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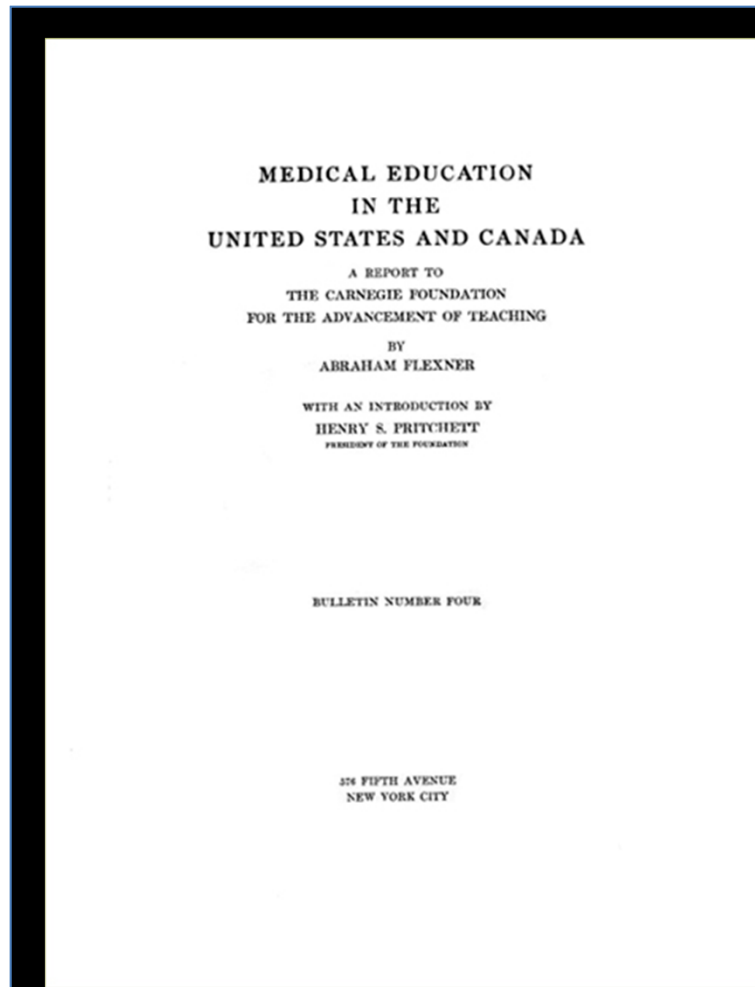
# **Educating Physicians: A Call for Reform of Medical School and Residency**

**David M. Irby, PhD**

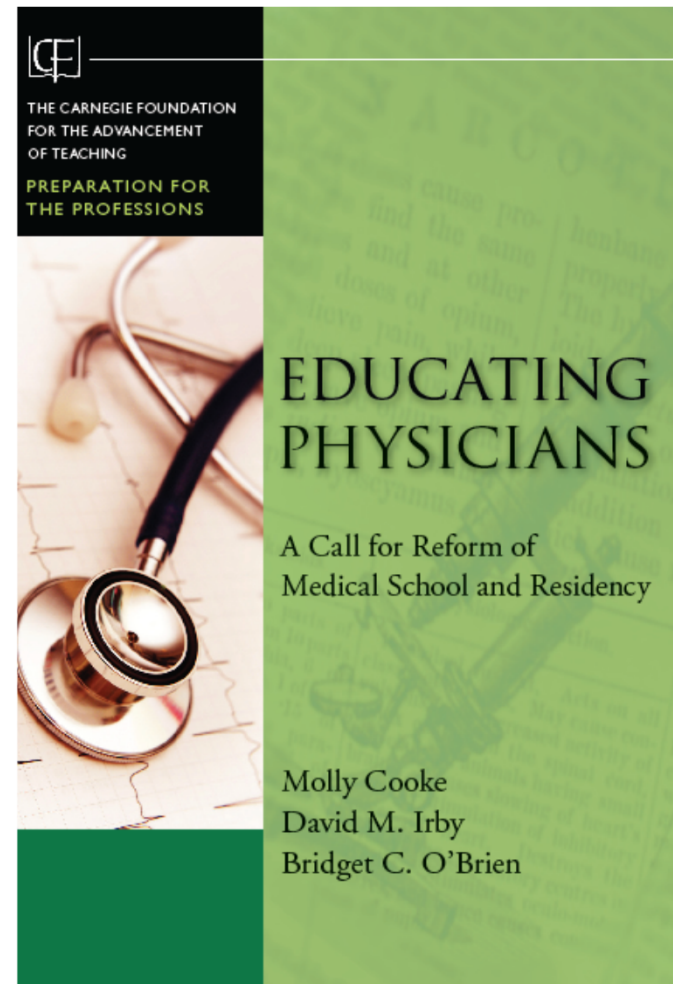
IAMSE Webinar  
September 1, 2011

# Reforming Medical Education

-1910-



-2010-



# Objectives

- Describe the key findings and recommendations of the 1910 Flexner Report
- List the four key recommendations of the 2010 Carnegie Report

# Precursor to 1910 Study

- Concern over variability in medical schools
- AMA /AAMC site visited schools in 1906
  - Validated concerns but unable to sanction their own
- Sought impartial third party
  - The newly created Carnegie Foundation for the Advancement of Teaching
    - Abraham Flexner, an educator, hired for study

# 1910: Flexner's Observations



- Great variability
- Lax admissions standards
- Passive learning, anemic curricula, poor facilities
- Faculty of practitioners
- No accreditation, certification or residency training

Flexner. Medical Education in the United States and Canada (1910).

# Flexner's Legacy



UC Medical Department 1910

- High standards for admission
  - College degree with science requirements
- Expanded science-based curriculum
  - Two years basic sciences with laboratory experience
  - Two years clinical experience
- University/teaching hospital

# Medical Education Then and Now

1910



Dissecting Room, medical students and professor

2010

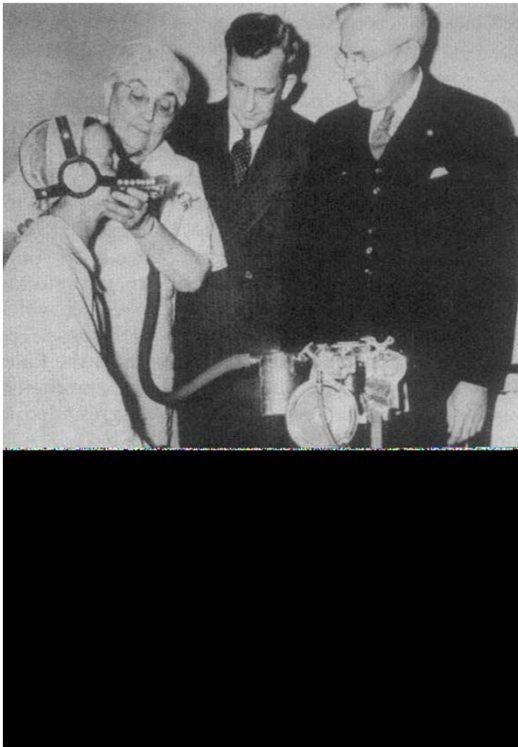


Multi-disciplinary lab with media support



# Medical Education Then & Now

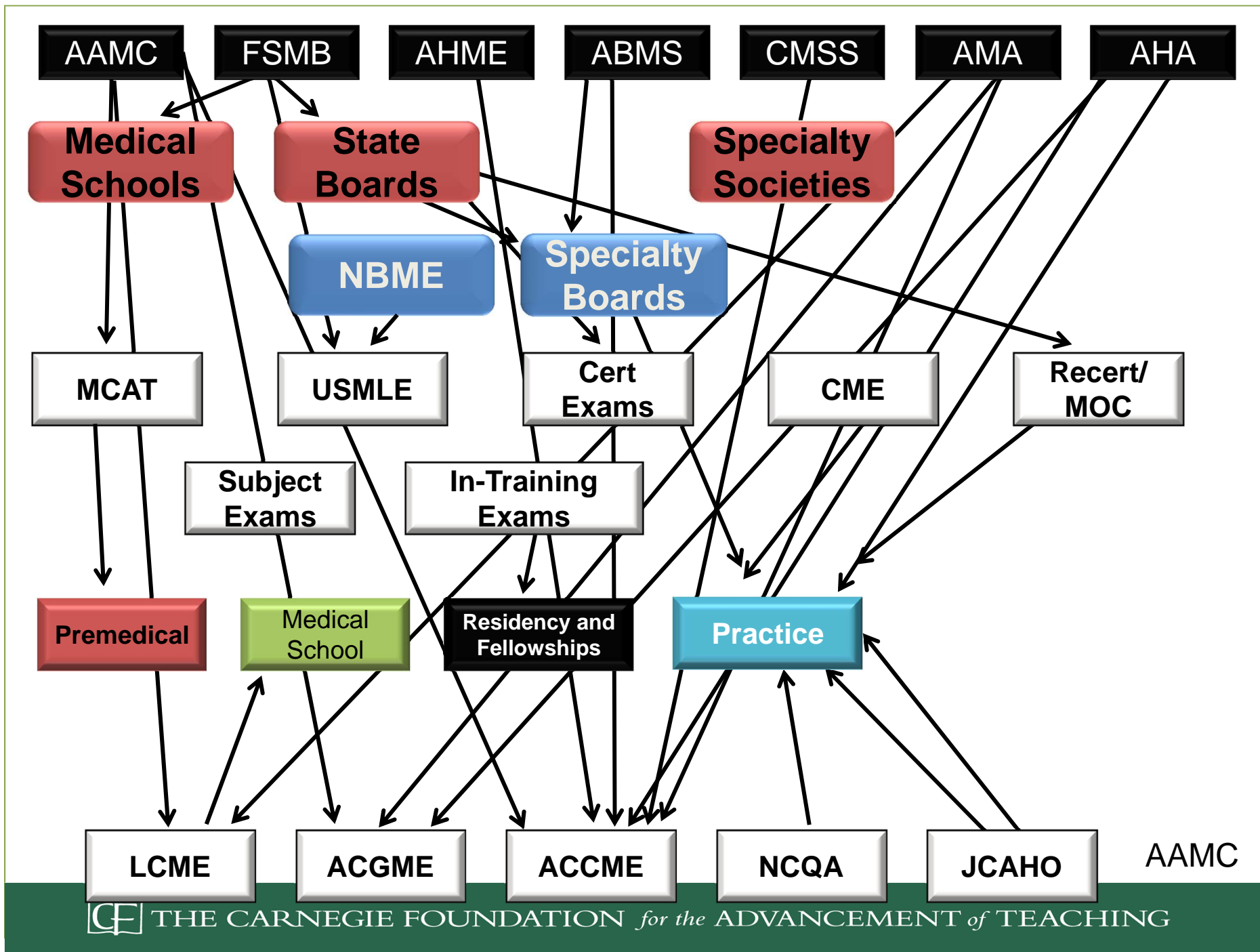
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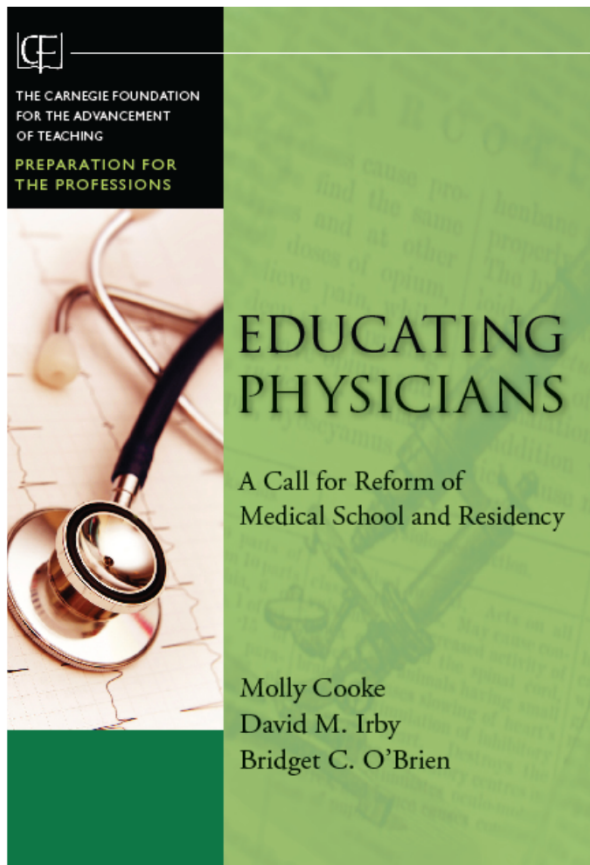




# 2010 Carnegie Research Team



# 2010 Carnegie Study



- Part of 5 profession study
  - Clergy, law, engineering, nursing, medicine
- Included 14 site visits
  - Interviews, focus groups, observations
- Based on research in the learning sciences and medical education

# Recommendations for the Future

- **Standardization and individualization**
  - *Set outcomes and allow flexibility in learning*
- **Integration**
  - *Connect knowledge and experience*
- **Habits of inquiry and improvement**
  - *Focus on excellence*
- **Identity formation**
  - *Develop professional values and dispositions*

# Standardize on Outcomes



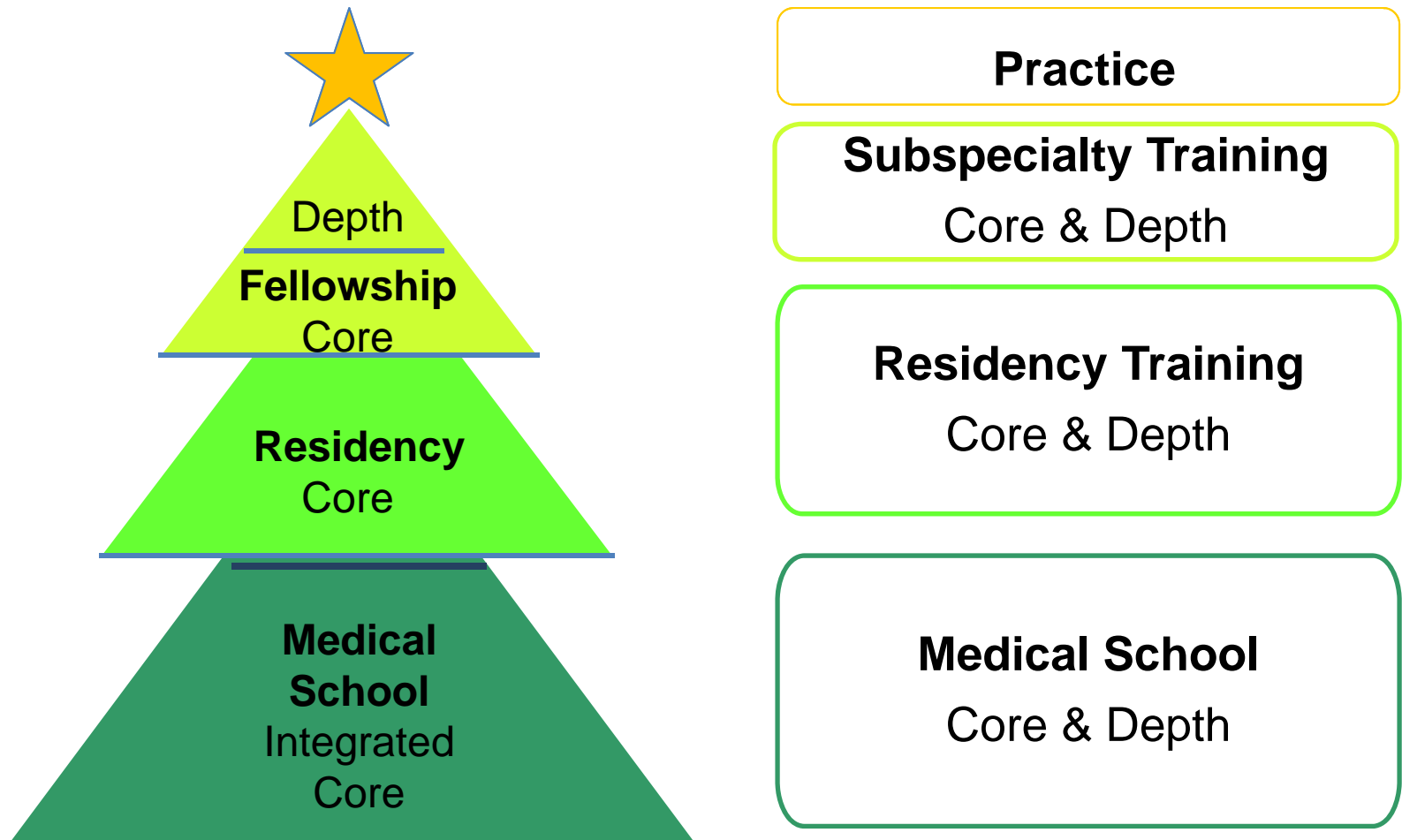
- Standardize on learning and practice outcomes
- Develop competencies and milestones
- Use multiple forms of assessment

# Competency Milestones -Patient Care

Competency Domain for Patient Care						
Sub-Domain	Mid First Year Milestones	Mid Second Year Milestones	Early Third Year Milestones	Late Third Year Milestones	Fourth Year Milestones	Graduate will be able to ... (Competencies)
History Taking	<ul style="list-style-type: none"> <li>Gather, synthesize, and organize basic information from a patient into the standard format of the medical history</li> </ul>	<ul style="list-style-type: none"> <li>Gather, synthesize, and organize information from a patient into the standard format of a medical history, including information related to sensitive topics and information relevant to specific populations</li> </ul>	<ul style="list-style-type: none"> <li>Obtain a complete history in an organized fashion</li> </ul>	<ul style="list-style-type: none"> <li>Obtain a focused interval history (e.g., follow-up visit, pre-rounding interview)</li> </ul>	<ul style="list-style-type: none"> <li>Obtain a complete history in an organized fashion</li> </ul>	<ul style="list-style-type: none"> <li>Gather complete and focused histories in an organized fashion, appropriate to the clinical situation and specific population</li> </ul>
			<ul style="list-style-type: none"> <li>Obtain a focused interval history (e.g., follow-up visit, pre-rounding interview)</li> </ul>		<ul style="list-style-type: none"> <li>Obtain focused, pertinent history in urgent, emergent, and consultation settings</li> </ul>	
History Taking	<ul style="list-style-type: none"> <li>Begin to apply approaches of clinical reasoning to help define relevant information to gather in the history</li> </ul>	<ul style="list-style-type: none"> <li>Apply approaches of clinical reasoning to focus the history and gather information relevant to the patient's chief complaint</li> </ul>	<ul style="list-style-type: none"> <li>Gather history relevant to specific populations or behaviors as outlined in the clerkship learning objectives (e.g., acute pain, geriatric, pediatric, preoperative)</li> </ul>	<ul style="list-style-type: none"> <li>Gather history relevant to specific populations or behaviors as outlined in the clerkship learning objectives (e.g., acute pain, geriatric, pediatric, preoperative)</li> </ul>	<ul style="list-style-type: none"> <li>Gather history relevant to specific populations or behaviors as outlined in the clerkship learning objectives (e.g., acute pain, geriatric, pediatric, preoperative)</li> </ul>	<ul style="list-style-type: none"> <li>Gather complete and focused histories in an organized fashion, appropriate to the clinical situation and specific population</li> </ul>
			<ul style="list-style-type: none"> <li>Identify and begin to use alternate sources of information to obtain the history when a patient is unable to provide a clear history</li> </ul>	<ul style="list-style-type: none"> <li>Identify and use alternate sources of information to obtain the history when a patient is unable to provide a clear history</li> </ul>	<ul style="list-style-type: none"> <li>Identify and use alternate sources of information to obtain history when needed, including from primary care and other physicians and patient caregivers</li> </ul>	
History Taking	<ul style="list-style-type: none"> <li>Begin to apply approaches of clinical reasoning to help define relevant information to gather in the history</li> </ul>	<ul style="list-style-type: none"> <li>Apply approaches of clinical reasoning to focus the history and gather information relevant to the patient's chief complaint</li> </ul>	<ul style="list-style-type: none"> <li>Apply clinical reasoning to focus the history, and identify and resolve important missing information</li> </ul>	<ul style="list-style-type: none"> <li>Apply clinical reasoning to focus the history, and identify and resolve important missing information</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate clinical reasoning and efficiency in gathering focused information relevant to a patient's care</li> </ul>	<ul style="list-style-type: none"> <li>Gather complete and focused histories in an organized fashion, appropriate to the clinical situation and specific population</li> </ul>
			<ul style="list-style-type: none"> <li>Apply clinical reasoning to focus the history, and identify and resolve important missing information</li> </ul>	<ul style="list-style-type: none"> <li>Apply clinical reasoning to focus the history, and identify and resolve important missing information</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate clinical reasoning and efficiency in gathering focused information relevant to a patient's care</li> </ul>	



# Individualization: Core & Depth



# Recommendations for the Future

- Standardization and individualization
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- **Integration**
  - *Connect knowledge and experience*
- Habits of inquiry and improvement
  - *Focus on excellence*
- Identity formation
  - *Develop professional values and dispositions*

# Integration



- Connect knowledge and experience
- Engage in multiple forms of reasoning
  - Analytical reasoning
  - Pattern recognition
  - Creative and adaptive reasoning

# Examples of Integration

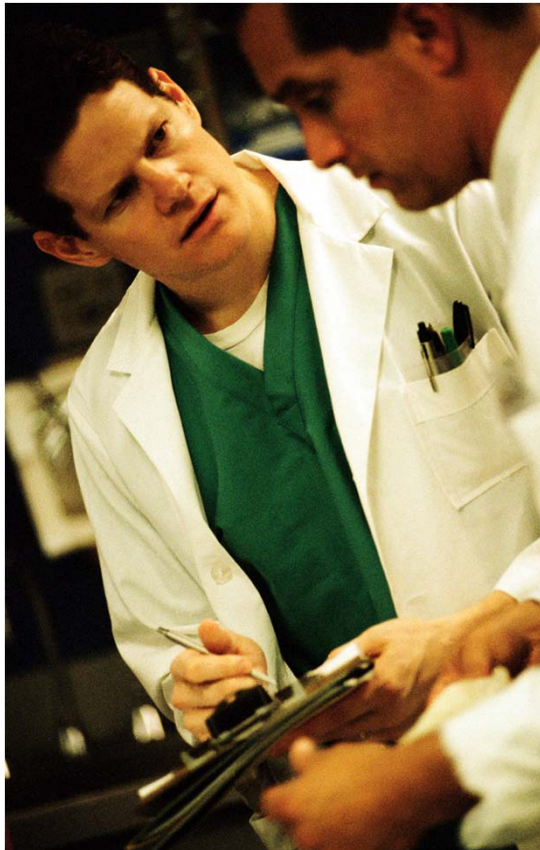


- Early clinical immersion
- Longitudinal integrated experience

# Recommendations for the Future

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# Habits of Inquiry & Improvement



- Develop habits of learning and innovation
  - Develop routine and adaptive expertise
- Advance expertise through deliberate practice & feedback
  - Experts vs experienced non-experts
- Participate in communities of inquiry and practice



# Everyday Inquiry/Improvement



- Engage in real projects, with training and support
- Document and assess project-based learning
- Learn methods of inquiry and discovery

# Recommendations for the Future

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# Professional Identity Formation



- Formation
  - Process of taking on identity
  - Commitment to values, dispositions and aspirations
- Learned through
  - Participation in a community of practice
  - Observation of role models, interactions
  - Coaching, instruction, assessment and feedback

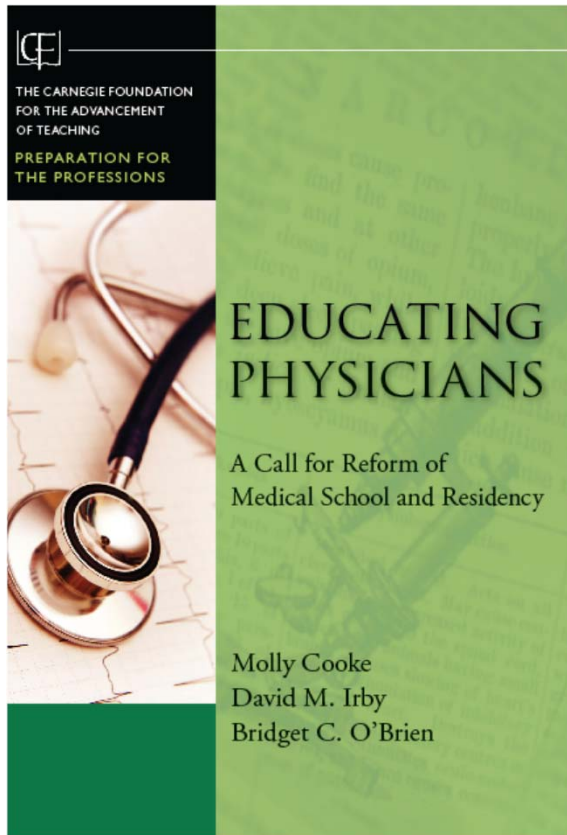
# Strategies for Formation



- Courses, rituals, and codes of conduct
- Self-assessment, reflection, planning
- Appreciative inquiry
- Ratings of respect

## **Institutional Culture**

# Summary



1. Individualize and standardize
2. Integrate
3. Inquire and improve
4. Identity formation