Educational Scholarship 101
At the end of this session, participants should be able to:

• Look at the table in front of them and see the outline of a possible educational research study that would be meaningful to them
Why should we do this at all?
What is your mission?
Definitions

Scholarship: “Knowledge resulting from study and research in a particular field”

Evidence-based practice: “All practical decisions made should be based on research studies that are selected and interpreted according to some specific norms”

Comparative effectiveness research: Identifying the most effective interventions through “the generation and synthesis of evidence generated through prospective and retrospective studies”

Quality improvement: “A formal approach to the analysis of performance and systematic efforts to improve it”

This all applies to education as well as clinical practice!!

Sources: www.thefreedictionary.com
patientsafetyed.duhs.duke.edu/module_a/introduction/introduction.html
http://www.bmj.com/rapid-response/2011/11/03/definition-comparative-effectiveness-research
Think of something in your work that you are passionate about*
Basic building blocks:

- Some knowledge, skills, or attitudes that you want to teach
- A plan for how you will do that
- Some measure of whether it worked
- Collaborator(s) whenever possible!*

*Collaborator(s) whenever possible!
MILLER’S PRISM OF CLINICAL COMPETENCE (aka Miller’s Pyramid)

it is only in the "does" triangle that the doctor truly performs

- Performance Integrated Into Practice
  - eg through direct observation, workplace based assessment
- Demonstration of Learning
  - eg via simulations, OSCEs
- Interpretation/Application
  - eg through case presentations, essays, extended matching type MCQs
- Fact Gathering
  - eg traditional true/false MCQs

Based on work by Miller GE, The Assessment of Clinical Skills/Competence/Performance; Acad. Med. 1990; 65(9); 63-67
Adapted by Drs. R. Mehay & R. Burns, UK (Jan 2009)

http://www.gp-training.net/training/educational_theory/adult_learning/miller.htm
Basic building blocks

Research Question

What is known about your topic locally and nationally? *
- Needs assessment
- Systematic/scoping review

What is the next logical step/research question?*

Resource: medical librarian

Data collection & analysis

Dissemination

Literature Review

Study Design

Logistics & IRB Approval
Examples from (my) real life:

- ✓ Does the preclinical medical school curriculum adequately prepare third year medical students for their pediatrics clerkship?
  - Needs assessment
  - Multiple institutions
  - Good collaborators
  - Survey easily distributed and collected
- What are key features of faculty development initiatives designed to promote educational research skills development & educational scholarship in medical education?
  - Literature review
  - Great collaborator
  - Information needed for ongoing work
Basic building blocks:

Dissemination

Research Question

Data collection & analysis

Literature Review

Study Design

Logistics & IRB Approval

What is known about your topic locally and nationally?
- Needs assessment
- Systematic/scoping review

What is the next logical step?
- Further needs assessment
- Intervention study

Resource: medical librarian

Resources: LL, education researchers in SOM, departmental research support

What intervention will you use?* Is there something already published?
- Lecture
- Demonstration
- Patient exposure
- Etc

Who will you study? In what setting?

What data will you collect and how will you analyze it?

Who can you work with?
Examples from (my) real life:

- ✓ Is a new rating tool valid and reliable when reviewing third year medical students’ oral case presentations?
  - Primary interest of mine at the time
  - Funded by (very) small grant from nat’l organization
  - Validation study

Followed by:
- ✓ Is feedback on student oral case presentations improved when this rating tool is used?
- ✓ Does use of an online learning module improve student oral case presentations as much as receiving one-on-one feedback?
  - Multi-center studies
  - Enthusiastic collaborators, one with funding
  - Captive audience of participants
  - Existing place in student schedule for program
Basic building blocks:

Research Question

What is known about your topic locally and nationally?
• Needs assessment
• Systematic/scoping review

What is the next logical step?
• Further needs assessment
• Intervention study

Dissemination

Literature Review

Resource: medical librarian

Data collection & analysis

Study Design

Resources: LL, education researchers in SOM, departmental research support

Resources: education researchers in SOM, departmental research support

How can you ensure the data is being collected?
Who will help you analyze it?

Who will you study? In what setting?
What data will you collect and how will you analyze it?

What intervention will you use? Is there something already published?
• Lecture
• Demonstration
• Patient exposure
• Etc

Who can you work with?
Examples from (my) real life:

- Can a 2 hour workshop improve interns’ skill in communicating effectively with consultants?
  - Teaching intervention based on validated tool
  - Assessment of “shows” via recorded standardized consult calls
  - Committed research group
  - Captive audience of participants

- Does a 4 hour training session in handoff communication improve resident handoffs on a pediatric ward rotation?
  - Resident driven project
  - Used a validated curriculum
  - Validated outcome measures – direct observation
Examples from (my) real life

- **✓** Does a pediatric heart sounds training session in the second year of medical school improve third year students’ ability to identify important cardiac murmurs in children during their third year clerkship?
  - Resident project
  - Listening test
  - Captive audience

- **✓** Does learning basic clinical skills from trained second year students enhance the experiences of first year medical students in a first-summer clinical preceptorship?
  - Student led project
  - Captive audience
Basic building blocks:

- **Research Question**
- **Literature Review**
- **Study Design**
- **Logistics & IRB Approval**
- **Dissemination**

**What is known about your topic locally and nationally?**
- Needs assessment
- Systematic/scoping review

**What is the next logical step?**
- Further needs assessment
- Intervention study

**Resources:** medical librarian

**How can you ensure the data is being collected?**
- Abstract/poster
- Presentation
- Publication
- Resource repository
- More than one?

**Resources:** LL, education researchers in SOM, colleagues in specific discipline

**Who will help you analyze it?**

**Who will you study? In what setting?**
- Lecture
- Demonstration
- Patient exposure
- Etc

**Who can you work with?**

**What data will you collect and how will you analyze it?**

**Dissemination**

**How will you disseminate your findings?**
- Abstract/poster
- Presentation
- Publication
- Resource repository
- More than one?

**Resources:** LL, education researchers in SOM, colleagues in specific discipline

**Who can you work with?**
Where can this be disseminated? (my real life, again)

• National/Regional/Local meetings:
  • Council on Medical Student Education in Pediatrics
  • Alliance for Academic Internal Medicine
  • Pediatric Academic Societies
  • Eastern Society for Pediatric Research
  • Medical Education Day

• Education journals:
  • Medical Science Educator
  • BMC Medical Education
  • Teaching and Learning in Medicine
  • Journal of Education in Health Care
Dissemination, continued...

- **Specialty-specific journals:**
  - Pediatrics
  - Journal of Pediatrics
  - Academic Pediatrics
  - Global Pediatric Health
  - Journal of Obstetric, Gynecologic, and Neonatal Nursing
  - Journal of Human Lactation

- **Other journals:**
  - Maryland Medicine

- **Online resource repositories:**
  - MedEdPortal
  - APPD Learn
Back to your worksheet...

- What are you passionate about in your work that you already teach or could teach?
- What is already known about this?
- Can you create a research question that is feasible and important?
- Who are your partners?
- Do you have a teaching intervention or do you need to create one? Is there something already published?
- What data would you collect? What level of evidence?
- What kind of analysis would you do?
- Who would want to know about this and how would you make sure they do?
Thank you!

For the list of resources mentioned in this presentation, go to:

whsc.emory.edu/education/whea