Pathways to Health Professions of the Future

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American Association of Colleges of Osteopathic Medicine

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The American Association of Colleges of Osteopathic Medicine (AACOM)

30 Colleges at 42 Locations in 28 States

Representing:

- Over 24,600 medical students (about 1 in 4 entering U.S. medical students)
- Over 37,000 faculty
  - 2500 full time (over 800 Basic Science, 1200 Clinical)
  - >36,000 clinical (45% DO, 55% MD)
- 3,500 Staff
The American Association of Colleges of Osteopathic Medicine provides leadership for the osteopathic medical education community by promoting excellence in medical education, research, and service, and by fostering innovation and quality across the continuum of osteopathic medical education to improve the health of the American public.
U.S. Colleges of Osteopathic Medicine

Map as of 3/25/2014
Overview

• The future of the health care system
• The health care professions – an inclusive view
• Health care changes and innovations in health care education
• Questions and discussion
Growth of Health Care

- The aging and growth of the U.S. population requires more health care.
- Through the Affordable Care Act (ACA), the number of Americans without health insurance has been reduced by 25 percent.
  - Roughly 10 million more people have health care insurance (e.g., expansion of Medicaid coverage in KY, WV, and OH).
- Expanding roles of providers, e.g., PAs, NPs, PharmDs, etc.
Percent Growth in Elderly Population (US)

Source: Census Bureau Population Projections
A Growing, Aging Population Matters

Physician utilization per 100,000 people by age

Source: HHS/HRSA The Physician Workforce: Projections and Research into Current Issues Affecting Supply and Demand, December 2008
U.S. Population: 2050

- Non-Hispanic White: 46.3%
- Hispanic: 30.3%
- Black: 13%
- Asian: 8%
- Native Hawaiian/Pacific Islander: 1.5%
- Other: 1.1%

U.S. Census Bureau Percent of the Projected Population by Race and Hispanic Origin for the U.S.: 2008 to 2050
Changes in Health Care Delivery in the U.S.

- Increasing demand
  - Demographic changes
  - Increasing access via insurance expansion
- Unsustainable cost increases
- Concerns about inefficiencies and quality
- Delivery system changes, e.g., growing size of health care organizations
- Innovations (e.g. increased use of non-physician clinicians; retail clinics, technological advances)
- Increased attention to primary care, chronic care, prevention, behavioral health, and population health

Source: Ed Salsberg on developments and trends in the Health Care Workforce
New Payment

New payment and delivery models include:

• ACOs
• State Innovation Models
• Team Based Care
• Social Determinants of Health
• Hot Spotting
• Bundled Payments
• IT Innovations
• Enhanced Care Coordination

Information courtesy of the 10th Annual AAMC Health Workforce Research Conference:
https://guidebook.com/guide/19735/event/8829599/
PATIENT-CENTERED MEDICAL HOME TEAM

- Physician
- Office Staff
- Nursing Team
- Specialists
- Clinical Care Coordinator
- Urgent-Care/Walk-in Clinic
- Physician Assistants, Nutritionists, Other Health Professionals

# Shifting Paradigm of Competence

<table>
<thead>
<tr>
<th><strong>Physician centered practice</strong></th>
<th><strong>Patient centered practice</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual physician autonomy</td>
<td>Collaboration as a team in a system</td>
</tr>
<tr>
<td>Anecdotal practice</td>
<td>Evidence-based standards</td>
</tr>
<tr>
<td>Focus on illness and cure</td>
<td>Focus on health promotion and wellness</td>
</tr>
<tr>
<td>Passive patient role</td>
<td>Involved patients and families</td>
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</table>
A Primary Care Crisis?

- 60 million Americans lack access to care.
- One in five sick people visit the ER for care they could have received from a primary care physician.
- Only 30 percent of U.S. physicians practice primary care.
- 50 years ago, half of U.S. doctors practiced primary care. Today, fewer than one in three do.
- Chronic diseases account for 75 cents of every dollar spent on health care in the United States.

Source: The Primary Care Project, http://theprimarycareproject.org/get-the-facts/
Workforce Composition: Growth of PAs/NPs Compared to Physicians

Percentages of Types of Direct Patient Care Providers, Supply and Production

Currently Practicing
- PAs/NPs: 18%
- Physicians: 82%

New Providers per Year
- PAs/NPs: 37%
- Physicians: 63%

Source: HHS/Health Resources and Services Administration, National Center for Health Workforce Analysis
Demand-Side Factors Contributing to Workforce Projections

- Aging of the current health care provider pool.
- Growing specialization by health care providers of all types.
- Changing work patterns for health care providers. Women in work force, decline in the FT and/or hours worked for both men and women.
- Aging population requiring more care.
- The consumer approach to health care driven partly by some insurance models for payment.
- Growing coverage of more of the population by insurance or other payment organizations.
- New health care professions.
Supply-Side Factors Contributing to Workforce Projections

- Rising cost of health professions education.
- Limits to growth in health profession education expansion – faculty numbers (salaries and demands for practitioners), financing the development of new schools (especially public).
- Growth in the number of schools/programs in some health professions.
- Lifestyle expectations of prospective practitioners.
- The economic downturn – some health care services viewed as a place to cut budget.
- Consolidation of health care services and facilities.
- But also, development of new practice locations – community health centers, minute clinics.
Impact of Affordable Care Act (ACA) on Physician Shortage

• With the ACA in effect, the projected shortages of patient care physicians is expected to increase from 7,400 in 2008 to 91,500 by 2020.

• Without the ACA in effect, the projected shortages of patient care physicians is expected to increase from 7,400 in 2008 to 64,100 by 2020.

Information courtesy of AAMC online:
Impact of Affordable Care Act on Physician Shortage

What do the projected physician shortages mean for the future of U.S. health care?

Information courtesy of AAMC online: https://www.aamc.org/download/158076/data/updated_projections_through_2025.pdf
Other Trends in Health Professions Education

- Innovation in Medical Education
- Increased numbers of students are participating in post-graduate training (not just physicians).
- Changes in length of training
- Interprofessional practice and education
- Technology
Opportunities to Improve Medical Education

- Transformation of U.S. Medical Education
  - Competency-based
  - Technology-enhanced
  - Greater focus on team-care competencies, population health, prevention, systems-based care
- Changes in MCAT, Match, curriculum, curriculum-delivery, and much more
- Single GME Accreditation System
Opportunities and Challenges

• New Curriculum Delivery Opportunities: Massive Online Open Courses

• New Curriculum Delivery Methods: gaming, modules, interprofessional teams

• New Learning Environments: longitudinal clinical experiences, international, interprofessional teams

• New Methods of Assessment: standardized patients, simulations, team-based evaluations

• New Accountability Expectations: Gainful Employment, heightened accreditation standards, growing expectations for accountability for GME (IOM Report)
The Changing Environment for Medical Education

- Transformation of Health Care Environment
  - Delivery system rapidly changing, consolidating
  - >50% of physicians employed, 80% by 2020
  - Aging population with multiple chronic diseases
  - The expansion of healthcare spending slowing and demand for healthcare will expanding: Federal, State, Business, Community, Personal
  - ACOs, Medical Homes, Team-based
  - Information systems
The Changing Environment for Medical Education

- Transformation of U.S. Medical Education
  - Competency-based Learning/Evaluation
  - Interprofessional Education
  - Information Technology
- Learning and Assessment Tools
  - Entrustable Professional Attributes
  - Next Accreditation System (ACGME)
  - Simulation
- Life-long learning expectations
  - Maintenance of Licensure
  - Maintenance of Certification
GME Accreditation Changes

In February 2014 the AOA, AACOM and the Accreditation Council for Graduate Medical Education announced joining together to create Single GME Accreditation System (2015-2020)

ACGME will incorporate osteopathic principles and practice into that system

MDs will have access to osteopathic GME
Typical Physician Training Timeline

The Osteopathic Physician (DO) Timeline

Osteopathic Medical Education

4 years
Undergraduate study (Bachelors degree)

4 years
Osteopathic Medical Degree

3–7 years
Internship/Residency

1–3 years
Specialty Fellowship

Board Certification/Licensure

11 to 18 years
Innovation in Medical Education Underway--

Education in Pediatrics Across the Continuum (EPAC)--AAMC-Macy project

- Competency-based vs. time-based
- Four schools: UCSF, U of CO, U of MN, U of UT

Multiple schools implementing 3+3

- LECOM, NYIT-COM, Texas Tech, NYU, UC-Davis, Oregon


Interprofessional Education and Practice
Core Competencies for Interprofessional Collaborative Practice

Sponsored by the Interprofessional Education Collaborative*

Report of an Expert Panel
May 2011

*IPEC sponsors:
American Association of Colleges of Nursing
American Association of Colleges of Osteopathic Medicine
American Association of Colleges of Pharmacy
American Dental Education Association
Association of American Medical Colleges
Association of Schools of Public Health
A New Pathway for Medical Education


November 14, 2013
Blue Ribbon Commission
Key Principles

Five Key Principles
Focus on team-based, patient-centered care.
Build on competency-based curriculum.
Provide continuous, longitudinal, education-based experience.
Administer via medical schools, in collaboration with GME providers with clinical experience in variety of settings.
Focus on healthcare delivery science.

www.BlueRibbonCommission.org
Technology in Health Care – Growing Impact

Using Data in Health Care

42 percent of Apps in health care can be used for direct patient care intervention and prediction of health.

Big data and intelligent diagnostic technology, as in IBM’s Watson.

Sources: [http://bit.ly/1cSYy7i](http://bit.ly/1cSYy7i) Read the article: [http://ibm.co/1q8Xani](http://ibm.co/1q8Xani)
# Health Professions Workforce Projections

<table>
<thead>
<tr>
<th>Profession</th>
<th>2012 employment</th>
<th>2022 projected change</th>
<th>2022 % growth</th>
<th>2012 median wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audiology</td>
<td>13,000</td>
<td>+4,300</td>
<td>+34%</td>
<td>$69,720</td>
</tr>
<tr>
<td>Dentistry</td>
<td>146,800</td>
<td>+23,000</td>
<td>+16%</td>
<td>$149,310</td>
</tr>
<tr>
<td>Medicine DO/MD</td>
<td>691,400</td>
<td>+123,200</td>
<td>+18%</td>
<td>$167,200</td>
</tr>
<tr>
<td>Nursing RN</td>
<td>2,711,500</td>
<td>+526,800</td>
<td>+19%</td>
<td>$65,470</td>
</tr>
<tr>
<td>Occupational Therapy</td>
<td>113,200</td>
<td>+32,800</td>
<td>+29%</td>
<td>$75,400</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>286,400</td>
<td>+41,400</td>
<td>+14%</td>
<td>$116,670</td>
</tr>
<tr>
<td>Physician Assistant</td>
<td>86,700</td>
<td>+33,300</td>
<td>+38%</td>
<td>$90,930</td>
</tr>
<tr>
<td>Podiatric Medicine</td>
<td>10,700</td>
<td>+2,400</td>
<td>+23%</td>
<td>$116,440</td>
</tr>
</tbody>
</table>

The Marketplace

Merritt Hawkins’ 2013 Review of Physician Recruiting Incentives:

“Primary care physicians remain at the top of the wish list for most hospitals, medical groups and other healthcare organizations. For the seventh consecutive year, two types of primary care physicians -- family physicians and general internists -- were top two most requested physician search assignments.”

“Demand is increasing rapidly for non-physician practitioners, including physician assistants (PAs) and nurse practitioners (NPs). For the first time in the 20 years Merritt Hawkins has been conducting this review, PAs and NPs were among our top 20 recruiting assignments.”
Combined DO and MD Growth Since 2002*

- The number of entering first-year DO and MD students has grown each year since 2002.

- By 2017, there will be a projected total of 3,707 first-year DO students and 4,591 first-year MD students.

Information courtesy of the AAMC 2013 Annual Meeting: https://s3.amazonaws.com/v3-app_crowdc/assets/events/UnQaEpCgx8/activities/Annual_Address_-11.1.2013.original.1383531279.pdf
Total Enrollment and Number of Colleges of Osteopathic Medicine Locations

Five-year interval

Total Enrollment and Number of Colleges, Branch Campuses and Teaching Sites

Number of Colleges and locations

Total Enrollment and Number of Colleges, Branch Campuses and Teaching Sites
Applicants to Osteopathic Medical Colleges
(Source: AACOM)
## Central Appalachia Applicants and Matriculants 2013 to Osteopathic Medical Colleges

<table>
<thead>
<tr>
<th>State</th>
<th>App</th>
<th>Matric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virginia</td>
<td>417</td>
<td>172</td>
</tr>
<tr>
<td>North Carolina</td>
<td>323</td>
<td>117</td>
</tr>
<tr>
<td>Georgia</td>
<td>329</td>
<td>117</td>
</tr>
<tr>
<td>Kentucky</td>
<td>217</td>
<td>104</td>
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<tr>
<td>Tennessee</td>
<td>260</td>
<td>97</td>
</tr>
<tr>
<td>Alabama</td>
<td>166</td>
<td>73</td>
</tr>
<tr>
<td>West Virginia</td>
<td>134</td>
<td>66</td>
</tr>
</tbody>
</table>

State of legal residence on application.
Kentucky Undergrad College Matriculants

To all osteopathic medical colleges – 109 matriculants in 2013

<table>
<thead>
<tr>
<th>College/University</th>
<th>Matriculants</th>
<th>College/University</th>
<th>Matriculants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alice Lloyd College</td>
<td>2</td>
<td>Northern Kentucky U</td>
<td>12</td>
</tr>
<tr>
<td>Asbury College</td>
<td>2</td>
<td>Thomas More College</td>
<td>8</td>
</tr>
<tr>
<td>Bellarmine U</td>
<td>3</td>
<td>Transylvania U</td>
<td>1</td>
</tr>
<tr>
<td>Centre College</td>
<td>2</td>
<td>University of Kentucky</td>
<td>3</td>
</tr>
<tr>
<td>Eastern Kentucky U</td>
<td>4</td>
<td>University of Louisville</td>
<td>35</td>
</tr>
<tr>
<td>Georgetown College</td>
<td>1</td>
<td>U of Pikeville</td>
<td>7</td>
</tr>
<tr>
<td>Kentucky State U</td>
<td>6</td>
<td>U of the Cumberlands</td>
<td>13</td>
</tr>
<tr>
<td>Morehead State U</td>
<td>2</td>
<td>Western Kentucky U</td>
<td>5</td>
</tr>
<tr>
<td>Murray State U</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Of Distinction: University of Pikeville-Kentucky College of Osteopathic Medicine

In 2014 UP-KYCOM earned high marks in rural medicine ranking fifth among all medical schools in the nation, both DO and MD, according to *U.S. News & World Report*’s 2014 edition of Best Graduate Schools.

UP-KYCOM ranked 2nd in the percentage of graduates who enter primary care residencies.

Since its inception in 1997, more than 800 physicians have graduated from UP-KYCOM with 60 percent serving primarily in rural health care facilities in Eastern Kentucky and other regions of Appalachia.
The workforce outlook is positive overall.

Health care, along with health care employment, continues to grow.

Innovation in health care delivery and health professions education

Interprofessional Education

Cost of education continues to grow.

Training models changing in many health professions.
Questions/Discussion

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