



NBOME
NATIONAL BOARD OF OSTEOPATHIC MEDICAL EXAMINERS

ANNUAL REPORT 2017

foundation



valid entrustable reliable



What lies behind us
and what lies before us
are tiny matters compared
to what lies within us.

—*Ralph Waldo Emerson*

PROTECTING THE PUBLIC

The National Board of Osteopathic Medical Examiners, NBOME, protects the public by providing high-quality, high-stakes, evidence-based assessment for the osteopathic medical profession and related health care professions. The COMLEX-USA examination series is the osteopathic assessment used for initial licensure of osteopathic physicians in the United States and internationally. In addition to providing the pathway to licensure for osteopathic medical practice, COMLEX-USA is a graduation requirement for earning a DO degree from a college of osteopathic medicine and is required for progression in graduate medical education.

**Successfully
providing assessments
that protect the
integrity of osteopathic
medical education,
training, and practice
for over 80 years.**

CONTENTS

foundation
2017 ANNUAL REPORT

02 MESSAGE FROM
THE BOARD CHAIR AND
PRESIDENT & CEO

05 STRATEGIC PLAN
AND PRIORITIES

06 BOARD OF DIRECTORS

06 Board of Directors

10 Tribute to Gary L. Slick, DO, MA

11 Board Retreat

NBOME AWARDS

12 Santucci Award

14 Clark Award for Patient Advocacy

15 President's Award for Outstanding Service

16 Certificates of Appreciation
and Meritorious Service

18 Item Writers, Case Writers and
Case Author of the Year

20 COMLEX-USA
CHAIRS

21 2017 MILESTONES

21 Enhancing COMLEX-USA

25 New and Expanded Assessments

28 Research Summary

32 Stronger Together

34 NATIONAL FACULTY
LEADERSHIP

38 2017 PERFORMANCE
DATA

38 Examination Data

42 Testing Services for Client and
Partner Organizations

44 Supporting Our Workforce and
Community

46 Financial Stewardship

48 NBOME COMMITTEES
AND EXAMINATION
CONTRIBUTORS

foundation

A HISTORIC
YEAR,
WITH MANY
ADVANCES
AND CHANGES—
THE WORD,
FOUNDATION,
SIGNIFIES
OUR THEME
FOR 2017.

Message from Dana C. Shaffer, DO, Board Chair and
John R. Gimpel, DO, MEd, President and CEO

The underlying foundational premise: assessment is important and valid, reliable, defensible assessment has a key role in protecting the public and affecting the quality of osteopathic medical education, training, and practice. The validity evidence supports this premise. The trust we've earned by the nation's state medical and osteopathic medical licensing boards, as well as the accreditation authorities for undergraduate medical education (Commission on Osteopathic College Accreditation) and graduate medical education (Accreditation Council for Graduate Medical Education, American Osteopathic Association) solidifies the important primary and secondary uses of NBOME's assessments.

The infrastructure: quality assessment in undergraduate and graduate medical education helps to drive teaching and learning toward osteopathic medical care that impacts the health of patients and communities and further inspires lifelong learning and

continuous professional development. The foundation supporting the NBOME superstructure includes the collective talents, wisdom, strengths, and commitment of the NBOME 23 member Board of Directors, over 700 members of our credentialed National Faculty, and the more than 220 professional staff. Inspired by the NBOME mission and core values, the strength of our collective foundation to support quality patient care from DOs and related health care professions is solid and durable.

The NBOME's foundation is strengthened by collaboration and support from numerous partners and organizations, including the American Osteopathic Association (AOA), the Commission on Osteopathic College Accreditation (COCA), the American Association of Colleges of Osteopathic Medicine (AACOM) and its Assembly of Osteopathic Graduate Medical Educators (AOGME), the Accreditation Council for Graduate Medical

Education (ACGME), the Federation of State Medical Boards (FSMB) and the American Association of Osteopathic Examiners (AAOE). Contributions and input from representatives from other key stakeholder groups, including the Council of Osteopathic Student Government Presidents (COSGP), the Student Osteopathic Medical Association (SOMA), the AOA Bureau of Emerging Leaders (BEL), the Organization of Program Directors Associations (OPDA), and the member organizations of the Coalition for Physician Accountability (CPA)—all are essential to the structure, as are important connections with the Electronic Residency Application Service (ERAS) and the National Residency Matching Program (NRMP).

COMLEX-USA, NBOME's core assessment program for osteopathic physician licensure, further solidified its foundation with the 2017 release of the enhanced COMLEX-USA Master Blueprint. The Master Examination Blueprint emphasizes the competencies required for generalist physicians to deliver safe and effective osteopathic medical care. The framework of COMLEX-USA is based on the foundation of the osteopathic approach to patient care. Its evidence-based design assures state licensing boards and the public that a DO has demonstrated minimal competence by passing a series of national standardized examinations designed for the practice of osteopathic medicine. COMLEX-USA test administration enhancements centered on improving the test experience and reducing anxieties for candidates, for example by building additional optional break times into the computer-based administrations for COMLEX-USA Levels 1, 2-CE, and 3 and providing additional tools, such as a computer mouse and clipboard, in the Level 2-PE clinical skills examinations. The enhancements to the attestation requirements for



“If you can’t measure it, you can’t improve it.”

—Peter F. Drucker, writer, educator and management consultant

COMLEX-USA candidate eligibility begin in 2018 with Level 3, and Levels 1 and 2 in 2019, and will include information from deans and residency program directors indicating that individuals are in good academic and professional standing. These requirements align with the public’s need for entrustability. They serve to assure patients that those who are granted the privilege to be a physician and provide osteopathic medical care, have been assessed along the continuum for behaviors and milestones in knowledge and other competencies—including professionalism, with integrity and responsiveness to the needs of patients that supersedes self-interest.

Foundational to understanding the human condition in health and disease, osteopathic medical students learn and study core biomedical concepts in the first two years at US DO-granting medical schools, who requested national standardized assessments to align with teaching and learning similar to NBOME’s COMAT clinical examinations for the clerkship/clinical rotation years. The COMAT program announced the 2018 release of a new portfolio of assessment services for undergraduate medical education, COMAT-Foundational Biomedical Sciences. In development for the past five years, the

comprehensive basic sciences examination will launch in late 2018, and targeted assessments geared for assessment by foundational science discipline or by organ body system are scheduled to be made available in late 2019.

Integral to our work are important collaborative assessment programs supporting testing for students, residents, pediatric dentists, cosmetic surgeons, podiatrists, osteopathic certification boards, practicing physicians and related health care professionals throughout their careers. This work has expanded internationally in recent years, with a number of consulting services provided to medical and related professional institutions around the globe. While the bulk of these collaborative initiatives have historically centered on traditional secure, proctored, summative multiple choice question examinations, or clinical skills/performance or oral practical examinations, there is a growing interest in assessment for learning, formative assessment, and longitudinal assessment with flexible delivery and immediate feedback for examinees.

NBOME’s CATALYST platform launched in 2017 and is instrumental in several successful osteopathic board certification pilots demonstrating meaningful alternatives to the AOA’s Osteopathic Continuous

Certification (OCC) requirements regarding recertification/continuous certification assessment. Initial results are promising, with practicing physicians reporting that CATALYST participation helps them take better care of their patients and is showing statistically significant correlation between CATALYST-delivered content and traditional recertification assessment formats. In 2018, NBOME’s COMSAE self-assessment will launch via a CATALYST platform to provide an option for DO students looking for additional learning, practice and feedback regarding their proficiency in the application of osteopathic medical knowledge and other competencies in COMLEX-USA-like test item formats.

We continually measure ourselves and constantly endeavor to improve our assessments and services. We recognize that there is no “perfect test,” but your feedback allows us to continue to strive for the best in providing valid, reliable and defensible assessments, and to attend to the test-taking experience. In the words of Confucius, “Humility is the solid foundation of all virtues,” and we believe this value, held collectively by our dedicated volunteer and professional staff workforce, strengthens our foundation for a strong future in continuing to meet our mission.

Accreditation Council for Graduate Medical Education (ACGME), the Federation of State Medical Boards (FSMB) and the American Association of Osteopathic Examiners (AAOE). Contributions and input from representatives from other key stakeholder groups, including the Council of Osteopathic Student Government Presidents (COSGP), the Student Osteopathic Medical Association (SOMA), the AOA Bureau of Emerging Leaders (BEL), the Organization of Program Directors Associations (OPDA), and the member organizations of the Coalition for Physician Accountability (CPA)—all are essential to the structure, as are important connections with the Electronic Residency Application Service (ERAS) and the National Residency Matching Program (NRMP).

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STRATEGIC PRIORITIES

mission

Our mission is to protect the public by providing the means to assess competencies for osteopathic medicine and related health care professions.

vision

Our vision is to be the global leader in assessment for osteopathic medicine and related health care professions.

core values

Patient Safety | Integrity
Accountability | Excellence
Collaboration

2017 marked the first year of our new three-year strategic plan, ACEL 2017-2019, to align, connect, experience and learn. Ten strategic priority goals helped us advance our mission to protect the public and work toward becoming a global leader in assessment for osteopathic medicine and related health care professions.



align

Align growth strategy for core assessments, services and new initiatives with data-driven, market-based needs, and lead the advancement of assessment for osteopathically educated physicians.

- Deliver COMLEX-USA examinations incorporating enhanced COMLEX-USA Master Blueprint and design.
- Conduct CATALYST pilot(s) to study applications for use including board recertification, professional development, COMSAE to develop and deliver CATALYST in production.

connect

Increase our reach, influence and effectiveness in advancing the NBOME mission to protect the public.

- Develop the means to connect the value and importance of osteopathically distinctive assessment to relevant groups including, osteopathic medical students, residency program directors and state medical boards, with a new website and new and improved information on tests, research and resources for residency program directors.
- Expand proposals and service offerings to current and potential client organizations.
- Add resident and newly practicing physicians to NBOME operational committees.

experience

Develop and promote high-quality experiences, assessments and services.

- Upgrade diagnostic images and photographs to improve quality to reflect real life experience in all levels of the COMLEX-USA series.
- Provide an optional test break that does not count against testing time for COMLEX-USA cognitive examinations.

learn

Foster a learning culture among the NBOME staff, National Faculty, and Board and increase support for assessment research.

- Develop a board-approved NBOME research agenda, publish additional validity evidence for COMLEX-USA in peer-reviewed journals and present on validity research evidence at major industry and professional conferences.
- Create and publish new NBOME Learning Center modules for professional development of the NBOME Board, National Faculty, staff and clients.
- Using the leading-edge Baldrige Performance Excellence Criteria, prepare for an application in 2018-2019.

BOARD OF DIRECTORS

executive committee members



DANA C. SHAFFER, DO

Board Chair
Pikeville, Kentucky

Installed as Chair Dec. 2017



GERALDINE T. O'SHEA, DO

Board Vice-Chair
Jackson, California

Installed as Vice-Chair Dec. 2017



RICH J. LABAERE, II, DO, MPH

Board Secretary-Treasurer
Ortonville, Michigan

Installed as Secretary-Treasurer Dec. 2017



SUSAN I. BELANGER, PhD, MA, RN

Public Member
Lewiston, Maine

Outgoing Dec. 2017



RONALD R. BURNS, DO

Winter Park, Florida



WAYNE R. CARLSEN, DO

Athens, Ohio

Outgoing Immediate Past Chair Dec. 2017



JED G. MAGEN, DO, MS

East Lansing, Michigan

Elected to EC Dec. 2017



GARY L. SLICK, DO, MA

Immediate Past Chair
Tulsa, Oklahoma

Outgoing Chair Dec. 2017



KAREN T. SNIDER, DO

Kirkville, Missouri

board members



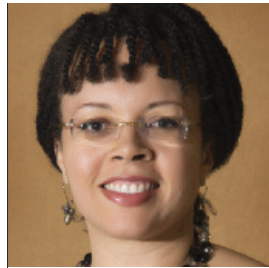
**PETER B.
AJLUNI, DO**

Bloomfield Hills,
Michigan



**JAMES M.
ANDRIOLE, DO**

Sarasota, Florida



**MILLICENT
KING
CHANNELL,
DO, MA**

Philadelphia,
Pennsylvania



**H. TIMOTHY
DOMBROWSKI,
DO, MPH**

Stratford,
New Jersey



**J. MICHAEL
FINLEY, DO**

Tustin, California



**JOHN L.
GOUDREAU,
DO, PhD**

East Lansing,
Michigan



**TERRI DONLIN
HUESMAN,
MBA**

Public Member
Columbus, Ohio



**MOLLIE M.
JAMES, DO,
MPH**

Chariton, Iowa



**LORI A.
KEMPER, DO,
MS**

Glendale, Arizona



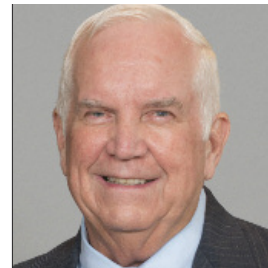
**DAVID KUO,
DO**

Blue Bell,
Pennsylvania



**RICHARD A.
ORTOSKI, DO**

Erie,
Pennsylvania



**DONALD H.
POLK, DO**

Waynesboro,
Tennessee



**ANITA L.
SHOWALTER,
DO**

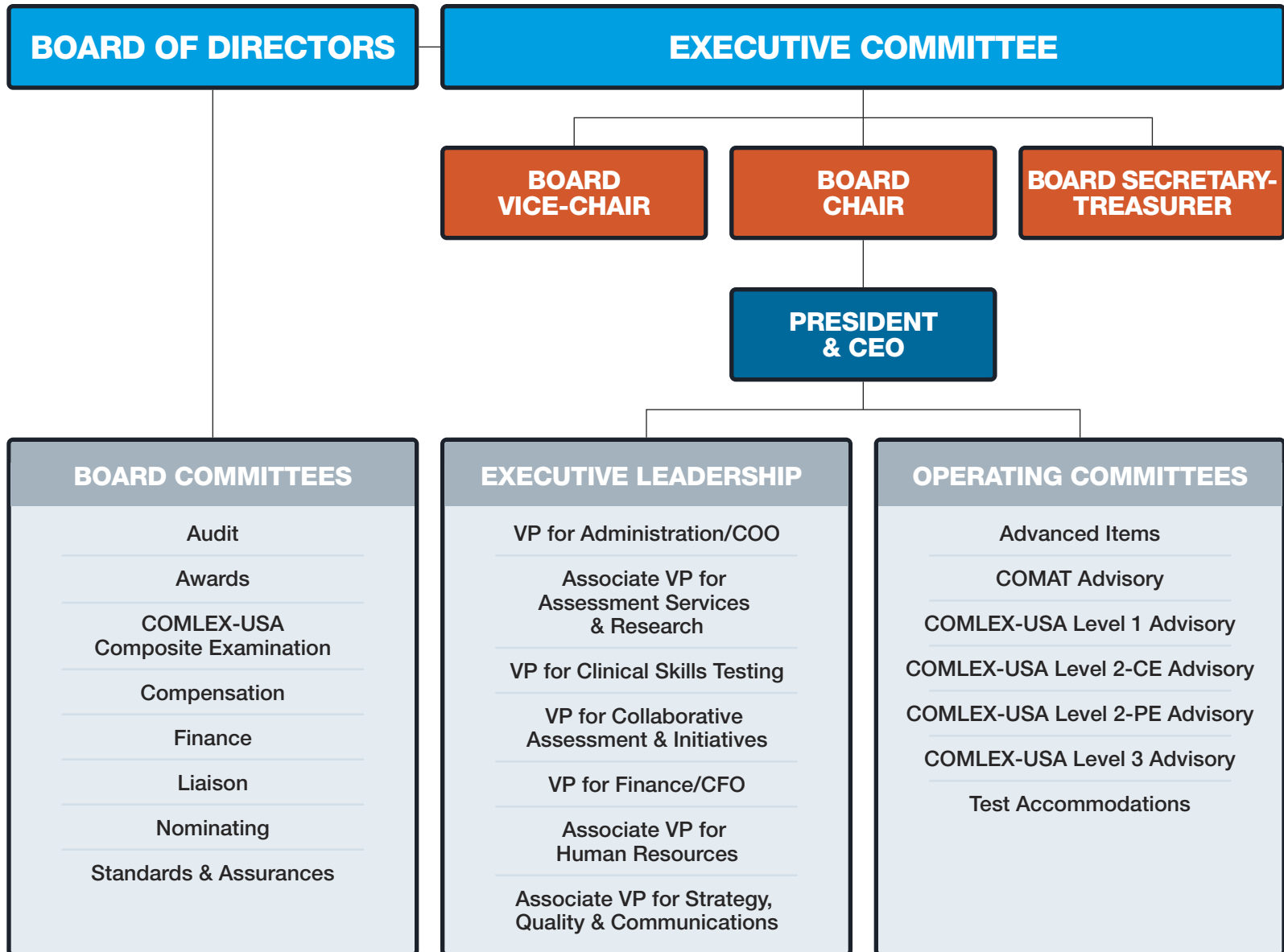
Yakima, Washington



**MOUSUMI
SOM, DO, MS**

Tulsa, Oklahoma





NBOME PAYS TRIBUTE TO GARY L. SLICK, DO, MA

For more than five decades, Gary L. Slick, DO, MA, Immediate Past Chair of the NBOME Board, has devoted his time and wisdom to the NBOME. A leader of exceptional character and expertise, with a steadfast and fierce commitment to the NBOME's mission to protect the public, he served as Chair of the NBOME Board from 2015 to 2017. Dr. Slick is also the designated institutional official for graduate medical education programs at the Oklahoma State University (OSU) College of Osteopathic Medicine and OSU Medical Center in Tulsa, medical director and chief academic officer at Oklahoma's Teaching Health Center residency programs, and professor of medicine

at the OSU Center for Health Sciences (OSU-CHS), as well as a member of the board of directors of the Accreditation Council for Graduate Medical Education (ACGME).

At the NBOME Annual Board of Directors dinner on December 8, 2017, Dr. Slick was recognized for his devotion and lasting, immeasurable impact by Board Vice-Chair Dana C. Shaffer, DO. In his tribute, Dr. Shaffer thanked Dr. Slick for his selfless service to the NBOME and recognized the legacy of his leadership and clear vision for the future.

Since 1978, Dr. Slick has served as an item writer in physiology for the NBOME Part 1 examination,

COMLEX-USA Level 1, and in internal medicine for NBOME Part 2 and 3 examinations, and COMLEX-USA Levels 2-CE and 3. He was a member of the Test Construction Committee in interdisciplinary medicine and served with John E. Thornburg, DO, PhD as a final reviewer of COMLEX-USA Level 1 examinations for many years. Dr. Slick became a member of the NBOME Board in 2005 and was installed as Board Vice-Chair in 2013. Since that time, he chaired numerous committees, including the Liaison Committee, the COMAT Advisory Committee, the Nominating Committee, and the Standards & Assurances Committee.



Throughout his tenure as Board chair, Dr. Slick has devoted his time and wisdom to the NBOME, making an immeasurable impact. Most of all, he has provided a steadfast and fierce commitment to our mission to protect the public.”

—Dana C. Shaffer, DO



2017 BOARD RETREAT

BUILDING A FOUNDATION FOR A NEW FUTURE—ACEL-ERATING INTO 2025

In December, the Board held its semi-annual retreat to explore strategic opportunities in the international arena, develop recommendations for 2018-2019 strategic priority goals, and evaluate its governance model. Retreat guests included (left to right) Mark Baker, DO, 2018 President, American Osteopathic Association, Ron Blanck, DO, Chair, Educational Commission for Foreign Medical Graduates (ECFMG), Martin Crane, MD, former Chair, Federation of State Medical Boards and William Pinsky, MD, President & CEO, ECFMG.



2017 NBOME AWARDS

Each year the NBOME Board recognizes outstanding service and leadership and bestows awards to those who have demonstrated exemplary dedication to the NBOME's mission of protecting the public. The contributions of those recognized reflect high standards and a commitment to excellence.


THE SANTUCCI AWARD

The Santucci Award is bestowed on an individual for sustained outstanding contributions to the mission of the NBOME: protecting the public by providing the means to assess competencies for osteopathic medicine and related health care professions. The Santucci Award was established in 2009, named for Thomas F. Santucci, Jr., DO, president and chair of the NBOME Board from 1985 to 1987, in honor of his legacy. Dr. Santucci was the award's first recipient in recognition of his visionary efforts to advocate for competency-based assessment licensure by assessing basic scientific knowledge and its clinical application. His efforts helped the NBOME develop examinations to ensure the competency and quality of osteopathic medical practice.

WAYNE R. CARLSEN, DO, received the Santucci Award, the NBOME's highest honor, on December 8, 2017. With great appreciation, Gary L. Slick, DO, NBOME Board Chair, acknowledged and honored Dr. Carlsen for his long-standing history of contributions to the NBOME, its mission, and the profession at large.

Since 1989, when he became an item writer for the NBOME, Dr. Carlsen has served on a variety of exam construction and item review committees. In the late 1990s, he was the Level 3 Coordinator for COMLEX-USA and was a member of the Health Promotion, Disease Prevention/Health Care Delivery Examination Construction Committee. A member of the NBOME Board from 2005 to 2017, he served as chair of the board from 2013-2015, chair of the Compensation Subcommittee, and as a member of the Nominating Committee.

Dr. Carlsen is vice dean and associate professor in the Department of Family Medicine at the Ohio University Heritage College of Osteopathic Medicine (OU-HCOM), where he has been a faculty member since 1993. A practicing geriatrician in Ohio for over 20 years, Dr. Carlsen serves the health care needs of uninsured residents through OU-HCOM's community health programs. He is a graduate of the University of Medicine and Dentistry of New Jersey School of Osteopathic Medicine, a fellow in the American College of Osteopathic Internists, the American Geriatrics Society, and the American College of Physicians.



Wayne R. Carlsen, DO, receiving the Santucci Award in December 2017 with NBOME President and CEO John R. Gimpel, DO, MEd.



SANTUCCI AWARD RECIPIENTS

2017

Wayne R. Carlsen, DO

2016

William G. Anderson, DO

2015

John W. Becher, DO
Janice A. Knebl, DO, MBA

2014

John E. Thornburg, DO, PhD
Shirley Bodett

2013

Boyd R. Buser, DO

2012

Sheryl Bushman, DO
Linjun Shen, PhD, MPH

2011

Joseph F. Smoley, PhD

2010

Frederick G. Meoli, DO

2009

Thomas F. Santucci, DO

THE NBOME CLARK AWARD FOR PATIENT ADVOCACY

Established by the NBOME in 2016, the Clark Award for Patient Advocacy recognizes individuals who have demonstrated an outstanding commitment to patient safety, patient protection, and quality of care. The award is named after long-time NBOME Board public member and leader in medical regulation and state medical licensure, Mr. Gary R. Clark.

MARTIN CRANE, MD, was honored with the NBOME Clark Award for Patient Advocacy on December 8, 2017. A board-certified obstetrician and gynecologist, Dr. Crane is a graduate of Princeton University and Harvard Medical School, as well as a commander in the Medical Corps of the U.S. Navy Reserves. He is past chair of the Board of Directors for the Federation of State Medical Boards (FSMB), past chair of

the National Committee on Foreign Medical Education and Accreditation of the U.S. Department of Education, and former chair of the Massachusetts Board of Registration in Medicine.

Dr. Crane has been involved in a wide array of quality assurance and improvement programs for more than 30 years and has spoken extensively on patient safety and adverse event reporting systems. The second recipient of the award for his lifelong advocacy for patient safety and physician quality initiatives, he is responsible for leading improved maintenance of physician licensure processes during his term as chair of the FSMB. Gary R. Clark, the award's namesake and its first recipient presented the award to Dr. Crane, recognizing him as a longstanding advocate for osteopathic medicine and the COMLEX-USA examination program.

“

Throughout his distinguished career, Dr. Crane's primary focus has always been to advocate for patients, a true reflection and embodiment of the NBOME's mission to protect the public through assessment.”

—Gary R. Clark



Martin Crane, MD, receives the NBOME Clark Award for Patient Advocacy in December 2017 from Gary L. Slick, DO, MA, Board Chair (right) and Gary R. Clark.

CLARK AWARD FOR PATIENT ADVOCACY RECIPIENTS

2017

Martin Crane, MD

2016

Gary R. Clark



Christopher B. Thoman, software developer, receives the Frederick G. Meoli, DO, President's Award for Outstanding Service in June 2017 from Gary L. Slick, DO, MA, NBOME Board Chair, Frederick G. Meoli, DO, former NBOME President and CEO and John R. Gimpel, DO, MEd, current NBOME President and CEO.

PRESIDENT'S AWARD FOR OUTSTANDING SERVICE

The Frederick G. Meoli, DO President's Award for Outstanding Service recognizes a NBOME employee who has demonstrated exemplary performance directly related to the NBOME core values — accountability, collaboration, excellence, integrity, and patient safety. The award was first established in 2015 to recognize a member of the NBOME staff for meritorious service. In 2016, the award was renamed after Frederick G. Meoli, DO, the NBOME's first full-time DO President and CEO from 1999 to 2009. Dr. Meoli led and served the NBOME and the osteopathic medical profession with dedication and wisdom, helping to grow the NBOME's national and international recognition and preeminence.

The Frederick G. Meoli, DO President's Award for Outstanding Service is given to a staff member who exemplifies the high standards set by the NBOME in areas such as supporting NBOME practices, procedures, and policies by bringing about

significant positive change, eliminating obstacles in support of the NBOME's mission, showing innovation and proactive leadership, and building relationships and partnerships.

CHRISTOPHER B. THOMAN is the third recipient of the NBOME Frederick G. Meoli, DO, President's Award for Outstanding Service. Since joining the NBOME in 2012 as a software developer, Chris has led many software development projects, bringing continuous improvement to the Candidate Registration System performance, increasing system availability to 100 percent, and facilitating transcript reporting automation with immediate results for the Electronic Residency Application Service (ERAS). Chris' technology skills, work ethic, leadership and dedication to customer service are outstanding.

2017 CERTIFICATES OF APPRECIATION AND MERITORIOUS SERVICE

IN 2017, THE NBOME RECOGNIZED INDIVIDUALS FOR OUTSTANDING SERVICE AND APPRECIATION FOR THEIR CONTRIBUTIONS TO THE NBOME.



Gary L. Slick, DO, MA,
NBOME Board Chair,
presents a certificate of
appreciation and
meritorious service to
Jeanne M. Sandella, DO.

DON A. "JAKE" JACOBSON, CLU, CHFC was recognized on June 24, 2017, for outstanding service for his contributions to the financial oversight of the NBOME and for his dedicated service on the Finance Committee from 2008-2017. Jake is co-owner, partner, and current president of Dean Jacobson Financial Services, LLC, having been with the firm since 1980. Board Chair Gary L. Slick, DO, MA, presented the award, acknowledging the good fortune of the NBOME to have Jake serve as a member of the Finance Committee and the Investment Subcommittee. Dr. Slick recognized the sound financial advice and guidance Jake has brought to the NBOME throughout a period of great growth and change.

JEANNE M. SANDELLA, DO, was honored with a Certificate of Appreciation and Meritorious Service on December 8, 2017. Board Chair Gary L. Slick, DO, MA thanked Dr. Sandella for her many years of service to the NBOME. Dr. Sandella served as vice president for Clinical Skills Testing from 2014 through 2017 and was a member of the NBOME staff for 13 years. Dr. Sandella left the NBOME staff at the end of 2017 to begin a full-time hospital-owned practice in Pennsylvania. During her tenure with the NBOME, Dr. Sandella was instrumental in the success of the COMLEX-USA Level 2-PE examination. Under her direction, clinical skills and continuous professional development sustained unprecedented growth. A graduate of the Philadelphia College of Osteopathic Medicine, Dr. Sandella is a board-certified family physician and a clinical faculty member at the Philadelphia College of Osteopathic Medicine family medicine residency program.



Jake Jacobson is honored for his service to the NBOME in June 2017 by Gary L. Slick, DO, MA, NBOME Board Chair and John R. Gimpel, DO, MEd, President and CEO.

ITEM WRITERS, CASE WRITERS AND CASE AUTHOR OF THE YEAR AWARD WINNERS

In December 2017, the NBOME announced the awardees for Item Writers, Case Writers, and Case Author of the year. Each year, examination items (test questions), and clinical cases contributed by members of the NBOME National Faculty for the COMLEX-USA and COMAT examinations are evaluated. The authors whose contributions are of exceptional quality, serving as models for item and case development, are selected to receive the awards. Congratulations to the 2017 award winners, whom we recognize for their dedication to the NBOME mission.

“Their contributions demonstrate the high standards of our examinations and reflect the commitment and excellence of the NBOME National Faculty.”

—*Janice A. Knebl, DO, MBA,
Chair, COMLEX-USA
Composite Examination
Committee*

“The NBOME family has trained me well and has helped me tremendously in advancing my professional and academic growth.”

—*Rani Bright, MBBS,
HCLD*



**Rani Bright,
MBBS, HCLD**

Assistant Professor in the Department of Bio-Medical Sciences at the Philadelphia College of Osteopathic Medicine, Philadelphia, Pennsylvania

**ITEM WRITER OF THE YEAR
COMLEX-USA Level 1**



**Shannon C.
Scott, DO**

Medical Director, Midwestern University Multispecialty Clinic • Assistant Dean and Clinical Associate Professor, Department of Family Medicine, Midwestern University Arizona College of Osteopathic Medicine, Glendale, Arizona

**ITEM WRITER OF THE YEAR
COMLEX-USA Level 2-Cognitive
Evaluation (Level 2-CE)**



**Kathryn
Brandt, DO,
MS, MedL**

Chair, Primary Care Department,
University of New England College of
Osteopathic Medicine, Biddeford, Maine

CASE AUTHOR OF THE YEAR
COMLEX-USA Level 2-
Performance Evaluation
(Level 2-PE)



**Jaime M.
Rawson, DO**

General Neurologist, Gilbert Neurology
and Mercy Gilbert Medical Center,
Gilbert, Arizona

ITEM WRITER OF THE YEAR
COMLEX-USA Level 3



**Deborah L.
Blackwell,
DO**

Associate Professor of Pediatrics at the
Ohio State University, Columbus, Ohio •
Pediatrician, Department of Emergency
Medicine at Nationwide Children's
Hospital

ITEM WRITER OF THE YEAR
COMLEX-USA Health
Promotion/Disease Prevention
(HP/DP) and Health Care Delivery
(HCD) Dimensions



**Lauren
Noto-Bell, DO**

Associate Professor, Department of
Osteopathic Manipulative Medicine at
Philadelphia College of Osteopathic
Medicine (PCOM) • Program Director at
PCOM Neuromusculoskeletal Medicine
Residency Program, Philadelphia,
Pennsylvania

ITEM WRITER OF THE YEAR
COMLEX-USA Osteopathic
Principles and Practice (OPP)
Dimension



**Matthew F.
Geromi, DO**

Psychiatrist at PsyCare, Inc in San Diego,
CA • Clinical Assistant Professor/Online
Preceptor for Psychiatry at Philadelphia
College of Osteopathic Medicine

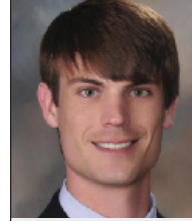
CASE WRITER OF THE YEAR
COMLEX-USA Clinical Decision
Making



**Peter F.
Bidey, DO,
MEd**

Assistant Professor, Department of Family
Medicine and Program Director,
Philadelphia College of Osteopathic
Medicine/Suburban Community Hospital
Family Medicine Residency • Director of
Medical Education, Suburban Community
Hospital, Philadelphia, Pennsylvania

CASE WRITER OF THE YEAR
COMLEX-USA Clinical Decision
Making



**Daniel L.
Griffin, DO**

Chief Resident in Internal Medicine,
Magnolia Regional Health Center, Corinth,
Mississippi

ITEM WRITER OF THE YEAR
COMAT



**Jandy Hanna,
PhD, MSB**

Chair, Biomedical Sciences Department •
Associate Professor of Anatomy, West
Virginia School of Osteopathic Medicine,
Lewisburg, West Virginia

ITEM WRITER OF THE YEAR
COMAT Foundational Biomedical
Sciences

COMLEX-USA EXAMINATION CHAIRS



**JANICE A. KNEBL,
DO, MBA**

CHAIR

COMLEX-USA COMPOSITE
EXAMINATION COMMITTEE



**JOHN E.
THORNBURG,
DO, PHD**

CHAIR

COMLEX-USA LEVEL 1



**CHARLES A.
FINCH JR., DO**

CHAIR

COMLEX-USA LEVEL 2-CE



DAVID KUO, DO

CHAIR

COMLEX-USA LEVEL 2-PE



**MICHAEL F.
OLIVERIO, DO**

CHAIR

COMLEX-USA LEVEL 3

2017 milestones

COMLEX-USA IS THE PATHWAY TO LICENSURE FOR OSTEOPATHIC PHYSICIANS. IT IS THE PRINCIPAL MEANS BY WHICH THE NBOME DELIVERS ON ITS MISSION TO PROTECT THE PUBLIC BY PROVIDING ASSESSMENT OF COMPETENCIES FOR OSTEOPATHIC MEDICINE AND RELATED HEALTH CARE PROFESSIONS.

ENHANCING COMLEX-USA

The COMLEX-USA examination series is designed to assess osteopathic medical knowledge, fundamental clinical skills, and other foundational competencies considered essential for the practice of osteopathic medicine. The primary and intended purpose of COMLEX-USA is for licensure of osteopathic physicians, and COMLEX-USA is accepted for medical licensure in all US states and jurisdictions.

FOUNDATION FOR COMLEX-USA

A CORNERSTONE OF OUR MISSION COMMITMENT IS THE FOUNDATION OR BLUEPRINT UPON WHICH COMLEX-USA IS BUILT AND ENTRUSTMENT DECISIONS ARE MADE.

The foundation of COMLEX-USA is based on osteopathic principles and practice and the tenets of osteopathic medicine:

The body is a unit; the person is a unit of body, mind, and spirit

The body is capable of self-regulation, self-healing, and health maintenance

Structure and function are reciprocally interrelated

Rational treatment is based upon an understanding of the basic principles of body unity, self-regulation, and the interrelationship of structure and function

(from the American Osteopathic Association, Tenets of Osteopathic Medicine)

ENHANCED COMLEX-USA TIMELINE 2006-2019

2006

Release of detailed report on seven osteopathic medical competencies, considerations for future testing, and the practice of osteopathic medicine

2009

JUNE Blue Ribbon Panel assembled to study and provide a future design for COMLEX-USA

RELEASE OF NEW COMLEX-USA MASTER BLUEPRINT

In July 2017, after more than nine years of extensive research, development, and review by stakeholders and expert reviewers, the new COMLEX-USA Master Blueprint was released. The master examination blueprint emphasizes the competencies required for generalist physicians to deliver safe and effective osteopathic medical care.

The framework of COMLEX-USA is based on the foundation of the osteopathic approach to patient care. Its evidence-based design assures state licensing boards and the public that a DO has demonstrated minimal competence by passing a series of national standardized examinations designed for the practice of osteopathic medicine. Aligned with the education and training pathway of a DO, passing Levels 1 and 2 of COMLEX-USA is also an accreditation standard for graduation with a DO degree and required for entry into residency training.

Prior to release of the new blueprint, Evidence-Based Redesign of the COMLEX-USA Licensure Examination Program, a manuscript published in the *Journal of the American Osteopathic Association* in April 2017, summarizing the evidence-based design processes that served as the foundation for blueprint development and the evidence supporting its validity, and providing an overview of the blueprint's two dimensions: Competency Domains and Clinical Presentations.

Featuring a framework that maps content to competency domains and clinical presentations, the new COMLEX-USA master examination blueprint and test specifications will be implemented in the Level 3 examination in September 2018. The new blueprint and test specifications for each exam will be introduced into Level 1, Level 2-PE, and Level 2-CE with the new test cycles beginning in 2019. Score reports will be revised to reflect the new master blueprint and test specifications.



CHANGES TO ELIGIBILITY

The NBOME's responsibility for professional self-regulation is shared with other authorities across the continuum in medical education, training, and licensure. In keeping with our mission, features to enhance protection for patients were added to the COMLEX-USA examination program in 2017.

In addition to existing requirements that candidates are only eligible to take the COMLEX-USA Level 1 examination after having successfully completed at least one full year at an AOA-COCA accredited college of osteopathic medicine (COM) and after attestation of good standing by the COM dean, the NBOME Board adopted new eligibility requirements for implementation in 2018-2019 which add the requirement for a dean's attestation of good academic and professional standing to the current eligibility requirements for Level 1. For Levels 2-CE and 2-PE, candidates must meet the expanded attestation requirement for good academic and professional standing, in addition to having passed Level 1 and completing at least two years at a COM.

Effective in September of 2018, DO residents are required to receive an attestation from their residency program directors in ACGME- and AOA-accredited GME programs that the resident is in good academic and professional standing in order to be eligible to take Level 3, in addition to existing requirements that a candidate must have earned a DO degree and passed Levels 1 and 2, in order to take Level 3. The NBOME recommends that Level 3 candidates complete a minimum of six months of residency training prior to taking Level 3. Beginning in 2018, score reports will be released to program directors who attest to the eligibility of a resident.

ENHANCING CANDIDATE EXPERIENCE

With the addition of a second National Center for Clinical Skills Testing (NCCST) in Chicago in August 2016 and the remodeling of the NCCST in Philadelphia in 2017, COMLEX-USA Level 2-PE candidates now appreciate the ability to choose to take their exams in either of two state-of-the-art test facilities.

Based on feedback from candidates, enhancements to COMLEX-USA computer-based exams and the clinical skills examination were implemented with the beginning of the new test cycles this year. A popular new enhancement allows optional 10-minute morning and afternoon breaks that do not count against allocated examination time. Other enhancements to COMLEX-USA Levels 1, 2-CE, and 3 include embedded lab value reference ranges and a standard online calculator feature. A computer mouse and clipboard were added to the Level 2-PE examination.

Initial feedback from candidates on the examination enhancements has been very positive, ranging from 81 to 91

2010

DEC Blue Ribbon Panel publishes consensus priorities for enhanced COMLEX-USA

2011

JUNE NBOME adopts Fundamental Osteopathic Medical Competency Domains (FOMCD)

ENHANCED COMLEX-USA TIMELINE 2006-2019

2012

MAR Blue Ribbon Panel publishes 10 key recommendations and next steps for enhancing COMLEX-USA

2014

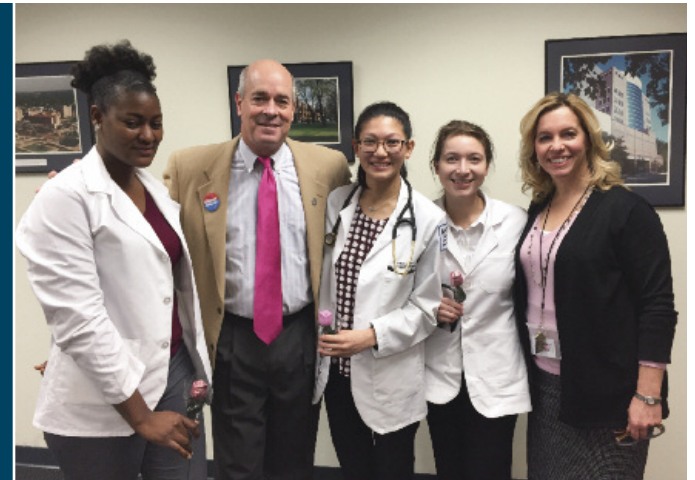
MAY Release of new COMLEX-USA blueprint dimensions and two-decision point, competency-based model

percent satisfied with the new break format, and 98 percent satisfied with the embedded laboratory reference ranges.

Major progress toward a comprehensive upgrade to replace and update media used in examinations occurred in 2017. Over 4,000 images (e.g., photography, diagnostic imaging) in the item bank were reviewed for quality, precision and clarity of diagnosis. Recommendations were made for expanded multimedia use in future testing and investigations into further use of avatars and other advanced image types. Beginning in 2018, new standards for quality and clarity will be implemented for all media used in NBOME examinations.

“ Thank you for including the normal lab values in the question stem! ...less time is spent trying to navigate through the list of values.”

“ It is a long test, and being able to have those 10-minute breaks without penalty was very nice.”



NEW AND EXPANDED ASSESSMENTS

CATALYST FOR CHANGE

In response to changes in the environment and requests by certifying specialty boards to explore alternatives to traditional board recertification cognitive examinations, the NBOME partnered with several clients to pilot a new and innovative approach to competency assessment. CATALYST, the NBOME's flexible, innovative assessment-for-learning platform, supports continuous professional development via longitudinal assessment. In 2017, pilot tests with AOA Certification Boards, the American Osteopathic Board of Internal Medicine (AOBIM), the American Osteopathic Board of Obstetrics and Gynecology (AOBOG) and the American Osteopathic Board of Pediatrics (AOBP) were conducted with board-certified osteopathic physician diplomates of the AOBIM, AOBOG and AOBP using the CATALYST platform. Initial results of the pilot studies are extremely positive with participating physician diplomates reporting that CATALYST would help them take better care of patients and is a preferred alternative to traditional recertification examinations. The CATALYST platform will be used with NBOME's COMSAE self-assessment program in early 2018.

“ I often tell people that you never know where a job will take you. I joined the NBOME in November 2012 as a Standardized Patient (SP); in 2014 I joined the Training Team as SP Trainer and in 2016 relocated to the Chicago NCCST to take on the role of Assistant Director for SP Training. I have been fortunate to work with a talented group of people who take the NBOME mission statement of protecting the public very seriously. I've never worked in a more collaborative environment, and appreciate the NBOME's commitment to work/life balance. Whether I'm facilitating the exam as the Trainer on Duty, joining my coworkers in a 5K walk for charity, or eating delicious food at the multicultural potluck, I am surrounded by a remarkable team of individuals dedicated to the success of the NBOME.”

—Bob Mason, Assistant Director for Standardized Patient Training



2016

JULY Release of updated FOMCD

JULY Overview of COMLEX-USA Master Blueprint published

DEC NBOME adopts new COMLEX-USA eligibility criteria

2017

FEB-MAR New eligibility criteria/attestation public comment period

JULY COMLEX-USA Master Blueprint 2018-2019, effective beginning September 2018, published

ENHANCED COMLEX-USA TIMELINE 2006-2019

2018

MAR 15 Last day to register for current one-day Level 3 examination

MAR 16 New Level 3 eligibility criteria in effect; first day to register for enhanced Level 3 examination—both days of examination must be completed within a 14-day period

APR 28 Administration of one-day Level 3 examinations ends

MAY – AUG NBOME prepares for transition to enhanced Level 3 examination; no Level 3 examinations conducted during this period

SEP 10 Administration of enhanced Level 3 examination in two-day format begins

COMAT[®]

Foundational
Biomedical
Sciences

FOUNDATIONAL BIOMEDICAL SCIENCE – COMAT

The Comprehensive Osteopathic Medical Achievement Test (COMAT) program continues to grow each year. In addition to growth of the COMAT clinical examinations in 2017, introduction of the Foundational Biomedical Sciences (FBS) comprehensive examination was announced for availability in 2018. Requested by colleges of osteopathic medicine (COMs), COMAT FBS is designed to assess first- and second-year student progress in basic biomedical sciences. Examination content is organized by major organ body systems and biomedical science disciplines. After the first year, COMAT FBS targeted examinations by organ body system and biomedical science discipline are targeted for delivery in late 2019.

EXPANDING OUR FOUNDATION THROUGH RESEARCH

In 2017, the NBOME updated its research agenda to support the strategic plan, with an emphasis on collaborative research to support the validity of COMLEX-USA for its primary and secondary purposes, the validity of the COMAT clinical subject examinations for achievement in clinical disciplines, predictive validity studies to provide evidence for correlation of scores on COMLEX-USA and COMAT examinations, and resident in-service and board certification examinations. The research team continued research on the use of innovative item types and novel assessments. Additional research activities include collaborative research projects with partnering organizations and opportunities to improve the testing experience.

Activities included submitting to and publishing manuscripts in major medical journals; delivering presentations and displaying posters at conferences and key professional meetings; and conducting workshops and participating in symposia in the United States and abroad.

On October 17, 2017, the NBOME hosted a Research Advisory Forum in its Chicago Corporate Offices and Conference Center. The “Innovative Item Types and Assessments” conference brought together experts from numerous leading assessment organizations in the health professions for roundtable discussions and presentations on the development, practice, and implementation of innovative assessments for high-stake licensure and related testing. Automated item generation and the use of artificial intelligence in testing were among the presentation and discussion topics.

“

Thank you for creating this opportunity for our community to come together and advance the conversation on continuing learning and assessment; these conversations and cross-fertilization of ideas are so valuable, and I hope we are able stay connected as we all move forward.”

—Ann E. Harman, PhD, Chief Assessment Officer, American Board of Anesthesiology, 2017 NBOME Research Advisory Forum



Joseph Flamini, MBA



Linda Althouse, PhD



Mark Dawley, MBA

2018

SEP-DEC Score release dates for Level 3 examination are anticipated to be longer than usual*

SEP 2018-DEC 2019 Initial enhanced Level 3 examination test cycle (16 months)[†]

2019

MAR Enhanced COMLEX-USA Level 2-PE begins

MAY Enhanced COMLEX-USA Level 1 begins

JUNE Enhanced COMLEX-USA Level 2-CE begins

* SCORE RELEASE DATES ARE ANTICIPATED TO BE LONGER THAN USUAL TO ALLOW SUFFICIENT TIME FOR THE STANDARD SETTING PROCESS TO SET A MINIMUM PASSING SCORE AND STATISTICALLY VALIDATE CANDIDATE PERFORMANCE FOR THE NEW LEVEL 3 TESTING CYCLE.

[†] SCORE RELEASE TURNAROUND MAY BE LONGER THAN FOR THE ONE-DAY EXAMINATION DUE TO SCORING NEEDS AND QUALITY CONTROL OF CLINICAL DECISION-MAKING ITEM FORMATS.

NBOME RESEARCH SUMMARY FOR 2017

THE FOLLOWING LIST OF ARTICLES, PAPERS AND PRESENTATIONS REFLECTS THE SCHOLARLY WORK OF NBOME STAFF MEMBERS, WHOSE NAMES ARE SHOWN IN BOLD, AND THEIR COLLEAGUES.



Jack Boulet, PhD

JOURNAL ARTICLES

Published

- **Gimpel J, Horber D, Sandella J, Knebl J, Thornburg J.** Evidence-Based Redesign of the COMLEX-USA Licensure Examination Program. *J Am Osteopath Assoc.* 2017; 117(4): 253-261.
- **Roberts WL, Boulet J, Sandella J.** Comparison study of judged clinical skills competence from standard setting ratings generated under different administration conditions. *Advances in Health Sciences Education: Theory and Practice*, 2017. doi: 10.1007/s10459-017-9766-1

Submitted

- **Brodersen A, Shao C, Cheng Y.** Parameter Random Error. January 2017. Accepted for publication in *The SAGE Encyclopedia of Educational Research, Measurement, and Evaluation*.
- **Cheng Y, Shao C.** Improving item parameter estimation by data cleansing with change-point Analysis. January 2017. *Journal of Educational Measurement*.
- **Hudson K, Feinberg G, Hempstead L, Zipp C, Gimpel J, Wang Y.** Association between performance on COMLEX-USA and the American College of Osteopathic Family Physicians In-

Service Examinations. December 2017. *Journal of Graduate Medical Education*. Under review.

- **Liu Q, Li I, Tsai E.** Identify different patterns of response speed with item performance on case-based items. December 2017. *Educational Measurement: Issues and Practice*.
- **Marquez-Hall S, Horber D, Sandella J, Knebl J.** Innovative geriatric care using interprofessional education modules. September 2017. *Medical Education*.

PRESENTATIONS

Delivered

- **Browne M, Mysker L, Wattleworth R.** *Meeting and Surpassing Contemporary Standards for Media Presentation on Board Exams.* Presented to American Board of Medical Specialties Conference, Chicago, IL, September 2017.
- **Browne M, Pernell C, Wattleworth, R.** *Maintaining a Validity Trail: Training SMEs to Re-code Board Examination Items to a Radical Blueprint Change.* American Board of Medical Specialties Conference, Chicago, IL, September 2017.
- **Gimpel JR.** *NBOME & COMLEX-USA Update.* Presented at the Osteopathic Medical Educators &

- Leaders Conference, Tampa, FL, January 20, 2017.
- **Gimpel JR. NBOME & COMLEX-USA Update.** Presented to faculty and students at the Nova Southeastern University College of Osteopathic Medicine, Fort Lauderdale, FL, January 23, 2017.
 - **Gimpel JR. NBOME & COMLEX-USA Update.** Presentation to faculty and students at Campbell University School of Osteopathic Medicine, Buies Creek, NC, February 17, 2017.
 - **Gimpel JR. NBOME Update to AOA Board of Trustees & Affiliates.** Presented at the American Osteopathic Association's Midyear Business Meeting, Honolulu, HI, March 1, 2017.
 - **Gimpel JR. A Primer for Residency Program Directors.** Presented at the Accreditation Council for Graduate Medical Education's Annual Conference, Kissimmee, FL, March 11, 2017.
 - **Shao C, Cheng Y, Kim D, Woo A. The Impact of Missing Data and Multidimensionality on Item Calibration in Computerized Adaptive Testing.** Paper accepted by the 2017 Annual Meeting of the American Educational Research Association, San Antonio, TX, April 2017.
 - **Shao C, Cheng Y. Detection of Test Speededness Using Change-Point Analysis with Response Time Data.** Paper accepted by the 2017 Annual Meeting of the National Council on Measurement in Education, San Antonio, TX, April 2017.
 - **Basehore P, Fischer J, Overbeck K, Ronkowski E, Browne M. Multiple Choices to Increase Exam Effectiveness: Successful Strategies at the National and School Level.** Accepted for presentation at the American Association of Colleges of Osteopathic Medicine Annual Conference, Baltimore, MD, April 2017.
 - **Gimpel JR. NBOME Spring Visitation 2017.** Presentation during Spring Visitation Day in Philadelphia Executive Offices, Conshohocken, PA, April 11, 2017.
 - **Gimpel JR. NBOME & COMLEX-USA Update.** Presented to students at the Texas College of Osteopathic Medicine at the University of North Texas Health Science Center, Fort Worth, TX, April 19, 2017.
 - **Roberts WL, Qui Y, Smith L. Investigating the Validity of Performance Ratings on a Clinical Skills Licensure Examination.** Presentation at the National Council on Measurement in Education Meeting, April 28-30, 2017.
 - **Gallagher L, Lavelle N. Faculty Development: How Technology Can Enhance Standardization in Training in Clinical Skills Evaluations.** Presentation at AACOM/AODME Meeting Baltimore, MD April 2017.
 - **Marquez-Hall S, Horber D. Improving Patient Care Using an Interprofessional Team Approach.** Presentation to American Association of Colleges of Osteopathic Medicine Annual Conference, Baltimore, MD, April 2017.
 - **Li I, Song H, Liu Q, Tsai T-H, Wang Y. An Elaborate Scheme to Score and Analyze Clinical Decision Making Exam Questions.** Presentation at the American Association of Colleges of Osteopathic Medicine Annual Conference, Baltimore, MD, April 2017.
 - **Flamini J, Gimpel JR, Tsai E, Wattleworth RA. Implementing a New COMLEX-USA Master Blueprint & Enhancing the COMAT Program.** Presented as a Pre-Conference Workshop at the American Association of College of Osteopathic Medicine Annual Meeting, Baltimore, MD, April 25, 2017.
 - **Gimpel JR. Enhanced COMLEX-USA Blueprint 2018-2019 - COSGP Blueprint Focus Group.** Presented to the Council of Student Government Presidents, Baltimore, MD, April 27, 2017.
 - **Flamini J, Gimpel JR, Sandella JM, Slick GL. NBOME & COMLEX-USA Update to AACOM.** Presented at the Annual Meeting of the American Association of Colleges of Osteopathic Medicine, Baltimore, MD, April 28 2017.
 - **Gimpel JR. NBOME & COMLEX-USA Update.** Presented to faculty and students at the Rowan School of Osteopathic Medicine, Stratford, NJ, May 19, 2017.
 - **Gimpel JR. NBOME & COMLEX-USA Update.** Presented to faculty at the Chicago College of Osteopathic Medicine at Midwestern University, Downers Grove, IL, June 2, 2017.
 - **Li I, Liu Q, Tsai E. Applying Supervised Learning Technologies to Predict Misdiagnosis and Overtreatment Using Data from Medical Examinations.** Presentation at MedBiquitous Annual Conference, Baltimore, MD, June 5-6, 2017.
 - **Gimpel JR. NBOME & COMLEX-USA Update and Item Writing Workshop.** Presented to the faculty at Liberty University College of Osteopathic Medicine, Lynchburg, VA, June 8, 2017.
 - **Errichetti A. Patient Simulations and the Assessment of Empathy: Is it Possible? Keynote Address, Philadelphia Area Simulation Consortium, Drexel University College of Nursing and Health Professions, Philadelphia, PA, June 15, 2017.**
 - **Gimpel JR. NBOME & COMLEX-USA Update.** Presented to faculty and students at Michigan State University College of Osteopathic Medicine, East Lansing, MI, July 6, 2017.
 - **Gimpel JR, Slick GL. NBOME Update to AOA Board of Trustees & Affiliates.** Presented at the American Osteopathic Association's Annual Business Meeting, Chicago, IL, July 19, 2017.



Kirk Becker, PhD

- **Gimpel JR.** *NBOME & COMLEX-USA Update.* Presented to the Council of Student Government Presidents, Chicago, IL, July 19, 2017.
- **Gimpel JR, Slick GL.** *NBOME & COMLEX-USA Update.* Presented to the American Association of Osteopathic Examiners, Chicago, IL, July 20, 2017.
- **Gimpel JR.** *NBOME & COMLEX-USA Update.* Presented to the Student Osteopathic Medical Association, Chicago, IL, July 20, 2017.
- **Gimpel JR.** *NBOME & COMLEX-USA Update.* Presented to faculty and students at the University of New England College of Osteopathic Medicine, Biddeford, MD, September 12, 2017.
- **Gimpel JR.** *NBOME & COMLEX-USA Update and Item Writing Workshop.* Presented to faculty and students at Touro College of Osteopathic Medicine, New York, NY, September 26, 2017.
- **Gimpel JR, Slick GL.** *Improving Physician Competence with CATALYST, Assessment for Learning.* Abstract presented at the International Association of Medical Regulatory Authorities 2017 Continued Competency Symposium, London, UK, October 5, 2017.
- **Liu Q, Li I, Wang Y, Tsai E.** *Investigating the Impact of Embedding Pretest Items on Item Response Time and Performance.* Poster at the National Board of Medical Examiners' Timing Impact on Measurement in Education Conference, Philadelphia, PA, October 2017.
- **Gimpel JR.** *NBOME & COMLEX-USA Update.* Presented to the Council of Osteopathic Student Government Presidents, Philadelphia, PA, October 7, 2017.
- **Gimpel JR.** *NBOME Update.* Webinar presented to the Association of Osteopathic Directors and Medical Educators, November 1, 2017.
- **Gimpel JR.** *Continuous Professional Development/*

- Lifelong Learning and the Physician: Demonstrating Ongoing Competence via CME, OCC, MOC, & MOL.* Presented section of the Practice Management Webinar Series for the Philadelphia College of Osteopathic Medicine, November 8, 2017.
- **Gimpel JR.** *NBOME & COMLEX-USA Update.* Presented to faculty and students at the Burrell College of Osteopathic Medicine, Las Cruces, NM, November 13, 2017.
- **Gimpel JR.** *NBOME & COMLEX-USA Update.* Presented to faculty and students at the Touro University Nevada College of Osteopathic Medicine, Henderson, NV, November 14, 2017.
- **Gimpel JR.** *NBOME & COMLEX-USA Update.* Presented to the Nevada State Board of Osteopathic Medicine, Henderson, NV, November 14, 2017.
- **Gimpel JR.** *NBOME & COMLEX-USA Update.* Presented to faculty and students at the Rocky Vista University College of Osteopathic Medicine, Parker, CO, November 15, 2017.
- **Steele S, Waters S.** *Accommodations for Test-Takers: Perspectives from NBOME and COMs.* Presented to the AACOM Board of Deans, Scottsdale, AZ, November 16, 2017.
- **Gimpel JR.** *NBOME & COMLEX-USA Update.* Presented to the Organization of Program Directors Associations, Arlington, VA, November 17, 2017.
- **Gimpel JR.** *NBOME & COMLEX-USA Update.* Presented to the Commission on Osteopathic College Accreditation, Chicago, IL, December 1, 2017.

Submitted

- Boulet, JR, Sandella JM. *Psychometrics for the Non-Psychometrician: A Practical Perspective*. Accepted for a pre-conference workshop at the Ottawa Conference on the Assessment of Competence in Medicine and the Healthcare Professions in Abu Dhabi, UAE, March 2018.
- Errichetti A, Kachur E, Drda V, Lank A. *Focused Debriefing Conversations with Difficult Standardized Patients: Using the ORID Framework to Confront Problematic Behavior and Negotiate Change*. Workshop abstract submitted for 18th International Meeting on Simulation in Healthcare, Los Angeles, January 13-17, 2018.
- Errichetti A, Fancher S. *Standardized Patient Communication Assessment in Medical and Advanced Practice Nursing Education: Two Perspectives*. Podium presentation abstract submitted for 18th International Meeting on Simulation in Healthcare, Los Angeles, January 13-17, 2018.

NBOME 2017 RESEARCH ADVISORY FORUM

INNOVATIVE ITEM TYPES AND ASSESSMENTS

The Research Advisory Forum included individuals from the following organizations:

ACT, Inc.

Ada Woo, PhD, Senior Director of Strategy Implementation and Operations

American Board of Anesthesiology

Ann E. Harman, PhD, Chief Assessment Officer

American Board of Family Medicine

Tom O'Neill, PhD, Vice President of Psychometric Services

American Board of Medical Specialties

David B. Swanson, PhD, Vice President, Academic Affairs

American Board of Pediatrics

Linda A. Althouse, PhD, Vice President of Psychometrics and Assessment Services

Foundation for Advancement of International Medical Education and Research

Jack Boulet, PhD, Vice President, Research and Data Resources

National Board of Medical Examiners

Mark Raymond, PhD, Research Director and Principal Assessment Scientist

Pearson

Kirk Becker, PhD, Senior Research Scientist;
David Shin, PhD, Manager, Principal Research Scientist

Touchstone Consulting

Cynthia G. Parshall, PhD, Principal Consultant

Philadelphia College of Osteopathic Medicine

David Kuo, DO, Associate Dean for Graduate Medical Education and Associate Professor of Family Medicine

Cynthia Parshall, PhD



Gary L. Slick, DO, MA,
John R. Gimpel, DO, MEd,
Dana C. Shaffer, DO



TOGETHER WE ARE STRONGER



Lorenzo Pence, DO



Mark Baker, DO

A key strategic objective is connecting to the various members of the NBOME community—patients, state licensing boards, colleges of osteopathic medicine, graduate medical education programs, osteopathic medical students, resident physicians, practicing osteopathic physicians, specialty boards, and organizational stakeholders—to advance our mission by expanding our outreach, influence and effectiveness. As we approach 2020 and full implementation of the single accreditation system (SAS) for graduate medical education (GME), the need for continuous, clear and accurate communications is stronger than ever. NBOME advocates for the single accreditation system for graduate medical education, for COMLEX-USA and osteopathic medical assessment for DOs. In 2017, we hosted nearly 100 in-house meetings in our Chicago and Philadelphia offices, hosting thousands of attendees; visited 13 colleges of osteopathic medicine; participated in and presented to external organizations at more than 34

external meetings across the nation and internationally; and communicated daily and directly with thousands of individuals. In March, to spread the 2017 NRMP Match Day results, we launched a campaign, Perfectly Matched—engaging osteopathic medical students and residents to share their Match success stories with COMLEX-USA, the licensing examination designed to assess DO credentials for safe and effective osteopathic medical care. Throughout 2017, we promoted testimonials on social media to share the news within and outside the osteopathic medical profession.

Another big advancement in 2017 was the launch of a new website in August to improve the user experience of all stakeholders with improved interactivity and navigation, adaptive, responsive design, and optimized search capability. The new site features audience pages, enhanced access to NBOME research, news and announcements, account login functionality and more.



Gary Slick, DO, Gregory Snyder, MD and Ashley Sam, OMS IV



Stephen Shannon, DO, MPH and Lori Kemper, DO, MS



Barbara Walker, DO



Stephen Shannon, DO, MPH, Thomas Cavalieri, DO and Boyd Buser, DO



Past and Present NBOME Leadership: Geraldine O'Shea, DO, Thomas Cavalieri, DO, Gary Slick, DO, MA, Boyd Buser, DO, Dana Shaffer, DO, Frederick Meoli, DO and John Gimpel, DO, MEd

#PerfectlyMatched



“I sought out programs that recognize and give equal weight to COMLEX-USA. I took only COMLEX-USA and was selected for interviews at top children’s hospitals across the country.”

— **Jonathan Bardahl**

*Chicago College of Osteopathic Medicine of
Midwestern University—Class of 2017*

*Matched in the Pediatrics Residency
Program at the University of Illinois Saint
Francis Medical Center*

COMLEX-USA

2017 NATIONAL FACULTY LEADERSHIP

The NBOME's National Faculty is critical to our mission of protecting the public through valid and reliable competency assessment for osteopathic medicine and related health care professions. Our diverse, dedicated Faculty includes nearly 800 professionals across the nation with expertise in osteopathic medical practice and medical education spanning the various disciplines and specialties, including a large number from full-time clinical practice and the physician licensure community.

To enhance the NBOME's position as the leader in osteopathically distinctive assessment, and

consistent with our strategic goal to increase our reach, influence and effectiveness in advancing the organization's mission to protect the public, in 2017 we expanded opportunities for resident and newly practicing physicians to serve on operational committees.

Of the nearly 100 National Faculty added in 2017, about 50 percent were in the "newly practicing physician" category of physicians in practice for 10 years or less. The National Faculty play an important role in the NBOME, with greater than 20 percent serving on operational and examination committees

and attending more than 96 meetings in 2017. NBOME worked with the American Osteopathic Association to provide 474 1-A and 5,725.75 1-B continuing medical education credits for 345 National Faculty in 2017 and sent recognition for scholarly activity to 75 organizations on behalf of 222 National Faculty members.

In August, the National Faculty Conclave met to recognize new and outgoing department and division chairs, update National Faculty Chairs about NBOME goals and product developments and receive input on new initiatives for 2018-2019.



COMLEX-USA EXAMINATION CHAIRS

• COMLEX-USA Level 1	John E. Thornburg, DO, PhD
• COMLEX-USA Level 2-CE	Charles A. Finch, Jr., DO
• COMLEX-USA Level 2-PE	David Kuo, DO
• COMLEX-USA Level 3	Michael F. Oliverio, DO

CLINICAL SCIENCES DEPARTMENT AND DIVISION CHAIRS

• Emergency Medicine	Ben D. Huang, DO, MPH
• Family Medicine	Joel L. Dickerman, DO
• Internal Medicine, Geriatric Medicine, and Dermatology	Darrin C. D'Agostino, DO, MBA, MPH
• Obstetrics and Gynecology	
• January 2017-June 2017	Joseph M. Kaczmarczyk, DO, MPH
• July 2017-December 2017	Eric J. Carlson, DO, MPH
• Osteopathic Principles and Practice/ Neuromusculoskeletal Medicine	Mark E. Sandhouse, DO, MS
• Pediatric and Adolescent Medicine	Ava C. Stanczak, DO
• Preventive Medicine and Health Promotion	James E. Foy, DO
• Biostatistics and Epidemiology Division	Alan G. Glaros, PhD
• Health Care Delivery and Patient Safety Division	Michael A. Becker, DO, MS
• Medical Ethics, Jurisprudence, and Professionalism Division	Elizabeth M. Petsche, JD
• Public Health and Preventive Medicine Division	Ali Moradi, MD, DrPH, MPH
• Psychiatry, Neurology, and Clinical Neurosciences	Jed G. Magen, DO, MS
• Radiology and Diagnostic Imaging	Joseph W. Stengel, DO
• Surgery, Surgical Subspecialties, and Anesthesia	Robert D. McGarrigle, DO

FOUNDATIONAL BIOMEDICAL SCIENCES CHAIRS

• Foundational Biomedical Sciences	John E. Thornburg, DO, PhD
• Anatomy Division	Randy J. Kulesza, Jr., PhD
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• Physiology Division	Michael L. Smith, PhD

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• Family Medicine	Tracy O. Middleton, DO
• Foundational Biomedical Sciences	Michael L. Smith, PhD
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• Obstetrics and Gynecology	Bryan C. Roehl, DO
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• Pediatrics	Tami Hendriksz, DO
• Psychiatry	Ryan M. Smith, DO, MSEd
• Surgery	Craig A. Gudakunst, DO

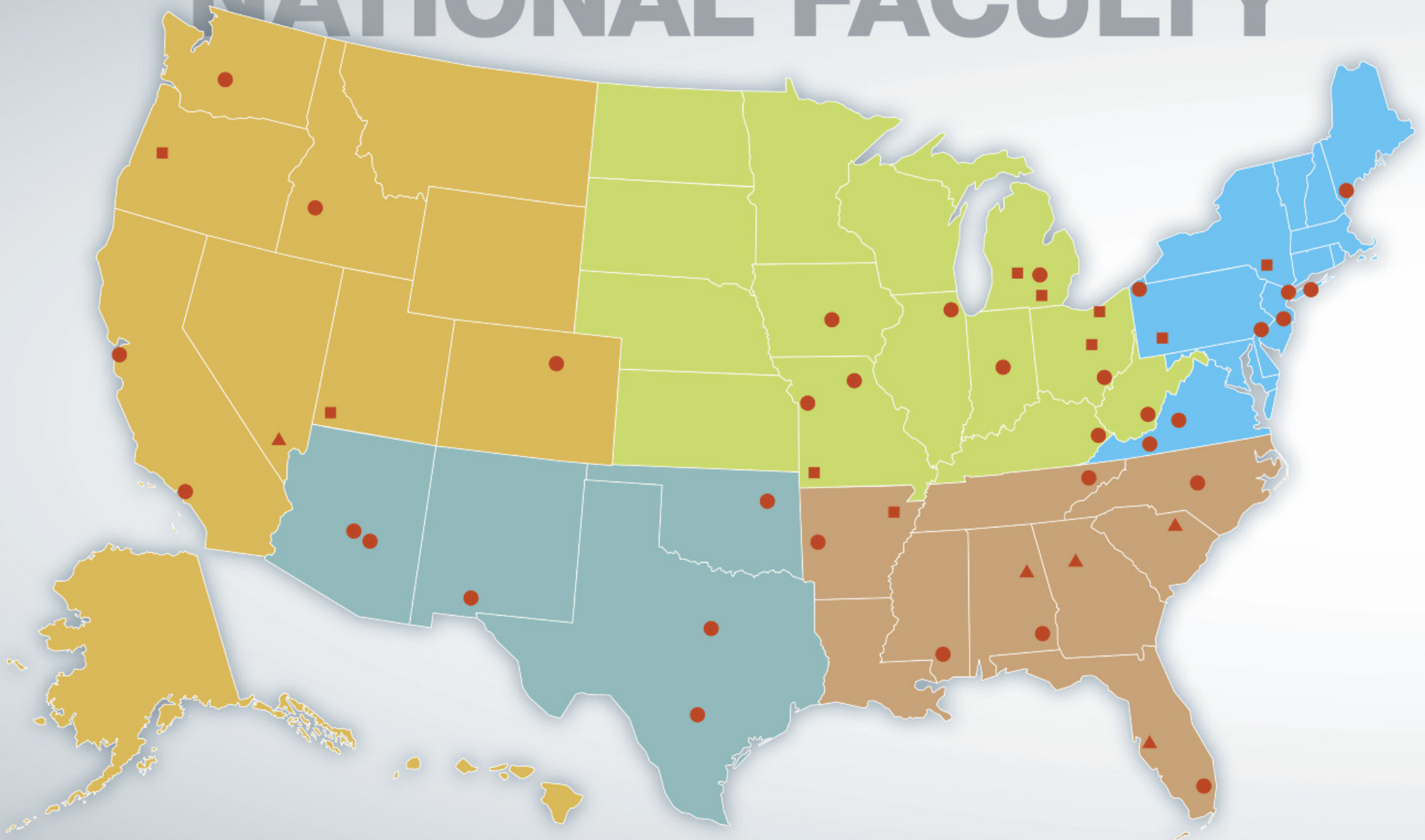
COMVEX EXAMINATION CHAIR

• COMVEX	H. Timothy Dombrowski, DO, MPH
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CONTENT COMMITTEE CHAIRS

• Clinical Decision-Making and Key Features	John L. Goudreau, DO, PhD
• Point-of-Care Knowledge, Education, and Testing	Dennis J. Dowling, DO, MA

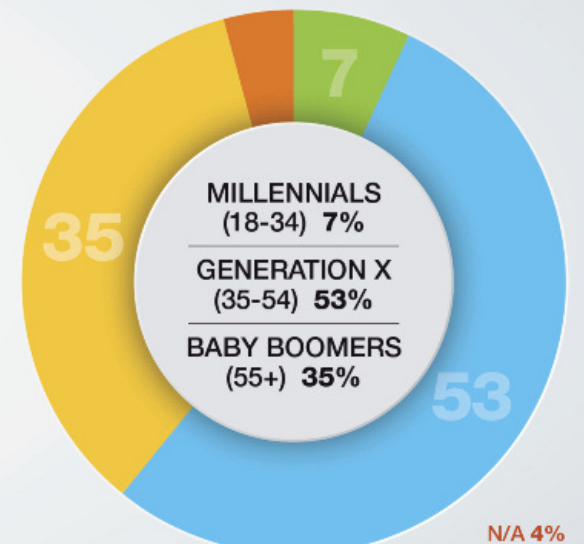
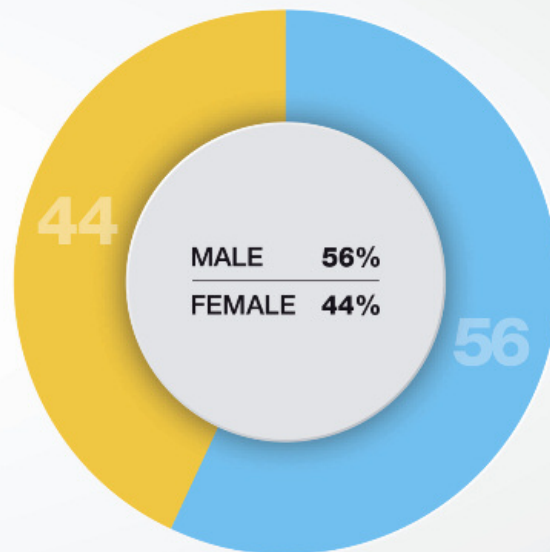
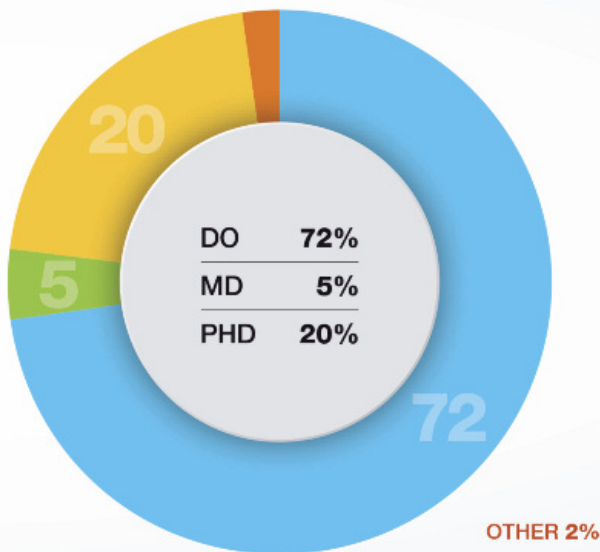
NATIONAL FACULTY



NATIONAL FACULTY BY REGION

NORTHEAST 241 | **SOUTH 113** | **MIDWEST 226** | **SOUTHWEST 110** | **WEST 98**

A DIVERSIFIED NATIONAL FACULTY



COLLEGES OF OSTEOPATHIC MEDICINE

● CIRCLES INDICATE MAIN CAMPUS ■ SQUARES INDICATE ADDITIONAL SITE ▲ TRIANGLES INDICATE BRANCH CAMPUS

2017 PERFORMANCE DATA

The NBOME's COMLEX-USA, COMSAE and COMAT examination series form the center of our program activity. The series of COMLEX-USA examinations assess essential osteopathic medical knowledge and clinical skills for licensure and entrance into unsupervised practice as an osteopathic generalist physician. The COMSAE examinations are self-assessments of a candidate's knowledge and ability and correspond to COMLEX-USA Level 1, Level 2-CE, and Level 3. The COMAT program consists of eight subject examinations in core osteopathic medical disciplines to assess progress using a national-normed standard.

26,321
COMLEX-USA
Examinations
Administered

COMLEX-USA LEVEL 1 EXAMINATION PERFORMANCE			
	2014-15	2015-16	2016-17
1ST TIME TEST TAKERS	5539	6177	6559
PASSING	93.9%	92.3%	92.7%
ALL TAKERS	6005	6790	7181
PASSING	91.8%	90.3%	90.4%

COMLEX-USA LEVEL 2-CE EXAMINATION PERFORMANCE			
	2014-15	2015-16	2016-17
1ST TIME TEST TAKERS	5423	5416	6084
PASSING	92.6%	92.2%	93.2%
ALL TAKERS	5953	6033	6662
PASSING	90.7%	89.6%	91.2%

COMLEX-USA LEVEL 2-PE EXAMINATION PERFORMANCE

	2014-15*		2015-16		2016-17	
	N	% 1 ST TIME TAKERS	N	% 1 ST TIME TAKERS	N	% 1 ST TIME TAKERS
1ST TIME TEST TAKERS	3577	100%	5711	100%	6209	100%
PASS	3291	92.0%	5308	92.9%	5764	92.8%
FAIL	286	8.0%	403	7.1%	445	7.2%
HUMANISTIC DOMAIN	86	2.4%	131	2.3%	127	2.0%
BIOMEDICAL DOMAIN	174	4.9%	237	4.1%	277	4.5%
BOTH DOMAINS	26	0.7%	35	0.6%	41	0.7%
ALL TAKERS	3920		6179		6687	

*8-month testing cycle (July 2014 – February 2015)

COMLEX-USA LEVEL 3 EXAMINATION PERFORMANCE

	2014-15	2015-16	2016-17
1ST TIME TEST TAKERS	5084	4987	5557
PASSING	96.4%	96.5%	96.7%
ALL TAKERS	5304	5245	5791
PASSING	95.6%	95.4%	96.1%

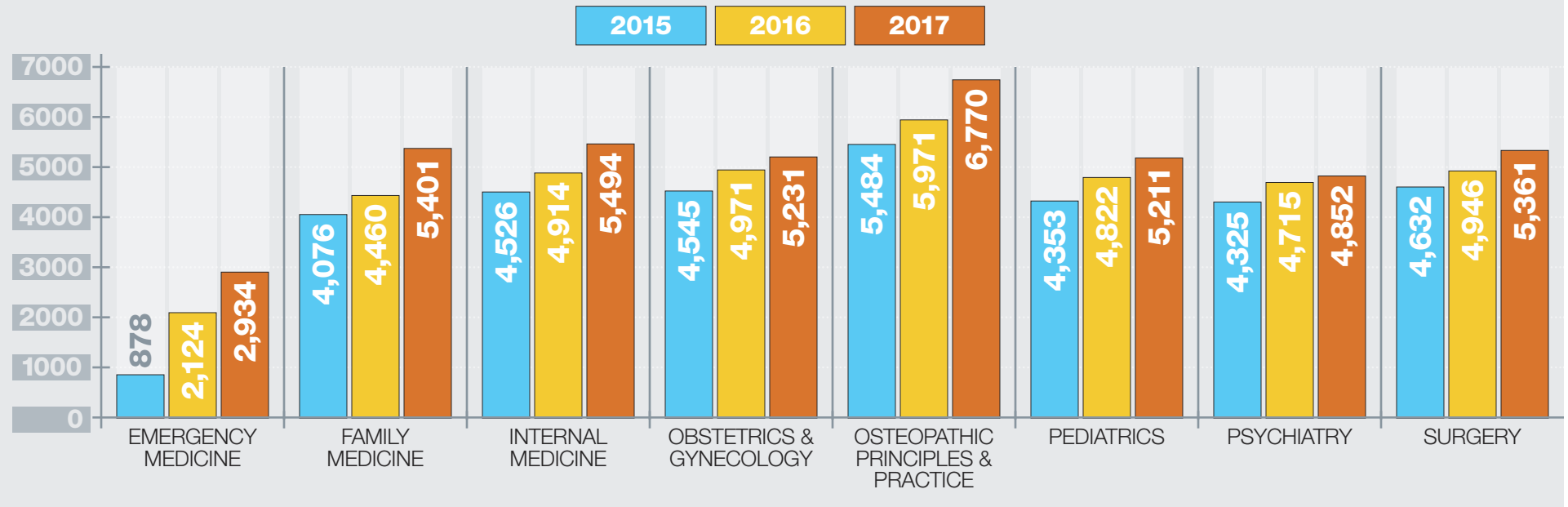
41,254

COMAT
Examinations
Administered

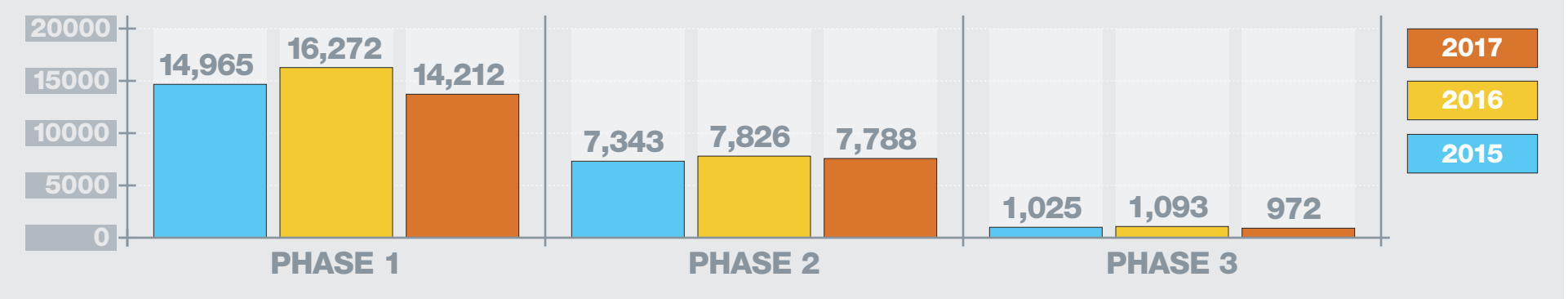
22,972

COMSAE
Examinations
Administered

NUMBER OF COMAT EXAMINATION ADMINISTRATIONS



NUMBER OF COMSAE EXAMINATIONS



(l-r): Lorenzo L. Pence, DO, Accreditation Council for Graduate Medical Education; Humayun J. Chaudhry, DO, MS, Federation of State Medical Boards; Gregory B. Snyder, MD, Federation of State Medical Boards; Johnny Dias, DO, AOA Bureau of Emerging Leaders; Joseph Flamini, MBA, NBOME; Richard Ortoski, DO, NBOME; Melissa Turner, MS, NBOME; Sandra Waters, MEM, NBOME; Lynn Mark, DO, Association of Osteopathic Directors and Medical Educators; Nick Schilligo, MS, American Osteopathic Association; Barbara Walker, DO, American Association of Osteopathic Examiners; Boyd R. Buser, DO, American Osteopathic Association; Geraldine T. O'Shea, DO, NBOME; Stephen C. Shannon, DO, MPH, American Association of Colleges of Osteopathic Medicine; Ashley Sam, OMS IV, Council of Osteopathic Student Government Presidents; Thomas A. Cavalieri, DO, American Association of Colleges of Osteopathic Medicine; Katie Cassella, OMS IV, Student Osteopathic Medical Association; Dana C. Shaffer, DO, NBOME (chair); Elise Lovell, MD, Organization of Program Director Associations; John R. Gimpel, DO, MEd, NBOME; Gary L. Slick, DO, MA, NBOME



2017 NBOME TESTING SERVICES FOR CLIENT AND PARTNER ORGANIZATIONS

NBOME PARTNERS WITH 16 OSTEOPATHIC SPECIALTY BOARDS AND RELATED HEALTH CARE ORGANIZATIONS to provide examination development, administration and psychometric services to meet their needs for assessment in training and certification. In 2017, the NBOME provided support for 40 examination programs for our testing partners and expanded test administration options for iPad delivery and score reporting. We continue to offer alternatives for

testing to new clients. In 2017, the NBOME entered into an agreement with the American Academy of Osteopathy to develop a new assessment, Core Osteopathic Recognition Readiness Examination (CORRE™), for physicians applying to ACGME-accredited residency programs with Osteopathic Recognition. CORRE will be delivered initially in 2018 and used by residency programs to evaluate physicians applying to their programs.





American Academy of Osteopathy
CORRE Examination



American Academy of Pediatric Dentistry
Resident In-Service Examination



American Board of Cosmetic Surgery
Certification & Recertification Examinations



American College of Osteopathic Emergency Physicians
Resident In-Service & Board Preparation Examinations



American College of Osteopathic Family Physicians
Resident In-Service Examination



American College of Osteopathic Internists
Resident In-Service Examination



American College of Osteopathic Pediatricians
Resident In-Service Examination



American College of Osteopathic Surgeons
Resident In-Service Examination



American Osteopathic Board of Anesthesiology
Item Writing Faculty Development



American Osteopathic Board of Emergency Medicine
Certification, Recertification, & Subspecialty Examinations



American Osteopathic Board of Internal Medicine
General Internal Medicine, Subspecialty, and CAQ
Certification & Recertification Examinations



American Osteopathic Board of Neurology and Psychiatry
Item Writing Faculty Development



American Osteopathic Board of Neuromusculoskeletal Medicine
Item Writing Faculty Development



American Osteopathic Board of Obstetrics and Gynecologists
CATALYST Pilot



American Osteopathic Board of Pediatrics
Certification and Recertification Examinations



National Board of Podiatric Medical Examiners
American Podiatric Medical Licensing Examination Part II
Clinical Skills Patient Encounter

SUPPORTING OUR WORKFORCE AND COMMUNITY

Our staff continues to grow and evolve in both NBOME offices—the Chicago Corporate Offices and Conference Center and the Philadelphia Executive Offices—plus our two National Centers for Clinical Skills Testing in Chicago and Philadelphia. In 2017, as our assessment product and service offerings and client list expanded, we grew to 233 full- and part-time employees, adding 25 new roles and promoting 21 employees to meet our growing needs while supporting retention of a talented and sustainable workforce. Critical to our foundation, our mission-driven staff is committed to our core values. In 2017 we embraced our strategic objective—Learn—with employees participating in 21 professional development and educational programs throughout the year.

Committed to better health care through fulfillment of our mission, employees

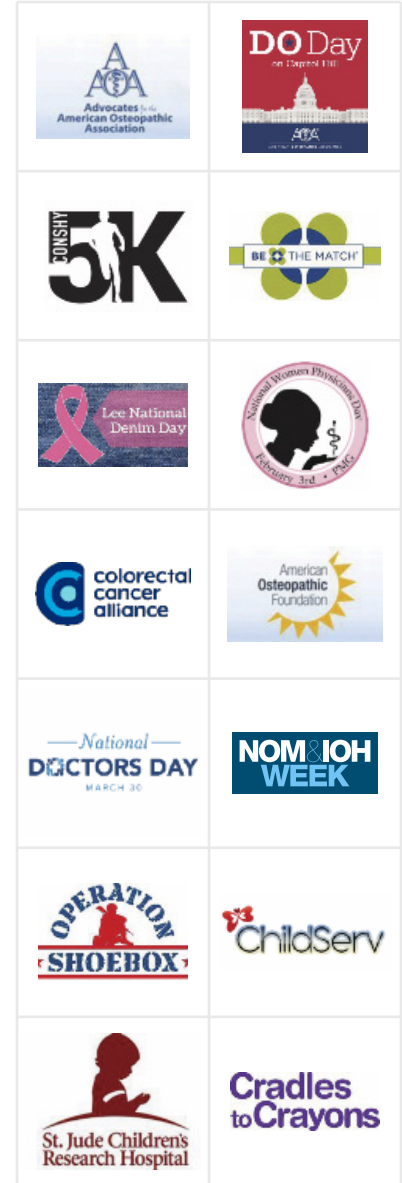
promoted wellness with programs encouraging healthy eating, healthy lifestyles and a healthy work environment. Throughout the year, we participated in a variety of events to support communities where we live, work, and serve. Staff contributed, promoted and volunteered to raise awareness; meet those in need; and advance research for a variety of critical causes and initiatives. Whether supporting troops overseas, ensuring school children have the supplies they need to be successful, helping advance cures for serious health problems by supporting research programs, or recognizing the important contributions of osteopathic medicine and all physicians who provide care to their patients and communities, our staff members are passionate about our mission to protect the public while making a difference in the lives of others. Some of the various 2017 events are shown below and on the next page.





I am proud of the collaborative efforts between our departments and with members of the National Faculty to reach our goals in implementing the new master blueprint and upgrading our media items. Staff and subject matter experts spent countless hours recoding thousands of items and evaluating media quality. The results will make for better exam quality.”

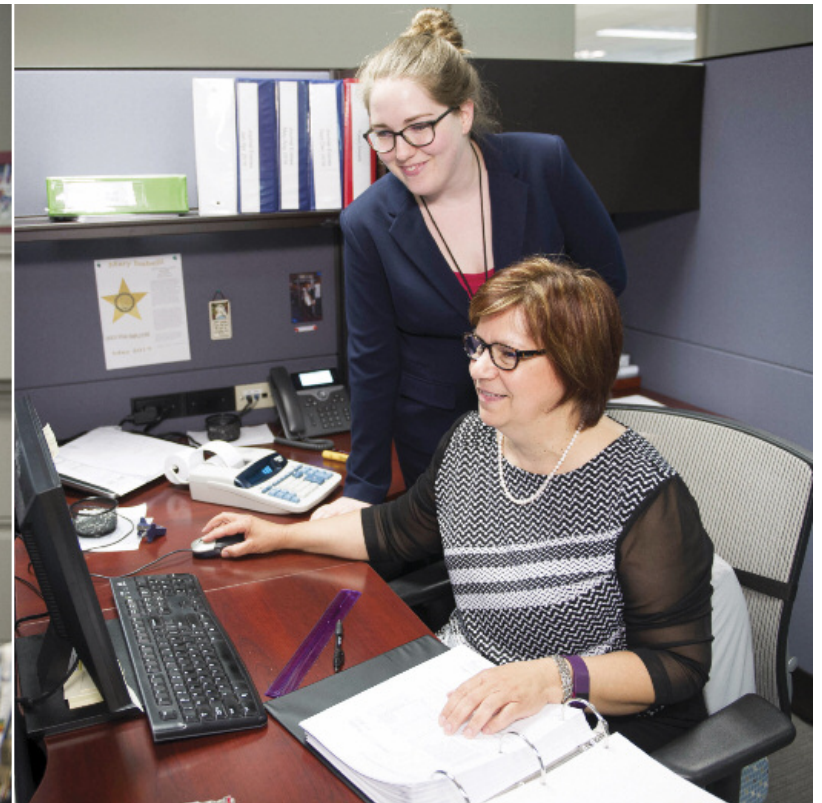
—Candice Pernell, Manager for Test Development



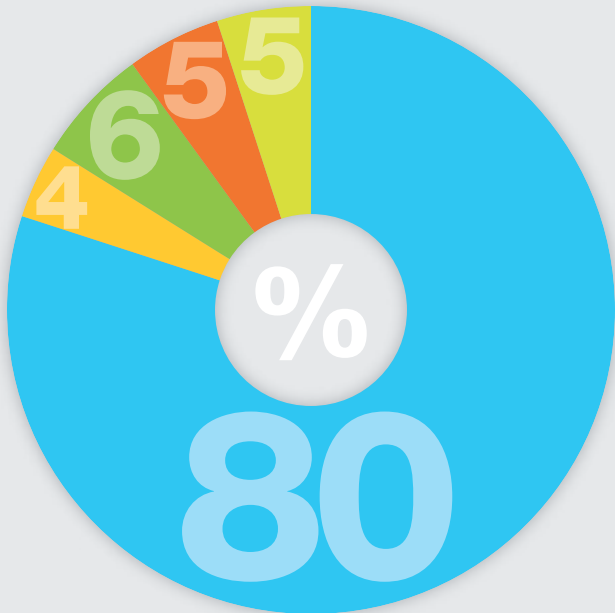
FINANCIAL STEWARDSHIP

2017 was a good year with positive financial results and strong financial stewardship, ensuring revenue growth to advance continuous quality improvement in fulfillment of our mission. Aligned with our vision, we continued development and progress with new products and partnerships with client organizations, making enhancements across the health care delivery continuum to assess competencies for osteopathic medicine and related professions. External validation of our financial results was

once again achieved in the annual financial audit, demonstrating strength in fiduciary oversight, internal controls, revenue diversification, and favorable expense ratios compared with national peer benchmarks. Sound management, planning, and negotiation result in minimal fee increases in our product and service offerings in 2017, helping secure a strong financial position for continued expansion to meet needs for expected growth of our programs and services.

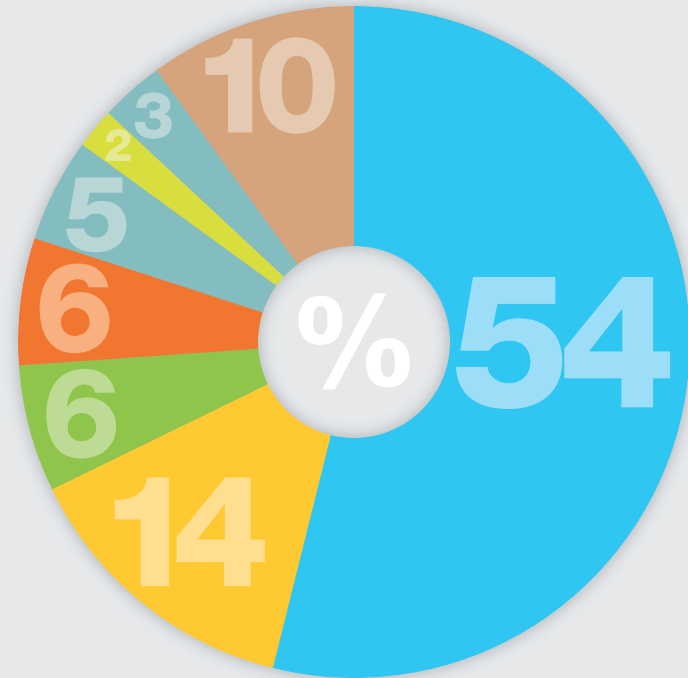


2017 REVENUE



COMPLEX-USA	80%
COMSAE	4%
COMAT	6%
CLIENT/OPAIM	5%
ADMIN SERVICES	5%

2017 EXPENSES



SALARIES AND BENEFITS	54%	DEPRECIATION	5%
EXAM ADMINISTRATION	14%	GOVERNANCE	2%
EXAM DEVELOPMENT	6%	PHYSICIAN EXAMINERS	3%
OFFICE SPACE	6%	IT, SUPPLIES, FEES AND OTHER	10%

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Shawna R. Duncan, DO	OSU-COM
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COMAT EMERGENCY MEDICINE ITEM REVIEW

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Frederic A. Rawlins, II, DO	VCOM-VC
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Rodney M. Fullmer, DO, MBS	Franciscan St. James Health Olympia Fields
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FOUNDATIONAL BIOMEDICAL SCIENCES CLINICAL REVIEW

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OBSTETRICS AND GYNECOLOGY ITEM REVIEW

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ACRONYMS FOR COLLEGES OF OSTEOPATHIC MEDICINE

ACOM Alabama College of Osteopathic Medicine

ARCOM Arkansas College of Osteopathic Medicine

ATSU-KCOM A.T. Still University-Kirkville College of Osteopathic Medicine

ATSU-SOMA A.T. Still University-School of Osteopathic Medicine in Arizona

AZCOM/MWU Arizona College of Osteopathic Medicine of Midwestern University

BCOM Burrell College of Osteopathic Medicine

CCOM/MWU Chicago College of Osteopathic Medicine of Midwestern University

CUSOM Campbell University School of Osteopathic Medicine

DMU-COM Des Moines University College of Osteopathic Medicine

ICOM Idaho College of Osteopathic Medicine

GA-PCOM Georgia Campus-Philadelphia College of Osteopathic Medicine

KCU-COM Kansas City University of Medicine and Biosciences College of Osteopathic Medicine

LECOM Lake Erie College of Osteopathic Medicine

LECOM Bradenton Lake Erie College of Osteopathic Medicine—Bradenton Campus

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

LUCOM Liberty University College of Osteopathic Medicine

MSUCOM Michigan State University College of Osteopathic Medicine

MU-COM Marian University College of Osteopathic Medicine

NSU-COM Nova Southeastern University College of Osteopathic Medicine

NYIT-COM New York College of Osteopathic Medicine of New York Institute of Technology

NYIT-COM Arkansas State New York College of Osteopathic Medicine of New York Institute of Technology – Arkansas State Campus

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

OU-HCOM Ohio University Heritage College of Osteopathic Medicine

PCOM Philadelphia College of Osteopathic Medicine

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

RowanSOM Rowan University School of Osteopathic Medicine

RVUCOM Rocky Vista University College of Osteopathic Medicine

TouroCOM-NY Touro College of Osteopathic Medicine—New York

TUCOM-CA Touro University College of Osteopathic Medicine—California

TUNCOM Touro University Nevada College of Osteopathic Medicine

UNECOM University of New England College of Osteopathic Medicine

UIWSOM University of the Incarnate Word School of Osteopathic Medicine

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

UP-KYCOM University of Pikeville Kentucky College of Osteopathic Medicine

VCOM-Auburn Edward Via College of Osteopathic Medicine—Auburn Campus

VCOM-CC Edward Via College of Osteopathic Medicine—Carolinas Campus

VCOM-VC Edward Via College of Osteopathic Medicine—Virginia Campus

WCUCOM William Carey University College of Osteopathic Medicine

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

WVSOM West Virginia School of Osteopathic Medicine



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