Writing up health professions education scholarship for publication

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November 11, 2022
Disclosures & Caveats

- Editor for *Journal of Graduate Medical Education, AEM & AEMET*
- Co-director ARMED MedEd
- No financial conflicts of interest

Slide credit: Slides modified from prior talks with JGME Editorial team (Gail Sullivan, Tony Artino, Deb Simpson, Nicole Deiorio) & Wendy Coates
Session Objectives

I. List strategies to enhance writing & publishing medical education research

II. Outline critical steps to define a problem, develop a logic argument for the study, and determine study design

III. Publishing tips
Strategies for Writing & Publishing Health Professions Education Research

• What is stopping YOU?
  – Lack of time
  – Lack of energy & motivation
  – Limited experience or writing skills
  – Difficulty organizing your thoughts, results, or paper
  – Lacking mentorship
  – Prior rejection
• Lack of time
  – Schedule time to plan & write
  – 10 minute rule

• Lack of energy
  – Say yes to projects you are excited about
  – Make time on your side
  – Work with a group

• Lack of experience or writing skills
  – Read published articles and review!
  – Ask others to read your work (& be willing to read theirs)
Strategies

• Difficulty organizing your thoughts, results, paper
Taking the First Step

- Polish your problem-gap-hook before you start
- Write as you go
- Try dictating with voice-recognition software
**Problem:** Identify a problem that people are talking about

**Gap:** What is the gap in the current knowledge or thinking about the problem?

**Hook:** Convince the reader that this gap is important and that it matters.
Leadership is increasingly recognized as an important competency for physicians. At the same time, collaboration is growing as a value and expectation of health care delivery. What has not been explored is the relationship between leadership and collaboration in physicians’ practice. The purpose of this study was to explore this relationship by asking ‘How do physicians experience leadership and collaboration during their daily team interactions?’
Leadership and collaboration are highly valued and potentially conflicting competencies in medical practice. While there has been attention to leadership and to collaboration individually, little attention has been paid to how they interact. With physicians experiencing increasingly formal expectations that they will lead and collaborate effectively, (e.g., CanMEDS 2015), we require systematic knowledge about how these competencies play out in clinical teams.
Step 2: Conceptual Framework

- A theory, model, or approach for how things work
- Helps establish the question’s importance
- Allows others to build on and adopt findings
- Helps you select outcomes and interpret results
Learning Abroad: Residents’ Narratives of Clinical Experiences From a Global Health Elective

Stephanie M. Lauden, MD, CTropMed
Sophia Gladding, PhD
Tina Slusher, MD
Cynthia Howard, MD, MPTh
Michael B. Pitt, MD

ABSTRACT

**Background** While resident participation in global health (GH) rotations has grown, little is known about trainee perceptions of the personal value of these international clinical experiences and their importance to the objectives of GH training.

**Objective** We sought to better understand the clinical scenarios experienced during international rotations that residents perceived as most meaningful and the frequency of these experiences across scenarios and participating residents.

**Methods** Using the conceptual framework of Schón’s reflection on action, we asked University of Minnesota GH track pediatric and internal medicine–pediatric residents to describe 10 clinical scenarios they found interesting or impactful during their 2016–2017 GH elective. We conducted a qualitative analysis of the deidentified resident narratives and mapped themes to the Accreditation Council for Graduate Medical Education (ACGME) competencies.

**Results** All eligible residents (n = 13) participated, yielding 129 unique clinical scenarios from 7 countries. We identified 5 thematic groups: (1) addressing challenges in making diagnoses in resource-limited settings; (2) dealing with patient outcomes different from those expected in the United States; (3) encountering and managing diseases in a different clinical context; (4) encountering and managing diseases in a different cultural context; and (5) reflecting on learning and self-growth. Of the 129 unique clinical scenarios, 30% (n = 39) had not been previously experienced by participants. Across the 5 themes, all ACGME core competencies were addressed.

**Conclusions** Residents identified meaningful scenarios of their GH experiences that are relevant to the educational and clinical objectives of GH training.
The Use of Experiential Learning Modules to Teach Integrative Medicine Approaches

Candace M. Gragnani, MD, MPH, FAAP
Iljie K. Fitzgerald, MD, MS
Rashmi Mullur, MD

ABSTRACT

Background Complementary, alternative, and integrative medicine (CAIM) are considered important in shifting toward whole person care. Residents remain limited in their understanding of CAIM approaches, preventing effective utilization.

Objective We created modules to expose residents to available CAIM approaches in a Veterans Administration setting, using conceptual frameworks for experience-based learning.

Methods In June 2016, 38 internal medicine residents at the VA Greater Los Angeles Healthcare System were randomized to 45-minute small group sessions. One cohort received an experiential module incorporating 10-minute practices of yoga, biofeedback, and acupressure. The other cohort received a standard lecture focused on CAIM use and outcomes. Participants completed a 6-question quiz to measure their understanding of CAIM use and an 8-question survey to assess their satisfaction of teaching, exposure to CAIM, and anticipated practice change. Referrals to CAIM modalities before and after the learning modules were counted to assess practice change.

Results All 38 residents completed the study, with 25 residents completing the experiential learning modules and 13 completing the standard lectures. Initial postquiz scores were similar. Five months postintervention, residents who participated in experiential modules were more likely to refer patients to CAIM modalities than those who received standard lectures (3.4 per month versus 0.6 per month, \( P = .018 \)).

Conclusions This study highlights the advantages of experiential learning of CAIM approaches for residents. It reinforces existing literature suggesting that physicians who experience CAIM are more likely to incorporate these approaches into practice.
Step 3: Study Design

- Need to create a curriculum
- Want to understand perceptions
- Understand a learning gap
- Pilot an intervention
- Approach a problem through a QI lens
- Summarize what is known in the literature
- Understand a phenomenon
- Measure the impact of an intervention
Curriculum development
Survey Study

Dillman, D. The Tailored Design Method of Survey Administration.
Needs assessment

- Identify needs of trainees, faculty, or other educational gaps

- May precede an intervention study – national or large region best

- Huge risk for research bias as everything potentially w/ unmet needs
  
  Depends on questions asked & who chooses to respond

- Single program needs assessment not generalizable

- Consider qualitative study, generate hypotheses for further evaluation
Innovation report

Pilot implementation of a curriculum or innovation

Should be novel, address a pressing novel, be applicable to others

Need: materials, feasibility, acceptability, preliminary outcomes
Quality improvement report

1. Identify & Select Problem
2. Analyze Problem
3. Generate Potential Solutions
4. Select & Plan Solution
5. Implement Solution on a Test Basis
6. Evaluate Test Implementation
7. Implement System Wide

Act, Plan, Study, Do
Instrument development study: *it’s all about validity evidence*

- **Content**
- **Response process**
- **Internal structure**
- **Relation to other variable**
- **Consequences**
Consensus proceedings

When expert opinion is what matters

- Consensus conference or session
- In person methods
- Email methods
Review papers

Synthesize what is known in the literature

- Theory
- Study results
- Research questions
JGME Literature Review Series

This series provides an overview of 8 influential approaches to knowledge synthesis: Systematic Reviews, Realist Reviews, Narrative Reviews, Scoping Reviews, State-of-the-Art, Critical Reviews, Meta-ethnographic Reviews, and Integrative Reviews. For each literature review, 2 articles are provided: (1) an overview of the review type with background information on philosophical foundations, purposes, and expected products for readers and researchers, and (2) a short article with steps that outline the "nuts and bolts" of this type of review.

Introduction to the JGME Literature Review Series
Anna MacLeod, PhD; Robin Parker, MLIS; Lara Varpio, PhD

Literature Reviews: Key Considerations and Tips From Knowledge Synthesis Librarians
Robin Parker, MLIS; Lindsey Sikora, MIS

Systematic Reviews in Medical Education
Lauren A. Maggio, PhD; Anita Samuel, PhD; Elizabeth Stellrecht, MLS

A Reader's Guide to Medical Education Systematic Reviews
Elizabeth Stellrecht, MLS; Anita Samuel, PhD; Lauren A. Maggio, PhD

Understanding Realist Reviews for Medical Education
Rola Ajjawi, PhD; Fiona Kent, PhD

Realist Reviews: A Brief How-To
Fiona Kent, PhD; Rola Ajjawi, PhD

Narrative Reviews: Flexible, Rigorous, and Practical
Javeed Sukhera, MD, PhD, FRCPC
Qualitative and Quantitative Methods

**Quantitative: how much?**
Will ratings of residents by students improve for residents who undergo a new teaching rotation?

**Qualitative: why?**
Why do residents report the same amount of stress when working fewer hours?
<table>
<thead>
<tr>
<th>Question/Problem/Theory</th>
<th>Study Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need to create a curriculum</td>
<td>Curriculum development</td>
</tr>
<tr>
<td>Want to understand perceptions</td>
<td>Survey study</td>
</tr>
<tr>
<td>Want to describe learning gap</td>
<td>Needs assessment</td>
</tr>
<tr>
<td>Have developed and piloted an innovation in one center</td>
<td>Innovation report</td>
</tr>
<tr>
<td>Approached an educational problem through a QI lens</td>
<td>Quality Improvement Report</td>
</tr>
<tr>
<td>Develop and test a new instrument</td>
<td>Instrument development study</td>
</tr>
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<td>Understand best practices when literature is not conclusive, and expert opinion exists</td>
<td>Consensus proceedings</td>
</tr>
<tr>
<td>Summarize what is known from the literature</td>
<td>Review papers</td>
</tr>
<tr>
<td>Understand a phenomenon through the lived experiences of those who experience it</td>
<td>Qualitative research</td>
</tr>
<tr>
<td>Measure the impact of an intervention, test a hypothesis, evaluate associations between exposure and outcome</td>
<td>Quantitative research</td>
</tr>
</tbody>
</table>
Tips to increase favorable consideration by academic journals
Strategic selection of target journal
Optimize Chance of Acceptance

How is quality determined in HPE research?
Quality =

- Clear, pre-determined hypothesis or question
- Methods appropriate to the question
- Valid measurements of relevant outcomes
- Appropriate analysis
- Significant results
  - Think *impact on education*, not just statistical
- Clear, organized writing
- Thoughtful self-critique
Introduction
• Why important & relevant to audience of this journal
• Brief literature review – describe evidence gap
• Explicit research hypothesis: your question or study aim

Methods
• Settings & participants, intervention, outcomes, analysis, IRB

Results – data in tables/figures or text, not both

Discussion
• Highlight what you found
• Compare findings to others’, discuss limitations

Conclusions
• Logical, conservative, briefly summarize your findings

References – up to date, complete – not a review
Path of a Manuscript
Manuscript Review Process

Manuscript Submitted

- Triaged by Staff
  - Rejected

- Triaged by Editor(s)
  - Rejected

Technical
Desk, or Internal

Editor also considers journal’s mission, space, what’s been published previously, what’s hot, etc.
Manuscript Review Process

Manuscript Submitted

Triaged by Staff

Triaged by Editor(s)

Sent out for Peer Review

Rejected

Technical

Desk/Internal

Timeframe

Reviewers: 20-30 days

Single-blinded review: Identity of the reviewers is anonymous, but author names visible to reviewers

Double-blinded review: Identity of both the authors and reviewers is kept hidden (hard to accomplish)
Manuscript Review Process

Manuscript Submitted
- Triaged by Staff
  - Accepted
  - Rejected

- Triaged by Editor(s)
  - Rejected

- Sent out for Peer Review

- Reviews Adjudicated by Editor(s)
  - Rejected

Single-blinded review: Identity of the reviewers is anonymous, but author names visible to reviewers.
Double-blinded review: Identity of both the authors and reviewers is kept hidden (hard to accomplish).

Technical
Desk/Internal

Editor considers journal’s mission, space, what’s been published previously, what’s hot, etc.
Generic Manuscript Review Process

- **Manuscript Submitted**
  - Triaged by Staff
  - Triaged by Editor(s)
  - Sent out for Peer Review
  - Reviews Adjudicated by Editor(s)
  - Revise and Resubmit: Minor Revisions
  - Revise and Resubmit: Major Revisions

- **Timeframe:**
  - Review: 1-6 mons
  - Publish: 6-24 mons

- **Acceptance Rates:**
  - JGME = 10-15%
  - Acad Med = 10-15%
  - Med Ed = 8-12%
  - Advances = 10-15%

- **Rejection:**
  - Rejected

- **Review Types:**
  - Single-blinded review: Identity of the reviewers is anonymous, but author names visible to reviewers
  - Double-blinded review: Identity of both the authors and reviewers is kept hidden (hard to accomplish)

- **Desk/Internal**
  - Accepted
  - Technical

- **Timeframe:**
  - Review: 1-6 mons
  - Publish: 6-24 mons
## Author Response Letters that get to YES

<table>
<thead>
<tr>
<th>From</th>
<th>Critique</th>
<th>Our Response</th>
<th>Pg &amp; Line #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Editor</td>
<td></td>
<td>Thank you for opportunity to revise the manuscript to further strengthen the impact of this report. We have added a number of details based on reviewer suggestions and have delineated them below.</td>
<td>NA</td>
</tr>
<tr>
<td>E 1.1</td>
<td><strong>Important Topic - Innovative</strong></td>
<td></td>
<td>NA</td>
</tr>
<tr>
<td>E 1.2</td>
<td><strong>Length</strong></td>
<td>Shortened by 1,000 words</td>
<td>Pg 2 L 250</td>
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<td>Reviewer #1</td>
<td></td>
<td></td>
<td>NA</td>
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<tr>
<td>R1.1</td>
<td><strong>Scales</strong></td>
<td>We appreciate Reviewer #2’s perspective. However, literature...</td>
<td>NA</td>
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<tr>
<td>R1.2</td>
<td><strong>Stats</strong></td>
<td></td>
<td>Pg 5 L 951</td>
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<tr>
<td>Reviewer #2</td>
<td></td>
<td></td>
<td>NA</td>
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<tr>
<td>R2.1</td>
<td><strong>Innovative but</strong></td>
<td>Editor in E.1 noted (go with E.1)</td>
<td>NA</td>
</tr>
<tr>
<td>R2.1</td>
<td><strong>Literature</strong></td>
<td></td>
<td>Pg 2 L 150</td>
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