

# Innovations for Resident-as-Teacher Programs: A Scholarly Track

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*Medical Education Discussion Group*

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# Objectives

- Explore the existing opportunities for resident educators in the Yale Neurology Program
- Discuss the Clinician-Educator Track and Neurology Education Certificate program at Yale
- Explore how residents can develop as Clinician-Educators within the constraints of a busy residency program

# Objectives for Neurology Clinician-Educator Track

- Develop teaching skills
- Design and implement an educational project
- Identify how to move an educational activity into scholarship
- Develop a career pathway for clinician-educators

# Objectives for Neurology Clinician-Educator Track

- Develop teaching skills

## **Resident-as-Teacher**

- Design and implement an educational project
- Understand how to move an educational activity into scholarship
- Develop a career pathway for clinician-educators

## **Educational Scholarship**

# Medical Education in the Department of Neurology

## Resident-as-Teacher



3 noon conference workshops/yr

Medical Student Teaching

“Teaching senior” Elective

## Educational Scholarship



Neurology Education Journal Club

Resident Educational Projects

Faculty Education Projects and Curriculum Development

## Resident-as-Teacher



**3 noon conference workshops/yr**

Principles of Teaching and Learning

Effective Bedside Teaching and the One-minute preceptor

Giving Effective Feedback

***At least one session mandatory for all residents***

***Most residents attend all 3***

## Resident-as-Teacher



3 noon conference workshops/yr

Small-group sessions  
for 1<sup>st</sup> and 2<sup>nd</sup> year  
students

### Medical Student Teaching

Clinical Exam Skills  
Teaching

- Teaching on wards
- “Top Ten” Differential Diagnoses
  - Neurology Simulation
  - Leading Didactic Sessions

\* Electives may be arranged by approval of advisor

## Resident-as-Teacher



3 noon conference workshops/yr

Medical Student Teaching

**“Teaching senior” Elective**

- Required component of Track/Certificate Program
- Lead Morning Report 2-3 days/week
- Give one noon conference presentation
- Give one medical student lecture
- LP simulation with students
- Facilitate simulation session with students
- Lead bedside teaching sessions
- ***Frequent supervision and feedback from faculty***



## Educational Scholarship



## Neurology Education Journal Club

- 3-4 times per academic year
- Open to all residents and faculty
- Discuss a new or important paper in the medical education literature, relevant to neurology education
- Each resident in the certificate track is required to present one journal club session

# The Inaugural Neurology MedEd Journal Club

- October 19, 2015
- Volunteer attendance (food was served) - 8 attendees
- Discussed Pascoe *et al.*'s review of two popular teaching methods, the One Minute Preceptor and SNAPPS



Journal of  
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## REVIEWS

### **Maximizing Teaching on the Wards: Review and Application of the One-Minute Preceptor and SNAPPS Models**

Jennifer M. Pascoe, MD<sup>1\*</sup>, James Nixon, MD, MHPE<sup>2</sup>, Valerie J. Lang, MD<sup>1</sup>

<sup>1</sup>Department of Medicine, University of Rochester School of Medicine & Dentistry, Rochester, New York; <sup>2</sup>Department of Medicine, University of Minnesota Medical School, Minneapolis, Minnesota.

# OMP vs. SNAPPS

## One Minute Preceptor

1. Get a commitment
2. Probe for supporting evidence
3. Teach general rules
4. Reinforce what was done right
5. Correct mistakes

## SNAPPS

1. Summarize the case
2. Narrow the differential
3. Analyze the differential
4. Probe the preceptor
5. Plan management
6. Select a learning question

# Translating Discussion into Scholarly Work

- Currently developing a curriculum for *resident-led* instruction of the OMP to other residents
- Multi-media, discussion based
  - Show a video of a well-executed but traditional, *socratic* interaction on rounds leading to a chalk talk
  - Garner impressions from the participants
  - Use their feedback as seeds for discussion on the most effective, efficient techniques used by residents during ward teaching
  - Ultimately steer discussion such that participants themselves outline the important aspects of the OMP, namely:
    - Make ward teaching *learner-centered*
    - Focus instruction on a few key, generalizable principles
- Primary outcomes being developed
  - Survey
  - Focus group?

# Translating Discussion into Scholarly Work

- Wish to validate a curriculum that could be disseminated across institutions and specialties
  - Basic review of OMP
  - Videos
  - Discussion prompts
  - Surveys
- In addition to publication/presentation at conference, would like to post to AAMC's MedEd Portal ([mededportal.org](http://mededportal.org))



## Educational Scholarship



Neurology Education Journal Club

- Could include a curriculum, teaching module, quality improvement project, innovation, review
- Disseminated : Abstract, MedEd Portal, Paper, Part of an existing curriculum
- ***Goal is to allow residents to develop tools to navigate a career as an academic clinician-educator***

## Resident Educational Projects

# Peer Mentorship in Residency

- **Objective:** To establish a Peer Mentorship Program to help ease the transition of first year residents into the Neurology Program
- **What We Did:** We paired PGY 3 and 4 residents with first year residents upon starting the program. The process was voluntary, and all PGY2 residents elected to be part of the program. Based on academic and personal interests (PGY2 residents filled out a short questionnaire) residents were paired.
  - Questions in the questionnaire:
    - What are you thinking of going in to?
    - Are you interested in doing research in residency?
    - Did you complete intern year at Yale or elsewhere?
    - Any other information you think is important!
- Basic guidelines about the purpose of the program were e-mailed to all participants

# Peer Mentoring in Residency

- After 3 months mentors and mentees were polled via an online Qualtrics survey about their thoughts on the effectiveness and utility of the program
  - The Survey was completed by:
    - 100% (8/8) mentees
    - 87.5% of mentors (6/7)
  - Topics which were most often discussed were:
    - career development
    - work life balance
  - 100% of mentees felt that the program enhanced their:
    - ability to deal with new situations
    - access learning opportunities



# Peer Mentoring in Residency

- Results Continued
  - 100% of mentees reported:
    - that the program was useful and enhanced their experience in the residency program
      - Specifically mentees felt that it reinforced the “camaraderie”, “collegial aspects” and “supportive culture” of our program
  - 100% of mentors reported:
    - that they would enroll to be a mentor again
    - PGY3 mentors felt that it gave them an opportunity to get to know incoming PGY2s better than they would have without the program
  - 100% of respondents would recommend peer mentorship to residents in other programs
- Future directions:
  - Focus group(s) to get richer qualitative feedback on the program, in order to improve for next year.
  - Develop a brief training module for mentorship prior to the next cycle
  - Compare our mentorship models to other programs, groups, etc.

## **Curriculum:**

- Residency curriculum committee: Noon conference, rotation objectives, assessment tools
- “Top Ten” Differential Diagnoses in Neurology and Internal Medicine (5/10 cases were developed by neurology residents)

## **Faculty Education Projects:**

- Simulation for Milestone Assessment (Loomis, Robeson, Moeller)
- Simulation for Brain Death (Greer)
- “Flipped” EEG Curriculum (Moeller)
- “Top Ten” (Loomis, DiCapua, Dunne)
- Threshold Concepts in EEG Learning (Moeller)

## **Educational Scholarship**



Neurology Education Journal Club

Resident Educational Projects

**Faculty Education Projects  
and Curriculum Development**

SPECIAL THEME ARTICLE

## How Best to Evaluate Clinician–Educators and Teachers for Promotion?

*Thomas H. Glick, MD*

### **Recognition vs. Impact:**

“In the absence of outcome-oriented criteria (other than publication) for educational scholarship, the name of the high-stakes promotion game is still recognition.”

# Defining Educational Scholarship: The Q<sup>2</sup>Engage Model

**Educational Activity**  
Teaching  
Curriculum  
Mentoring/Advising  
Leadership/Administration  
Learner Assessment

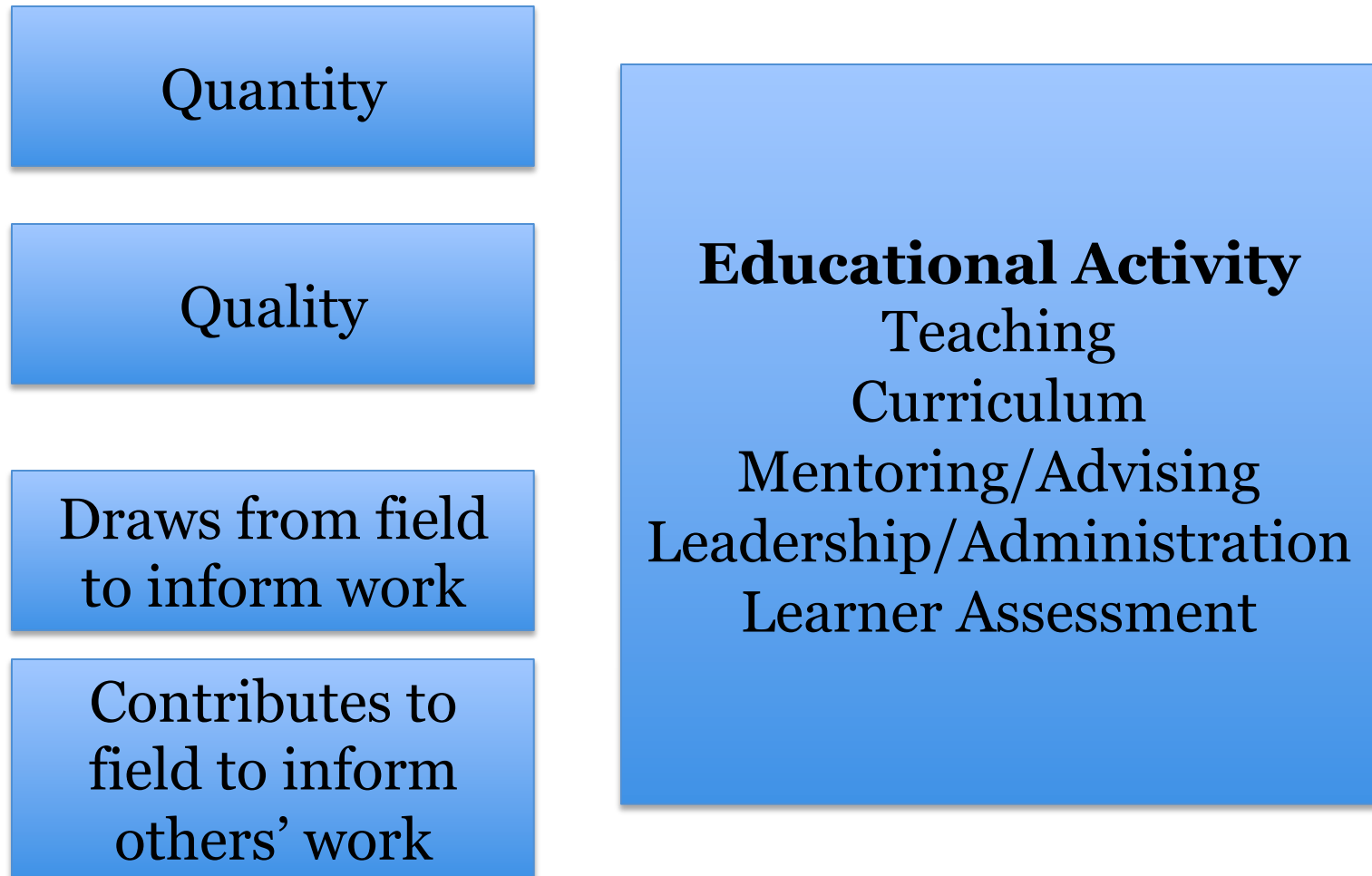
# Defining Educational Scholarship: The Q<sup>2</sup>Engage Model

Quantity

Quality

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# Defining Educational Scholarship: The Q<sup>2</sup>Engage Model



# Defining Educational Scholarship: The Q<sup>2</sup>Engage Model

Q<sup>2</sup>

Quantity

Quality

Engage

Draws from field  
to inform work

Contributes to  
field to inform  
others' work

**Educational Activity**

Teaching

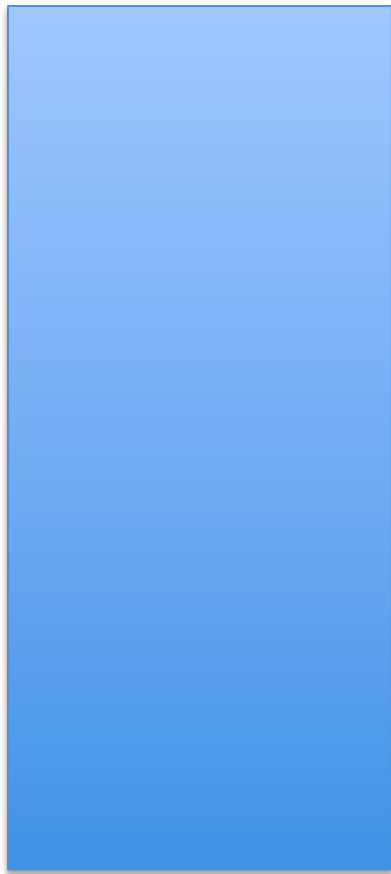
Curriculum

Mentoring/Advising

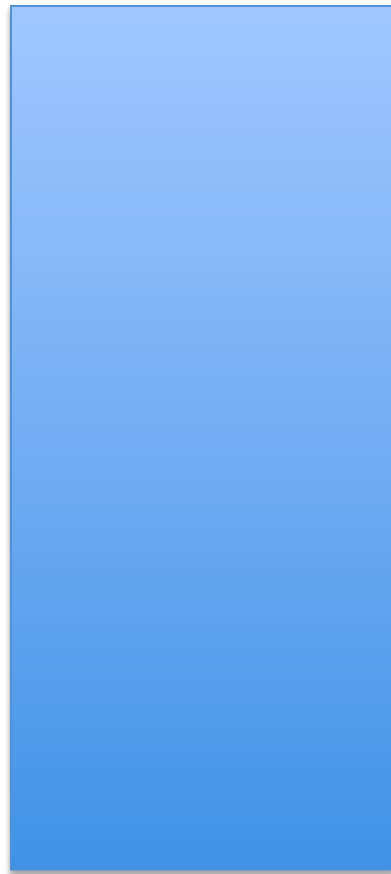
Leadership/Administration

Learner Assessment

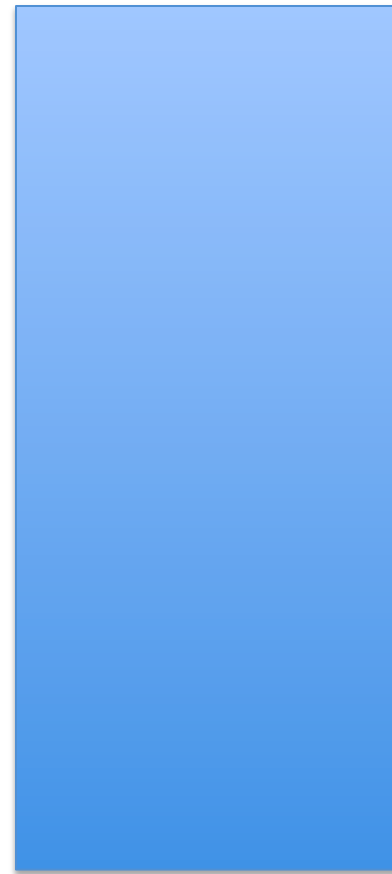
# Integrating Educational Scholarship into a busy residency program



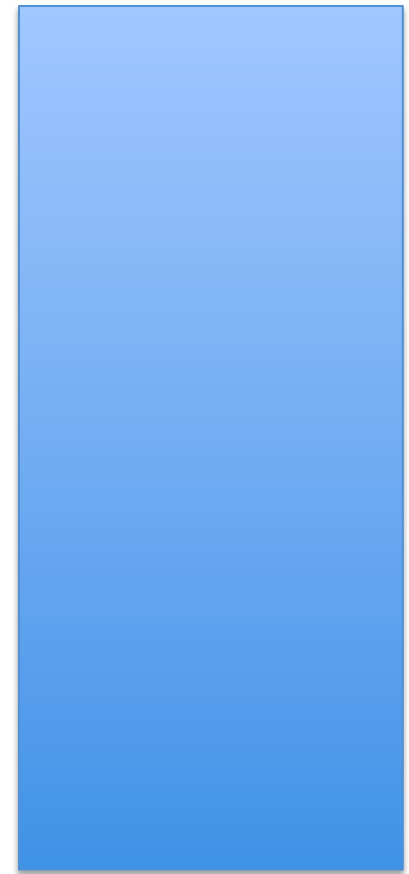
Pre-residency



PGY-2



PGY-3



PGY-4

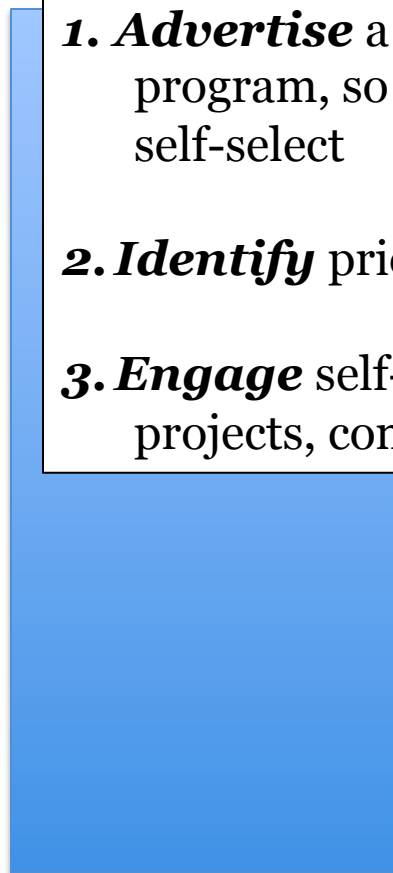


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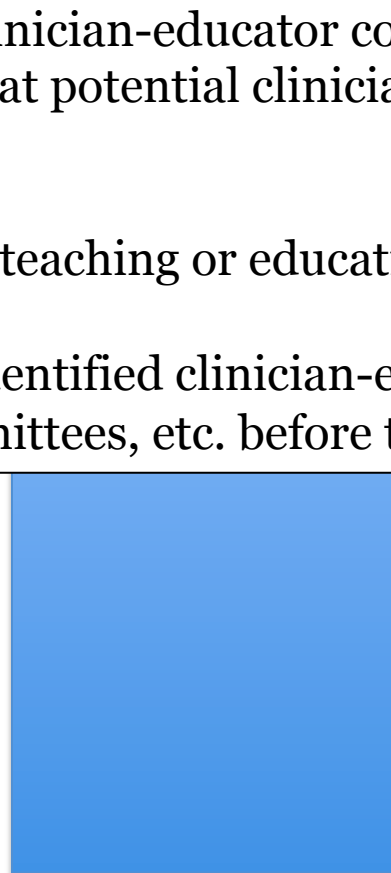


**Pre-residency**

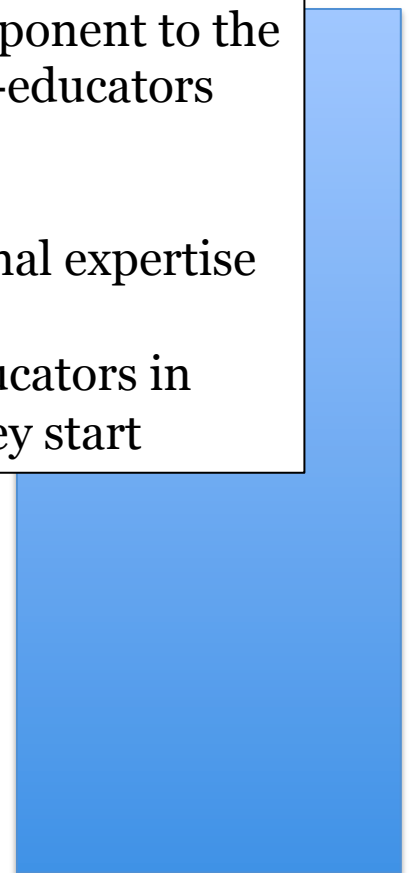
- 1. *Advertise*** a clinician-educator component to the program, so that potential clinician-educators self-select
- 2. *Identify*** prior teaching or educational expertise
- 3. *Engage*** self-identified clinician-educators in projects, committees, etc. before they start



**PGY-2**



**PGY-3**



**PGY-4**

# Integrating Educational Scholarship into a busy residency program

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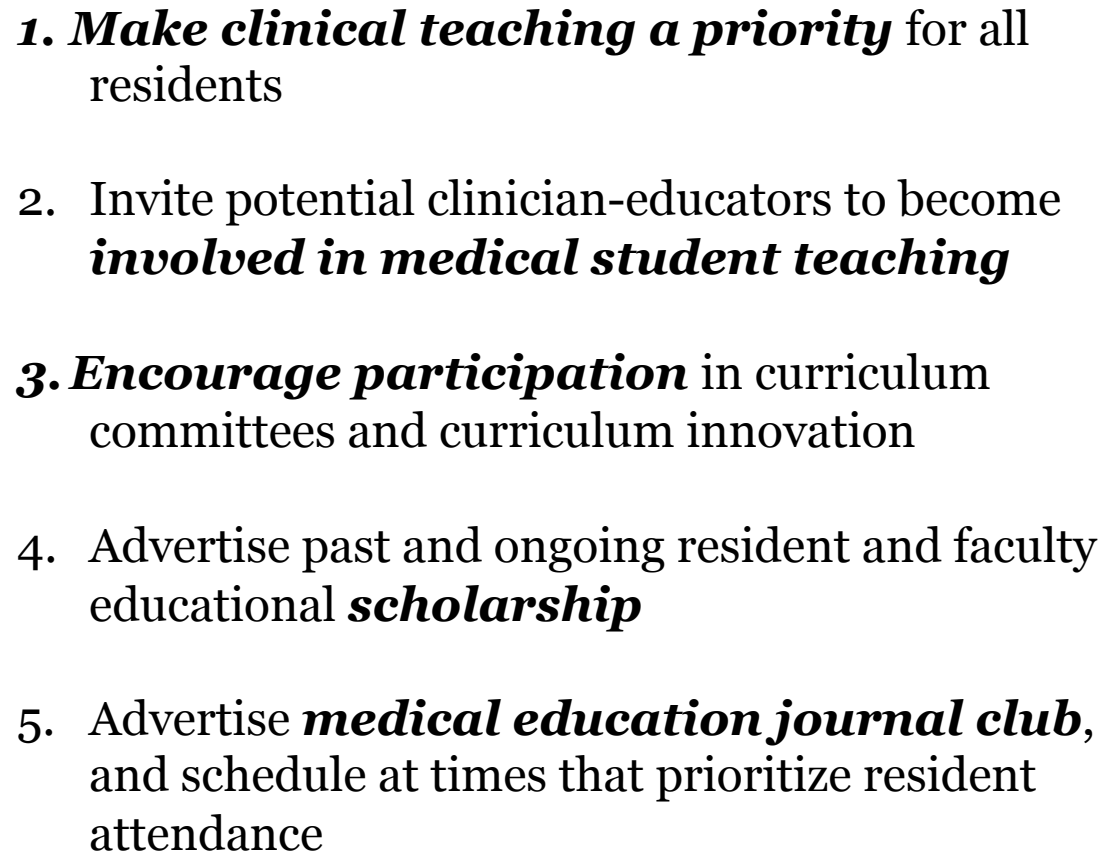
medical education in review

**Computer-based teaching module design: principles derived from learning theories**

K H Vincent Lau

**Pre-reside**

# Integrating Educational Scholarship into a busy residency program

- 
- 1. Make clinical teaching a priority** for all residents
  - Invite potential clinician-educators to become **involved in medical student teaching**
  - 3. Encourage participation** in curriculum committees and curriculum innovation
  - Advertise past and ongoing resident and faculty educational **scholarship**
  - Advertise **medical education journal club**, and schedule at times that prioritize resident attendance

Pre-residency

PGY-2

PGY-3

PGY-4

# Integrating Educational Scholarship into a busy residency program

- 1. Give first opportunities for medical student teaching** to residents in clinician-educator track, and support time off to participate in teaching
- 2. Establish mentorship relationships** between residents and clinician-educator faculty
3. Map out scholarly project that is:
  - **Feasible** on a resident's timeline
  - **Engages** with the greater medical education community
  - Produces a product that enhances the resident's **recognition** as a medical educator

Pre-residency

PGY-2

PGY-3

PGY-4

# Integrating Educational Scholarship into a busy residency program

1. Encourage senior clinician-educator residents to **mentor and advise** junior residents
2. Allow development of teaching expertise by encouraging “**teaching senior**” elective or similar intensive teaching experience
3. **Finish and disseminate** scholarly project
4. **Recognize** clinician-educator residents with a Certificate or similar credential


Pre-residency

PGY-2

PGY-3

**PGY-4**

# The Big Picture



**Content Experts**  
(Clinicians,  
Researchers)

# The Big Picture

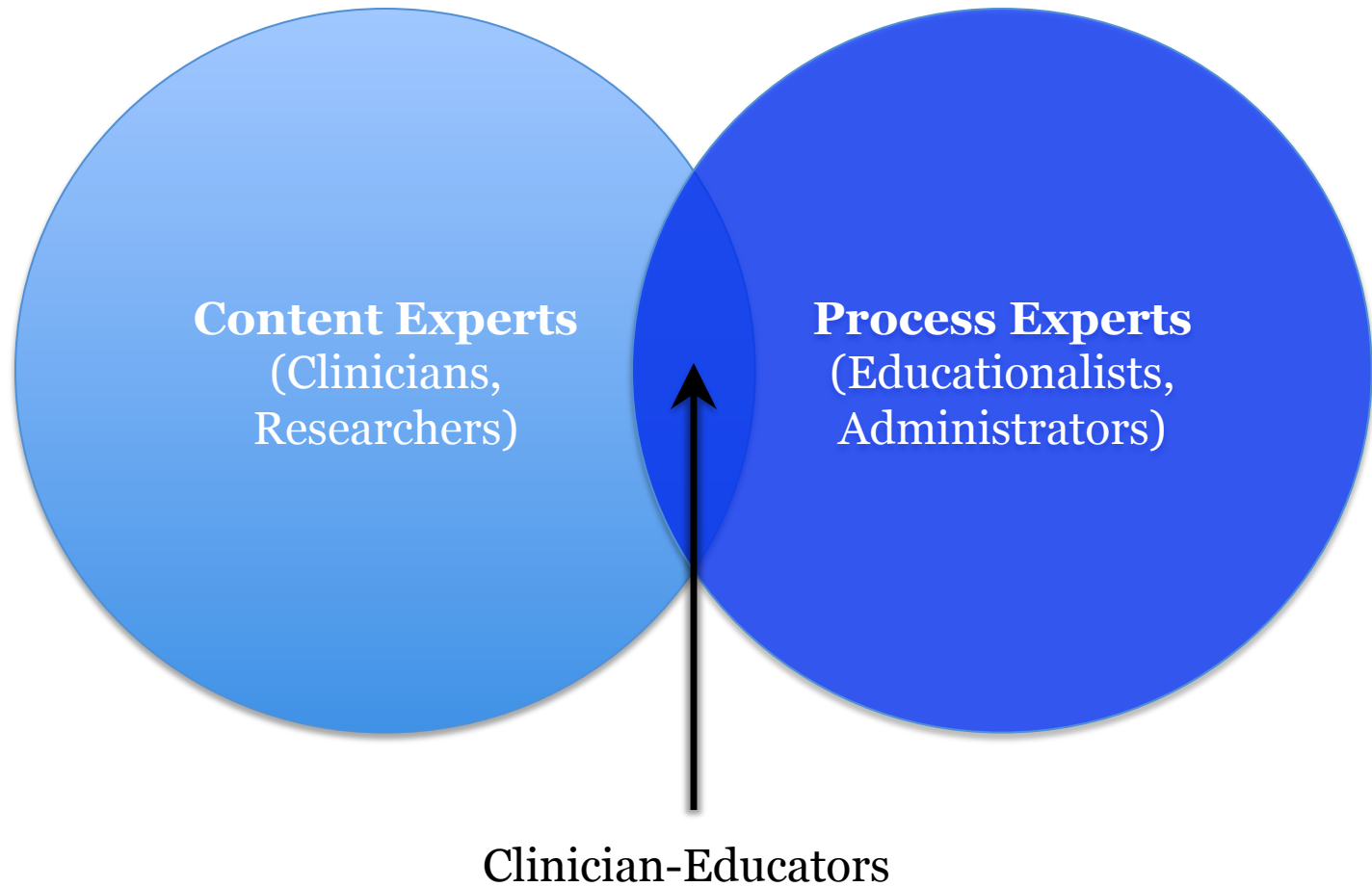


**Content Experts**  
(Clinicians,  
Researchers)



**Process Experts**  
(Educationalists,  
Administrators)

# The Big Picture





# Future Steps

- Evaluate our program:
  - Resident and faculty perceptions
  - Resident career outcomes
  - Faculty growth as mentors/leaders in neurology education
- Work with other departments on some “fixed” components of a resident Clinician-Educator track/program that could be shared between programs
- Share our experiences outside of Yale, and potentially collaborate with other neurology programs
- Get faculty and residents applying for educational grants

# Thanks

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