting, the NBOME presented a program on the utilization of clinical skills and multimedia test items in the assessment of the competency of osteopathic physicians. The NBOME had an abstract that was accepted and presented in October 2008 at the International Association of Medical Regulatory Authorities (IAMRA) meeting held in South Africa. That presentation stressed the relationship between fraudulent SOAP notes in a licensing examination and professionalism. The NBOME is an associate member of both IAMRA and the OIA. The NBOME has been working closely with the AOA to assist osteopathic physicians seeking licensure or registry in international jurisdictions.

The NBOME staff and officers continue efforts toward the implementation of the expansion of the National Center for Clinical Skills Testing (NCCST) in Conshohocken which will double the testing capacity of the NBOME to conduct clinical skills testing by September 2009. This required detailed negotiations to acquire the needed space and equipment, as well as increased recruitment efforts to make the Center operational by the fall of 2009.

The NBOME completed negotiations with Prometric to provide computer-based test delivery for the COMLEX-USA. The NBOME has been working closely with Prometric to try to introduce new test item formats and certain enhancements such as a strike-out feature in order to facilitate the broadening scope of the COMLEX-USA examination.

New products and services were introduced in 2008 including, but not limited to, the Comprehensive Osteopathic Medical Self-Assessment Examination (COMSAE), which permits students to assess their osteopathic knowledge level prior to taking COMLEX-USA, the Pediatric Dentists In-Service Examination, and the implementation of the AOBEM Part 1 Certifying Examination. The NBOME has also made subject examinations available and is working on a web-enabled system for the future. A proposal to manage the recertification examination for AOBEM has been submitted and accepted. The NBOME staff met with the American Board of Podiatric Medical Examiners (ABPME) in August of 2008 to work toward proposing a development plan for a clinical skills assessment program for that profession. The ABPME recently computerized their three part examination and uses Prometric as their test vendor.

In 2009, the NBOME looks forward to celebrating with its stakeholders, affiliates and friends its 75th year of quality service to the osteopathic profession and the public.

The year 2008 has seen an unprecedented change in the financial markets and the economy. Through careful and conservative planning and the implementation of cautious steps to preserve the integrity of the operating capital of the NBOME, the organization will enter 2009 in a fiscally stable position. However, to meet ever increasing costs, the NBOME will have to slightly increase testing administration fees in 2009.

As President, I would like to again express my appreciation to the dedicated staff at both the Chicago and Conshohocken offices who have worked tirelessly to assist me in dealing with the issues that face the NBOME, and to provide the best services and products to the profession while protecting the public.

It is important to recognize the Executive Committee and the Board for their continued and unflagging support to assure that the NBOME remains preeminent in the field of high-stakes testing and within the osteopathic profession. The NBOME is greatly appreciative of the efforts of our legion of volunteers who serve on our committees, write our test items, and work on special projects. Without this core of volunteers, our ability to meet the challenges facing us would be virtually impossible.

It has been a pleasure to work with the finest cadre of professionals who give freely of their time, experience, and expertise for the betterment of the organization rather than for themselves. Thank you for the privilege of serving as your president.

Respectfully submitted,

Frederick G. Meoli, D. O.

Frederick G. Meoli, D. O., FACOS
President

Our Mission

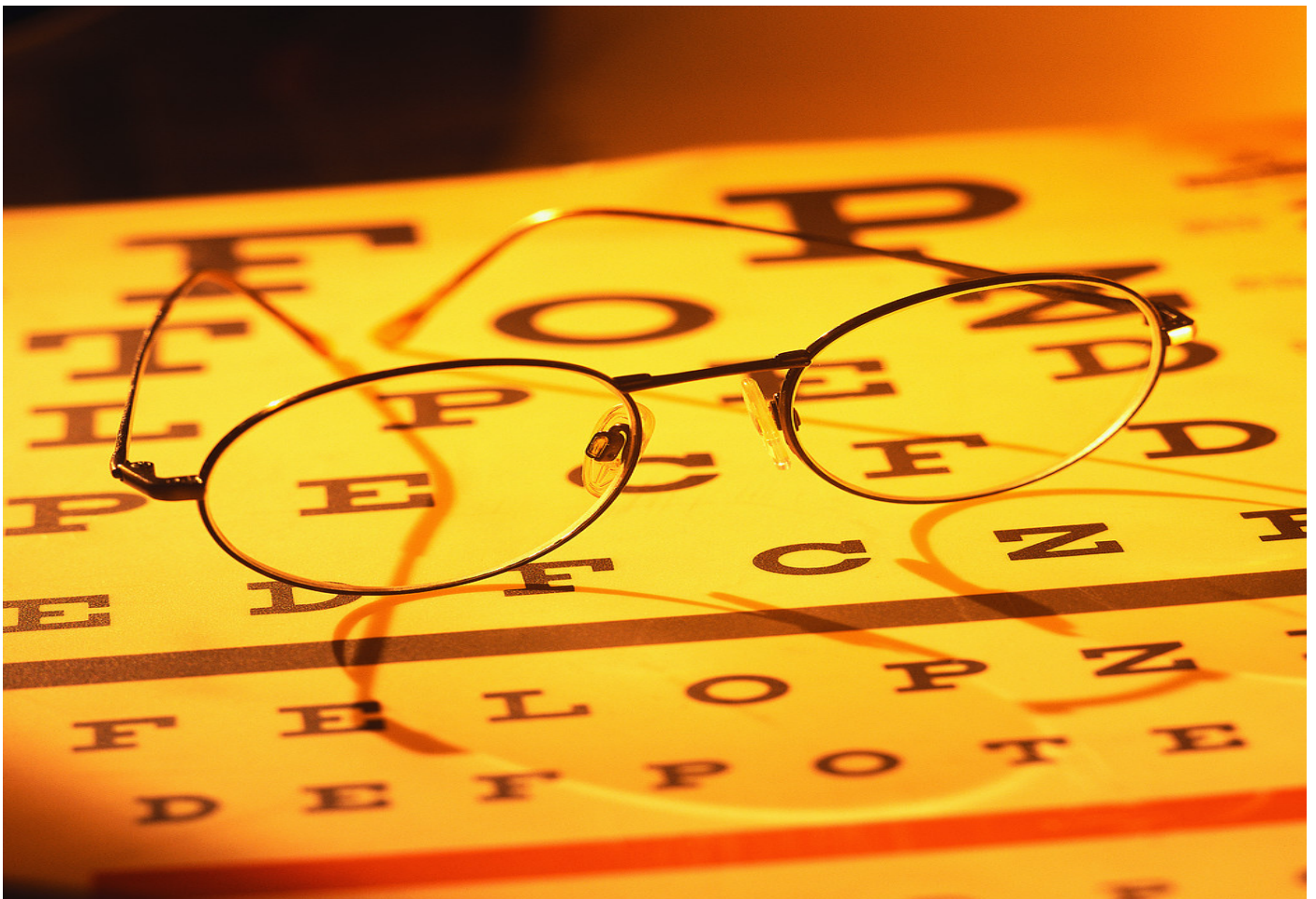
“To provide for the public welfare a means to assess competency in the healthcare disciplines relevant to Osteopathic Medicine”



Our Vision

To be the testing organization for the osteopathic profession

- To provide for the Osteopathic profession innovative, high quality instruments, services and products related to testing*
- To be a leader in national and international osteopathic medical licensure and testing*



Our Values

- *Quality*
- *Integrity*
- *Accountability*
- *Commitment to the Osteopathic Profession*
- *Public Safety*





1934 - 2009
History of the NBOME



The NBOME was established by charter in 1934 and has served the public and the osteopathic medical profession with quality service for nearly 75 continuous years. The Board was first established as the National Board for Osteopathic Physicians and Surgeons (NBOPS) under the leadership of Charles Hazzard, D.O. who served as the first president until 1939. The initial licensing examination was offered in an essay-type format. The NBOPS issued its first Diplomate's Certificate in 1936 to Margaret Barnes, D.O. The essay format was used until 1961.

For many years, the licensing examination was administered as the National Board for Osteopathic Physicians and Surgeons of the United States of America, Parts 1, 2 and 3. That early examination sequence used test items in an objective-type format. From the late 1940s through the early 1980s Part 3 consisted of a live-patient examination covered under the supervision of approved examiners. Although the concept was years ahead of its time, the "practical examination" was replaced by a totally objective-type test item format for Level 3. This examination sequence was discipline-based in design.

The NBOPS was incorporated in Illinois in 1951, and in 1961 was re-incorporated in the state of Indiana. In 1981 the organization incorporated in Indiana under the current name, and in the 1990s the Comprehensive Osteopathic Medical Licensure Examination of the United States (COMLEX-USA) sequence was developed. The new basis for the sequence arose from the concept that patients present clinically to the physician with problems and not as a set of organs or disciplines. Further, these problems require that the physician possess certain knowledge and perform certain tasks in order to deal effectively with those problems. Sensitivity to disease prevention, health promotion and an awareness of the nature of the healthcare delivery systems were all deemed to be requisites for the competent practice of osteopathic medicine. The three levels of COMLEX-USA became fully implemented in the new bi-dimensional (problems vs. tasks) design in 1998.

In the late 1990s, it became apparent to the NBOME that it was not fully testing the competence of the future practitioners as the actual performance of clinical skills was not being assessed. The NBOME undertook the research and development of the COMLEX-USA Level 2 PE (Performance

Evaluation) to evaluate the clinical skills of candidates about to enter postgraduate medical training. In September of 2004, the NBOME introduced the implementation of the Level 2 PE. The successful completion of this examination became an accreditation requirement for all graduates of osteopathic medical schools beginning with the Class of 2008.

Until 2005, the COMLEX-USA had been administered twice annually in each of the three levels in a paper-and-pencil format at a limited number of locations within the United States. In 2005, the NBOME converted the COMLEX-USA to a computer-based administration offered 40 times per year for each level nationwide at over 300 professional test centers. Approximately 12,000 administrations of COMLEX-USA are given each year, and the number is growing rapidly as the number of osteopathic medical schools has increased over the years.

The COMLEX-USA is accepted for medical licensure in all 50 jurisdictions of the United States, and is used as an accreditation requirement for all schools and colleges of osteopathic medicine by the Commission on Accreditation of Colleges of Osteopathic Medicine of the American Osteopathic Association. The medical licensure sequence is accepted in the Province of Ontario and on an individual basis in other international jurisdictions.



Major Milestones and Benchmarks of the NBOME

1934

- Chartered as the National Board for Osteopathic Physicians and Surgeons

1935

- Elected first president, Charles Hazzard, D. O.
- Administered first exam (essay)

1936

- Issued first Diplomat Certificate to Margaret Barnes, D. O.

1947

- Live-patient examination started as Part 3 during internship.

1951

- Incorporated in Illinois as the National Board of Osteopathic Physicians and Surgeons (NBOPS)

1961

- Multiple-choice examinations introduced

1966

- Developed licensing exam for the Osteopathic Medical Board of Florida

1971

- Introduced computerized scoring

1975

- Developed licensing examinations for the states of California & Michigan

1981

- Developed licensing examination for the state of Pennsylvania

1984

- Department of Health and Human Services (DHHS) Grant to develop competency-based standards

1985

- Developed the licensing exam for the states of Tennessee & West Virginia

1986

- Discontinued “live patient” examinations for Part 3
- Incorporated as National Board of Osteopathic Medical Examiners in Indiana

1987

- Internalized electronic scoring and analysis

1989

- New security system installed

1993

- New committee structure for the NBOME

1995

- COMLEX-USA introduced with Level 3

1997

- COMLEX-USA Level 2 introduced

1998

- COMLEX-USA Level 1 introduced

2001

- FSMB passes resolution 01-03 indicating COMLEX-USA valid for licensing osteopathic physicians

2002

- First full-time President appointed

2004

- COMLEX-Level 2 PE administered September 23, 2004

2005

- COMLEX-USA Levels 2 and 3 converted to a computer based format
- COMLEX accepted in Ontario, Canada for initial registry
- NBOME becomes participant in PAPC
- NBOME becomes “partner” in OIA
- NBOME becomes “associate member” of IAMRA
- The State of Pennsylvania accepts COMLEX-PE in lieu of its own practical examination for licensure

2006

- CBT conversion of COMLEX-USA is completed with Level 1
- COMLEX-USA acceptable for registry in New Zealand once licensure is obtained in any state in the U.S.
- Competency Document published by the NBOME

2007

- COMVEX-USA available in CBT format nationwide
- New PE Standard set
- NBOME contracts with AOBEM to provide first CBT certifying examination
- NBOME releases Faculty Review Examination series for CBT at Prometric sites nationwide
- 1000th Clinical Examination given at NCCST

2008

- FSMB restates the validity of COMLEX and USMLE for their intended purpose in Resolution 08-01
- COMSAE released
- AOBEM contracts with NBOME to convert recertification exam to CBT
- NCCST expanded to accommodate increasing number of student candidates and expertise

History of the Leadership of the NBOME

The Presidents that have served the NBOME over the course of its history are listed below:

Charles Hazzard, D.O.	1935-1939
W. Curtis Brigham, D.O.	1939-1944
T. T. Spence, D.O.	1944-1948
S. V. Robuck, D.O.	1948-1963
Spencer G. Bradford, D.O.	1963-1976
Marion E. Coy, D.O.	1976-1980
Lester Eisenberg, D.O.	1980-1985
Thomas F. Santucci, Jr., D.O.	1985-1987
Robert E. Mancini, D.O., Ph.D.	1987-1989
Eugene Mochan, D.O., Ph.D.	1989-1991
John J. Fernandes, D.O., Ph.D.	1991-1993
Bruce Gilfillian, D.O.	1993-1995
John P. Bruno, D.O., MBA	1995-1997
Gerald Osborn, D.O., M.Phil.	1997-1999
Frederick Meoli, D.O., FACOS	1999-2001
Thomas Cavalieri, D.O., FACOI	2001-2002

In 2002, the NBOME changed its organizational structure and recruited its first full-time president. With the president functioning in an operational capacity, the leadership at the board level was placed in the control of the Chair of the Board. Frederick G. Meoli, D.O., FACOS, served as the first full-time president. Thomas Cavalieri, D.O., became the first Chair of the NBOME under the new structure during the middle of his term. The Chairs of the Board since 2002 are listed below:

Thomas Cavalieri, D.O., FACOI	2002-2003
Boyd Buser, D.O.	2003-2005
Sheryl Bushman, D.O. FACOOG	2005-2007
William Ranieri, D.O., FACNP	2007-2009

The NBOME looks forward to a bright and challenging future under the leadership of the Board, the support of its dedicated and committed staff, and the legion of professional volunteers that give freely of their time and experience



Strategic Plan

In 2008, the Board of Directors of the NBOME adopted a three-year strategic plan to move the organization forward into the 21st century. The five primary goals and the objectives to meet those goals are outlined below.

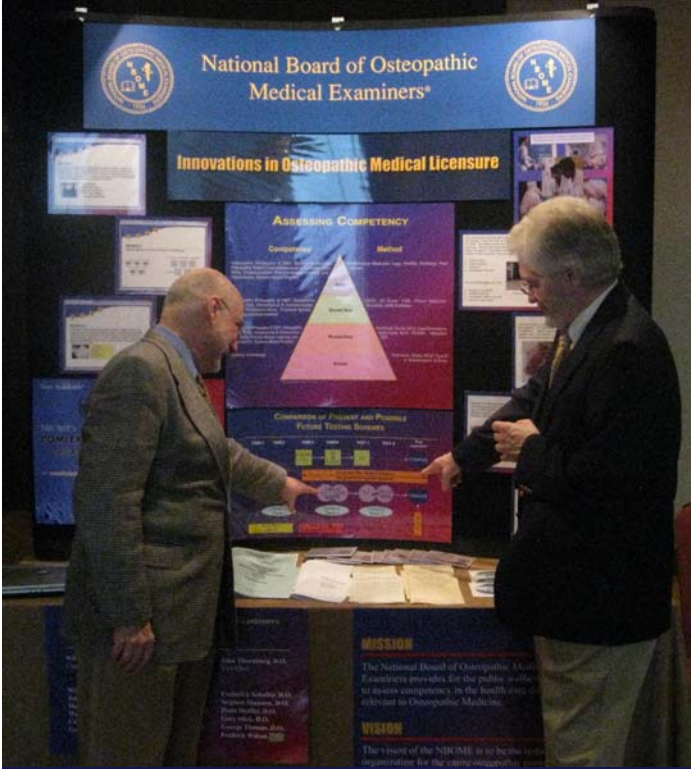
- 1. PREEMINENCE IN THE ARENA OF DOMESTIC AND INTERNATIONAL TESTING OF THE OSTEOPATHIC AND RELEVANT HEALTH CARE PROFESSIONS**
 - a. Research, develop, administer and promote quality, valid, and reliable test instruments, products, and services that serve to protect the public
 - b. Promote osteopathic medical education, osteopathic medical licensure and physician competency
 - c. Develop and maintain relations between national and international organizations which foster medical education and registry regulation
 - d. Develop and maintain relations with regulatory bodies and agencies on both a domestic and international front

 - 2. LEADERSHIP AND COLLABORATION IN THE FIELDS OF OSTEOPATHIC EDUCATION, MEDICAL REGULATION AND RESEARCH**
 - a. Develop an effective research strategy
 - b. Fund both intramural and extramural research relevant to medical education and osteopathic medical licensure
 - c. Partner with national and international medical testing, regulatory, professional, and educational organizations
 - d. Foster publication in recognized journals, periodicals and texts
 - e. Encourage presentations and participation at regional, national and international meetings
 - f. Promote research and medical education through the use of on-line technology

 - 3. INNOVATION AND EXCELLENCE IN PRODUCT LINES AND SERVICES**
 - a. Design, conduct, manage and fund innovative tests and services
 - b. Establish, maintain and implement quality standards and performance-improvement parameters
 - c. Assure the competitiveness of products and services, and market them to present and potential clients

 - 4. CREATION OF A STRONG AND SUSTAINABLE TECHNOLOGICAL INFRASTRUCTURE**
 - a. Explore developing technologies having applicability to services, products and the organization
 - b. Develop an overall strategy for an appropriate technological infrastructure
 - c. Adopt and fund, within our means, technologies that will improve the quality of products and services, stimulate innovation, and improve the performance and reputation of the organization

 - 5. PROMOTE AN EFFICIENT AND EFFECTIVE ORGANIZATIONAL STRUCTURE**
 - a. Focus on our mission and vision and apply the values in all endeavors
 - b. Ensure quality legal service availability to protect the integrity and security of services, products and the organization
 - c. Cultivate a positive functional human resource structure that efficiently and effectively implements the plans of the organization
 - d. Recruit highly skilled, experienced and committed board members
 - e. Communicate effectively to all members, staff and stakeholders
 - f. Ensure effective and constructive participation of members, board and staff by systematic meetings, assessing performance and utilizing the best available technology
 - g. Promote the long term financial stability of our organization by auditing fiscal reports and procedures at least annually, preserving and exploring new sources of revenue, and reviewing and implementing investment strategies.
 - h. Encourage all members and staff to excel, both for the organization and themselves
 - i. Publish an annual report
 - j. Promote the protection of the public
 - k. Seek to provide for the safety and integrity of all who work for, are associated with and are served by the organization
 - l. Support and participate in community and professional programs and affairs
-



Activities and Events 2008



- The NBOME attended the OIA meeting in London in January 2008. Select members met personally with HRH, Prince Charles, who is a patron of osteopathy in the UK. It was also the 10th anniversary of the regulation of osteopathy in the UK.
- The NBOME attended the AOA Mid-Year Meeting in Palm Beach, Florida on February 2-4, 2008, and presented an update to the Board of Trustees.
- A survey was sent to over 4000 ACGME GME programs to determine the acceptability of COMLEX-USA. Most programs accept COMLEX-USA and few program directors understood the three-digit and two-digit standard score reported by the NBOME.
- The NBOME added new staff in March 2008 to deal with the increasing demands of testing at the NCCST.
- The NBOME visited the Arizona College of Osteopathic Medicine on February 26 to participate in a program with the NBME for the faculty and students.
- The Influenza Pandemic Summit was held in Chicago, in conjunction with the Liaison Committee, March 6-7, 2008, to explain the NBOME's position on a potential pandemic and to encourage preparedness on the part of clients and stakeholders.
- The Comprehensive Osteopathic Medical Self-Assessment Examination (COMSAE) went live for Level 1 on March 24, 2008.
- The American Osteopathic Board of Emergency Medicine (AOBEM) Certification Examination Part 1 went live at Prometric test centers nationwide on March 26, 2008.
- Construction of the addition to the Chicago office facilities was completed on March 31, 2008, adding approximately 1200 square feet.
- The NBOME participated in IAMRA Workgroup international phone conference on March 18, 2008.
- The NBOME participated in the first Annual AACOM-AODME meeting in St. Louis. The NBOME presented a Point-Counter Point on the In-Depth Assessment of COMLEX; a display on Innovations in Testing, and presented an update to the deans during their board meeting.
- The IAMRA Workgroup held an international phone conference on April 28, 2008, to discuss unilateral and multilateral agreements between jurisdictions.
- The NBOME made a presentation to the Texas College of Osteopathic Medicine faculty on April 29, 2008, as part of a faculty development program.
- The Executive Committee confirmed the appointment of Erik Langenau, D. O., FACOP, FACP, effective May 1, 2008.
- The Executive Committee confirmed the appointment of Ms. Dee Grimes, MBA, as Vice-President for Finance and Human Resources effective April 19, 2008.
- The NBOME participated in the 96th Annual FSMB Meeting in San Antonio on May 1-3, 2008, and was featured in the early bird session with the NBME. The NBOME had an exhibit on "Innovations in Medical Licensure" on display during the meeting.
- The NBOME joined the American Association of Osteopathic Examiners for a meeting in San Antonio on May 2, 2008, to present an update on the NBOME to the association.
- The NBOME visited Rocky Vista University-College of Osteopathic Medicine on May 10, 2008, to present a faculty enrichment program.
- The Senior Staff Management Summit was held in Conshohocken on May 14-15, 2008.
- The NBOME visited Touro University at Vallejo on May 23-24, 2008, to hold a faculty development program.
- The NBOME Item-Writing module was posted to the NBOME SharePoint website for limited access by faculty, committee members, residents who have passed Level 3, and selected practitioners.
- The NBOME hosted its first three-way teleconference with LECOM to offer an Item-Writer's Course as part of a faculty development program.
- The American Council for Graduate Medical Education and the American Osteopathic Association Program Directors FAQ Sheet was published and posted on the NBOME website.
- A Biometric Identification System was installed in the National Center for Clinical Skills Testing to assure candidate identity.
- The first candidate took the "Item-Writers Seminar" on-line June 2008.
- The American College of Osteopathic Family Physicians Examination Review Meeting was held in Chicago on June 20-21 to prepare the next In-Service Examination for Family Medicine residents.

(Continued on page 24)

(Continued from page 23)

- Caitlin (Cassie) Dyer, MS has joined Bill Roberts, Ed.D., in the Research and Psychometric Section of the National Center for Clinical Skills Testing.
- The NBOME Board of Directors convened their first mid-year meeting in several years in Boston on June 28-29, 2008.
- The NBOME Board honored Dr. Gimpel for his “Years of Dedicated Service” on June 29, 2008, as he assumed the helm at the University of New England-College of Osteopathic Medicine as the new dean.
- NBOME participated in the Physicians Alliance for Physician Competence meeting on July 7-9, 2008. The National Physician Alliance for Competency Summit VI (formerly PAPC) met at the Sheraton Hotel in Baltimore. The Alliance is composed of 51 member organizations, and represents a group that has worked by “the will of the common” as opposed to a hierarchal organization type organization. More information on the meetings can be found on www.innovativelabs.com/summit.
- The Bulletin of Information was posted to the NBOME website for 2008-2009 test cycle in July.
- The 2008-2009 CBT Test Schedule was posted to the website in July 2008.
- The NBOME attended the AOA Board of Trustees Meeting in Chicago to present an “Update on the NBOME.”
- In July 2008 the NBOME, along with AACOM representative Steve Shannon, D.O., presented to the State Government & International Affairs Bureau regarding the potential changes in medical licensure.
- The NBOME participated in the International Association of Medical Regulatory Authorities (IAMRA) Examination Workgroup Phone Conference on July 22, 2008, to work on unilateral and multilateral agreements between licensing jurisdictions worldwide.
- A devastating fire occurred near NCCST on August 13, 2008, at the Riverwalk at Millennium apartment complex, approximately $\frac{3}{4}$ of a mile from the NCCST, not far from the Marriott Residence Inn that is utilized by students when sitting for the PE examination. The NCCST suffered no damage or disruption of testing during the disaster.
- The NBOME addressed the National Board of Podiatric Medical Examiners on Clinical Skills Testing in Chantilly, Virginia on August 16, 2008, to propose a system for examining the clinical skills of podiatrists. Dr. Jeffrey Gerland, President, and Dr. Charles Gibley invited the NBOME to speak with the NBPME.
- The NBOME was invited to give testimony before COCA on September 7, 2008, regarding potential changes in the COMLEX-USA examination in the future.
- The NBOME attended the American College of Osteopathic Surgeons Annual Clinical Assembly in Boca Raton, Florida. During the meeting, the NBOME met with members of the ACOS In-Service Committee which took under advisement a proposal to convert their current examination to a CBT format.
- The IAMRA Fasttrack Workgroup held its final phone conference in preparation for the international meeting in Cape Town, South Africa, on September 30, 2008. The meeting was conducted by Professor Kenneth Cochran from the UK. Dr. Jack Boulet announced that he would be presenting the NBOME paper on the SOAP Note and Professionalism at the IAMRA meeting as no one from the NBOME was able to attend.
- On October 24, 2008, the NBOME presented an update for the Board of Trustees of the AOA. The NBOME’s participation in international and national affairs was reiterated, and the performance of candidates taking the COMLEX-USA was reviewed.
 - The NBOME met with students from SOMA and COSGP to provide them an update on COMLEX-USA and COMLEX-USA Level 2 PE. Students were also asked to complete a short survey to get their opinion regarding the two-stage assessment for osteopathic medical licensure.
 - The NBOME staff and officers also participated in the Healthcare Advocacy Program sponsored by the AOA’s Bureau on State Government and International Affairs.
 - The NBOME had a display in the exhibition hall entitled “The Future in Assessment for Physician Competence.”
- Staff and officers of the NBOME were invited to present to the American Osteopathic Board of Family Practice on the conversion of their initial certifying examination from paper and pencil to CBT format on October 27, 2008. The invitation was extended by Dr. Frank Bonafacio, President of the AOBFP, and Ms. Carol Toma, the Executive Director of the Board. The NBOME presentation included advantages of conversion, steps necessary to convert to CBT, a theo-

retical timetable for conversion, and an approximation of costs.

- The NBOME sent representatives to the American Association of Colleges of Medicine (AAMC) meeting held in San Antonio, Texas, October 31-November 4, 2008. Dr. Langenau, the NBOME Vice-President for Clinical Skills Testing, was one of three speakers on the topic “Feedback and Debriefing” that addressed learning and performance based on techniques utilized to give students and residents both immediate and delayed formative information after clinical skills testing.
- The NBOME extends its admiration and appreciation to John Thornburg, D. O., Ph.D., for his service, innovation, ingenuity, and energy as the former Chair of the Product Committee. For the past nine years, Dr. Thornburg has given selflessly of his time, experience, and expertise in the capacity of Product Committee leader. He has made invaluable contributions during the transition to the CBT format, and the development and implementation of the PE.
- The NBOME made a presentation on “Clinical Skills Testing; COMLEX-USA is Changing” to the Osteopathic International Alliance assembly on Sunday, November 9, 2008, at the Midwestern University-Chicago College of Osteopathic Medicine.
- The NBOME was an active participant at the meeting of the National Disability Forum held in New York under the leadership of Abraham Brinkerhoff, Ph.D., from November 10-12, 2008. Other participants include the NBME, ETS, LSAT, and several other high-stakes testing organizations. Of particular interest during this meeting was the impact the new federal regulations regarding the rights of those with disabilities will have on high-stakes testing. The new regulations are far less stringent on the responsibilities that candidates have regarding verifying the nature and impact of their disability on their daily life routines. The new guidelines may permit more candidates to qualify with less evidence of disability than has been the case up until now.

- After exploring a number of options in the Conshohocken area, the NBOME has executed an eight-year lease on its current site with the expansion of an additional 5900 square feet to house the new NCCST. The total square footage of the new facility is approximately 19,600. The new facilities will permit the NBOME to virtually double its testing capacity at the Conshohocken location.
- On November 26, 2008, the IAMRA International Fasttrack Workgroup met by an international phone conference. It was the first conference since the IAMRA meeting that was held in South Africa in early October.
- The NBOME has been working closely with Prometric, the CBT vendor for COMLEX-USA, to offer candidates a highlighting and strike-out feature on the COMLEX-USA CBT examination sequence. Students have indicated a preference for this feature as it simulates the manner in which they study and prepare for tests. Currently, Prometric does not offer this feature to other clients. The NBOME and Prometric have been working through the technical details necessary to modify the test driver to deliver this feature to all candidates. Logic to effect implementation and final cost estimates have not yet been determined. Closure as to whether or not the service can be offered to candidates should come over the next few months.



International Associations and Activities



The NBOME has been engaged in the international arena actively since 2000. The NBOME worked with the American Osteopathic Association (AOA) to procure recognition for American trained D.O.'s to obtain full licensure in the Province of Ontario. In December of 2005, the Province of Ontario recognized the COMLEX-USA as a means to attain initial licensure within the Province. On an individual basis, D.O.'s have attained recognition and licensure in 51 international jurisdictions outside of the United States of America. The NBOME has worked closely with the AOA's Bureau of State Government and International Affairs to promote licensure or registry of osteopathic physicians trained in the United States who seek licensure in other countries.

In 2004, the NBOME was admitted as an associate member of the International Association of Medical Regulatory Authorities (IAMRA). The NBOME presented a poster session comparing the English-speaking licensure or registry examinations used worldwide as well as a presentation on the efforts of the IAMRA Fasttrack Examination during the IAMRA meeting in New Zealand in 2006. The Workgroup has been studying the examinations for licensure from around the world in the hopes of fostering portability and uniformity in the quality of the examinations for medical licensure. The NBOME has been a member of the Fasttrack Workgroup since 2004. Most recently, the NBOME presented an abstract at the IAMRA meeting in South Africa in November of 2008. The abstract addressed the issue of the fraudulent SOAP Note used in the COMLEX-USA level 2 PE (Performance Evaluation) and its impact on the professionalism of the physician candidate. The NBOME also served on a panel dealing with professionalism that followed the presentation.



The NBOME has been an Associate Member of the Osteopathic International Alliance (OIA) since 2005. Members of the NBOME were invited to join other members of the OIA to attend the celebration of the 10th Anniversary of the regulation of osteopathy in the United Kingdom in January of 2008. Members of the NBOME met with Prince Charles during a luncheon honoring the osteopathic profession's contributions to the health of the citizens of the United Kingdom.

At the last meeting of the OIA in Lombard, Illinois (near Chicago) in November of 2008, the NBOME presented to the association on the use of clinical skills testing to assess the competency of osteopathic physicians. The presentation stressed the importance of the assessment of clinical skills in determining whether a candidate can demonstrate his or her ability to evaluate a patient in the environment created by a standardized patient clinical encounter.

The National Board of Medical Examiners is continually seeking opportunities to collaborate and cooperate with the American Osteopathic Association, IAMRA, the OIA, and other associations to promote the international recognition and licensure of osteopathic physicians and the osteopathic profession worldwide.

Beginning in 2009, the NBOME will offer the computer-based COMLEX-USA Levels 1, 2 and 3 in Canada and other international venues worldwide. This will enable osteopathic medical licensure candidates to take the examination while they are on clinical rotations in foreign countries without having to return home to take a scheduled licensure examination.

Supporting the Community



The Board and staff of the NBOME appreciate the importance of working in, supporting, and fostering the sense of community at the professional, educational, local, national, and international levels. Contributing to and improving these communities is paramount to the NBOME in developing and maintaining good relations with our neighbors.

To this end, the NBOME has engaged in the support of a number of projects for the professional community. In January of 2008, the NBOME participated in and partially supported the educational Summit of the American Association of Osteopathic Examiners. In this program, guest speakers, including participants from the NBOME, presented updates on what is new in medical licensure testing. Similarly, in May of 2008, the NBOME participated in the Federation of State Boards of the United States meeting in San Antonio, Texas. Representatives of the NBOME served on a panel with representatives of the National Board of Medical Examiners to update the state medical boards and other members of the regulatory community on the direction testing in medical licensure may go in the future. Additional programs supported by the NBOME included those for the American Association of Directors in Medical Education (AODME), and the AOA's Bureau of State Government and International Affairs.

The NBOME has also been a strong supporter of the National Alliance for Physician Competence which has been working for nearly five years on defining and assessing physician competence on a national level. The

Alliance has produced a document entitled the *Guide to Good Medical Practice-USA*. The Alliance continues to seek comments on the document from the professional community on the principles described in the work. The NBOME held a number of “Visitation Days” where the professional community of deans, faculty, and licensing board members or representatives were invited to visit the NBOME’s National Center for Clinical Skills Testing to learn about the COMLEX-USA Level 2 PE, and see first-hand how the clinical skills examination is administered to over 3500 candidates annually.

At the local community level in Chicago, the NBOME supported the KABOOM program. This national program, in cooperation with the American Osteopathic Association, brings important changes to the local environment by providing new and improved playgrounds for less fortunate children. The NBOME staff joined others in helping to build new parks in Chicago by contributing funds for the popular national program.

In Conshohocken, the NBOME staff participated in the “Fun Run for Juvenile Diabetes” program, sponsored by the Juvenile Diabetes Research Foundation, by raising funds and joining in on the activities that included a 3K walk and run along Philadelphia’s West River Drive. The staff also strongly supported a local effort for breast cancer and cancer awareness by joining in on “Denim Day” hosted by the local branch of the American Cancer Society. During the Christmas holidays, the NBOME staff joined in the Conshohocken area’s Adopt-A-Family Program where food and toys were collected for needy families in the surrounding communities. The NBOME staff at the National Center for Clinical Skills Testing in Conshohocken conducted a “Biggest Loser Contest” to bring the issue of being overweight to the awareness of the staff. A prize was offered to the individual who lost the most weight within the prescribed period of time. Everyone benefited from the program, if only to become alert to the potential damage being overweight or obese has on the general health of the individual, and the impact obesity has on the community, the nation and society.

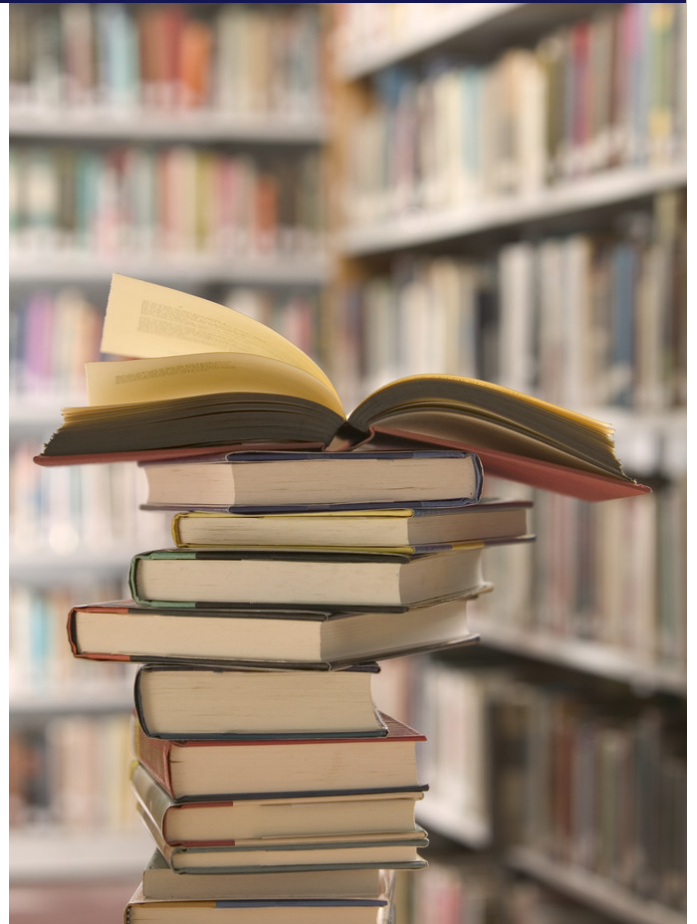
The educational community was assisted by a number of NBOME visits to the colleges and schools of osteopathic medicine. During the year, the NBOME provided many courses to faculty as part of their faculty enrichment or development programs, such as item writing seminars and programs dealing with the history of the osteopathic profession. Student programs to orient the next generation of physicians about medical licensure and the COMLEX-USA osteopathic medical licensure examination were also a part of the NBOME’s educational community efforts in 2008. In April of 2008, the NBOME partially supported the educational meeting of the American Association of Colleges of Osteopathic Medicine during their meeting in St. Louis, Missouri. The NBOME also sponsored a luncheon to present an update for students, faculty, and administrators on modern testing techniques and formats in CBT and performance evaluation assessments.

Demonstrating an interest in the national community, the NBOME provided a grant to the Bayou la Batre Rural Health Clinic in Alabama that had been ravaged by several natural disasters, including fire and Hurricane Katrina. Several NBOME members, acting in a different capacity, supported the American Osteopathic Association’s “Day on the Hill” to encourage legislators to recognize the difficulties facing the osteopathic medical profession. The NBOME also donated to the First Baptist Church of Fort Scott, Kansas, to promote its community and local healthcare initiatives. In support of minority students studying osteopathic medicine, a grant was given to the American Osteopathic Foundation in honor of Mrs. Norma Anderson for the advancement of minority students attending or applying to osteopathic medical colleges.

Being an active and integral part of the communities in which we work, serve, and live is an important activity of the NBOME as it strives to fulfill its mission and vision, and to help in its efforts to protect and promote the public welfare.



Research and Development



Research and Development is a very integral and essential part of what the NBOME is about. To conduct research and development programs, the NBOME utilizes a number of committees, as well as encouraging the efforts of the staff, volunteers, and the collaboration with other individuals and institutions to accomplish its mission and vision by conducting and promoting educational and testing research.

To this end, the Research Committee is charged with the solicitation, consultation, and support of internal and external research that supports current and future testing activities and product development for the NBOME. This has been a building year for the committee with some notable successes. The roles of the committee have been defined, and the specific research topics to be addressed have been identified and proposed. Some proposals have been accepted and funded, while others are in the process of being refined for purposes of resubmission. The overarching focus of predictive validity remains an area of great interest and presents numerous challenges. The NBOME continues to look for partners to collaborate with in completing these types of studies. Two additional areas have been the focus of discussion and planning. These include research on the changes in the timing and frequency of the examinations and research on testing methods for the osteopathic core competencies that have received limited coverage in the current testing strategies. The clinical skills assessment staff (COMLEX-USA Level 2 PE) has been very active in their research activities, and the Research Committee has attempted to work more closely with the PE staff and volunteers in their research and development efforts. The Research Committee is chaired by Thomas Hardie, Ed. D.

The Research Committee is planning a combined conference with several measurement experts to assist the committee in developing test designs that address the primary research foci (predictive validity, the impact of testing frequency, and timing and competency measurement). Discussion and research requests reviewed during the last year suggest that NBOME data-sharing policies may be negatively impacting external investigators. Exploration of this assertion and a review of the current policies will be a focus for 2009.

The foundational efforts of the committee should result in more concrete projects and products during 2009. Anticipated outcomes from our planned expert consultations include expanding external and internal research efforts, improving the quality of existing products through research, and defining the future role of the committee in supporting the mission, vision and strategic plan of the NBOME.

Product development in computer-based testing in 2008 was aimed at introducing multimedia test items into the COMLEX-USA. These items will first be introduced into Level 3 in 2009. Multimedia test items include sound, video clips, and limited animation items that test beyond knowledge and application. Additional efforts to refine the COMLEX-USA for the future include the auditing of the blueprint and work toward introducing a better assessment of the osteopathic core competencies in the examination sequence.

A self-assessment tool, COMSAE (Comprehensive Osteopathic Medical Self-Assessment Examination) was introduced in 2008 after nearly two years of development. This web-enabled program permits candidates to evaluate the status of their knowledge base at the end of their second year of osteopathic medical school education, and upon the completion of their core clinical rotations. The assessment provides immediate feedback to the candidate upon completion of the examination. Two testing modes, limited time and unlimited time, are available to the candidate. A faculty evaluation tool permits approved faculty members the ability to take a simulated COMLEX-USA examination in the testing environment actually experienced by test candidates. Faculty can take the specially prepared examination at any time at any Prometric Professional Test Center during their usual hours of operation all year long. This helpful experience has been available to faculty members since 2007. Research and development is underway to create a web-enabled subject examination program to replace the current paper-and-pencil type subject examinations.

The NBOME is in the process of conducting the “In-Depth Assessment Program (IDAP)” to evaluate the currency and adequacy of the COMLEX-USA licensing examination sequence to meet its mission in the 21st

(Continued on page 32)

(Continued from page 31)

century. The NBOME is working to thoroughly explore the concept of utilizing a two-decision point examination system and creating a comprehensive applied medical sciences examination for undergraduate osteopathic medical education. More information will become available regarding this study some time in mid-to-late 2009.

The National Center for Clinical Skills Testing is exploring new methods for expanding the testing scope of the COMLEX-USA Level 2 PE. These include the use of hybrid simulators, simulation models, and post-encounter, computer-based exercises that may include the use of informatics. The use of electronic recording of SOAP Notes is continually under study.

The NBOME has had numerous research studies, or projects, conducted internally or in collaboration with others, that have been reported in published articles and presented at national and international meetings during the course of the year. One notable study was conducted regarding the fabrication of the SOAP Note by students during the conduct of the Level 2 PE. This study has become a benchmark for the clinical assessment arena and has been the source of significant interest and study. Details on the publications, abstracts and presentations made by the NBOME during 2008 are reported in another section of this report. It is noteworthy that the NBOME has had more than 20 abstracts and articles submitted for publication, and that seven are expected to be published by late 2008 or early 2009.

In 2008, the NBOME created a new committee, the Emerging Technologies Committee, co-chaired by Rocco Crescenzo, D.O., and Jeanne Sandella, D.O., to explore, evaluate, and implement innovative and applicable technologies into NBOME operations and testing.

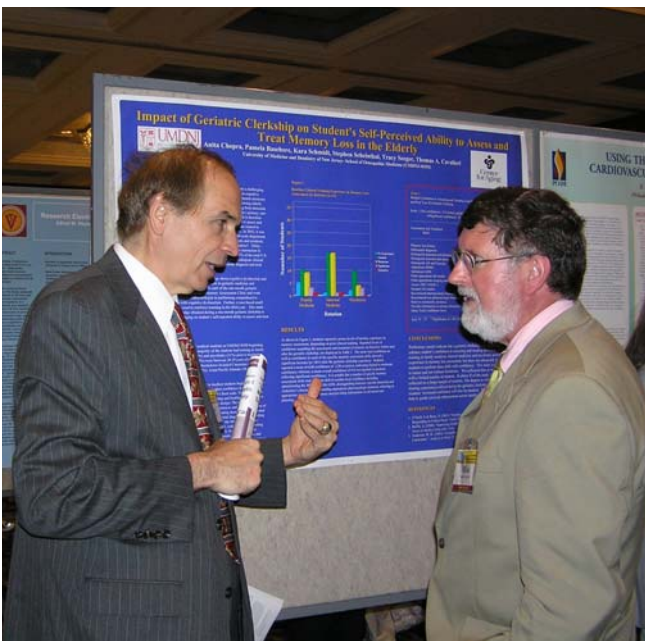
The staff committed to conducting the research and development efforts for the NBOME include Linjun Shen, Ph.D.; Erik Langenau, D.O., FACP; William Roberts, Ed. D.; Caitlin Dyer, M.Sc.; and Feiming Li. The NBOME is proud to offer a one-year funded Research Fellowship in both CBT and Clinical Skills Assessment beginning in 2009. Interested applicants may apply to the NBOME through the Chicago office. Research consultants for the NBOME include Tony Errichetti, Ph.D., and Jack Boulet, Ph.D.

The NBOME is committed to providing quality test instruments and services for the osteopathic profession while looking to insure the public's safety and welfare. A vigorous research and development program is designed to help the NBOME to meet that goal and to be the best that it can be, both for the present and in the future.

Publications ...

1. Boulet, J. R., Smees, S. M., Dillion, G. F., & Gimpel, J. R. (accepted). The use of standardized patient assessments for certification and licensure decisions. *Simulation in Health Care*.
2. Roberts, W. L., Boulet, J. R., & Gimpel, J. R. (in review). Setting standards for passing scores on medical licensure and credentialing exams. *Applied Measurement in Education*.
3. Roberts, W. L., McKinley, D. W., & Boulet, J. R. (Submitted). Effect of first encounter pretest on pass/fail rates of a clinical skills medical licensure examination. *Advances in Health Sciences Education*, 1-17.
4. Weidner, A. C., Gimpel, J. R., Boulet, J. R., & Solomon, M. (accepted). Using standardized patients to assess the communication skills of graduating physicians for the comprehensive osteopathic medical licensing examination (COMLEX) Level 2-performance evaluation (Level 2-PE). *Teaching and Learning in Medicine*, 1-29.

1. Gallagher, L. A., Tomayko, A., & Gimpel, J. R. (2008, April) *The Use of electronic health records by osteopathic medical students*. Poster presented at the annual meeting of the American Association of Colleges of Osteopathic Medicine & American Association of Saint Louis, MO.
2. Gimpel, J. R. (2008, March). *Update on COMLEX-USA*. Symposium conducted at the meeting of the American College of Osteopathic Family Physicians, Denver, Colorado.
3. Kachur, E. K., Langenau, E. E., Altshuler, L., Zabar, S., Kalet, A., Parish, S., et al. (2008, November). *Feedback and debriefing and after OSCEs and other multiple station exercises*. Symposium conducted at the meeting of the Association of American Medical Colleges, San Antonio.
4. Kachur, E. K., Langenau, E. E., Schwartz, C., Parish, S., & Zabar, S. (2009, January). *Instant and delayed OSCE feedback--how to do it well*. Symposium conducted at the meeting of the Annual International Meeting on Simulation in Healthcare, Lake Buena Vista, FL.
5. Langenau, E. E., Gimpel, J. R., Kachur, E. K., Schaller, F., & Scott, T. (2009, April). *Assessing competence in tomorrow's physicians: Developing a competency-based assessment program for medical students*. Symposium conducted at the meeting of the American Association of Colleges of Osteopathic Medicine, Bethesda, MD.
6. Roberts, W. L., Boulet, J. R., & Gimpel, J. R. (2008, April). *Setting standards for passing scores on medical licensure and credentialing exams*. Paper presented at the American Educational Research Association, New York, NY.
7. Sandella, J. M., Langenau, E. E., Gallagher, L. A., & Monterey, D. (2009, June). *Protecting SPs: Providing a safe environment for standardized patients*. Symposium conducted at the meeting of the Association of Standardized Patient Educators, Las Vegas, NV.
8. Solomon, M., Roberts, W. L., & Langenau, E. E. (2009, October). *Test of construct validity for a measure of humanistic clinical skills: a multitrait-multimethod matrix investigation*. Paper presented at the International Conference on Communication in Healthcare, Miami Beach, FL.
9. Tomayko, A., Roberts, W. L., Gimpel, J. R., & Boulet, J. R. (2008). *Effect of examinee characteristics on success on a medical licensure examination*. Paper presented at the American Educational Research Association, New York, NY.



10. Gimpel, J. R., Boulet, J. R., Sandella, J. M., Roberts, W. L., & Gallagher, L. A. (2008, March) *Rectifying unintended consequences of clinical skills assessment*. Poster presented at the annual meeting of the 13th Ottawa International Conference on Clinical Competence (Ozzawa), Melbourne, Australia.
11. Wilson, C. D. (2008, June). *QA strategies for high-stakes performance-based examinations*. Symposium conducted at the meeting of the Association of Standardized Patient Educators, San Antonio, TX.
12. OME Conference: "The Physician Accountability for Physician Competence Initiative," January 11, 2008, in Chicago. Dr. Meoli.



National Board of Osteopathic Medical Examiners®



Innovations in Osteopathic Medical Licensure

A 44 year old female is seen with a chief complaint of difficulty with maintaining her balance and ambulating. The patient is observed to demonstrate vestibular and ocular movements that are jerky. The patient is examined and demonstrates the gait pictured in the

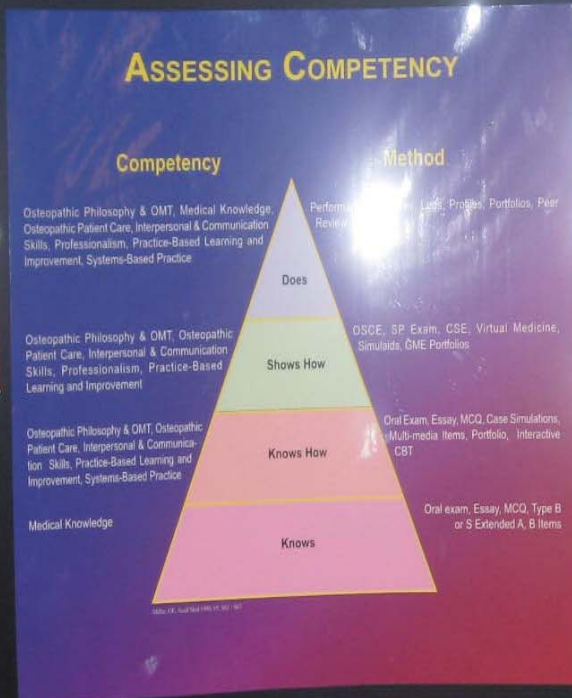
a. Steppier gait
b. Shuffling gait
c. Cerebellar gait
d. Sensory ataxia

Click on Exhibit to View

Questions

A 21 year old male presents with a chief complaint of fatigue. He reports with fatigue that is worse in the morning and improves throughout the day. He has a history of chronic sinusitis and allergic rhinitis. Since the past illness, he has lost 10 pounds and has trouble sleeping. He has a normal physical exam. What is the most likely diagnosis?

Simulation Period for the Student to Submit Radiology Patients as Continuing Medical Education



A 55 year old female presents with a chief complaint of severe abdominal pain localized to the back. The patient has a history of frequent use of NSAIDs and a past episode of acute pancreatitis in the past. She has a normal physical exam. What is the most likely diagnosis?

Click on Exhibit to View

A 55 year female presents with a chief complaint of frequent stumbling and tripping. There has been no history of trauma to the extremities or her head. The patient reports that her brother was similarly affected 2 years ago. She has also noted fasciculations and an ankle jerk reflex in the right foot. The patient is not knowledgeable of any cause. The patient is asked to walk across the room and walk with the gait demonstrated in

a. Anterior Tibial
b. Gastrocnemius
c. Peroneal
d. Quadriceps Femoris

The most likely diagnosis is the

a. amyotrophic lateral sclerosis
b. multiple sclerosis
c. amyotrophic lateral sclerosis
d. myasthenia gravis

Click on Exhibit to View

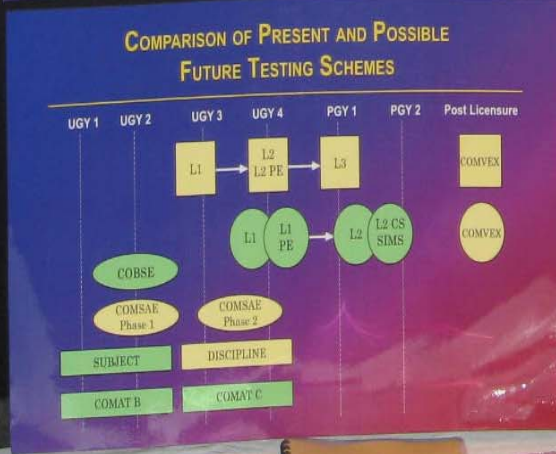
Match the letter in the diagram with the most appropriate clinical presentation. Choices may be used once, more than once or not at all.

A. Diaphragm
B. Intercostal space
C. Costal cartilage
D. Chest on back pain
E. Hernia of the abdominal wall

Now Available!

NBOME's COMLEX Style Self-Assessment

See www.nbome.com/comlex for details



NOW AVAILABLE!

NBOME COMLEX-USA Levels 1 and 2 CBT Faculty Review

13. Influenza Pandemic Summit: "The NBOME Policy on the Influenza Pandemic," March 9, 2008, in Chicago. Dr. Meoli.
14. "Evaluating the impact of change in test formats on the predictive validity of Comprehensive Osteopathic Medical Licensing Examination (COMLEX-USA) scores." Yuping Ying, MS, M.Ed. and Linjun Shen, PhD, MPH.
15. Gimpel, JR, Weidner, A, Boulet, JR, Wilson, C, Errichetti, A. *Standardized Patients and Mechanical Simulators in Teaching and Assessment at Osteopathic Medical Schools*. Journal of the American Osteopathic Association. December 2007, 107(12): 557-561.
16. Weidner, A.C., Gimpel, J.R., Boulet, J.R., Solomon, M. *Using Standardized Patients to Assess the Communication Skills of Graduating Physicians*. Teaching and Learning In Medicine. Accepted for publication. February 28, 2008.
17. Roberts, W.L., Boulet, J.R., Gimpel, J.R. *Setting Standards for Passing Scores on Medical Licensure and Credentialing Exams*. 2008 American Educational Research Association Annual Meeting. New York, N.Y., April 2008.
18. Tomayko, A., Roberts, W.L., Gimpel, J.R., Boulet, J.R. Effect of Examinee Characteristics on Success on a Medical Licensure Examination. 2008 American Educational Research Association Annual Meeting. New York, N.Y., April 2008.
19. Meoli, F. G., Gimpel, J., Sandella, J., Boulet, J. and Roberts, W. "The Fabrication of the SOAP Note: Irregular Behavior and a Measure of Professionalism;" Abstract presented at IAMRA meeting in South Africa, November 6, 2008.

Rectifying Unintended Consequences of Clinical Skills Assessment

John R. Gimpel, D.O., M.Ed.
 Jeanne M. Sandella, D.O.
 William L. Roberts, Ed.D.
 John R. Boulet, Ph.D.
 Laurie A. Gallagher, D.O.

Background

Medical students are required to formulate patient notes as part of high stakes clinical skills examinations for licensure, such as the COMLEX-USA Level 2 Performance Evaluation (Level 2-PE) administered by the National Board of Osteopathic Medical Examiners (NBOME). The Level 2-PE format requires that candidates synthesize the information gathered in the encounter in a patient note (SOAP note format). Studies have revealed that the patient notes in OSCEs and clinical skills examinations are not always an accurate reflection of the clinical encounter. Misrepresentation within the note by documentation of medical history that was not elicited, or documentation of physical exam maneuvers that were not performed, is considered by NBOME to be unprofessional behavior.

Purpose

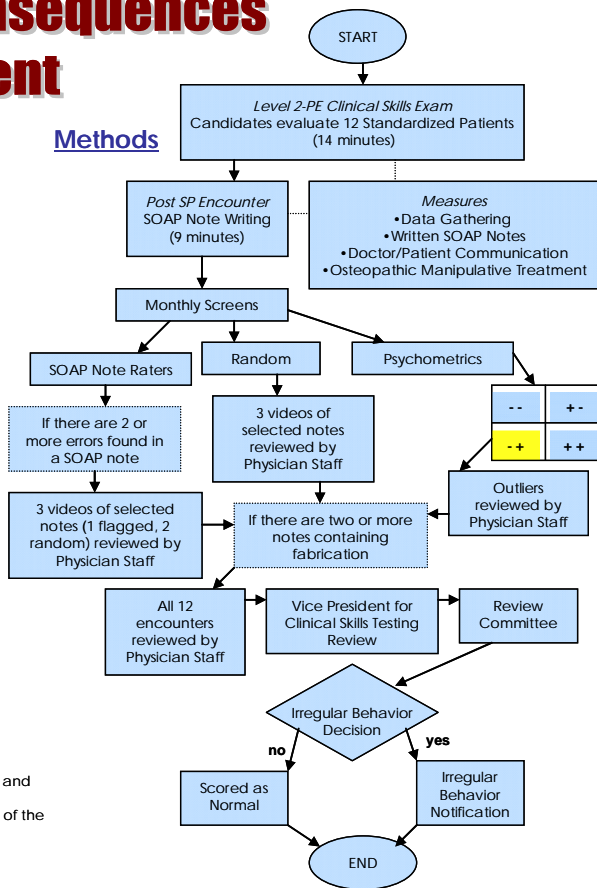
The purpose is to ensure that the patient notes are an accurate representation of the actual patient encounter and that candidates understand that misrepresentation in the patient note constitutes unprofessional behavior. This assists NBOME to fulfill its mission of providing for the public welfare a means to assess competency in the health care disciplines relevant to osteopathic medicine.

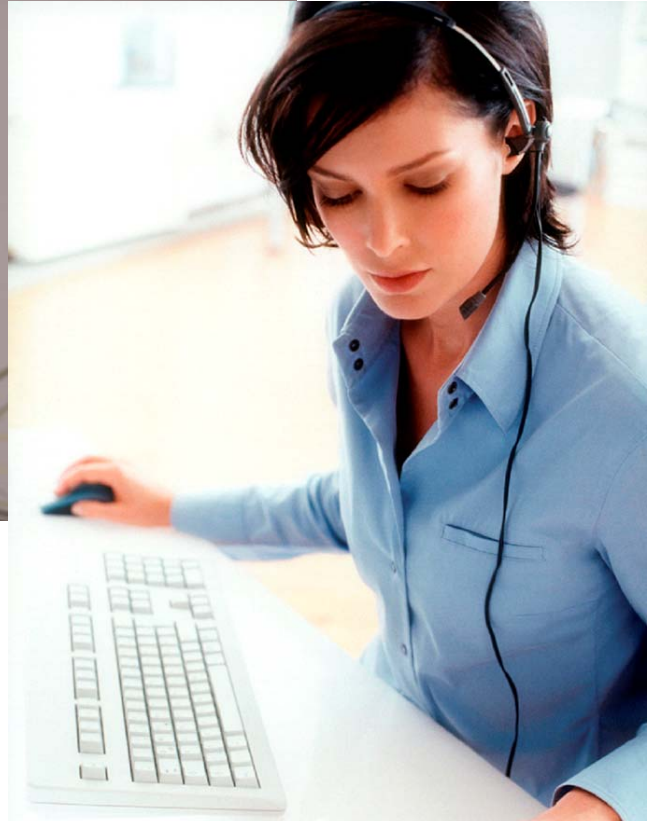
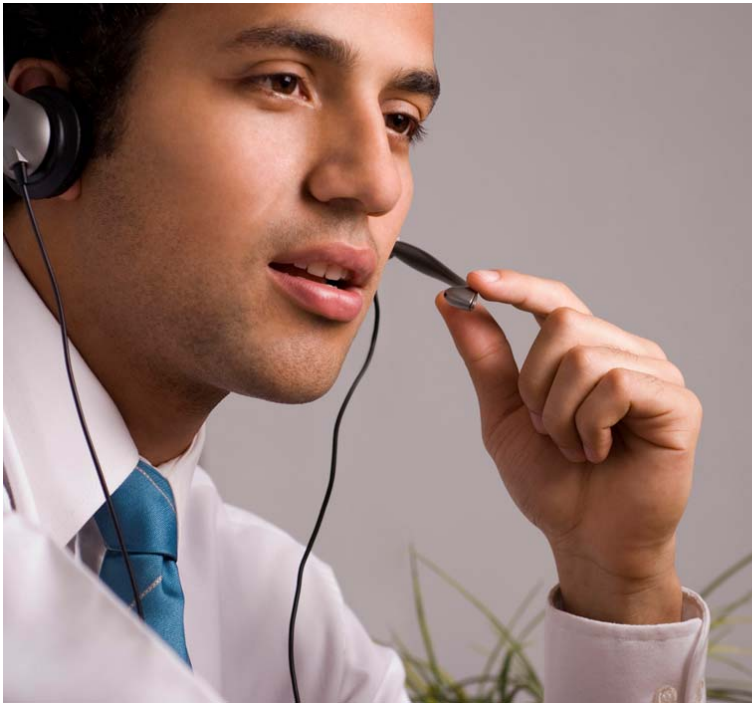
Results

Of all candidates tested, 2.47% were identified for review using psychometric methods, SOAP note rater review for inconsistencies, and random review. 19.4% of the screened candidates were confirmed as having clearly misrepresented their findings. Of these, 100% were confirmed by an external review committee as having fabricated their findings, thus committing irregular and unprofessional behavior.

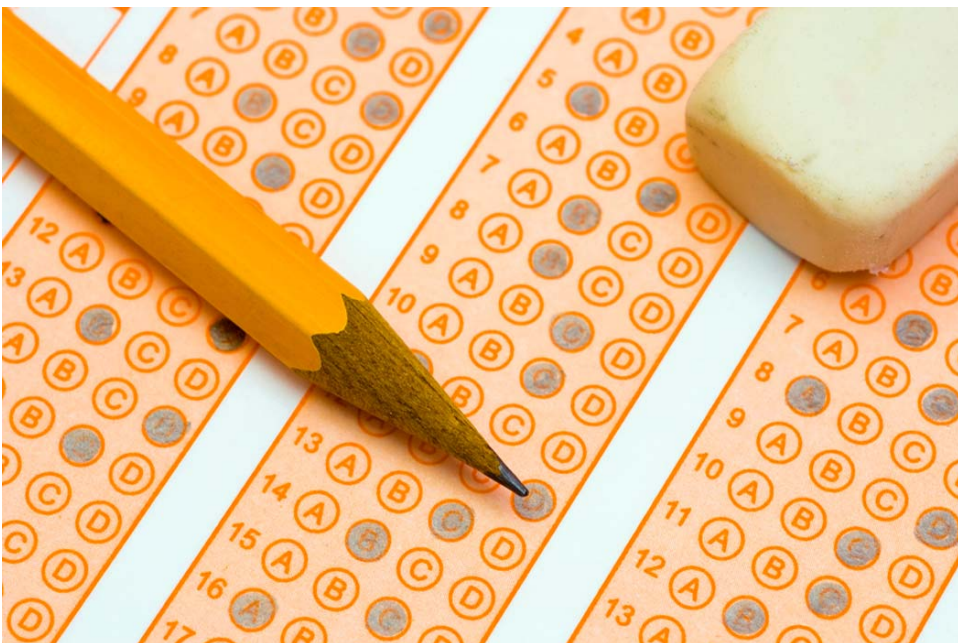
Conclusion

It is important to monitor the consequences of testing, and when unintended outcomes are found, to consider modification of procedures to promote the objectives of the assessment.





Testing and Psychometric Services



The NBOME is pleased to offer a variety of testing and psychometric services that can be tailored to meet the specific needs of an individual or organization.

The Testing and Research Division is headed by Linjun Shen, Ph.D., who brings years of experience in applying psychometric principles and practices to moderate and high-stakes testing. The Division has several capable research assistants who extend our ability to meet the specific needs of various organizations, associations or students involved with testing of health care professionals.

Examination Verification

Fidelity of Test-to-Test Specifications

Weighting Relevance

Correlation with surveys

Research federal and other data

Examination Analysis

Item Type Distribution

 Type A, B, R and C

Item Analysis

P-Value

R-Value

Distractor Analysis

Reliability Coefficients

Bloom's Taxonomy Study

Array Reports

By year

Year-to-Year

Candidate-to-norm performance

Program-to-norm performance

Analysis of Test Results

By geographic region

By program

Descriptive Analysis

By subject or discipline

Computer-Based Conversion

HTML and XML

Security Services

Version Patterning

Version Release Patterns

Internal Control Systems

Standard Setting

Guidelines

Assist in Panel Construction

Document procedures

Angoff, Hofstee, Rasch, and Bookmark
(item mapping) methods

Computerized Item Bank Control

Bank Coding

Bank Storage

Access Control

Proctoring

Test Item Development

Item-Writing Guides

Item-Writing Workshops

Item-Writing Seminars

Consulting

Auditing Services for Standards

Clinical Skills Testing

Case Development/Assessment

Standard Setting



NBOME

COMPLEX-USA

2008 - 2009



COMLEX-USA: Comprehensive Osteopathic Medical Licensure Examination

Computer-Based Testing

Description of Examination

The COMLEX-USA series is designed to assess the osteopathic medical knowledge and clinical skills considered essential for osteopathic generalist physicians to practice medicine without supervision. COMLEX-USA is constructed in the context of medical problem-solving; which involves clinical presentations and physician tasks. Candidates are expected to utilize the philosophy and principles of osteopathic medicine to solve medical problems. The Clinical Presentation ("Dimension I") of the COMLEX-USA examination blueprint identifies high-frequency and/or high-impact health issues that osteopathic generalist physicians encounter in practice. The Physician Task ("Dimension II") specifies the major steps osteopathic physicians generally undertake to solve medical problems. Major categories of the two dimensions can be found in Table 1. Detailed topics covered by each category are in the CBT Tutorial available on www.nbome.org.

The COMLEX-USA series is an examination sequence with three levels. While all examination levels have the same two-dimensional content structure, the depth and emphasis of each level parallels the educational experiences of the candidate. This progressive nature of the COMLEX-USA examinations ensures the consistency and continuity of the measurement objectives of the osteopathic medical licensing examinations. A description of the blueprints follows:

Osteopathic principles and practices, by design, are integrated throughout all areas of the examination, as this best reflects the manner in which osteopathic principles and practices permeate osteopathic medicine.

Table 1 - The COMLEX-USA Examination Blueprint

Dimension I	Level 1, Level 2 CE, Level 3		
Asymptomatic & General Symptoms	8 -- 16%		
Symptoms & Disorders of Digestion & Metabolism	4 – 10%		
Symptoms & Disorders of Sensory Alternations	28 – 38%		
Symptoms & Disorders of Motor Alternations	6 – 12%		
Symptoms & Disorders Related to Human Sexuality & Urination	3 – 8%		
Symptoms & Disorders of Respiration & Circulation	8 – 16%		
Symptoms & Disorders of Thermoregulation	2 – 6%		
Symptoms & Disorders of the Tissues and Trauma	8 – 16%		
Symptoms & Disorders of Human Development	3 – 8%		
Dimension II	Level 1	Level 2 CE	Level 3
Health Promotion & Disease Prevention	1 – 5%	15 – 20%	15 – 20%
History & Physical	5 – 15%	30 – 40%	10 – 20%
Diagnostic Technologies	1 – 5%	10 – 20%	15 – 25%
Management	2 – 7%	10 – 20%	25 – 40%
Scientific Understanding of Mechanisms	70 – 85 %	5 – 15 %	5 – 10%
Health Care Delivery	1 – 3 %	5 – 10%	5 – 10%

Level 1

COMLEX-USA Level 1 is constructed according to the COMLEX-USA examination blueprint. Candidates are expected to demonstrate basic science knowledge relevant to medical problems as defined by the Level 1 blueprint. Level 1 emphasizes the scientific concepts and principles necessary for understanding the mechanisms of health, medical problems and disease processes.

Level 1, taken in one day, is a problem- and symptom-based assessment integrating the basic medical sciences of anatomy, behavioral science, biochemistry, microbiology, osteopathic principles, pathology, pharmacology, physiology and other areas of medical knowledge as they are relevant to solving medical problems. The examination consists of two four-hour test sessions, each containing questions related to diverse clinical presentations and principles.

Level 2-CE

COMLEX-USA Level 2-CE is constructed according to the COMLEX-USA examination blueprint. Candidates are expected to demonstrate knowledge of clinical concepts and principles involved in all steps of medical problem-solving as defined by Dimension II. Level 2-CE emphasizes the medical concepts and principles necessary for making appropriate medical diagnoses through patient history and physical examination findings.

Level 2-CE, taken in one-day, is a problem- and symptom-based assessment integrating the clinical disciplines of emergency medicine, family medicine, internal medicine, obstetrics/gynecology, osteopathic principles, pediatrics, psychiatry, surgery, and other areas necessary to solve medical problems as defined by the Level 2-CE blueprint. A similar problem-symptom-based approach is used in Level 2 and in Level 1. The examination consists of two four-hour test sessions, each containing questions related to diverse clinical presentations and principles.

Level 3

COMLEX-USA Level 3 is constructed according to the COMLEX-USA examination blueprint. Candidates are expected to demonstrate knowledge of clinical concepts and principles necessary for solving medical problems as independently practicing osteopathic generalist physicians. Level 3 emphasizes the medical concepts and principles required to make appropriate patient management decisions.

Level 3, taken in one-day, is a problem- and symptom-based assessment integrating the clinical disciplines of emergency medicine, family medicine, internal medicine, obstetrics/gynecology, osteopathic principles, pediatrics, psychiatry, surgery, and other areas necessary to solve medical problems as defined by the Level 3 blueprint. The examination consists of two four-hour test sessions, each containing questions related to diverse clinical presentations and principles.

Performance Evaluation

Description of Examination

For case selection, Level 2-PE applies the Dimension I categories from the COMLEX-USA blueprint. The content (case selection) of Level 2-PE is crossed with the following axes:

Patient Presentation Axis

Standardized patients present in simulated ambulatory medical settings with problems and symptoms that are either acute, chronic, or provide opportunities for health promotion and disease prevention. In addition, the patients encountered are balanced to meet the examination specifications for patient gender and age as a reflection of national osteopathic physician practice patterns based on national survey data, as well as expert judgment. In addition, the demographic and cultural profiles of patients are instrumental considerations in the case development process.

(Continued on page 41)

Osteopathic Medical Practice Axis

In any examination form, the following clinical skills are evaluated in the majority of the standardized patient encounters

Biomedical/Biomechanical Domain

- Osteopathic Principles and/or Osteopathic Manipulative Treatment
- History-Taking and Physical Examination Skills
- Integrated Differential Diagnosis and Clinical Problem-Solving
- Written Communication and Synthesis of Clinical Findings (SOAP note format)

Humanistic Domain

- Physician-Patient Communication, Interpersonal Skills, and Professionalism

Successful passage of the two distinctive domains is required to pass COMLEX-USA Level 2-PE.

Clinical Content Axis

Based on Dimension I of the COMLEX-USA blueprint, expert judgment, and national survey data of osteopathic physician practice patterns, candidates will encounter standardized patients presenting with the symptoms, problems, or complaints that are common to primary care osteopathic medical practice. These include:

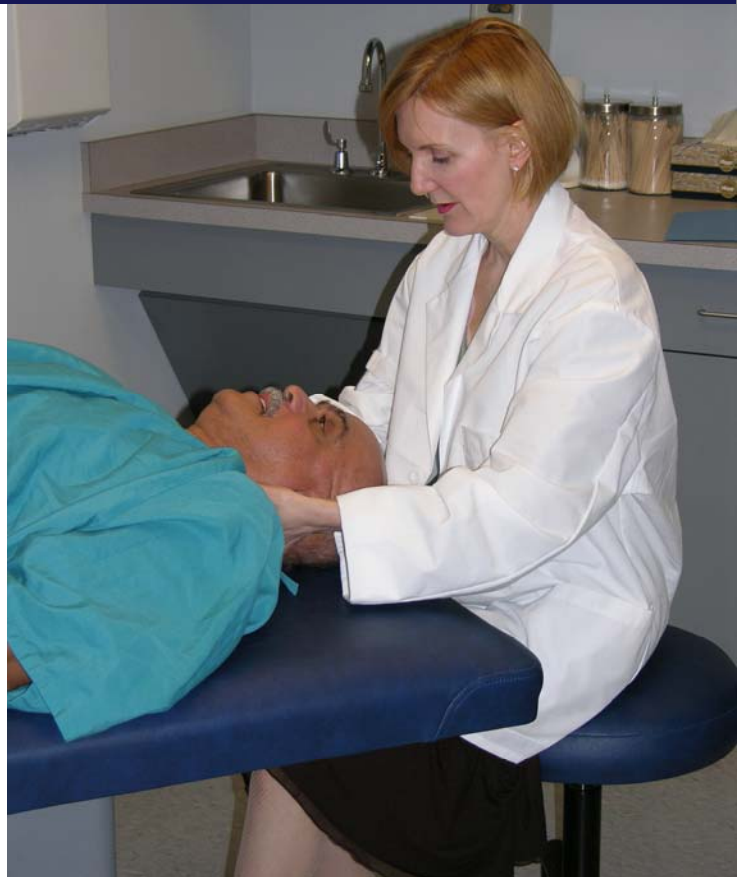
- Patients with Neuromusculoskeletal Symptoms/Problems
- Patients with Respiratory Symptoms/Problems
- Patients with Gastrointestinal Symptoms/Problems
- Patients with Cardiovascular Symptoms/Problems
- Patients with Other Symptoms/Problems

The Level 2-PE is a one-day examination of clinical skills where each candidate will encounter twelve standardized patients over the course of a seven-hour examination day. The examination takes place at NBOME's National Center for Clinical Skills Testing in Conshohocken, Pennsylvania (bordering Philadelphia, Pennsylvania). Examination design, test specifications, testing format, an instructional video and other details are available on our website: www.nbome.org.

COMLEX-USA Level 2-PE is the clinical skills component of the Comprehensive Osteopathic Medical Licensure Examination (COMLEX-USA). Consistent with NBOME's mission to protect the public, COMLEX-USA-Level 2-PE helps to fulfill the public and licensing authority mandate for enhanced patient safety through the documentation of the clinical skills proficiency of graduates from osteopathic medical schools. The Performance Evaluation augments the written COMLEX-USA-Level 2-Cognitive Evaluation (CE) of osteopathic medical knowledge by providing an assessment of clinical skills. These clinical skills are: doctor-patient communication, interpersonal skills and professionalism, medical history-taking and physical examination skills, osteopathic principles and osteopathic manipulative treatment, and written communication skills (including synthesis of clinical findings, integrated differential diagnosis and formulation of a diagnostic and treatment plan). These patient-centered skills are evaluated in the context of clinical encounters with standardized patients and are required to be personally performed, as appropriate, in a timely, efficient, safe, and effective manner.



COMLEX-USA Candidate Performance



**Summary of COMLEX-USA
CBT Results by Percent Passing
2006-2008**

Year	Number Candidates (1st-Time/Total)	Pass Rate (1st Time)	Pass Rate (Re-taker)	Pass Rate (Total)
Level 1				
2007-2008	3655/4235	90.0%	62.4%	86.2%
2006-2007	3434/4157	88.5%	62.7%	84.0%
2007-2008	3587/4194	90.6%	65.1%	86.9%
Level 2 CE				
2006-2007	3114/3701	88.1%	63.9%	84.4%
2005-2006	2785/3322	87.0%	61.6%	82.9%
Level 3				
2007-2008	3444/3953	91.0%	69.0%	88.2%
2006-2007	3173/3770	87.7%	65.4%	84.2%
2005-2006	2434/2817	88.7%	62.4%	85.1%

The chart presented above represents the report as of the close of the 2007-2008 year. It has been the policy of the NBOME to not report partial cycle data due to the nature of the distribution of the testing population and the bias of the results that may be obtained by making assumptions based on less than the entire cohort. However, to date, there does not appear to be any suggestion of any unanticipated shifts in the pass/fail scores for any level of the COMLEX-USA examination, including the PE. A more detailed analysis of the performance of candidates taking the COMLEX-USA Level 2 PE is provided in the charts on the following pages.

COMLEX-USA Level 2 Clinical Skills Statistics 2005-2008

The total number of candidates tested for each of the four testing cycles is shown in *Figure 1* below. The number of candidates tested increased with each testing cycle. For each testing cycle, the total number tested includes both first-time takers and repeaters. For each testing cycle, there was an increase in the number of students taking the test for the first time, as well as an increase in the number of repeaters.

Yearly trends in the number of first-time takers by month across the four testing cycles are shown in *Figure 2*. Each testing cycle typically begins in July and ends in June. Numbers of first-time takers steadily increased with each testing cycle. As shown in *Figure 2*, the most active months of testing are around the months of September, October, and March. In the 2007-08 testing cycle, there were a large number of candidates who tested as late as May. For the 2008-09 testing cycle, candidates and deans were informed by various means of communication (e.g., e-mail and NBOME website bulletins) that, if a candidate tested before January 31st and, unfortunately, failed, he/she would have the opportunity to retake the exam and receive a second score report prior to graduation. For candidates taking the examination for the first time after January 31st, this rescheduling timeline could not be guaranteed. Trends of first-time takers in *Figure 2* suggest that the majority of candidates test early to take advantage of the opportunity to reschedule should their outcome be a fail.

The percentage of those who failed by month and testing cycle are plotted in *Figure 3*. The overall fail rate for first-time takers across all testing cycles is 5.5%. As shown in *Figure 3*, fail rates by month tested are fairly consistent around the overall fail rate across testing cycles. Considering that the confidence interval (CI) set at +/- 5% around the total fail rate (CI = 0.5% to 10.5%), then all months, including November and April, are within these limits for all testing cycles. Based on this criterion, results in *Figure 3* suggest that the month a candidate takes the examination does not affect the probability of passing the examination.

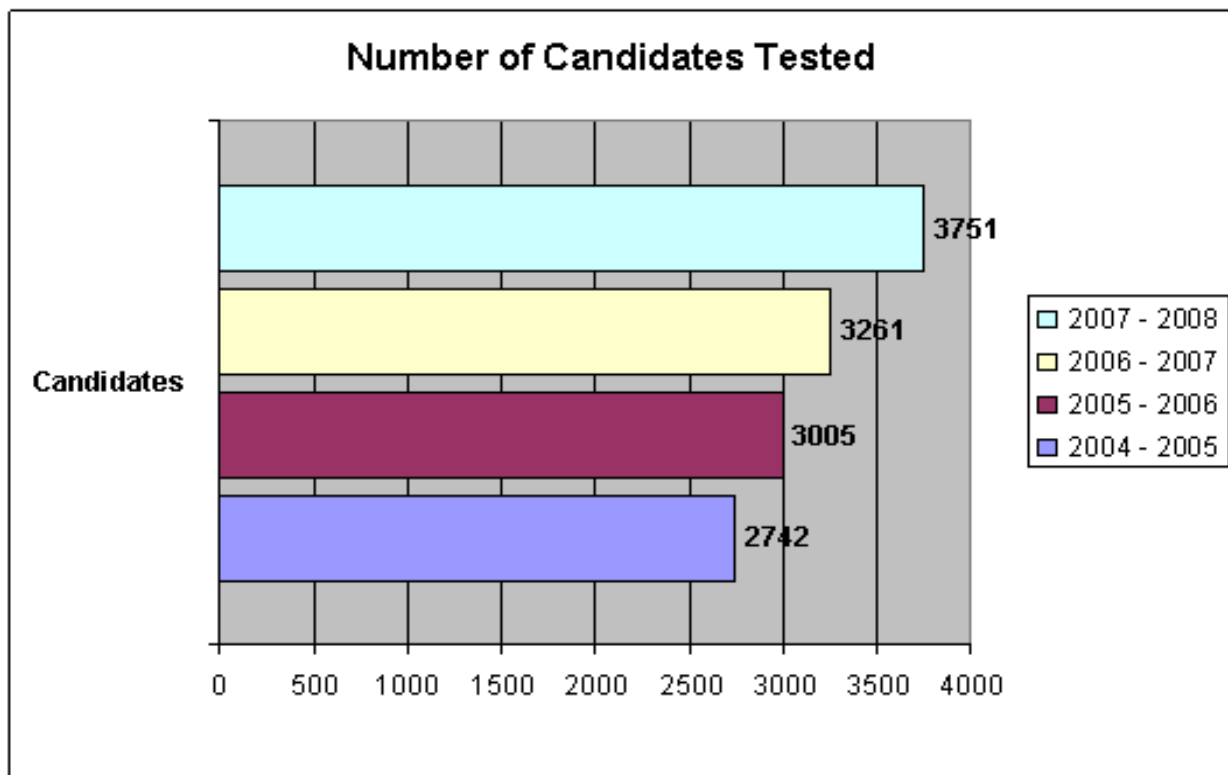


Figure 1. Number of candidates tested across testing cycles 2004-05 through 2007-08.

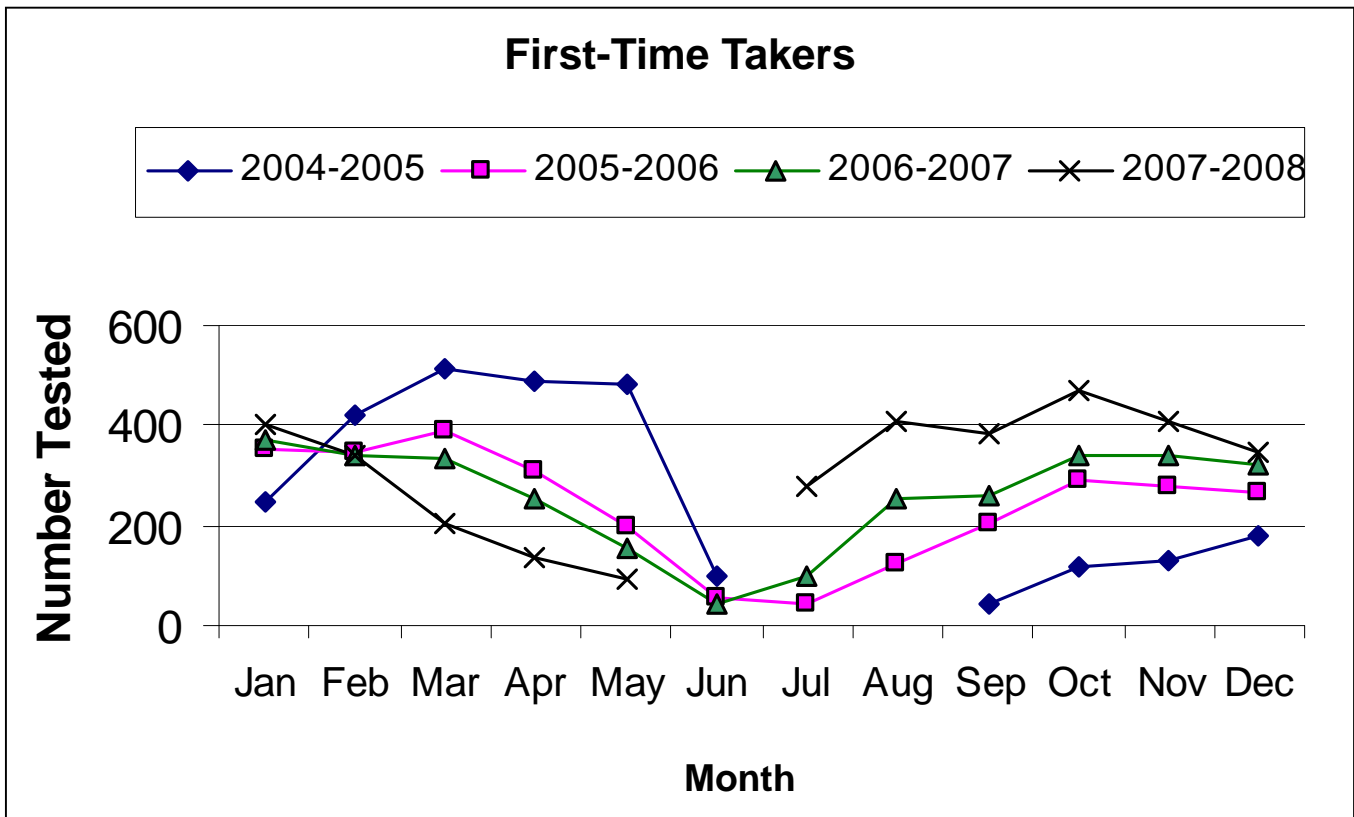


Figure 2. Number of first-time takers by testing cycle and month.

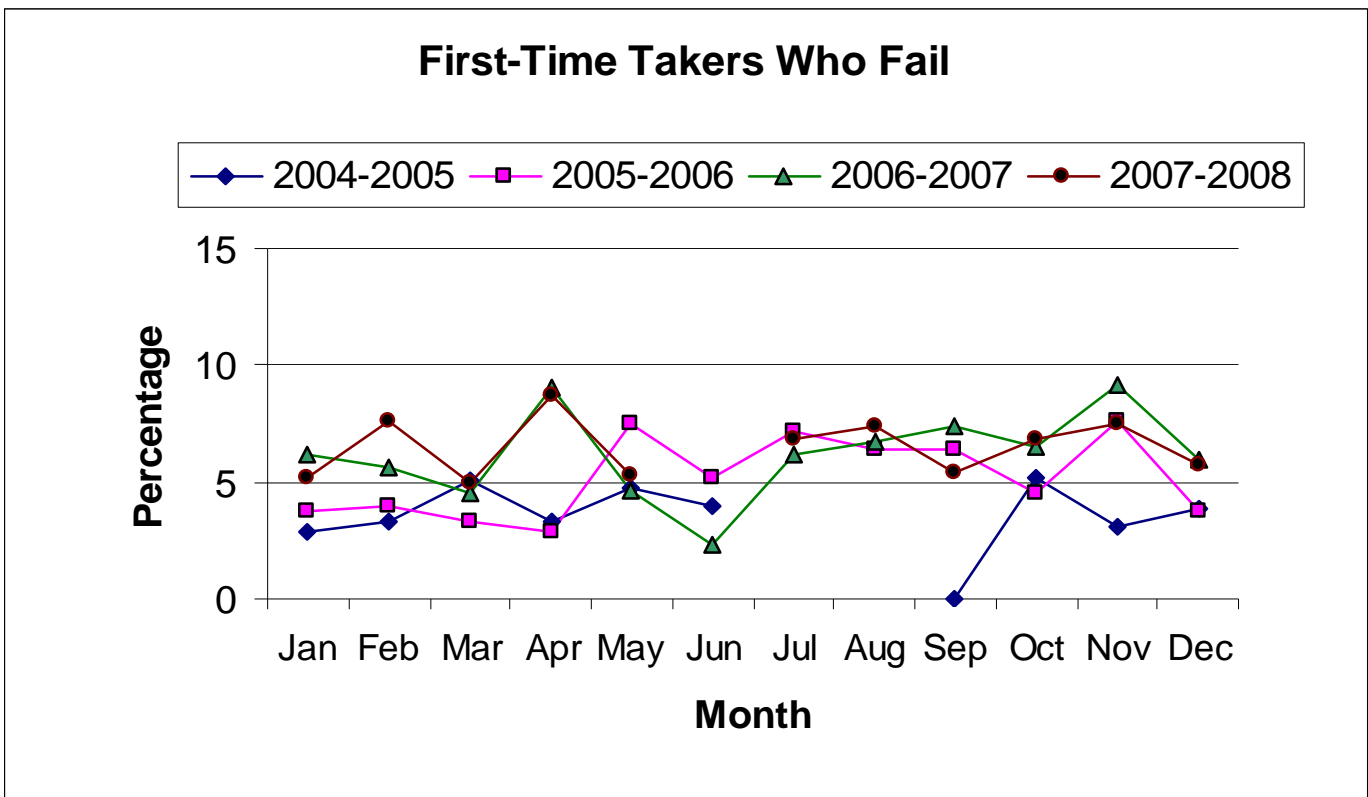


Figure 3. First-time takers who fail by month across four testing cycles.

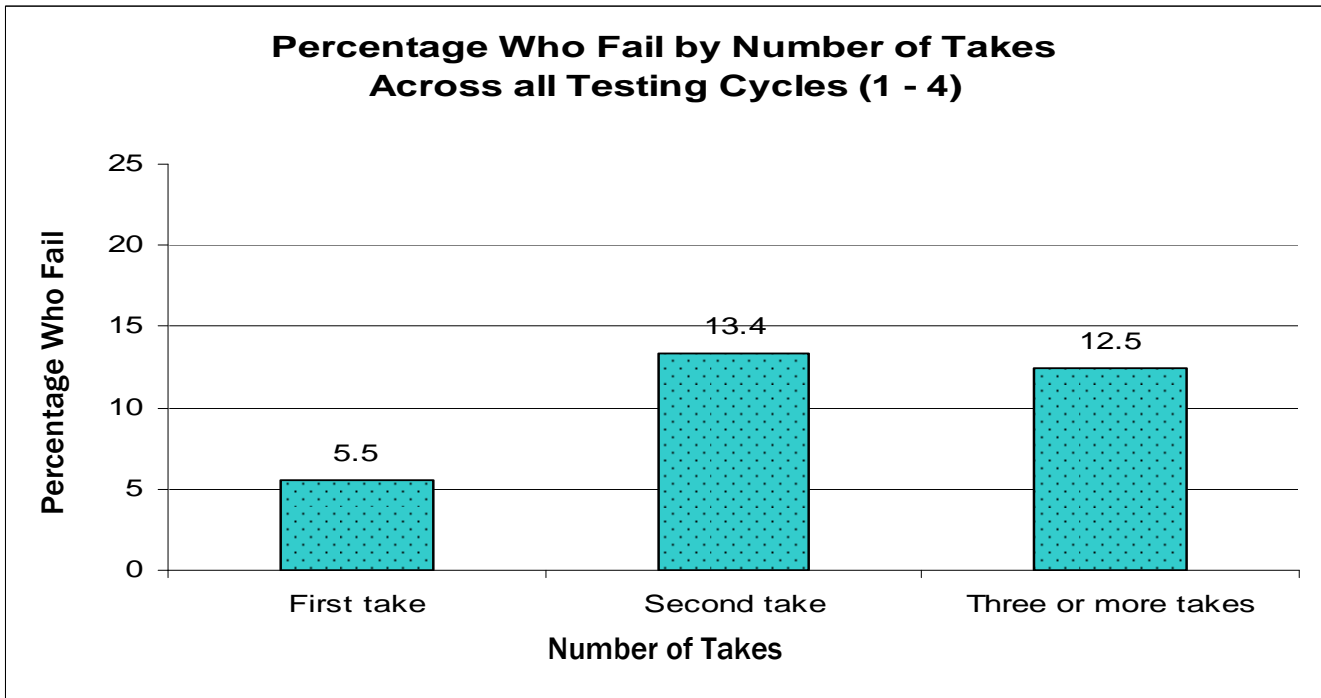


Figure 4. Percentages of candidates who failed the examination, by number of takes for four test cycles.

The post-exam survey is completed by candidates immediately after the examination. The survey is comprised of 22 questions asking students about their satisfaction with the Clinical Skills Testing Center and the administration of the examination. Overall, candidates’ average response to survey questions ranged from 2.8 to 3.7, illustrating that a majority of responses were near agreement. Questions responded to with an average rating somewhat lower than 3.0 included items related to the SOAP notes and encounters, especially where the length of time for each was concerned (see Figure 5). In contrast, questions responded to with an average rating higher than 3.5 included items related to orientation, exam equipment, and exam staff (see Figure 5). Responses to the survey suggest that the examination center and administration of the examination were positively received. Generally, candidates appear to be satisfied with their testing experience.

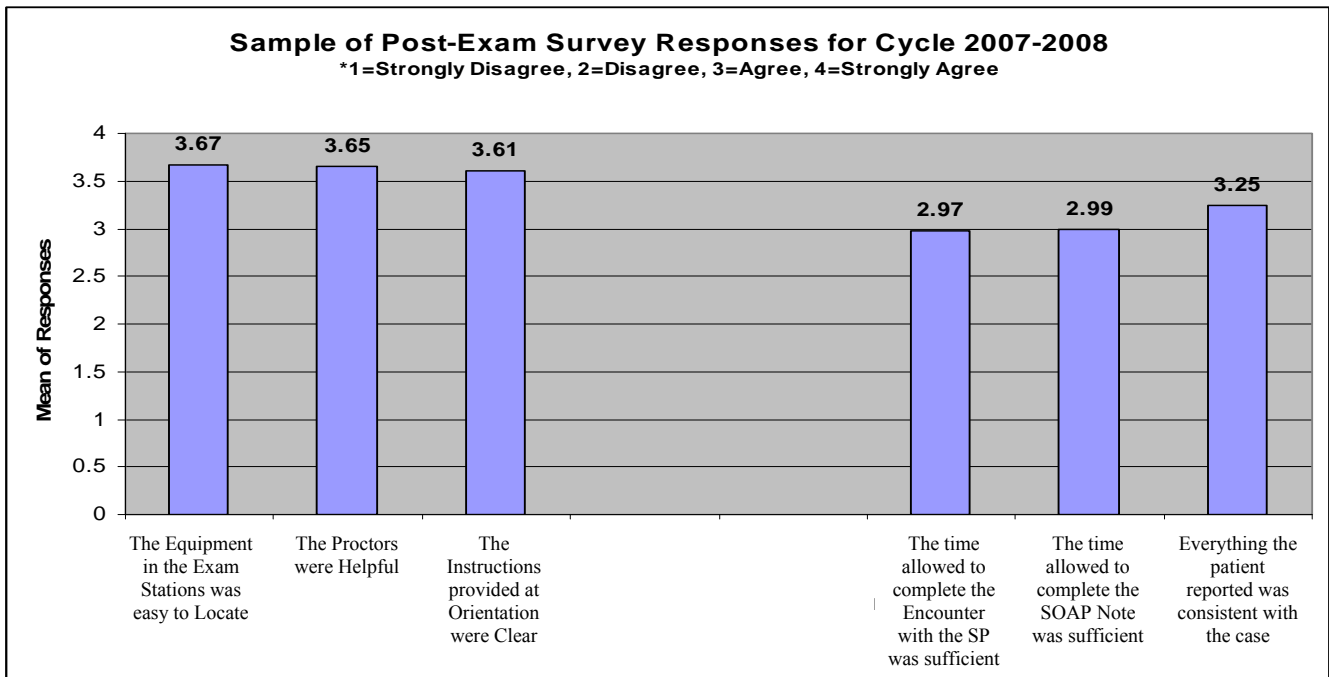


Figure 5. Mean responses for selected items from the post-exam survey for the 2007-2008 testing cycle.

Similarly, at the conclusion of each computer-based administration of COMLEX-USA, candidates are requested to complete a post-examination survey to determine the degree to which the candidate was pleased or displeased with the testing experience. The graph below indicates the level of satisfaction or dissatisfaction by category.

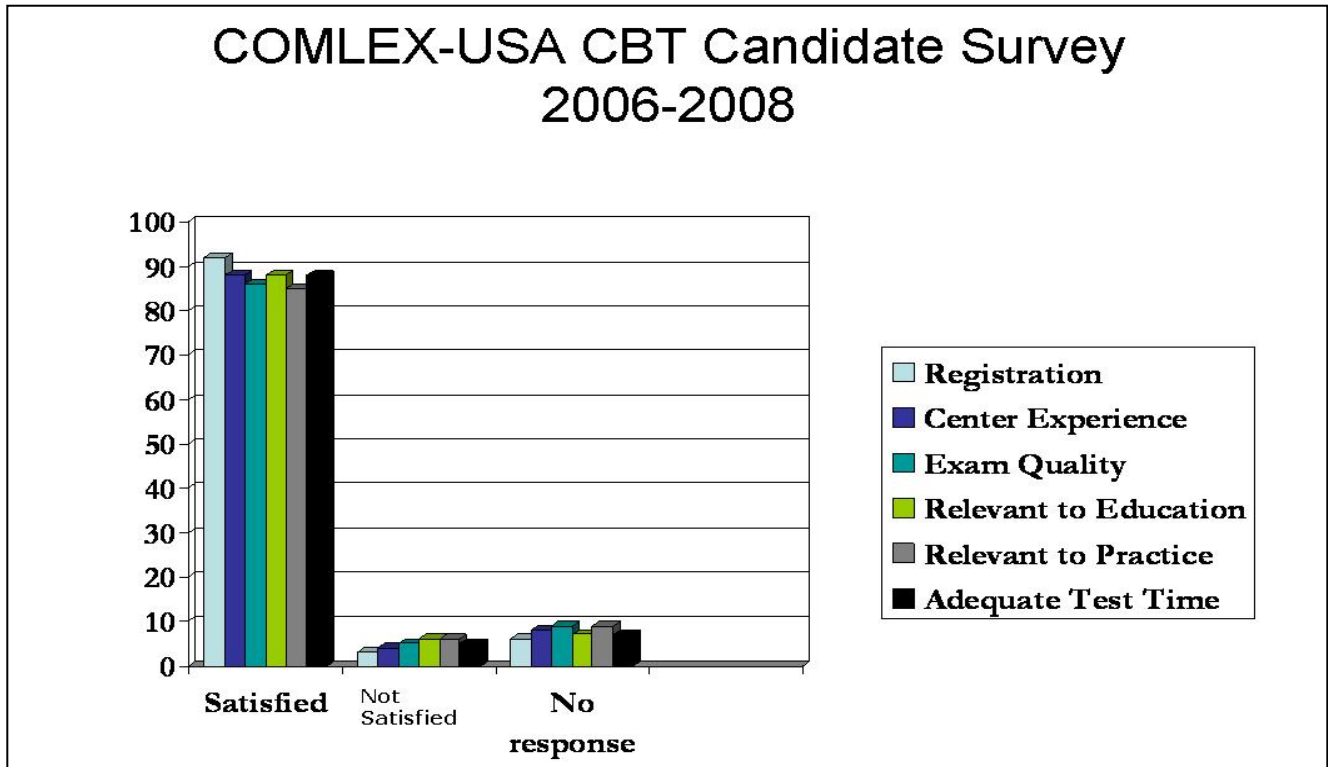


Figure 6. COMLEX-USA CBT Candidate Survey results 2006 - 2008



First-time takers pass/fail rates by testing cycle.			
	N	%^a	%^b
2004-2005			
<i>Fail</i>			
Humanistic Domain	20	18.7	0.7
Biomedical Domain	83	77.6	3.1
Both Domains	4	3.7	0.1
Total Fail Rate	107		3.9
<i>Pass</i>	2,613		96.1
Grand Total	2,720		
2005-2006			
<i>Fail</i>			
Humanistic Domain	15	11.1	0.5
Biomedical Domain	113	83.7	4.0
Both Domains	7	5.2	0.2
Total Fail Rate	135		4.7
<i>Pass</i>	2,721		95.3
Grand Total	2,856		
2006-2007			
<i>Fail</i>			
Humanistic Domain	55	27.1	1.8
Biomedical Domain	126	62.1	4.1
Both Domains	22	10.8	0.7
Total Fail Rate	203		6.6
<i>Pass</i>	2,896		93.4
Grand Total	3,099		
2007-2008			
<i>Fail</i>			
Humanistic Domain	121	53.3	3.5
Biomedical Domain	83	36.6	2.4
Both Domains	23	10.1	0.7
Total Fail Rate	227		6.5
<i>Pass</i>	3,249		93.5
Grand Total	3,476		

Exam scores were recorded fail on both domains for candidates CSTAC determined to have engages in irregular conduct due to SOAP note fabrication

^a Total fail rate is the base for calculating percentages.

^b Grand Total is the base for calculating percentages.

As shown above, of all test takers in the 2007-08 testing cycle (N = 3,476), 3,279 first-time takers passed the exam, resulting in a 93.5% pass rate. In comparison, 227 failed the examination, resulting in a 6.5% fail rate. With the technical adjustment of the new standards introduced in the 2007-2008 testing cycle, the resulting fail rate for 2007-2008 is consistent with the fail rate for 2006-2007 and higher than fail rates in the first two testing cycles. Of all tested in the 2007-2008 testing cycle, 3.5% failed the humanistic domain, 2.4% failed the biomedical/biomechanical domain, and .07% failed both domains.

The pattern of percentages for domain fail rates is consistent when using those who failed (N = 227) as the base for calculations. Fail rates for each domain in previous testing cycles were consistently higher for the biomedical domain. It was estimated, based on the new standards, that domain fail rates would be closer together and higher for the humanistic domain.

COMSAE: The Comprehensive Osteopathic Medical Self-Assessment Examination

There has been strong interest in an evaluation instrument for osteopathic medical students at various educational stages in order for them to be able to self-assess their understanding of osteopathic medicine. The National Board of Osteopathic Medical Examiners (NBOME) has developed the Comprehensive Osteopathic Medical Self-Assessment Examination (COMSAE) series to serve this need for osteopathic medical students.

COMSAE consists of three examinations. COMSAE Phase 1 emphasizes scientific understanding of osteopathic medicine. It is most appropriate for second-year osteopathic students. COMSAE Phase 2 emphasizes the concepts and principles necessary for making appropriate medical diagnoses. It is most appropriate for fourth-year osteopathic students. COMSAE Phase 3 emphasizes the concepts and principles necessary for making appropriate patient management decisions. It is most appropriate for osteopathic interns and residents.

The content of COMSAE is similar to that of the Comprehensive Osteopathic Medical Licensure Examination (COMLEX). The test questions have the same format and style as that of COMLEX. Many of the test items come from both unused (but not to be used) and retired COMLEX–USA item pools. COMSAE results are reported in a format similar to that of COMLEX results. Because of these features, osteopathic students may find COMSAE examinations to be useful for becoming familiar with COMLEX content and format before actually taking COMLEX examinations.

COMSAE is Internet-delivered, making it convenient for busy osteopathic medical students and residents. Any osteopathic student or resident with an established Internet account with the NBOME can take the examinations at any time from any place using a computer with Internet access. Examinees do not need to complete an entire test in a single sitting. Within a defined time period an examinee can start a test session, stop the session, and come back later to continue taking the test. COMSAE has two timing

modes: matching-timed and self-timed. An examinee can choose a timing mode based on his/her purpose and individual situation. The feedback of COMSAE is immediate. As soon as the examination is finished, an examinee will be able to print test results instantly from the computer.

COMSAE resembles the content, style, and format of COMLEX. Therefore, it is possible that COMSAE does not reflect what a specific osteopathic school or specialty emphasizes, and the results may not be consistent with the results of other assessments of osteopathic medicine.

Available March 24th, 2008!

NBOME's
COMLEX Style
Self-Assessment

See www.nbome.org/comsae for details



National Board of Osteopathic Medical Examiners, Inc.
8765 W. Higgins Road, Suite 200, Chicago IL 60631 Tel: 773-714-0622

COMVEX: The Comprehensive Osteopathic Medical Variable Purpose Examination - USA

Overview

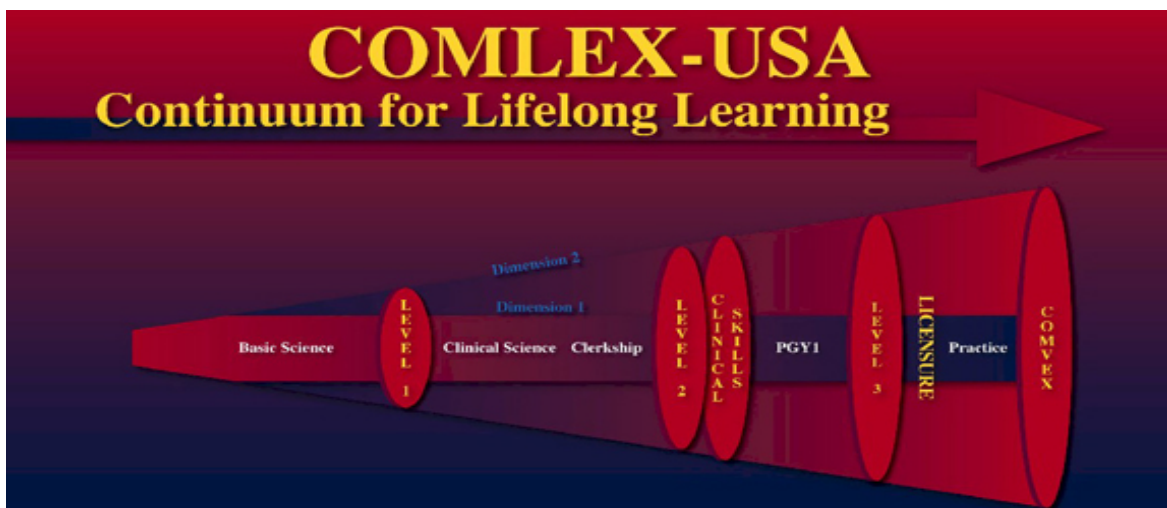
The Comprehensive Osteopathic Medical Variable-Purpose Examination for the United States of America, COMVEX-USA, is the current evaluative instrument offered to osteopathic physicians who need to demonstrate current osteopathic medical knowledge. As a measurement tool, the COMVEX-USA provides the state medical licensing boards with a clear evaluation of a candidate's knowledge of current osteopathic medical practice.

The introduction of the COMVEX-USA completes the cycle of osteopathic assessment that begins with the COMLEX-USA initial licensing sequence available to osteopathic medical students. COMVEX-USA builds on the same assessment foundation by utilizing common outlines and subject areas. This examination assesses both the depth and breadth of osteopathic medical practice.

Lifelong Learning

Obtaining and assessing medical knowledge is a process that continues throughout the length of medical practice, as referenced in the accompanying illustration. The National Board of Osteopathic Medical Examiners provides examinations for each step of the licensing process with evaluation tools focused on the particular knowledge blocks that should be acquired as medical students progress from the narrow focus of the first two years of medical school to the broad-based clinical knowledge characteristic of practicing osteopathic physicians. The core area of medical knowledge shown in the accompanying illustration by the horizontal line stays constant throughout a physician's practice. However, the clinical knowledge base indicated by the widening cone continues to expand over time as the physician interacts with a broader patient base and encounters more clinical scenarios. The COMLEX-USA/COMVEX-USA sequence assesses these patterns by utilizing a simple two-dimensional grid system of categorization that mirrors the real-life practice patterns of osteopathic physicians.

The illustration below shows osteopathic physician education, training, and practice, which offers an increasing scope of physician knowledge and skill (Dimension II); while the medical knowledge (Dimension I) is the core of all physicians' practice. The COMLEX-USA and COMVEX-USA partner with you to offer ever-expanding career opportunities. The first axis, Dimension I, focuses on core medical knowledge areas and consists of different patient encounters -- the situations that cause patients to seek medical care. Although the subject areas of this axis remain constant over time, the test



items become more advanced reflecting the candidate's increasing level of knowledge. Dimension II contains six areas of osteopathic knowledge that a clinician brings to the core knowledge base of Dimension I. These areas include: history and physical, diagnostic technologies, case management, scientific understanding of mechanisms, health care delivery issues and health promotion/disease prevention. The scope of clinical practice shown by the lifelong learning model demonstrates the increasing sophistication in clinical knowledge and experience physicians use in making health care decisions.

The COMVEX-USA, as a further assessment point for many physicians, is comprehensive in evaluating the broad scope of unsupervised clinical practice. Therefore, Dimension II concentrates on areas of patient evaluation and case management. The majority of the examination focuses on applying physician knowledge in the areas of history and physical, diagnostic technologies and case management. The relative percentages of Dimension II subject areas are indicated in the graph below.

Dimension II	
Health Promotion / Disease Prevention	3 - 6 %
History and Physical	22 - 26%
Diagnostic Technologies	13 - 17%
Management	35 - 43%
Scientific Understanding of Mechanism	3 - 6%
Health Care Delivery	8 - 12%

Who takes COMVEX-USA?

COMVEX-USA is an appropriate examination in the following circumstances:

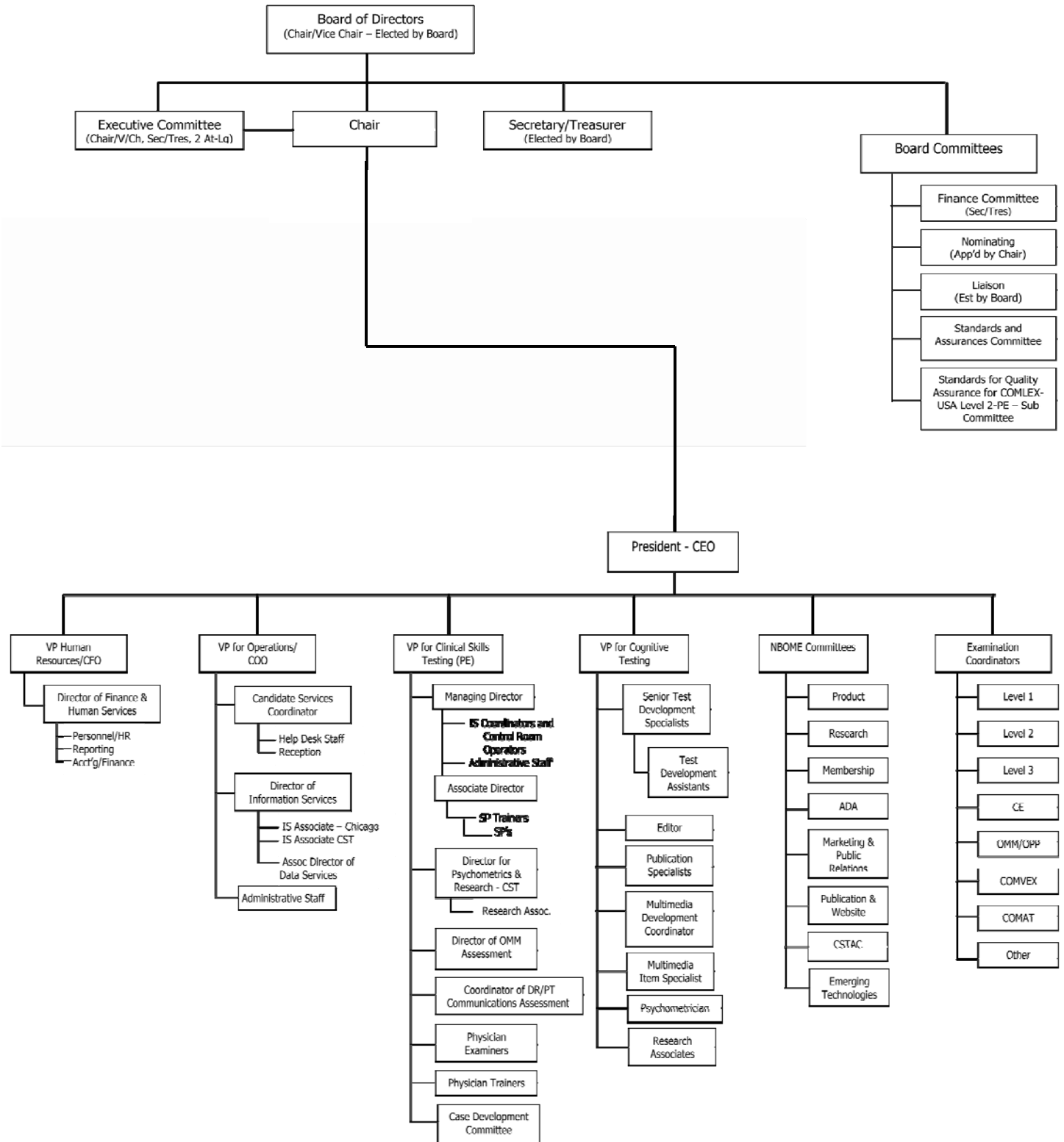
- An osteopathic physician originally licensed by an examination devoid of osteopathic content now applying for a license in a state that requires an osteopathic examination
- An osteopathic physician applying for licensure in a state which imposes a time limit that has not been met by the applicant
- An osteopathic physician requesting reinstatement of a license following an interruption in his or her clinical practice
- An experienced osteopathic physician needing to demonstrate basic osteopathic medical competency

Administration

COMVEX-USA is available to candidates through the individual state licensing boards. The examination is created under the auspices of the National Board of Osteopathic Medical Examiners by test development and review committees composed of a variety of osteopathic physicians from a range of medical disciplines. Further details concerning administration and scoring are found in the COMVEX-USA handbook available from the state licensing boards. Candidates are directed to contact the state licensing boards for information on application procedures.

Public policy as reflected by practice acts, the U.S. court system and licensing boards across the country have consistently maintained a clear distinction between allopathic and osteopathic medical licensure. The policy maintains that there are differences in the education and the practice patterns of each physician group. Currently and historically, allopathic and osteopathic medical students have followed parallel but distinctly separate pathways for initial medical licensure. The introduction of COMVEX-USA maintains the integrity of these separate pathways throughout the reevaluation process by supplying state licensing boards with high quality evaluation for the osteopathic physician seeking reexamination.

NBOME Organizational Structure



Department of Administration Student, School and Licensing Board Services

The NBOME, through trained support staff, provides a wide range of services to a diverse constituency of stakeholders, interest groups and information seekers.

The NBOME website was constructed and further enhanced to present a portal to obtain valuable information on osteopathic medical assessment and evaluation.

Osteopathic candidates, after receiving their secure code, can log into a secure personal page to register for all COMLEX-USA examinations, use tutorials designed for each examination or self-test on designated examinations. In addition, candidates are able to order transcripts for state licensure or have scores submitted to medical programs through ERAS.



Joseph Smoley, Ph.D.
*VP Administration/
COO*

- Colleges/schools of osteopathic medicine can receive student performance data for curriculum evaluation and institutional research. Additionally, faculty of osteopathic medical schools have on-line access to an item-writer course specifically designed for their use.
- State medical boards may use the NBOME website to obtain current content of the COMLEX-USA services for information gathering. Likewise, Graduate Medical Program Directors may link to a FAQ (Frequently Asked Questions) page to learn more about the COMLEX-USA examination.
- The general public, as curiosity seekers or information gatherers, can obtain valuable information about osteopathic medicine.
- New to the website is an international landing page which is expected to expand in the next few years.

The NBOME has long been committed to providing up-to-date information, and our enhanced web portal provides instant access from around the world to osteopathic medicine and, in particular, osteopathic medical assessment.

Further enhancement will provide expanded links, notification of score release, further efficiency and effective constituent outreach.



Department of Cognitive Testing

Test Development, Result Reporting and Psychometric Research



Linjun Shen, Ph.D.
*VP Cognitive Testing and
Research*

The Division of Cognitive Testing is responsible for test development, publishing, analysis, result reporting, and psychometric research for NBOME written examinations. Its products include the computer-delivered COMLEX Level 1, Level 2-CE, and Level 3; COMVEX; subject examinations; COMSAE, the web-based self-assessment tools; and test development and psychometric services for client examinations. Currently, the client examinations include computer-delivered AOBEM Certifying Examination Part 1, computer-delivered AOBEM recertification examination, ACOFP in-service examination, ACOS in-service examination, ACOEP in-service examination, and American Academy of Pediatric Dentistry (AAPD) in-service examination.

In 2008, the Division submitted to the NBOME Standard Assurance Committee for its internal COMLEX auditing mission a report titled “The NBOME Compliance with Section 9.0 of the Standards for Quality Assurance with Regard to Standard Setting, Cut Scores, and Equating: A Report to the

Standard Assurance Committee.” The committee found the report satisfactory.

A new product, the Comprehensive Osteopathic Medical Self-Assessment (COMSAE), was launched in 2008. Research on the relationship between performance on Phase 1 and COMLEX Level 1 conducted by the staff in the Division found that Phase 1 and Level 1 performances were strongly correlated and COMSAE examinees’ scores on Level 1, on average, improved significantly from the Phase 1 scores.

2008 was a busy year for NBOME’s client examination services. The Division helped AOBEM successfully convert its paper-pencil certification examination into computer-delivered examination. The Division is now engaged in converting AOBEM’s recertification examination. The computerized AOBEM recertification examination will be launched in 2009. 2008 was the first year the NBOME provided AAPD test development and psychometric services. The collaboration between the AAPD and NBOME made the transition smooth and successful.

There will be some new developments for COMLEX in the coming year. For the first time in the COMLEX history, Level 3 will have items with multimedia contents. This will provide COMLEX additional tools to better assess medical competencies. COMLEX Level 2 and Level 3 will set new pass/fail standards through the process well-established in psychometric literature. The new Level 2 pass/fail standard will be effective starting June 2009.



Department of Clinical Skills Testing

Assessment of Doctor-Patient Communication and Interpersonal Skills

Objective Structured Clinical Examinations (OSCEs) and standardized patient performance-based assessments have been used in medical education and assessment for many years. Standardized patients were first utilized in the United States for medical education in the 1960s. Over the last 30 years, clinical skills testing has made great advances, and the National Board of Osteopathic Medical Examiners has contributed greatly to this endeavor. Starting in 2004 with 2742 candidates in the first testing cycle, COMLEX-USA Level 2-PE celebrates its 5th year of osteopathic clinical testing. In the 2007-08 cycle, we successfully administered examinations to 3752 candidates. With increasing class size and number of osteopathic schools, we look forward to accommodating more osteopathic students in the 2008-09 cycle.



**Erik Langenau, D.O.,
F.A.A.P., F.A.C.O.P.**
*Vice President for Clinical
Skills Testing*

COMLEX-USA Level 2-PE, utilizing standardized patient performance-based assessments, is used to evaluate doctor-patient communication, interpersonal skills and professionalism, medical history-taking and physical examination skills, osteopathic principles and osteopathic manipulative treatment, and written communication skills. One key feature distinguishing COMLEX-USA Level 2-PE from other clinical exams is the assessment of osteopathic principles and manipulative treatment. Osteopathic principles are assessed throughout the examination (history taking, physical exam, and SOAP-note writing), and skills in osteopathic manipulation are specifically evaluated in 25-40% of the encounters. Anecdotally, students really seem to enjoy the opportunity to demonstrate their osteopathic clinical skills during the examination.

Over the last few years, clinical skills testing has rapidly gained acceptance and popularity among health care educators, licensing bodies, and public at large: clinical skills testing has become an industry. With advance-



ments in research and technology, we are excited to explore future testing opportunities, such as the use of human simulators, partial human simulators, and integrated cognitive testing. We, along with the In-Depth Assessment of COMLEX-USA Committee, are also exploring the possibility of assessing competency-specific clinical skills and clinical skills of candidates during post-graduate medical training. The opportunities for research, development and testing are exciting. As our research progresses, we look forward to enhancing our current clinical skills testing format and developing additional clinical skills assessments for the future.

Vice President of Human Resources/CFO



Dee Grimes
*Vice President Human
Resources/CFO*

2008 was a financially stable year for the NBOME. The increase in our asset base ensures the expansion of the Clinical Skills Testing Center in Conshohocken will be possible without outside financing. This expansion will allow the growing number of Osteopathic medical students to complete the testing required in a more timely and efficient manner. Additional funds obtained will be used for modernizing our computer based testing to include multimedia and highlight functions.

Each year our financial statements are reviewed by an external auditor. In 2007, our audit was completed by Clifton Gunderson, and the financial statements were found to be fairly represented in all material respects. In 2009, the leadership of the NBOME, including Finance Committee, Executive Committee and Board of Directors chose to have a new auditing firm complete this process. We will work with Alhbeck & Company, and estimate the audit will be completed by mid-2009.

As in the past, the Finance Committee, along with the Board of Directors, reviews our asset mix and holding companies. This year we chose to safeguard assets in numerous CDs and short-term treasuries with Morgan Stanley along with keeping our operating assets and long term investments with Harris Bank.

Many thanks go to the members of the Finance Committee: Janice Knebl, D.O.; Wayne Carlsen, D.O.; Carman Ciervo, D.O.; Mr. Gary Clark and Mr. Jake Jacobson. They devote a large amount of time and energy serving as fiduciaries of the finances of the National Board of Osteopathic Medical Examiners and follow the prudent man rule to invest the property with the following factors in mind: the needs of beneficiaries, the need to preserve the corpus and the amount and regularity of income.



Managing Director National Center for Clinical Skills Testing

The NBOME National Center for Clinical Skills Testing (NCCST) administers a valid, reliable, and defensible clinical skills examination for osteopathic medical students. Our staff of dedicated professionals is committed to continuous quality improvement, ongoing research, training, and quality assurance. Through collaboration our team fosters an environment of professional development and learning, with the belief that providing a high-quality testing experience today can positively shape the future of osteopathic medicine and health care in America.



Crystal Wilson, M. Ed.
Managing Director,
NCCST

We administer the COMLEX-USA Level 2-Performance Evaluation at the National Center for Clinical Skills Testing in Conshohocken, PA. With a full-time staff of less than 20 individuals, as well as over 150 part-time staff (physician trainers, proctors, standardized patients, and physician examiners), we tested over 4450 candidates between January – December 2008.

Throughout 2008 we administered exams 5-6 days a week with an average of 8 exams per week (both AM and PM). We were “closed” to testing only 8 days throughout 2008 to allow for facility maintenance and computer system upgrades.

In 2008 the NCCST hosted many NBOME meetings, including the ADA Committee, Emerging Technology, Research, Finance, and the Standards and Assurances Committee. We also conduct our own meetings, including the biannual Clinical Skills Testing Advisory Committee, NCCST Visitation Days, Case Development, SP Wellness, SOAP Note rater refresher courses, OMT rater training and refresher courses, SP recruitment, and a full Standards and Assurances audit.

In 2009, we plan to expand our facility to increase our testing capacity. With the addition of a 2nd testing center (set of 12 exam rooms), we will be able to offer expanded testing opportunities, as needed, within our existing location.

We look forward to continuing the excellence into 2009 and beyond. It is a pleasure to work with all of our clients, and we will strive to positively shape the future of osteopathic medicine and health care in America.





Board & Operational Committees



A name in bold type indicates the Committee Chairperson*

ADA Committee

The ADA Committee is charged with creating and administering policy for the accommodation of Americans with disabilities as is required to comply with applicable federal, state and local laws.

David Baron, D.O. *Temple University*
 Robert Foster, D.O. *WVSOM*
Timothy Kowalski, D.O.
 Jed Magen, D.O. *MSU COM*
 J. William McCord, D.O. *FAAFP*
 Richard Simmers, D.O. *UMDNJ-SOM*
 Dana Shaffer, D.O. *DMU-COM*
 Brian E. Wood, D.O. *VCOM*
 Brian Fulton, D.O.
 Gary Palman, D.O.
 Cheryl L. Ray, D.O., FACN

Blueprint Audit Committee

The Blueprint Audit Committee is charged with assuring that the content and format of the COMLEX-USA is consistent with the mission of the NBOME to protect the public as we move forward into the future

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 Sandra Wilsie, D.O.

Core Competencies Committee

The Core Competencies Committee is a subcommittee of the Product Committee. Their function is to review the core competencies of the NBOME

and ensure that all areas of physician competency are addressed by COMLEX-USA.

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Consumer Affairs and Relations Committee

The purpose of the Committee is to develop and recommend strategies to assist in the improvement of relationships with existing agencies, jurisdictions, associations, groups, clients, and the public to improve the position and image of the NBOME and the osteopathic profession within the domestic and international community.

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 Frederic Wilson

Clinical Skills Testing Advisory Committee (CSTAC)

The Committee shall assure the NBOME that the Clinical Skills Examination component of COMLEX-USA is a current, innovative, accurate, representative, valid, and reliable examination and process that meets or exceeds industry standards for quality in clinical skills testing. Additionally, the Committee stimulates, encourages, and supports research relating to clinical skills testing.

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The Committee is charged with exploring, evaluating, testing, seeking, and recommending implementation (through the Product Committee) of new and existing technologies and strategies for application into the CBT (cognitive) and performance (clinical skills) testing formats.

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*Glossary of school acronyms available on Page 64

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The purpose of the Committee is to assure that the content and format of the COMLEX-USA is consistent with the mission of the NBOME to protect the public as we move forward into the future.

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Essential to the development of the COMLEX-USA Examination are the item writers and committee members who contribute time and energy to writing, reviewing, editing and finalizing the test questions used for the Computerized Evaluation (CE) and the development of cases used for the Performance Evaluation (PE). It is with thanks that we recognize them in this report. A glossary of school acronyms is located on page 64.

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*Health Promotion Disease Prevention/Health Care Delivery

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College Acronym Glossary

For our report, we have used the following acronyms, taken from the American Association of Colleges of Osteopathic Medicine (AACOM). Detailed school information can be obtained at the AACOM website.

ATSU/KCOM: A.T. Still University of Health Sciences/Kirksville College of Osteopathic Medicine

ATSU/SOMA: A.T. Still University of Health Sciences/School of Osteopathic Medicine – Arizona

AZCOM: Arizona College of Osteopathic Medicine of Midwestern University

CCOM: Chicago College of Osteopathic Medicine of Midwestern University

DMU-COM: Des Moines University – College of Osteopathic Medicine

GA-PCOM: Georgia Campus – Philadelphia College of Osteopathic Medicine

KCUMB-COM: Kansas City University of Medicine and Biosciences College of Osteopathic Medicine

LECOM: Lake Erie College of Osteopathic Medicine

LECOM – Bradenton: LECOM- Bradenton Campus

LMU-DCOM: Lincoln Memorial University-DeBusk College of Osteopathic Medicine

MSUCOM: Michigan State University College of Osteopathic Medicine

NYCOM/NYIT: New York College of Osteopathic Medicine of New York Institute of Technology

NSU-COM: Nova Southeastern University – College of Osteopathic Medicine

OUCOM: Ohio University College of Osteopathic Medicine

OSU-COM: Oklahoma State University Center for Health Sciences – College of Osteopathic Medicine

PNWU-COM: Pacific Northwest University of Health Sciences College of Osteopathic Medicine

PCOM: Philadelphia College of Osteopathic Medicine

PCSOM: Pikeville College of Osteopathic Medicine; **RVUCOM:** Rocky Vista University College of Osteopathic Medicine

RVUCOM: Rocky Vista University College of Osteopathic Medicine

TOUROCOM: Touro College of Osteopathic Medicine – New York

TCOM-CA: Touro University College of Medicine

TUNCOM-NV: Touro University of Nevada College of Osteopathic Medicine – Nevada Campus

UMDNJ-SOM: University of Medicine and Dentistry of New Jersey - School of Osteopathic Medicine

UNECOM: University of New England College of Osteopathic Medicine

UNTHSC/TCOM: University of North Texas Health Science Center at Fort Worth/Texas College of Osteopathic Medicine

VCOM: Edward Via Virginia College of Osteopathic Medicine

WVSOM: West Virginia School of Osteopathic Medicine

Western U/COMP: Western University of Health Sciences/College of Osteopathic Medicine of the Pacific



Test Construction and Review Committees - 2008



Our Level committees are an important part of the test construction process. Without their hours of dedication to editing submitted questions, verifying source materials and reviewing the final product, we would not be able to offer the quality examination we do. A glossary of school acronyms is located on page 64.

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New Logo and Seal for 2009

The NBOME Celebrates 75 Years

The NBOME will be celebrating its 75th year of continuous service to the public and the osteopathic profession. Symbolic of that event, the NBOME has designed and adopted a new logo and seal that will be introduced in 2009 to replace the current one.

Historically, the NBOME was chartered by the American Osteopathic Association following the work of a foresighted committee that recognized the need for a “universal examination” for osteopathic medical licensure in the United States of America in 1934. The Board was then called the National Board for Osteopathic Physicians and Surgeons. However, research indicates that a seal or logo was not adopted until 1951 when the Board became incorporated in the state of Indiana as the National Board for Osteopathic Physicians and Surgeons of the United States. The seal was only used to imprint the gold seal placed at the bottom of each Diplomate Certificate or for other official documents. The seal pictured at right captures the respect the Board and the osteopathic profession had for its founder A. T. Still. The name of the Board is inscribed about the circumference of the seal. The A. T. Still seal remained the symbol of the Board until it was reincorporated in Indiana in 1986.



The seal created in 1986 embodied the new name and direction of the Board as the National Board of Osteopathic Medical Examiners. The name of the Board is written in full title around the periphery of the seal, and the acronym is inscribed obliquely within the central area of the seal. The book located in the lower left portion of the seal's inner circle symbolizes osteopathic medical knowledge and education. The specially reproduced caduceus represents the importance of the NBOME's relations with all stakeholders within the osteopathic profession. The closed double ring of the inner circle of the seal represents a commitment to quality, excellence, and the protection of the public. The year 1934, observed between the circles of the seal, indicates the year in which the NBOME was originally chartered.



After 75 years of continuous service to the osteopathic profession and the public, the NBOME redesigned its seal and logo to reflect changing times and a respect for its heritage. The name

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of the organization is placed in the periphery of the seal, and mention is again given to indicate that the NBOME has served the public and the profession well since 1934. The single inner circular line continues to



represent the dedication and commitment of the NBOME to promote its organizational values of quality, integrity, accountability, professional commitment, and public safety. The book in the upper half of the inner circle defines the importance of osteopathic medical knowledge and education to the practice of osteopathic medicine. The D.O. caduceus speaks to the mission of the NBOME: *To Protect the Public by Providing the Means to Assess Competencies for Osteopathic Medicine and Related Health Care Disciplines.*

The most notable feature in the new seal and logo of the NBOME are the hands placed at the bottom of the inner circle. This symbol carries many meanings within the context of the seal. They include the “laying of the hands” for diagnosis, treatment, and healing, which is a cornerstone in the philosophy and practice of the osteopathic profession. It also stands for the appropriate and timely use of manual medicine in the form of osteopathic manipulative treatment and, lastly, for the use of hands to save and preserve life as one would do

with cardiac compression for resuscitation or surgical intervention. Interestingly, few organizations within the medical field have adopted the figure of a hand or hands with the exception of the American College of Osteopathic Surgeons and the American College of Surgeons.

The change in the seal and logo of the NBOME is a microcosm of its history, its mission and its vision for the future. It is the symbol of the dedication and commitment of the NBOME to the public welfare and to the osteopathic medical profession every time, every day, and in everything we do.

**Join us in 2009
as we celebrate
75 Years of Ensuring
Competence in
Osteopathic Medicine**

