

# The Unique Challenges and Opportunities for Research in Rural Medical Education

Jeff Hostetter, MD, FAAFP

January 20, 2022



# Need for Translational Research

- Takes up to 10 years to incorporate clinically relevant information into widespread practice
- Very little research done in rural populations
- But . . . who is going to do this research?
- *Doctors, right?!*

# Need for Research Education

- Observations over past 20 years: Kicking the can down the road
  - Doctors in clinical settings feel they have no time allotted for research of any kind
  - Residency programs assume doctors know how to do research
    - *Not sure where this would have been done!*
    - *Watching an online module does not count!*
  - Health systems assume doctors were taught how to do research in residency

# Need for Research Education

- Observations over past 20 years: Kicking the can down the road
- Most clinical researchers I know are medical school faculty who either went to fellowship or learned by trial-and-error
  - ❖ *Not a model that will produce the results we need!*
  - ❖ *Produces faculty and residents that are very cynical about research!*

# The Struggle is Real

- No one has time to do it
- Research is not compensated by most health systems
- No one has time to teach research skills

# Things we tried:

## All Residents Do Own Project

- Strength –
  - 1) Everyone involved
  - 2) Check box for graduation
  - 3) Separate 1-month rotation
- Weakness –
  - 1) Not enough time to do the steps necessary for publication or poster
  - 2) Not enough time to gather and analyze any significant data
  - 3) No didactics on research design/implementation

# Things we tried:

## All Residents Do Own Project

- Outcome –
  - 1) No one did any research of consequence
  - 2) Residents either very disinterested/apathetic or stressed out over the time crunch
  - 3) Most research projects were planned, but not carried out
- What we learned –
  - 1) Research takes time that occurs in “fits & starts”
  - 2) Research rotations will only produce case reports, at best

# Things we tried:

## All Residents Write An FPIN Article

- Strength –
  - 1) Easy to get people involved (we had faculty write as well)
  - 2) Tasks are clear
  - 3) Publication is virtually guaranteed
- Weakness –
  - 1) Peer review requires intensive time commitment
  - 2) The peer review process is NOT intuitive to most residents and faculty



# Things we tried:

## All Residents Write An FPIN Article

- Outcome –
  - 1) Residents and faculty invariably wrote the first draft of the article
  - 2) All became bogged down and overwhelmed in the peer review process
  - 3) Rarely did they finish during residency
  - 4) The PD got LOTS AND LOTS of publications!
    - And experience with peer review
- What we learned –
  - 1) All steps in doing research from project planning through publication need to be explicitly taught to residents and faculty
  - 2) Peer review requires much patience and intellectual humility

# Things we tried: All Residents Do QI Studies

- Strength –
  - 1) Teaches a skill that is relevant to all doctors
  - 2) Easy to convince residents that it is important and useful
  - 3) Didactic materials readily available
  - 4) Clinic/hospital experts in all systems to support the process
  - 5) No IRB
- Weakness –
  - 1) Cannot be published or presented
  - 2) QI stats do not apply to many research settings/articles

# Things we tried: All Residents Do QI Studies

- Outcome –
  - 1) Residents and faculty all involved
  - 2) Culture of safety and quality established
  - 3) Unable to disseminate lessons learned
  - 4) No publications, so nothing for accreditation
- What we learned –
  - 1) Research skills can be effectively taught
  - 2) Research skills need to be practiced
  - 3) Doctors more invested in research that is clinically relevant to them
  - 4) Research can be done in groups

# ACGME FM RC Changes the Game

- Quality and safety education subsumed by the CLER requirements
- The 2020 Program Requirements
  - (and accompanying Scholarly Activity Guidelines) stated:  
“To be recognized as scholarship, contributions must be:
    - shared with peers; and,
    - subject to peer review.”

**Table 1**

	<b>Residency Faculty Members (Core/Key)</b>	<b>Residents</b>
<b>Number of scholarly</b>	two per faculty member on average over five years	two per resident by end of residency

# ACGME FM RC Changes the Game

- ACGME Annual ADS Report –

Faculty Member	PMID	Non-PMID Peer Review Publications	Other Publications	Conference Presentations	Other Presentations	Chapters Textbooks	Grant Leadership	Leadership or Peer-Review Role	Formal Courses
Jeffrey Hostetter MD, MS	1 - 32718313 2 3 4	0	1	2	2	0	0	Y	Y

# Back to the Drawing Board

# Summary of Lessons Learned

- Research takes time that occurs in “fits & starts” over an extended period of time (usually longer than 3 years)
  - \* *IRB’s are NOT navigated well by most clinicians*
  - \* *Residents and faculty view research as work NOT a hobby*
    - \* At least some protected time during the work week is necessary
- Research skills need to be explicitly taught
- Research skills need to be practiced
- Research that is clinically relevant is the research that gets done
- Research can be done in groups

# New Plan: Group Research Projects

- 1) Structured didactics about the details
  - ❖ formulating a question
  - ❖ IRB application
  - ❖ sources for help with statistical analysis
  - ❖ submitting articles for publication
  - ❖ the peer review process
- Done for BOTH faculty and residents



# New Plan: Group Research Projects

- 2) Research groups consist of
  - ❖ faculty advisor
  - ❖ their resident advisees
  - ❖ a research mentor from the medical school
  - ❖ Each year the new PGY-1's are added to a group, and graduates leave a group
- Goal/Rationale:
  - ❖ Much (but not all!) significant research takes >3 years
  - ❖ Every resident will be involved in some critical aspect of the project

# New Plan: Group Research Projects

- 3) Provide protected time every month for the research group to meet and organize their work
  - ❖ One hour from 4-5PM every month

# New Plan: Group Research Projects

- 4) Accountability: MUST clearly communicate that this is a priority for training
  - Roster of attendance submitted for each monthly meeting
  - Every 6 months, each group presents their project and progress made to the all faculty and residents at a noon meeting

# New Plan: Group Research Projects

- Outcomes so far . . .
  - 4 groups
  - All groups meeting regularly with good attendance
  - All groups have submitted applications to the IRB
  - One group has received a RuralPrep grant for their project
  - One group has completed data collection and is working with statisticians on analysis
- Everyone (especially faculty) has a better attitude about research!

# Implemented With All Residents and Faculty: Rural and Core

- Have included the rural track residents with one of the core research groups
- Provides a “critical mass” to do the work
- Provides modeling for rural faculty

# Challenges Found in the Rural Space

- All ideas of rural/core group focused on comparing rural vs. urban clinical outcomes
  - Made difficult to design study protocols
    - Different populations, different EMR's, different access to technology
- Difficult to explain the study protocols to the IRB

# Challenges Found in the Rural Space

- Organizing the schedules of residents and faculty in 2 different systems to be able to meet
- Organizing sharing of work over distance
  - E.g.: editing of study protocol, editing of IRB applications, discussion of IRB comments/requests, anticipate issues with peer review as well
- ❖ Creative use of innovative tech mandatory!

# Questions?

- Thank you for your time and attention!