Graduate Medical Education in the United States

A Few Words About Important Topics

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Disclosure

- Professor of Medicine (Nephrology)
  Jefferson Medical College
- Full Time Salaried by ACGME
- No conflicts of interest to report
Topics

• Rhetorical Question
• CLER
• GME Funding/Positions
• Milestones
• Single Accreditation System
How Well Are We Doing?

• Reasonably Well, with focal challenges, in the Traditional Competencies
  • Patient Care and Procedural Skills (caveat re: confidence)
  • Medical Knowledge
  • Improving in shared understanding of elements of Professionalism
  • Better, but not ideal in Communications

• Not so well in Leading Change in Safety and Quality – Elements of:
  • Systems Based Practice
  • Practice Based Learning and Improvement
Adjusted Annual Changes in Adverse-Event Rates
Wang Y et al.

The change in the number of adverse events per 1000 hospitalizations

Panel A shows changes in overall adverse-event rates according to the condition.

Panels B through E show changes in rates for each condition according to the type of adverse event.
Evaluating Residency Programs Using Patient Outcomes

_\text{n= 4,906,169 deliveries in Florida and New York, 1992-2007}_
_\text{4124 physician program graduates of 107 residency programs}_

### Rate of Major Obstetric Complications by Graduates (%)

<table>
<thead>
<tr>
<th>Quintile</th>
<th>Rate of Major Obstetric Complications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q5</td>
<td>10.1-10.5</td>
</tr>
<tr>
<td>Q4</td>
<td>11.3-11.4</td>
</tr>
<tr>
<td>Q3</td>
<td>11.9-12.0</td>
</tr>
<tr>
<td>Q2</td>
<td>12.3-12.5</td>
</tr>
<tr>
<td>Q1</td>
<td>13.6-14.0</td>
</tr>
</tbody>
</table>

**Difference remains after correction for USMLE performance**

**Excess Risk $\Delta$ 33%**

**Q1 vs Q5**

$\Delta$ Q1-Q5: 2.8 – 3.8

*Residency Program of Origin, Ranked (Quintile) by Program Complication Rate*

*JAMA 2009;302(12):1277-1283. Asch, DA, et.al., Table 4*
Pivotal Elements of Excellent Experiential Education Applied to Graduate Medical Education (GME)

- Selection of Learners
- Expertise, and Mentoring Ability and Capacity of Faculty
- Other Professional Colleague Interactions
- Discipline Specific Technology/Facilities
- Clinical Experience Opportunities
- Ability to Define and Measure Educational Outcomes

- All Historic/Current/ Strengths of ACGME Accreditation Processes

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Why are our “Outcomes” Fine in “Specialty Based” Elements, Yet Inadequate to Meet the Contemporary Quality and Safety Imperative?
Why are our “Outcomes” Fine in “Specialty Based” Elements, Yet Inadequate to Meet the Contemporary Quality and Safety Imperative?
The Clinical Learning Environment (Context) is Pivotal
CLER

Addresses the Clinical Context, or Clinical Learning Environment, of our Educational Programs
The actions of the ACGME must fulfill the social contract, and must cause sponsors to maintain an educational environment that assures:

- the safety and quality of care of the patients under the care of residents today
- the safety and quality of care of the patients under the care of our graduates in their future practice
- the provision of a humanistic educational environment where residents are taught to manifest professionalism and effacement of self interest to meet the needs of their patients
The Components of The “Next” Accreditation System (NAS)

Clinical Learning Environment Review (CLER) Visits

- 10 year Self-Study Visit
- 10 year Self-Study
- prn Site Visits (Program or Institution)
- Continuous RRC and IRC Oversight and Annual Accreditation

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Improving Clinical Learning Environments for Tomorrow’s Physicians

Thomas J. Nasca, M.D., Kevin B. Weiss, M.D., and James P. Bagian, M.D.

“Approximately 2 months ago, I had a patient where I accidently administered a wrong dose of fentanyl during a procedure. The patient developed severe hypotension, and the procedure had to be temporarily halted until we could get her blood pressure back up. My attending was close by. He responded quickly. Ultimately, no harm was done.

“The reason I believe this happened is that during a procedure I’m sometimes required to administer fentanyl and must dilute it during the procedure. There are two dilutions, either to directly administer by syringe, or for use as an intravenous drip. We do this dilution while we are monitoring the patient. I was told to re-review the approach to dosing fentanyl during procedures and to be more careful.”

This experience was reported by a second-year anesthesiology resident, but dozens of similar patient-care experiences have been described to us by residents in various specialties during site visits that the Accreditation Council for Graduate Medical Education (ACGME) and the executive leadership and governance of U.S.
Clinical Learning Environment Review (CLER)

CLER Pathways to Excellence
Expectations for an optimal clinical learning environment to achieve safe and high quality patient care

Accreditation Council for Graduate Medical Education
What About Funding of the GME Environment?

- Institute of Medicine Report (May, 2014)
- HRSA FQHC Project successful
  - Yet without continuing funding
- Various proposals:
  - Increase in “Cap” by 15,000 positions
  - Modulate IME Payments through measured “Outcomes”
  - On hold pending IOM Recommendations
- Remaining “on the table”
  - “Overfunding” of IME by 50% (loss of 33% of Medicare GME Reimbursement)
  - >50% Total Medicare Reduction (Bowles-Simpson)
  - 10% Administration Budget Proposal 2013
  - The President’s Budget Proposal 2014
- State Initiatives (Medicaid and other)
The Pipeline

Nasca, T.J., Miller, R.S., Holt, K.D.

Effects of Potential Federal Funding Cuts on Graduate Medical Education: Results of a Survey of Designated Institutional Officials
Holt, K.D., Miller, R.S., Philibert, I., Nasca, T.J.
Journal of Graduate Medical Education. 2014; 5(1):

Figure 1. Actual and Projected Numbers of Medical School Graduates Entering Graduate Medical Education (GME) Training Positions, as Compared with Three Scenarios of Available Positions (2001–2020).

Health Policy Report. The Uncertain Future of Medicare and Graduate Medical Education.
Iglehart, J. NEJM (10.1056/NEJMhpr1107519)
Published on September 7, 2011. at NEJM.org.
Number of Residents (Matriculants) Entering the Pipeline and Continuing GME Programs by Academic Year

1 2012-2013 ACGME Data Resource Book. Available at www.ACGME.org

© 2014 Accreditation Council for Graduate Medical Education (ACGME)
Effects of Potential Federal Funding Cuts on Graduate Medical Education: Results of a Survey of Designated Institutional Officials

Kathleen D. Holt, PhD
Rebecca S. Miller, MS
Ingrid Philibert, PhD, MBA
Thomas J. Nasca, MD, MACP

Abstract

Background Proposed reductions in federal funding for physician education may affect the United States’ ability to produce the number of physicians needed to provide care.

Objective Using a survey similar to that used by the ACGME in 2011, we assessed designated institutional officials’ (DIOs) perceptions of the impact of potential GME funding reductions.

Method In August 2013, we sent a survey link to all DIOs of ACCME-accredited institutions (N = 678). A 9-item survey asked how future federal funding would affect the number of residency programs in their institutions under 4 different funding scenarios: stable funding, and reductions of 10%, 33%, and 50%. We also asked about changes in the number of residency positions during the last 2 years.

Results The response rate was 47.9% (325 of 678 DIOs); respondents represent 58.9% of accredited institutions with more than 1 program. Most respondents reported no change or an increase under the stable funding scenario. Under a 33% funding reduction, an estimated 17379 (14.8% of all current) positions would be lost, and a 50% reduction would result in a loss of 33562 positions (28.6%). Primary care specialties (eg, family medicine, internal medicine) would be most affected under the greatest funding reductions.

Conclusions The findings of the 2013 survey are consistent with 2011 data, with DIOs projecting significant reductions in programs and positions under more severe budget cuts. DIO comments highlighted reduced optimism (compared to data obtained in 2011) about the effect of funding cuts and concerns about the impact of reductions on patient care and health care personnel at teaching institutions.
ACGME DIO GME Funding Study II

• Repeated 2011 study
• Enhanced specificity around reductions
• 325 DIO’s responded (48%)
• Represent:
  • 61.5% of all accredited programs
  • 61.8% of all US residency positions
• Results extrapolated to 100% of 2012-2013 academic year cohort

Holt, K.D., Miller, R.S., Philibert, I., Nasca, T.J.
Effects of Potential Federal Funding Cuts on Graduate Medical Education: Results of a Survey of Designated Institutional Officials. Journal of Graduate Medical Education. 2014(1): 183-188.
# ACGME DIO GME Funding Study II

<table>
<thead>
<tr>
<th>Funding Scenario</th>
<th>Type of Specialty</th>
<th>Positions Lost (#)</th>
<th>Mean Lost per Specialty (#)</th>
<th>Minimum Lost for any one Discipline</th>
<th>Maximum Lost for any one Discipline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stable Funding</td>
<td>Core¹</td>
<td>705</td>
<td>24</td>
<td>0</td>
<td>282</td>
</tr>
<tr>
<td></td>
<td>Subspecialty</td>
<td>295</td>
<td>13</td>
<td>0</td>
<td>164</td>
</tr>
<tr>
<td>10% Reduction</td>
<td>Core</td>
<td>3,169</td>
<td>109</td>
<td>2</td>
<td>834</td>
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<tr>
<td></td>
<td>Subspecialty</td>
<td>1,367</td>
<td>62</td>
<td>0</td>
<td>788</td>
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<tr>
<td>33% Reduction</td>
<td>Core</td>
<td>13,034</td>
<td>449</td>
<td>13</td>
<td>3,079</td>
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<tr>
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<td>Subspecialty</td>
<td>4,346</td>
<td>198</td>
<td>0</td>
<td>2,351</td>
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<tr>
<td>50% Reduction</td>
<td>Core</td>
<td>25,425</td>
<td>877</td>
<td>25</td>
<td>5,514</td>
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<tr>
<td></td>
<td>Subspecialty</td>
<td>8,137</td>
<td>370</td>
<td>0</td>
<td>4,269</td>
</tr>
</tbody>
</table>

¹ Core - “Pipeline” Positions: Positions in programs leading to Initial Board Certification  
Subspecialty - Positions in programs leading to Certification in disciplines that require completion of a Core or Pipeline program

Holt, K.D., Miller, R.S., Philibert, I., Nasca, T.J.  
Effects of Potential Federal Funding Cuts on Graduate Medical Education: Results of a Survey of Designated Institutional Officials.  
Journal of Graduate Medical Education. 2014(1):183-188.
Major Core (Pipeline) Position Losses
2012-2013 Academic Year  n = 97,155

1 2012-2013 ACGME Data Resource Book. Available at www.ACGME.org

Holt, K.D., Miller, R.S., Philibert, I., Nasca, T.J.  Effects of Potential Federal Funding Cuts on Graduate Medical Education: Results of a Survey of Designated Institutional Officials. Journal of Graduate Medical Education. 2014(1):183-188.
Major Subspecialty Position Losses
2012-2013 Academic Year  n = 20,582

1 2012-2013 ACGME Data Resource Book. Available at www.ACGME.org

Holt, K.D., Miller, R.S., Philibert, I., Nasca, T.J. Effects of Potential Federal Funding Cuts on Graduate Medical Education: Results of a Survey of Designated Institutional Officials. Journal of Graduate Medical Education. 2014(1):183.188.
Obvious Conclusion for ACGME

• Every GME program and position is valuable, and should be treated as a *national asset*

• ACGME/RRC systems and actions should be configured to aid programs to continually improve, optimizing use of the public trust

• We believe NAS, CLER, and Milestones all are in alignment with those goals
The Goal of the Continuum of Clinical Professional Development

- **Novice**
- **Beginner**
- **Competent**
- **Proficient**
- **Expert**
- **Master**

- **Undergraduate Medical Education**
- **Graduate Medical Education**
- **Clinical Practice**

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First Look at US Milestones Data

- Differ from Singapore Milestones:
  - Specialty Unique
  - Not Trend Data
  - First Snapshot (Mid-PGY Year)

- 16,506 potential residents in 5 specialties
- \( n = 16,505 \) on duty residents in reporting window
- 100\% \( (n = 16,505) \) reported
- Mean by Competency, Mean of Program Means, error bars denote ± SD
2013 December USA Milestone Mean of Program Means (n = 16,505 residents)

Patient Care

Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4
Emergency medicine Neurological surgery Orthopaedic surgery Radiology-diagnostic Urology

Medical Knowledge

Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4 Year 1 Year 2 Year 3 Year 4
Emergency medicine Neurological surgery Orthopaedic surgery Radiology-diagnostic Urology

© 2014 Accreditation Council for Graduate Medical Education (ACGME) and ABMS Specialty Boards
2013 December USA Milestone Mean of Program Means (n = 16,505 residents)

Professionalism

Interpersonal Communication Skills

© 2014 Accreditation Council for Graduate Medical Education (ACGME) and ABMS Specialty Boards
2013 December USA Milestone Mean of Program Means (n = 16,505 residents)

Systems-Based Practice

Practice-Based Learning

© 2014 Accreditation Council for Graduate Medical Education (ACGME) and ABMS Specialty Boards
Much Work Yet To Be Done

- Completion of Subspecialty Milestones v.1.0
- Validation and Refinement over time
  - In concert with Specialty Boards, Community
- Refine Clinical Competency Committee “set-points” *(Inter-Program Reliability)*
- Faculty Development
  - In concert with AAMC, AIAMC, AHME, ABMS Boards, and OPDA Organizations
- Integration along the Continuum (where feasible)
Let’s Think Some More About Milestones and the Continuum
The Continuum of Development of the Physician in the USA

- **Beginner**
  - SAT
  - MCAT
  - NBME
  - FSMB
  - Collegiate Accreditation

- **Competent**
  - MCAT
  - NBME
  - LCME

- **Proficient**
  - MCAT
  - NBME
  - LCME

- **Expert**
  - MCAT
  - NBME
  - LCME

- **Master**
  - MCAT
  - NBME
  - LCME

- **Advanced**
  - MCAT
  - NBME
  - LCME

- **Performance in Practice**
  - ABMS – Certification, MOC
  - FSMB – Licensure, MOL
  - CMSS/ABMS – ITE’s
  - ECFMG – Visa

- **AHA/ AHME/ AIAMC/ COTH/AAMC**

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**Credit Systems**

- **AMA Cat 1 Credit System**
  - ACCME
  - ACGME
The “Continuum” in the United States

• Thought of as UME/GME/CME in the Allopathic dimensions of the profession
• Parallel educational system in the Osteopathic dimensions of the profession
Historic Agreement
Announced on February 26, 2014

For more information contact:
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AOA – Mike Campea
312.202.8043, mcampea@osteopathic.org

AACOM – Lisa Cole
301.968.4146, lcole@AACOM.org

Allopathic and Osteopathic Medical Communities Commit to a Single Graduate Medical Education Accreditation System

CHICAGO, February 26, 2014 – The Accreditation Council for Graduate Medical Education (ACGME), the American Osteopathic Association (AOA), and the American Association of Colleges of Osteopathic Medicine (AACOM) have agreed to a single accreditation system for graduate medical education (GME) programs in the U.S. After months of discussion, the allopathic and osteopathic medical communities have committed to work together to prepare future generations of physicians with the highest quality GME, ultimately helping to ensure the quality and safety of healthcare delivery.
March 8, 2014

Dear Members of the Graduate Medical Education Community,

Over the past seven years I have used this vehicle, an open letter to our community, to communicate important information directly to all engaged in the graduate medical education (GME) effort in the United States. Again today I take advantage of this opportunity to speak with you concerning a major event in American medicine, the creation of a single accreditation system to set standards and oversee the education and training of future generations of physicians to serve the American public. The agreement between the Accreditation Council for Graduate Medical Education (ACGME), the American Association of Colleges of Osteopathic Medicine (AACOM), and the American Osteopathic Association (AOA) sets in motion the accreditation of all GME programs under the auspices of an expanded ACGME.


- Roll-Out of Phase 2 of NAS
  - Learn from Phase 1 of NAS first two cycles
- Complete Round 1 of CLER Visits
  - Deliver first national report on CLER
- Begin Outreach to AOA Accredited Programs/Institutions
  - Refine Data Systems
  - Make Case Logs, Resident Survey, Faculty Survey, ADS Update available during application phase
  - Revise ACGME ByLaws, gain Member Organization approval
  - Form Osteopathic Recognition and NMM Committees
- Complete Initial Subspecialty Milestones Development
- Begin Review of Specialty Milestones

• Work with *All* Organizations related to GME Funding, Positions

• Support Internal Medicine and General Surgery National Duty Hour Studies

• Hold National Discussions stimulated by the Institute of Medicine Report on GME
  • Partnership with Other Organization(s)

• Work in the Broader Context of the Continuum
  • Enhancing the “Transitions”
  • Engaging in discussions of the implications of Milestone Frameworks

• Enhance collegiality, professionalism, and focus on our mission
Optimism

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

Oliver Wendell Holmes
It is *Always* the Right Time
To Do What is *Right*

Rev. Martin Luther King
Thank You!