PA's and Research

Possibilities, Opportunities and Challenges

Charles DiMaggio, PhD, MPH, PA-C

Departments of Anesthesiology and Epidemiology
College of Physicians and Surgeons
Columbia University
New York, NY 10032
cjd11@columbia.edu

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PA's and Research

- Most PA research has been research about PA's
  - PA utilization/health services or PA education
- 2010 AAPA Research Summit
  - PA profession has not given much thought to research, with no "overarching strategic research goals" extant research has been "conducted unsystematically, generally producing more breadth than depth." "...very few existing research studies are generalizable; most have small sample sizes or use highly context-specific variables"
  - 11 researchers spoke at the summit, 2 were PA's (one of whom was AAPA president)
- topic today is biomedical and public health research

How to Translate PA Excellence in Clinical Care to Similar Excellence in Research?

- need individual passion and commitment
  - ... but requires institutional and professional support
- need mentors and models
  - . . . emulate successful researchers
- need to make an impact beyond the profession itself
  - . . . public health and biomedical research
- need funding
  - . . . federal, non-profit, private

Some PA Researcher Success Stories

- Rod Hooker (Lewin Group, VA)
- Rick Dehn (Northern Arizona University, AZ)
- Jean Slutsky (Agency for Healthcare Research and Quality, Washington DC)
- Gary Lapidus (Connecticut Children's Medical Center, CT)
- James Cawley (George Washington University, Washington DC)

Why Do Research?

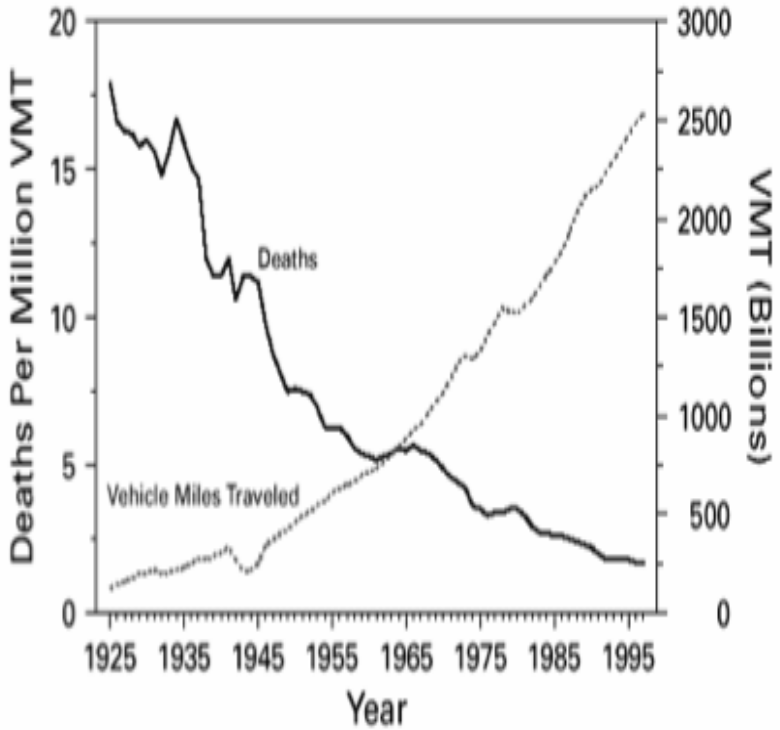
- to save lives
  - or at least improve patient care or prevent illness
- to advance science
  - and perhaps your career
- because you love it

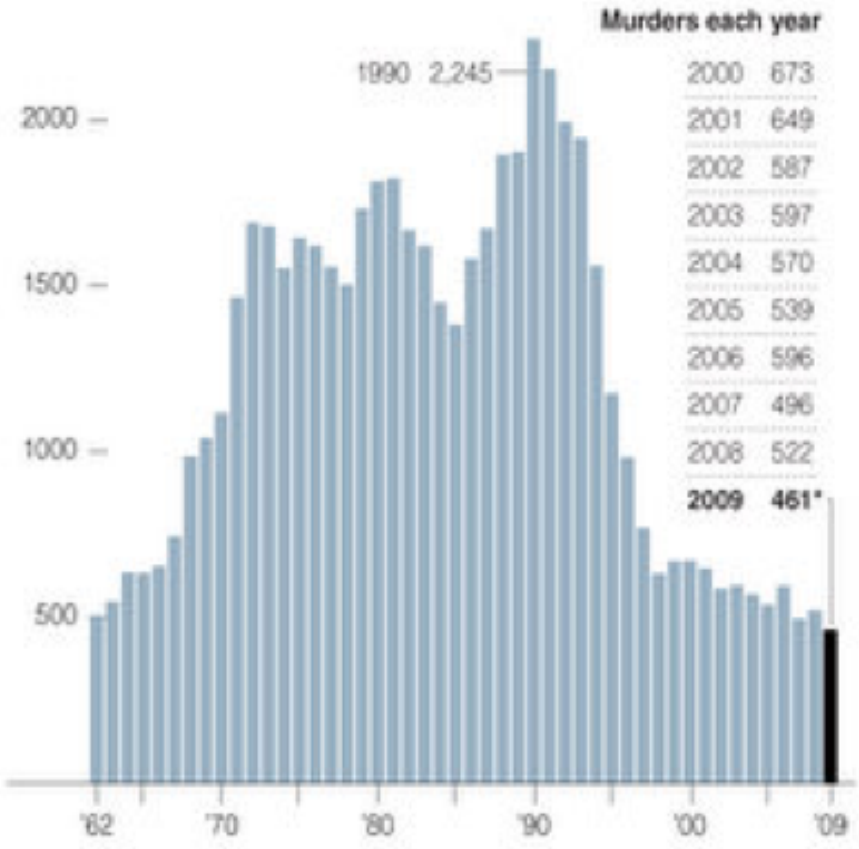
Why I Do Research

- William Haddon (Seatbelts), Barbara Barlow (Window Guards), Susan Baker (Infant Car Seats), Guohua Li (Distracted Driving)
- you or someone you know is likely alive because of one of these folks

Research Makes a Difference

FIGURE 1. Motor-vehicle–related deaths per million vehicle miles traveled (VMT) and annual VMT, by year — United States, 1925–1997





Opportunities

- federal government *very* interested in medical professionals translating research into health
- increasing emphasis on patient-oriented research ideal for PA's
- medical training puts you at an advantage, both conceptually and practically
- there is a lack of clinician researchers to serve as a "bridge" between research and practice communities
    - develop clinically relevant research, disseminate evidence-based treatments

Challenges

- specialized body of knowledge
- funding
  - a difficult fact of life for clinician researchers
  - usually given a "start-up" package on initial recruitment
  - expected to bring in between 50% and 80% of your own salary, with R01 the gold standard
- bottom line: grant writing takes significant portion of time and effort, difficult to balance that with patient care responsibilities
- delayed gratification
  - emphasis of PA training and practice has always been on clinical care
    - physician assistants in research facebook page has 12 likes. . .
  - loss of immediate focus and purpose inherent in clinical research
  - frustration when results don't turn out the way you want ("The great tragedy of science - the slaying of a beautiful hypothesis by an ugly fact." Thomas Huxley)

First Steps

- read the literature on a topic in which you are interested
- establish a track record by writing a review article
  - JAAPA recently moved to Lippincott, with emphasis on scholarly content
- work with an established researcher on a project in that topic and publish your results
  - managing clinical research protocols, enrolling patients
  - ask PI's to include you on their applications as co-investigators
  - lead a subproject as part of a multiproject application

Finding Your Niche

- area of (relatively) narrow expertise where you will work for the next 10 years
- read the literature
  - what is known
  - what is possibly wrong or missing?
  - are you the person to address it?
- do you have the skills to make an impact and establish an early track record?

Networks and Homework

- match your interests, experience and abilities with opportunities
- go to conferences and ask questions
  - ask at least one question at every talk you attend
  - linger after talks
  - request something: help, advice (e.g. possible data sources)
  - follow up with an email
- find mentors and ask them questions
  - what are the open questions?
  - what's the best way to make an impact
  - how can you match your strengths to potential projects?
- who are the players in the field?
  - CSF study rosters
  - NIH RePorter

Next Steps

- establish your qualifications
- advanced degrees
  - PhD - "union card" for biomedical researchers...
  - MPH / MS - doable but more difficult for PA's vs. MDs
- training / education options
  - Patient-Oriented Research (POR) programs - part of Clinical Translational Science Award (CTSA) programs
  - fellowships and scholarships - "K scholars", T32 training programs
  - employee education benefits
- early funding
  - supplements to existing awards
  - internal awards, e.g. CTSA
  - small grants - R03, R21

Define a Project

- address an important problem in an area about which you feel strongly
- be innovative and create knowledge
  - make a difference, open a new area, develop a new approach
- does it match your strengths?
  - get opinions

Operationalize Your Project

- outline a draft set of three specific aims, each with a hypothesis
- look for potential funding institutes and study sections
  - grants.gov
  - contact NIH program officers and ask their advice
  - program officers: oversee scientific programs, administer grants, set scientific priorities, advise investigators, advocate science areas
- identify potential collaborators
  - ideally folks with whom you've worked or would like to work

Some NIH Funding Mechanisms

Mechanism	Funding	Intent
R01	$500K/yr, 3-5yrs$	independent, investigator-initiated
R03	50K, 2 yrs	pilot, feasibility, secondary analyses
R21	$275K, 2yrs$	new, exploratory studies
K99/R00	varies	pathway to independence

Some Non-NIH Grant Resources

- CDC
- AHRQ - patient-oriented outcomes research
- PCORI - translational research (from research findings to better care)
- FDA
- pharmaceutical industry
- nonprofits, e.g RWJ, Alfred Sloane, Kaiser
- institutional support

Some Conclusions

- be as passionate about research as you are (or were) about clinical care
- accept you will (once again) be forging new paths
- be curious
- be patient
- enjoy the ride