Publish or Perish: Scholarship in Medical Education

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Advancing Educators & Education: Defining the Components and Evidence of Educational Scholarship

• By AAMC Group on Educational Affairs Consensus Conference 2007
• Defining Educational Scholarship
• Broadening Educational Scholarship
• Largely ineffective
Why Publish?

1. Academic “coin of the realm.”
2. Promotion and Tenure
3. Recognition among peers
4. We have “an obligation to disseminate our findings.” -Alan Halperin
Why Publish Education?

We would never subject patients to untested therapies, but we do it all the time to learners.

-Frank Stritter
“Let the students be your laboratory.”

Ted Kotchen
Chair of Medicine, WVU 1990
Tasks of Academic Physicians

• Investigation: publication expected
• Education*
• Clinical activity*
• Administration*

• *The trick is to write about these three.
Clinician-Educators’ Activities
Sheffield. JGIM 1998

- Work week: 59 hours
- Scholarship: 7.6 hours (13%)
- Job description: 20%
- Done outside week: 42% scholarship
Responsibilities & Activities of Clerkship Directors
Hemmer. Acad. Med. 2001

• Duties
  – 3.2 Clinic half days
  – 2.9 Months inpatient attending
  – 22% FTE on clerkship
  – 2.5 other courses taught

• Scholarship
  – 2.2 Papers (0-20)
  – 0.7 Grants (0-4)
## Predictors of Scholarly Productivity

<table>
<thead>
<tr>
<th></th>
<th>Papers (p)</th>
<th>Grants (p)</th>
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<tbody>
<tr>
<td>Male Gender</td>
<td>.14</td>
<td>.01</td>
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<tr>
<td>Fellowship</td>
<td>.005</td>
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<tr>
<td>Less Clinic Days</td>
<td>.06</td>
<td>.04</td>
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<td>Faculty Development</td>
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<td>&lt;.01</td>
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<td>Expectations Article</td>
<td>.04</td>
<td>.01</td>
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<td>Teaching Courses</td>
<td>.07</td>
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Ranking Importance of Clinician-Educator Performance in Promotion Decisions
Beasley and Wright. JGIM 2003.

<table>
<thead>
<tr>
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<th>Clinician-Educators (N = 107)</th>
<th>Promotion Committee Chairs (N = 115)</th>
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<tbody>
<tr>
<td>Clinical Research</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td><strong>Written Scholarship</strong></td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Reputation</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Teaching Skills</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Educational Research</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>Clinical Skills</td>
<td>11</td>
<td>2</td>
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</table>
Clinical Faculty and Career Progress
Buckley. Arch IM 2000

<table>
<thead>
<tr>
<th></th>
<th>&gt;50% clinical</th>
<th>&lt;50% clinical</th>
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<tbody>
<tr>
<td>Professor</td>
<td>16%</td>
<td>40%</td>
</tr>
<tr>
<td>Tenure</td>
<td>26%</td>
<td>52%</td>
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<tr>
<td>Acad. Time</td>
<td>15</td>
<td>45 (hr/mo)</td>
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Overview

1. Ask questions
2. Collect good data
3. Attend to methodology/analysis
4. Collaborate
5. Remember IRB
6. Where to publish (round pegs in round holes)
Hit the “Academic Home Run”

- Give a talk
- Write an abstract
- Write a paper
- Get a grant
Study what you need to do anyway

- Logging trainee experiences (patients, procedures)
- Quality surveys (new, old experiences)
- Remember: design to yield quality data
Example

Create an early clinical exposure for students that will stimulate their interest in internal medicine.

- Rashida Khakoo, Chair
  Department of Medicine
  West Virginia University
Early Intervention
Elnicki. JGIM 1999

Intervention: MS2 volunteers
8 weeks, mixed in/outpatient

Funding: ACP

Results: Higher ICM scores, more honors in Ethics & IM clerkship (p<.05)
More matched in IM (54 v. 27%, p<.01)
Pick Low Hanging Fruit

- CAMC evaluations at Pitt
  - in a pile on the Office of Medical Education floor
- Three papers later
  - which teaching behaviors are associated with high quality teaching
Effective Teaching Behaviors

- Elnicki M, Kolarik R, Bardella I. Third Year Medical Students’ Perceptions of Effective Teaching Behaviors in a Multidisciplinary Ambulatory Clerkship. Acad Med 2003
- Elnicki M, Cooper A. Medical Students’ Perceptions of the Elements of Effective Inpatient Teaching by Attending Physicians and Housestaff. JGIM. 2005
“The primary goal of medical education is to produce physicians who deliver high-quality health care.”

How can we tell if we do?
Methodology

1. Surveys
   Needs assessment
   Outcome (satisfaction or knowledge)

2. Comparison of Groups
   Demonstrate need/benefit

3. Curricular Innovation (intervention)
   RCT, Pre/Post, Cohorts
Education: Dissect the Curriculum

• New Didactic Sessions
  – lectures, conferences, labs

• Clinical Encounters
  – patients, diagnoses, procedures

• Communication (doc-pt, oral, written)

• Learning style

• Teaching/Learning Interactions

• Feedback & Evaluation
Outcomes

- Learner Opinion (not enough)
- Exam Scores (MCQ, SP, others)
- Performance at Next Level (predictive)
- Career Choices
- Patient Evaluations
- Costs
Collaborate: How to Initiate?

- Section meetings
  - answer questions/problems
- Interest groups
  - clinical or educational focus
- Committees
- Professional societies
Collaborate: With Whom?

- Within department
  - senior/junior, partners
- Inter-department
- Among institutions
Collaborate across Disciplines

• Internal Medicine/OB-GYN Clinic
  (Abby Spencer)

• Observed Teaching Behaviors in IM, FM, Peds
  (Inis Bardella)
Multi-Institutional Studies

• Feedback in resident clinic
  WVU and Texas A&M
• Medical student abuse
  12 schools
• Procedures
  Teddy Wu and 6 schools
• Physical Diagnosis
  Scott Herrle and 3 schools
Where to Publish Educational Research

1. Medical educational journals
   Academic Medicine/RIME
   Teaching and Learning in Medicine
   Medical Education, Medical Teacher

2. Journals with interest
   Journal General Internal Medicine
   Journal of the American Medical Association

3. Regional/state journals
   Southern Medical Journal
   American Journal of Medical Science
Rejection: Don’t Give Up!

It’s like dating - you’re going to get told “no” sometimes, but keep asking

1. Go have a beer and cool down
2. Use reviewers’ feedback
3. Choosing a different journal
4. Timelines
Funding Background

• Institute of Medicine has called for increased rigor of medical education research
• Outcomes based: improving patients’ health
• New approaches to recognize and reward teachers and educational researchers
• National funding is limited
  - <.04% of federal spending in GME is used for education research
Funding Educational Scholarship

- Federal (HRSA)
- Foundations
  - RWJ, Kaiser, Kellogg
- Shadyside Hospital Foundation
  - unrestricted educational grants
- Professional Societies
  - ACP, SGIM, AAMC
- “Rob Peter to pay Paul”
Reviewed published medical education research
- in 13 journals
- 290/665 articles were research studies

- Response rate 84% from authors
  - Mean cost of studies $24,471
  - Underestimated cost of study by >50% ($12,000)
Funded & Published

• 30% of studies had funding (72/243)
  - Median funding $15,000 (IQR $5,000- 66,500)
  - Median cost $37,315 (IQR 18,731- 82,393)

• Private foundation grants
  - Most common source of funding (42%)
  - Median $21,500 (IQR 8,750-64,750)

• Government Grants
  - Usually larger grants (24%)
  - Median $158,000 (IQR 50,000-387,500)
Institutions Successful at Med Ed Research. Acad Med 10/04

1. High Profile (centers):
   Wilson Center (University of Toronto)
   Dept Med Ed (U Mich),
   Academy (UCSF)

2. Used for Faculty Development

3. Support (consultations, stats, etc.)
Bordage: RIME Wrap up

• Build themes to research
• Theory should drive research and vice versa
• Our research should better practice
Example: Med Ed Research

- Building on a theme
- Real outcomes
Curricular/Evaluation Articles


Outcomes

Papadakis MA, et al.

Unprofessional behavior in medical school is associated with subsequent disciplinary action by a state medical board

Acad Med. 2004
Outcomes


Review/Commentary

Stern DT, Papadakis M
The developing physician—becoming a professional. NEJM. 2006
Summary

Publishing is a “coin of the realm”

1. Publish things you need to do anyway
2. Collaborate intra- and inter-institutionally
3. Develop themes to your work
4. Hit the academic “home run”