Research Productivity of Senior General Practice Academicians in Australia, Canada, England/Wales, New Zealand, Scotland, and the US

Susan Dovey,¹ Andrew Bazemore,² Winston Liaw,³ Bob Phillips²

1. University of Otago, New Zealand
2. Robert Graham Center, US
3. Virginia Commonwealth University, US
The Problem

- Limited research training
- Inhospitable environment
- Don’t contribute to their academic environments
- Don’t develop their discipline


About 1883, I resolved to do a series of careful observations, entirely for my own improvement, never dreaming of research, for I was under the prevalent belief that medical research could only be undertaken in a laboratory or ... in a hospital.

To what extent do Family Medicine Senior academicians fulfill the research part of the complete academic mission?
This Presentation

- What do the most prolific Family Medicine academicians write about?

- Who funds their research?
Research Design

- Medical school websites search to identify family medicine academicians (not Clinical, not Research)
- Thomson Reuters Web of Science search to collect research measures:
  - N papers published 1985-2010
  - N citations
  - H-index
- Pdf or HTML of research articles visually scanned for funding acknowledgements
High Productivity FM academicians

- >100 papers listed on Web of Science
- >1,000 citations on Web of Science
- H-index >= 15
Output from a high productivity FM academician

- Results found: 185
- Sum of the Times Cited: 5,015
- Average Citations per Item: 27.11
- h-index: 35
• Out of 517 FM academicians in 41 universities in 6 countries

• 13 (2.5%) High Productivity FM academicians came from
  • 9 universities
  • 5 countries
• 6 were medically qualified
  • 2 medics had PhDs
• 4 had PhDs but no medical qualifications
• 3 had unknown qualifications
Over 25 years they produced...

- 2,534 pieces of scholarly writing
- 54,644 citations

In THIS study, from 2001 – 2010, they produced
- 1,071 pieces of scholarly writing
- 21,773 citations
Types of scholarly writing
2001 - 2010
What they wrote

- Research: 500
- Discussion papers: 200
- Conference: 100
- Editorials: 50
- Letters: 30
- Other: 10

Research is the most written type, followed by discussion papers, conference, editorials, letters, and other.
Where they published

Journals they published in

Citations by Journal Type
Diseases and health conditions they wrote about

- Mental health/conditions = 67
- Cancer = 53
- Cardiac and vascular = 41
- Dental conditions = 33
- Arthritis + other musculoskeletal = 17
- Diabetes = 16
- Infections = 15
- Pain = 12
- Digestive conditions = 10
- Injuries = 7

- Respiratory conditions = 6
- Eye conditions = 6
- Urinary conditions = 5
- Allergies = 2
- Skin conditions = 2
- Headaches = 2
- Hearing = 2
- Hemochromatosis = 2
- Kidney disease = 2
- Other diseases = 8
Environmental things they wrote about

- Obesity = 89
- Other environmental things = 50
- Diet and exercise = 47
- Drugs and other treatments = 45
- Genetics = 10

- Obituaries = 2
Family medicine-specific things they wrote about

- Core Fam Med concepts and values = 155
- Health services research = 45
- Women / children / elderly = 109
- Health policy = 21
- Medical education = 25
- Investigations = 8
- Nursing = 4
Research things they wrote about

- Research methods = 86
- Evidence-Based Medicine = 32
- Informatics = 1
- Publishing = 1
“The research of these [general practice] departments will be, as with all other departments in the medical school, properly concerned with a measurement of the measurable. The danger ... is that this may be all that will be taught”

“The general practitioner in the medical school must, if he is to become credible, remain subversive.”
Who funded the 513 research papers?

- 432 (84.2%) – no funder listed
- Up to 5 separate funders, 93 in total
  - 23 (4.5%) - public research agency (e.g. NIH)
  - 22 (4.3%) - charity (e.g. RWJ Foundation)
  - 21 (4.1%) - university
  - 14 (2.7%) - government department
  - 9 (1.8%) - professional organization (e.g. AAFP)
  - 4 (0.8%) - private (e.g. drug companies)
Summary

- Large electronic databases and university websites are starting to be useful for research.
- Prolific FM researchers also write a lot of other things and publish in high impact general medical journals as much as they publish in Fam Med journals.
- In these 5 countries, only a small minority of prolific researchers’ research was funded by the main public research agencies.
  - most research was not specifically funded.
Why is this important?

- Increasing transparency increases accountability
- Provides a baseline for measuring the effect of investments and changes in research investment
- Suggests scope to develop research skills of primary care teachers:
  
  “incomplete clinical reasoning is encouraged by the silence of clinicians who know better, but whose innumeracy makes them insecure or intimidated when confronted by statistics.” (Alvan Feinstein)
Final message

- Research questions need to spring from the realities of providing primary care services, and the outputs of primary care research need, in parallel, to make a contribution to the practice of high quality, clinically effective and cost-effective care.

  Jones, R. Primary care research: ends and means
  Fam Pract 2000; 17(1): 1-4