Charting a Rational Course for the Future of Medical Education

Steven L. Kanter, M.D.
Friday, September 30, 2016
EVERY MORNING SHE HAD THAT NAGGING FEAR: IF HER CLOTHES WEREN'T WRINKLE-FREE AND PERFECT, SOMETHING BAD WOULD HAPPEN.

INSIDE THE WORLD OF OBSESSIVE COMPULSIVE DISORDER
CHANGE SERVICE REQUESTED

***************AUTO**MIXED ABC 150

Steven Canter
Dean
University of Missouri-Kansas City School of Medicine
2411 Holmes St
Kansas City MO 64108-2741

THE OWL, 1972

UMKC
School of Medicine
From: "FacAffairs@medschool.pitt.edu" <FacAffairs@medschool.pitt.edu>
Date: Tuesday, November 17, 2015 at 12:38 PM
To: Steven Kanter <kanternl@umkc.edu>
Subject: Referee Request from the Univ of Pittsburgh Sch of Medicine

Dear Dr. Kanter:

Dr. Xxxx Yyyy has been recommended for academic Promotion to Associate Professor without tenure in the Clinician - Educator pathway of the Faculty of Medicine, University of Pittsburgh.

The School's Standing Committee for Non-Tenured Faculty Promotions and Appointments (NTFPA) is now in the process of reviewing and evaluating this recommendation. We would very much value your opinion and assessment of Dr. Yyyy's qualifications for this proposal. We would appreciate specifically your candid appraisal of the candidate’s strengths and quality of contributions in research, teaching, and service. If possible, please comment on the suitability of this candidate for a comparable professorial rank at your institution. The confidentiality of your letter will be maintained unless disclosure is required by law.

I realize that you may not know the candidate. However, if you are able to assess this candidate's work, please review the documented accomplishments in the Curriculum Vitae and Executive Summary (available on the web site below) and make a recommendation based on our criteria and on your experience at your own institution. I would be most grateful if you could submit your response within two weeks of the date of this letter. If you are unable to comment on this candidate, please notify my office immediately via e-mail at facaffairs@medschool.pitt.edu and I invite you to submit the names of other qualified referees.

Please visit the following web site and use the credentials provided to login, review the candidate’s portfolio, and submit your review.

Website: https://www.henry.pitt.edu/
Login Name: xxxx
Password: xxxx

I recognize that a request such as this entails significant time and effort, and so I wish to emphasize the importance of your expert evaluation to the committee and to this vital aspect of academic life.

Sincerely,

Ann E. Thompson, M.D., Voc Dean

Other ways to contact the Office of Faculty Affairs at the University of Pittsburgh School of Medicine:
EMAIL: facaffairs@medschool.pitt.edu
VOICE: 412-648-9060
From: "FacAffairs@medschool.pitt.edu" <FacAffairs@medschool.pitt.edu>
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- Where is Kansas City?

- Does the University of Missouri have a School of Medicine in Kansas City?

- What does current practice in medical education reveal about our underlying beliefs? Do these beliefs still make sense?

- As we update our beliefs and actions, what threats can limit our effectiveness?

- Charting a rational course
**Charting a Rational Course for the Future of Medical Education**

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Charting a rational course
University of Missouri – Kansas City (UMKC) School of Medicine

• Doctor of Medicine Degree Programs
  – B.A./M.D. six-year program (about 115 students/year)
  – M.D. four-year track (about 15 students/year)

• Master’s Degree Programs
  – Physician Assistant
  – Anesthesia Assistant
  – Bioinformatics
  – Health Professions Education
  – Physician Leadership Development (with Business School)
University of Missouri – Kansas City (UMKC) School of Medicine

- A relatively young medical school – 45 years in existence
- 17 academic departments (3 basic, 14 clinical)
- Signature program
  - A premier accelerated, dual-degree program
  - Docent System of Medical Education
- About 750 students
- Over 3500 graduates with the MD degree
- Nearly half stay in region after graduation
- About 400 residents/fellows
University of Missouri – Kansas City (UMKC) School of Medicine

Docent Teams

- 12 students and 1 faculty Docent per team
- 3 MS-3s, 3 MS-4s, 3 MS-5s, 3 MS-6s
- Students are paired: MS-3 with MS-5; MS-4 with MS-6
- See outpatients ½ day per week
- 2 months inpatient DoRo in each of years 4, 5, and 6
- The best of apprenticeship learning combined with mentoring, peer teaching, small group learning

Docent Units

- Each student has a small office on same unit as Docent’s office
- $10K to name a student office
Apprenticeship Learning

- Learning an art, craft, or profession
  - under the personal guidance of an experienced practitioner
  - for a sustained time period
  - in the context of professional practice
Apprenticeship Learning

• Characteristics
  – Student is active, instructor is a coach
  – Learning and teaching are social as well as educational processes
  – Relationship between student and instructor is dynamic
  – Student involved in every day practical experiences
  – Student increasingly participates in a community of professional learning and practice
Why did a medical school, originally designed to educate primary care physicians for Missouri and the Midwest, end up 45 years later with graduates in major leadership positions around the country?

What factors contributed to this phenomenon?
Mark Ediger, M.D. ’78

- Lt. General
  - Directs operations of U.S. Air Force Medical Service
  - Commanded two medical groups and served as command surgeon for three major commands
  - Air Force Distinguished Service Medal, Legion of Merit, Bronze Star, Meritorious Service Medal, Aerial Achievement Medal
  - UMKC School of Medicine Alumni Board president
Karen Remley, M.D. ’80

- Executive Director/CEO of the American Academy of Pediatrics
  - Dr. Remley is the first female CEO of the AAP, an organization that represents 62,000 primary care pediatricians, pediatric medical subspecialists and pediatric surgical specialists
  - Former chief medical director of Anthem Blue Cross and Blue Shield of Virginia
  - Founding director of the M. Foscue Brock Institute for Community and Global Health at Eastern Virginia Medical School
Alan Braverman, M.D. ’85

• Professor of Medicine
• Alumni Endowed Professor in Cardiovascular Diseases
• Director, Marfan Syndrome and Genetically Triggered Thoracic Aortic Aneurysm Clinic
  Washington University School of Medicine, St. Louis
• Chief-of-service for inpatient cardiology, Barnes-Jewish Hospital
  – Nationally-recognized authority on Marfan syndrome, Loeys-Dietz aneurysm syndrome, thoracic aortic aneurysms and dissections, bicuspid aortic valve disease
  – Coordinates largest multidisciplinary clinic in the Midwest
  – 2010 Take Wing Award, 2009 American Heart Association Hugh D. McCulloch Award
Tom Toth, M.D. ’86

- Founder and Director, In Vitro Fertilization Unit
- Director, Reproductive Endocrinology Fellowship Training Program Massachusetts General Hospital
- Associate Professor of Obstetrics, Gynecology, and Reproductive Biology Harvard Medical School
  - NIH-funded research in assisted reproduction
  - Clinical interests span infertility, reproductive endocrinology, fertility preservation, and cryopreservation
  - *Boston Magazine* Top Doctor for infertility
  - 2013 Take Wing Award; 2002 Alumni Achievement Award
Catherine Spong, M.D. ’91

- Deputy Director of the National Institute of Child Health and Human Development
  - Executive Secretary of the National Advisory Child Health and Human Development Council
  - She is board certified in maternal-fetal medicine and obstetrics and gynecology
  - Dr. Spong is a fellow of ACOG and a member of the Society for Maternal-Fetal Medicine, the Society for Gynecologic Investigation, the Society for Neuroscience, and the Perinatal Research Society.
Lisa Fitzpatrick, M.D. ’92

• Leader in public health program development, management and community outreach, in the field of HIV/AIDS research
  – board-certified infectious diseases physician
  – was named director for the CDC global AIDS program and was responsible for implementing the President’s Emergency Plan for AIDS Relief in the Caribbean Region
  – team leader on landmark HIV-related study overseeing a multi-disciplinary team to conduct the CDC’s first ever HIV investigation among prison inmates
Robert M. Arnold, M.D. ’83

- Leo H. Creip Chair of Patient Care, Department of Medicine
- Director, Institute to Enhance Palliative Care
- Director, Institute for Doctor-Patient communication
- Chief Medical Officer, Palliative and Supportive Institute, UPMC Health System
Where is Kansas City?

Does the University of Missouri have a School of Medicine in Kansas City?

What does current practice in medical education reveal about our underlying beliefs? Do these beliefs still make sense?

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Charting a rational course
What does current practice in medical education reveal about our underlying beliefs?

• The structure and methods of programs, curricula, approaches imply ...
  – most US students need at least four years of college prior to medical school
  – admissions processes are state-centric, not student-centric
  – students learn by receiving information from teachers
  – many teachers view students as children
  – it is only moderately important to assess clinical reasoning; they talk about the importance of critical thinking, but most examinations still test retention of knowledge
  – it is not important to assess a learner’s emotional and moral development over time, even though all agree it is important
  – faculty do not feel responsible for the health of the neighborhoods surrounding the medical school

• If we seek to understand this in a historical context ...
Knowledge
• After the Middle Ages, the knowledge of the world began to be organized
  – in a rational way
  – independent of the learner
  – determined by some structure of the subject
• Disciplines were developed
• Taxonomic schemes were established

Teaching
• The task of the teacher was to transmit this knowledge to the learner
• The notion of teachers transmitting and students receiving information influenced the structure of education for centuries
Transmission-reception concept of education is inadequate because it implies that
- learner is passive
- memorization and drill can replace meaningful experience
- knowledge and learning can be isolated from real-world contexts

Development of new theories
- learner is active
- construction of meaning
- learning influenced by context and social interaction
Charting a Rational Course for the Future of Medical Education

- Broaden and deepen understanding
- Task of teacher
- Task of Learner
- Acquire information
- Provide information
- Construct meaning

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Task of Learner

- Limited learning occurs
- Acquire information
- Learner = blank slate, “child"
  Teacher = source of info.
  L-T Relationship = paternalistic
  Theory = transmit/receive

Task of Teacher

- Broaden and deepen understanding
- Learner = primed slate, adult learner
  Teacher = catalyst for critical thinking
  L-T Relationship = collaborative
  Theory = constructivist

Provide information

- Construct meaning
- Learning highly dependent on effort and skill of learner
In 2016, learners are “saying” to teachers:

- “We no longer need you as a source of information”
- “We can find what we need on the Web, when we need it, at the pace we need it, in the format we need it”
- “More than ever before, we need to understand how you think, how you use information to generate good questions and solve problems”
- “More than ever before, we need to understand how to evaluate the quality of information”
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- Failure to correctly define the problem
  - one of Flexner’s key strengths: ability to accurately describe merits and faults
  - the Waiting Room
- Tyranny of numbers
  - numbers that exert more control than is warranted by their intrinsic value
- Mandates from state legislatures
- Groupthink
  - mismanagement of disagreement
  - suppression of dissenting viewpoints by other group members
  - desire for harmony and conformity trumps critical assessment of ideas
- The Abilene Paradox
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Charting a rational course

- If we believe that the medical school admissions process should be as fair as possible to all US applicants, then
  - it should be student-centric instead of state-centric
  - it should maximize opportunities for students
  - we should develop a national system for medical school admissions analogous to the Match for residency programs

- If we believe that, on average, it takes too long to educate a physician, then
  - we should increase the number of 6-year slots in schools of medicine
If we believe that modern technology has enabled students to acquire the information they need, when they need it, where they need it, and in a manner that aligns with their individual learning styles, then

– we should accept that the teacher is no longer a primary source of information for students
– we should seek new and better ways to help students learn to think critically about the information they acquire
– and we should develop better ways to assess critical thinking and clinical reasoning
We need better ways to assess clinical reasoning
We need an assessment of clinical reasoning that has the power to distinguish levels of expertise
  – Imagine that we are assigned the task of testing individuals to determine if a given person is an anesthesiologist or a nurse anesthetist.
  – We are not allowed to ask about educational background.
  – We only can administer a test – it could be questions (multiple-choice, short answer, etc.), writing tasks, performance on a simulation, or other activity.
  – The first person enters the testing suite. Do we have any assessment instrument that would enable us to determine the individual’s profession with a high degree of confidence?

Valid and reliable tests of clinical reasoning have the potential to inform scope of practice discussion
Charting a Rational Course for the Future of Medical Education

Charting a rational course

• If we believe that moral and emotional development are important, then
  – we should develop valid and reliable ways to track development and identify opportunities for remediation and growth

• If we believe that medical schools should improve the health of their neighbors, then
  – we should track a series of health outcome and health literacy measures of the population in the zip codes that form a medical school’s neighborhood