Building Capacity for Scholarship in your Teaching Practice: Tips for Engaging Learners

Payam Sazegar, MD, Lance Fuchs, MD, Vidush Athyal, MD
Kaiser Permanente San Diego Family Medicine Residency Program
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Disclosures
None
Goals for this session

1. Define scholarship in the broadest sense
2. Introduce ideas and concepts for engaging learners
3. Identify ways of picking low-hanging fruit for publication success
4. Stimulate interest in preparing scholarly work for dissemination

Forms of Scholarship

Scholarship may take the form of peer-reviewed publications, invited publications in journals, books (or chapters of books), reports for agencies or organizations, significant public communications for education or advocacy, inventions or patents, laws or regulations, institutional or professional policies, clinical or professional guidelines, curricula, syllabi, or any equivalent online or information technology-based materials, among others.

-KPSOM Faculty Handbook
Question for Reflection

What is your academic phenotype?

Four Different Types of Scholarship

- **Discovery** = traditional research (basic/clin sci, epidemiology, policy, bioinformatics) using scientific method
- **Teaching** = developing courses, curricula, educ models, approaches to interprofessional education. Using best practices in a systematic way based on lit
- **Integration** = synthesis of knowledge → new resources (reviews, book chapters, guidelines)
- **Application** = apply new knowledge to different clinical environments, QI, disseminating innovative practices (implementation science)

Why figure out your academic phenotype?

- Helps you turn what you do well into a tangible product
- Determine what products align well with this
- This is the secret sauce to academic productivity

Example: Preparing a Commentary or Perspective

Think about a topic for which knowledge translation is needed

Teaching safe and responsible opioid prescribing for chronic pain

The opioid epidemic is a global problem and Canada has one of the highest rates of opioid-related deaths in the world. A 2013 report from...
Why is it a good idea to publish?

- It is important to advance medical knowledge
- Publishing is “academic currency” \(\rightarrow\) build credibility
- It is your Intellectual Property / legacy \(\rightarrow\) get credit for work you’ve done
- Sets you apart from the pack
- Increases your depth and breadth as a clinician
- Leadership development
- Find joy or meaning in work
- Gain skills in Evidence Based Medicine (education by peer reviewers)
- CME credits

Publication is a universal currency in academia

**Bronze**: Podcasts, Blogs, Newsletters, Magazines, Social Media

**Silver**: Commentaries/Perspectives, Reviews (eg AFP, UpToDate), Case Series/Reports, Editorials/Letter to Editor

**Gold**: original research publications, grants

**Diamond**: the randomized, double-blind, placebo-controlled clinical trial
Barriers to Publishing

- Not enough time
- Can’t get started (space)
- Not sure what to write about
- Lose momentum when other things get in the way
- Fear of rejection
- Lack of expertise (skill sets, training)
- Data Management / Statistics
- Funding / IRB
- Lack of interest
- Lack of Mentorship

Strive for SILVER at a minimum
Many of these are indexed in PubMed
Higher acceptance rate that traditional research
Most of this is formulaic

- Clinical Imaging
- AFP Photo Quiz
- Case Reports
- Conference Abstract
- Letter to Editor (w/in 1 month)
- Editorial
- Journal Newsletter
- Review Article
- Perspective/Commentary
- Workshop for a national meeting
Success of a scholarly project often depends on a student / resident having a special interest in the topic & how well the project capitalizes on their strengths

Case Study:

Engaging medical students in practice-based quality improvement projects

Population Based Medicine projects at KP San Diego Family Medicine Residency Program
Examples of Value-Added Medical Education

- Population health management – outreach (cancer/vaccinations)
- Chronic disease management (eg DM metrics)
- Clinic quality improvement activities → workflows (rooming/BP/etc)
- Health coaches (long term)
- Patient educators
- Motivational interviewing for behavior change during clinic appointments

Rationale for Population Based Medicine (PBM) education program - 2019

- KP has maintained a robust system of preventative care and population-based medicine for decades, but QI work had not traditionally been an established requirement of our Family Medicine student clerkship.
- Family Medicine educators need to: empower learners with evidence-based knowledge, cultivate inquiry skills and provide leadership experiences conducive to 21st century medical practice.
Rationale for Population Based Medicine (PBM) education program - 2019

- Future physicians will require a strong foundation in systems-based practice and health system science.
- Acquisition of skills in inquiry and QI are not easily achieved through the standard clerkship curriculum of office encounters, didactic presentations and exam preparation.

PBM program: Short Term goals

- Teach students about patient centered communication
- Provide insights into why care gaps might exist and give opportunities to address them.
- Provide opportunity for practice-based research and education within the QI structure of our Family Medicine Center.
- Provide students a stake in our health care delivery and opportunity to develop leadership skills.
- Build a bridge between our organization’s expanding work in population health and expanding role in undergraduate medical education.
Population Based Medicine: The Challenge

• Many patients overdue for preventive care do not come in for appointments
• Underrepresented minority groups are less likely to receive preventive care.
• Acquiring skills in PBM is part of the core competency of Systems Based Practice as well as the Triple/Quadruple Aim of health care → educational need is present

Design of PBM pilot

• Elicit ideas/suggestions/concerns from teaching faculty
• Started with our 4-week block rotations (MS4 Sub-Internship)
• Week 1: Planning phase
• Week 3: 1-2 Half Days of protected time to work on PBM
• Week 4: Student gives oral presentation ~ 15 min
Medical students learn the basic Quality Improvement process (a PDSA cycle).

Choose a project of interest to them (shark tank)

Develop SMART goals

Perform Root Cause Analysis as part of planning phase

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Project #1: Flu Tent Education about Covid-19 vs Seasonal Flu

The Intervention Pt 1: Opening Question

- What similarities and differences between COVID-19 & influenza do you know?
- Do you know anyone who does not regularly get vaccinated?

Student Slides
October 2020
COVID Education to Flu Vaccine Recipients

Qualitative Findings & Outcomes

- n=24, ages ranging from 23-67
- Participants generally focused on the similarities and differences in terms of symptomatology, mainly “the severity” and “loss of smell/taste.”
- 2 were aware of the cardiorespiratory protective benefit of the flu shot for high-risk patients because they themselves are high-risk.
- 4 have friends or family members who do not regularly get vaccinated.
- 5 were previously ambivalent towards vaccinations.
- All 24 reported learning something new and insightful and were able to recap the key points and concepts from the handout back to me.

Project #2: Screening for Post-Covid Depression

During COVID-19, there was decreased incidence of depression diagnoses in primary-care

- There may be people with undiagnosed and untreated depression and other mental illness

![Graph showing depression incidence over time]
Undiagnosed and untreated depression during a pandemic

Screening for Post-Covid Depression

- *Intervention*: screen patients with history of Covid-19 infection and no history of MDD
- 2 step strategy: pre-screen with PHQ-2 and then PHQ-9 if score >3
- **PHQ-9 score 1-4**: provided resources such as CALM App and Health Education classes
- **PHQ-9 score 5+**: offer Behavioral Medicine and route to FMR behaviorist and PCP
The 2 patients with PHQ-2 score >3 had moderate-severe depression (PHQ-9 scores of 15 and 18). ONE patient endorsed passive suicidal ideation. Both referred to on-site Behavioral Medicine provider and PCP notified for ongoing treatment.
General Lessons Learned from Population Health QI Projects with Visiting Medical Students (2019-2021)

• Enthusiasm of medical students was harnessed for creative solutions to challenging, yet common, clinical problems
• Provided enhanced educational value to learners (pursue interests, learn QI)
• Provided faculty a wider lens through which they could evaluate the students’ interests/clinical competencies/potential fit for our residency program
• Improved clinic workflow and function.
• The amount of actual time and effort required by our clinical faculty was small as our PBM pilot projects were integrated into the overall clinic workflow, which included nursing and administrative teams.

Recent student case report

Student: I want to be an Ophthalmologist. I don’t have much research experience. I will take a gap year.
Preceptor: Are you interested in writing a case report for publication? I have a great eye case for you.
Student: Yes, please.
Preceptor: Look at these journals that publish case reports. Focus on these 1–2 journals first. Send me a draft that complies with Author Instructions (word limits / etc)

Herpes Zoster Ophthalmicus Associated with Oculomotor Nerve Palsy

Case Presentation
A 65-year-old African American male presented with a 1-week history of left eye pain with conjunctival erythema, a purplish rash on his left forehead, headache, and 2 days of diplopia. The physical examination was notable for conjunctival injection of the left eye, left upper eyelid ptosis, and a drooping left upper eyelid. The patient was unable to maintain gaze medially or laterally; attempts at prolonged gaze resulted in the eye drifting medially.
Example: Preparing a Case Report

- Read Author Guidelines for journals that publish case reports
  
  *E.g. Permanente Journal, American Journal of Medicine, Southern Medical Journal*

- Word count is variable

- Highly motivated students applying to competitive specialties

- Think of 2-3 key points from the case

- **Qs to ask:** [https://med-fsu.libguides.com/publishing](https://med-fsu.libguides.com/publishing)
  
  - Who is the Publisher?
  - Fee?
  - PubMed?
  - Open Access?

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Tips for Writing and Publishing
Tip #1: Know your end goal

• What journal to choose?
  Eg: Am Fam Physician vs Ann Fam Med vs Fam Med

• Talk to 3+ different colleagues

• Read the table of contents of journal to see what kind of articles they publish

• Use JANE (Journal/Author Name Estimator) for Abstract. Then start with list of 4-5 journals

• Identify the formula (journal website, previous articles, common words/trends/structure) to crack the code

jane.biosemantics.org
Tip #2: Look for the low hanging fruit or least publishable unit?

Short (eg 200 words, 500 words, 1200 words)

Little to no “research” required – good background knowledge and insight

- Eg. Letter to the Editor: contains insights that extend the discussion and limited to 1-2 key points.

Focus on the most novel part of your project

Tip #3: Know the Kirkpatrick Model of Assessment
Tip #4: Find time + mentorship

- Practice writing
- Find a mentor (FMR, non-FM, STFM, University)
- Schedule time to write (25 min) & make it a routine Pomodoro technique
- Be a Peer Reviewer: pairs you with mentors/leaders
- Go to a writing workshop or bring one to your institution
- STFM offers free virtual coaching, webinars, fac dev resources

**A writer who waits for ideal conditions under which to work will die without putting a word on paper.**

-E.B. White
Tip #5: Identify causes of procrastination

- If you’re feeling overwhelmed with the process, get help chunking it into smaller pieces
- Collaborate with experienced colleagues
- Schedule time to write
- Write as you go in bits (vs “I will finish this project then write it up”)
- Finding Accountability partners or Writing Accountability Groups are a common best practice (set writing goals)

Tip #6: Don’t be discouraged by rejection

- Read Author Instructions and follow them precisely
- Ask Editor for feedback
- Publishing requires a good pitch and spin
- Ask colleagues for suggestions
- Use JANE to find a short list of other publications
- Accept with Major Revisions = great news
Conference Presentations More Likely to Get Published if…

(From STFM 2021 Annual Conference presentation by STFM Faculty Development Collaborative)

- Oral presentations (more prep/organization)
- Quantitative (ability to translate)
- Study completed at time of presentation (better feedback)
- Rigor in abstract (design/methods)
- Multiple institution collaborations (variety of viewpoints, similar data sets)
- PhD as last author (guide)
- Acting quickly—relevant/important topic (3 years max)

General Advice for Publishing

- QI projects (making change in program) do not need IRB unless you plan to publish → need IRB approval or IRB exempt letter
- Do a Resident / Student Work in Progress presentation → before collecting data/results
- Put thought/effort into Limitations section (as well as strengths)
- Some journals will ask single institution studies to be research briefs (1000 words) instead of full manuscript (3000 words)
- Use Reference Manager (Endnote, Zotero) — saves you time
- Make everything count TWICE
Take home messages

Medical students and residents can be effectively leveraged to build capacity for scholarship in clinical practice.

Scholarship is a team sport with diverse forms

Publishing is formulaic but requires time + mentoring + accountability

Writing skills can be learned and, with practice, most faculty and residents can become excellent scholars

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