Hospital Medicine
Clinical Scholars Program

2018–2019
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Introduction

The Weill Cornell Hospital Medicine Clinical Scholars Program is a one-year, intensive faculty development program that aims to foster academic success and personal growth for hospitalists. While geared towards the training of academic hospitalists, it is a program relevant for any new faculty who are committed to becoming leaders in academic medicine. Although there is a common curriculum, each participant also formulates a uniquely tailored curriculum that fits their personal academic interests.

Program Content

The program focuses on developing skills in foundational areas of academic medicine: clinical teaching, clinical epidemiology and advanced evidence-based medicine, quality improvement and patient safety, and leadership. There is an emphasis on how best to teach physical diagnosis and clinical reasoning and how to properly evaluate and incorporate research evidence into clinical decision-making. The program also helps assure proficiency in bedside ultrasound, a diagnostic modality that most hospitalists are now expected to master. Additionally, there are introductory courses in research methods, data analysis, medical ethics, resiliency training, peer coaching, medical writing, and humanism in medicine.

Program Structure and Expectations

This is a one-year program that includes:
- 16–20 weeks of clinical work, divided between the main hospital (majority of time) and a community hospital; between teaching (majority) and non-teaching services; and between days (majority) and nights;
- 12 weeks of didactic instruction;
- 4 weeks of vacation and holidays;
- 12–16 weeks of individualized academic pursuits and research.

Each clinical scholar is expected to complete a scholarly project and prepare a manuscript for publication by the end of the year. For those wanting to focus on clinical research, it is recommended that years 2 and 3 be spent getting additional training in research methods, epidemiology, and advanced data analysis. Other expectations include participating in the teaching of students and residents in physical diagnosis, evidence-based medicine, clinical reasoning, and bedside ultrasound.
Clinical Teaching

Total Hours: 22

Course Director
Ernie Esquivel, MD
Assistant Professor, Hospital Medicine
Medicine Clerkship Director, Weill Cornell Medical College

Objectives
We will address specific teaching skills that enhance patient-centered clinical learning, with an emphasis on activating learners, interviewing patients, physical diagnosis, and exposing and critiquing clinical reasoning. We plan on a 1-week intensive interactive curriculum on clinical teaching that is modeled after Kelly Skeff’s program at Stanford, with extensive supplementation using materials from Harvard’s Macy program for health educators and from two master teachers, Jeff Wiese (Teaching in the Hospital) and Brendan Reilly (One Doctor; Inconvenient Truths about Effective Clinical Teaching). There will be direct observation of each participant’s teaching with confidential feedback and design options for dedicated practice. Additional personalized coaching sessions will be arranged.

Description
During an intensive 5 days, there are over 20 hrs of instruction. Many of the sessions are interactive seminars, some require role-play among participants, and other sessions critique teaching observed in the hospital (morning rounds; small group teaching; large lectures). The major topics are divided into several 1–3 hour sessions, covering:
  • Peer coaching to improve clinical teaching: using direct observation and principles of appreciative inquiry.
  • Learning environment. How to monitor and control the learning climate to foster greater learning and a growth mindset.
  • Teaching style. Appreciating the range of styles and where one’s own style fits along that spectrum.
  • Control. How to control the learning interaction so learning objectives are met.
  • Communicating goals. What goals to communicate and how to do it well.
  • Assessing understanding and retention of the learners.
  • Cognitive load. Reviewing evidence on the optimal cognitive stress (load) that maximizes growth and learning.
  • Evaluating oral presentations of medical students and residents.
  • Feedback. Techniques, strategies, pitfalls, culture.
  • Critiquing the learning on morning rounds.
  • Critiquing the learning in small groups as clinical teams discuss patient-related topics.
  • Bedside teaching. How to efficiently incorporate teaching about interviewing and physical diagnosis at the bedside.
  • Clinical reasoning. Critiquing and enhancing clinical reasoning; exposing cognitive biases.
Critical Readings

2. Reilly. Inconvenient truths about effective clinical teaching.
5. Bunce. How long can students pay attention?
7. Yeager. Mindsets that promote resilience.
10. Elwyn. Leadership in groups.
11. Sklar. Competencies, milestones, entrustable professional activities.
15. West. Advance organizer.
16. Prince. Does active learning work?
18. Wear. Pimping
23. Molloy. Seeking a different angle on feedback.
27. Feddock. Lost art of clinical skills.
29. Sutkin. What makes a good clinical teacher in medicine?
30. Nothnagle. Struggling to be self-directed.
31. Premkumar. Does medical training promote or deter self-directed learning?
32. Duran-Nelson. Should we Google it?
Clinical Epidemiology and Advanced EBM
Total Hours: 40

Course Directors
Arthur Evans, MD, MPH
Professor of Medicine, Hospital Medicine

Amiran Baduashvili, MD
Assistant Professor, Hospital Medicine
Associate Program Director, Internal Medicine Residency Program

Objectives
A sampling of the learning objectives include:

1. **Diagnosis**
   - Correctly interpret and calculate test characteristics (sensitivity, specificity, accuracy, likelihood ratios) from different data sources.
   - Accurately interpret an ROC curve and identify best cutpoints.
   - Appreciate work-up bias and bias from indeterminate results.

2. **Treatment: Risks and Benefits**
   - Appreciate difficulties and ambiguities of describing risks in quantitative and qualitative terms.
   - Calculate NNT and risk difference from relative risks and odds ratios.
   - Understand the limitations of hazard ratios.

3. **Clinical Reasoning**
   - Correctly interpret P-values and confidence intervals.
   - Apply universal principles to make decisions about when it is best to observe, test, or empirically treat.
   - Describe how disease-specific mortality can be biased by sticky diagnoses or slippery linkages (and why disease specific mortality should be considered a surrogate outcome).

Description
All teaching is problem-based and interactive, where learners are encouraged to struggle, fail, and persist until they feel comfortable in teaching the concepts to others. Successfully applying research findings reported in the literature to an individual patient’s unique circumstances requires an ability to judge the validity (internal and external) of the reported results and an ability to translate research findings into something clinically meaningful. This requires a robust appreciation for the role of chance, bias, and confounding in producing erroneous conclusions. It also requires skills in the interpretation and use of likelihood ratios, ROC curves, odds ratios, relative risk reductions, hazard ratios, regression coefficients, P-values, and confidence intervals.
Critical Readings
2. Welch, Schwartz, Woloshin. 5-year survival rates. JAMA. 2000
3. Welch and Black. Overdiagnosis of cancer. 2010
5. Spruance. Harzard ratio in clinical trials. 2004
7. Baduashvili. ROC-on. Getting the most from your diagnostic test. 2018
8. Perneger. Framing bias. 2011
17. Lachs. Spectrum bias. 1992
18. Punglia. Verification bias and PSA. NEJM. 2003
Quality and Patient Safety
Total Hours: 18

Course Director
Jennifer Lee, MD
Associate Professor, Hospital Medicine
Vice Chair and Quality and Patient Safety Officer, Weill Department of Medicine

Objectives
- Learn and integrate rigorous QI and patient safety tools into clinical practice.
- Develop skills to become effective leaders and mentors in clinical excellence.
- Apply simple tools to maintain personal and project team wellness to prevent burnout and overcome barriers to success.
- Explore opportunities for academic productivity through scholarship in QI.

Description
Career success at academic medical institutions has been centered on achievements in the tripartite mission of research, education and patient care. With continuing changes to the academic environment and expectations in healthcare delivery, new challenges arise for many junior faculty without traditional research training in balancing those three domains and achieving professional fulfillment of the mission. Training in advanced quality improvement (QI) and safety science provides junior faculty with a pathway to achieve academic scholarship through curriculum development, mentorship and publications.

Critical Readings
Point-of-Care Ultrasound (POCUS)
Total Hours: 80

Course Directors
Tanping Wong, MD
Assistant Professor, Hospital Medicine
Director, Weill Cornell POCUS Program

Gregory Mints, MD
Assistant Professor, Hospital Medicine
Member, Executive Council, Society of Hospital Medicine POCUS Interest Group

Elaine Gee, MD
Assistant Professor, Hospital Medicine

Objectives
This course is designed to achieve competency in image acquisition, image interpretation, and clinical integration in the following areas: basic cardiology, lung and pleural disease, kidney and bladder, lower extremity veins, and approach to shock, dyspnea, and acute renal failure.

Description
This 2-week course will give you the skills to confidently integrate POCUS into your everyday practice. Learn through hands-on scanning, image interpretation, case discussions, and evidence review. The course covers applications in cardiac, pulmonary and pleural, renal, GU, abdominal, biliary, vascular, and musculoskeletal sonography.

- Scan with live models
- Low 2:1 student-to-teacher ratio
- All course faculty are certified by the American Chest Society, engaged in the development of national guidelines, and teach at conferences held by the American College of Physicians and the Society of Hospital Medicine

Critical Readings
Leadership
Total hour: 18

Course Directors
Margaret McNairy, MD, MSc
Assistant Professor, Hospital Medicine Sacerdote
Clinical Scholar in Women’s Health
Co-Director, Weill Cornell Hospital Medicine/Global Health Clinical Research Fellowship Program

Justin Choi, MD
Assistant Professor, Hospital Medicine

Objectives
- Develop leadership skills in mentoring, conflict resolution, and negotiation.
- Design personalized plans for career and personal growth that promote flow, productivity, and vitality.
- Learn tools and methods for innovation and entrepreneurship.

Description
Hospitalists serve a variety of leadership roles in patient care teams, medical education, research collaborations, and hospital operations among many other arenas. This course aims to give new hospitalists the foundational skills necessary to become the next generation of leaders in hospital medicine. Participants will apply their own experiences to discussions on mentoring, conflict resolution, negotiation, and vitality. Activities include designing personalized strategies and plans for career development and personal growth. This course also serves as a model for facilitated peer mentorship, and will serve as springboard for establishing peer mentoring groups beyond the completion of this course.

Critical Readings
Research Methods

Total Hours: 7

Course Director
Lisa Kern, MD, MPH
Associate Professor of Medicine
Associate Professor of Healthcare Policy and Research
Associate Director of Research, Division of General Internal Medicine

Objectives
By the end of the session, participants should be able to:
- Recognize the key components of a research question
- Think through how a given research question could be answered with different types of study designs
- Articulate potential sources of bias and confounding
- Recognize different approaches to recruitment and sampling
- Compare and contrast different potential sources of data

Description
This course discusses fundamental principles of clinical research and health services research. Participants in this course will gain a greater appreciation for how research studies are designed, and they will then be equipped with the information needed to start to develop their own research projects (in collaboration with their mentors). Participants will also gain insights that will allow more critical reading of research studies in the scientific literature. The course includes lectures and interactive discussions.

Critical Readings
Data Analysis

Total Hours: 22

Course Directors

Arthur Evans, MD, MPH
Professor, Hospital Medicine
Chief, Hospital Medicine

Deanna Jannat-Khah, DrPH, MSPH
Quality University Program Manager

Objectives

The goal is to provide an introduction to data analysis as well as training in using Stata statistical software. Participants first learn the basics about importing data, cleaning data, simple data management, and creating new variables. Next, they learn about descriptive statistics and how to visually display the characteristics of individual variables. We then progress to different bivariate analyses and introduce the most common multivariable approaches. At each step, there is an emphasis on the graphical display of results and appropriate interpretation. Finally, we perform a meta-analysis and generate ROC curves.

These skills will allow participants to replicate some analyses in the literature; generate confidence intervals; generate new insights through appropriate visualization of quantitative data; initiate the analysis of their own data sets; and more successfully interact with research collaborators and biostatisticians. Most research that will be submitted for publication will require input from an experienced analyst/epidemiologist/biostatistician, and this introductory course does not eliminate that need.

Description

This is a 5-day survey of data analysis techniques that is conducted in a computer lab over 22–25 hours. We will ask participants to answer questions that require data manipulation and analysis. They will also be required correctly interpret output and generate graphs to facilitate understanding and communication.

Critical Readings

Parts of the following books:
1. Acock. A Gentle Introduction to Stata.
Clinical Reasoning

Total Hours: 26

Course Directors
Brendan Reilly, MD
Honorary Professor of Medicine, Geisel School of Medicine at Dartmouth

Jigar Contractor, MD
Assistant Professor, Hospital Medicine

Justin Choi, MD
Assistant Professor, Hospital Medicine

Objectives
By the end of the session, participants should be able to:
- Compare and contrast theories of diagnostic reasoning and therapeutic decision making.
- Diagnose common pitfalls in clinical reasoning and develop best practices to mitigate bias and errors.
- Develop best practices for teaching reasoning during clinical and didactic encounters.
- Design a plan for dedicated practice to maintain engagement and vitality throughout a career in hospital medicine.

Description
Academic hospitalists must provide exceptional patient care, serve as leaders for interdisciplinary teams, and teach junior doctors and students the knowledge and skills required for success in medicine. Through group exercises, observation of attending rounds and morning reports, and facilitated group discussions, we review best practices and strategies for mentoring trainees while maintaining personal vitality throughout a long career. Additionally, the course aims to provide a foundational understanding of diagnostic and therapeutic reasoning through a review of clinical reasoning theories, applications in daily practice, and methods to recognize and mitigate errors and bias.

Critical Readings
Physical Diagnosis

Total Hours: 10

Course Director
Anthony Ogedegbe, MD
Assistant Professor, Hospital Medicine

Objectives
By the end of the session, participants should be able to:
- Demonstrate at the bedside, in a step-wise and reproducible fashion, physical exam maneuvers most relevant to a hospital medicine practice.
- Articulate clinical scenarios where physical exam maneuvers change management and improve clinical outcomes.
- Impart physical diagnosis concepts in a manner that highlights their value in contemporary medical practice.
- Teach in a way that engenders enthusiasm, interest and purpose in learners with respect to physical exam maneuvers.

Description
This course offers a framework for engaging students and residents on the value of physical diagnosis in contemporary clinical practice. The curriculum will stress physical exam items that are most relevant to hospitalists and will focus on bedside teaching. The course will be taught in 3 modules: 1) OSCE-based instruction on exam technique and bedside teaching philosophy, 2) teaching on live patients, 3) teaching Weill Cornell students/housestaff (optional). Participants receive immediate faculty feedback on a one-on-one basis.

Critical Readings
7. Gowda, Deepthiman MD, MPH; Blatt, Benjamin MD; Fink, Mary Johanna MD; Kosowicz, Lynn Y. MD; Baecker, Aileen MPH; Silvestri, Ronald C. MD A Core Physical Exam for Medical Students: Results of a National Survey. Acad Med. 2014;89:436-442.
Medical Ethics
Total Hours: 4

Course Directors
Joseph Fins, MD
The E. William Davis, Jr. M.D. Professor of Medical Ethics
Chief, Division of Medical Ethics

Matthew McCarthy, MD
Assistant Professor, Hospital Medicine

Ezra Gabbay, MD
Assistant Professor, Hospital Medicine

Nekee Pandya, MD
Assistant Professor, Hospital Medicine

Objectives
This course surveys the ethical issues facing hospitalized patients, medical trainees, and patients. Participants will learn how to confront ethical challenges in real time and will examine the various methods of resolving ethical conflicts on the wards. The course will also cover clinical research ethics and funding opportunities for hospitalist-investigators.

Description
Participants will discuss common ethical issues encountered on academic hospitalist services and will explore how those decisions impact patient care and medical education. Participants will also learn how to transform ethical dilemmas into teachable moments.

Critical Readings
Resiliency Training
Total Hours: 4

Course Directors
Alice Tang, MD
Assistant Professor, Hospital Medicine

Kimberly Bloom-Feshbach, MD
Assistant Professor, Hospital Medicine

Objectives
By the end of the session, participants should be able to:
- Define and explain the relationships between wellness, resiliency, and burnout.
- Recognize physical and cognitive manifestations of stress in self and others & apply adaptive strategies to mitigate stress and prevent burnout.
- Teach learners and apply techniques from resiliency training to own practice.

Description
This two-part resiliency training session is designed to help participants enhance resiliency in both their learners, as well as themselves. Participants will undergo a guided discussion of personal experiences and beliefs about resiliency. They will be introduced to a framework to conceptualize burnout, resiliency, and wellness. They will be trained in several tools from the mindfulness and positive psychology literature that can enhance resiliency, through experiential learning. Finally, they will develop a Resiliency Road Map, where participants will set goals for how they will enhance resiliency in their learners and themselves, anticipate barriers to implementation, and brainstorm solutions for how to overcome these barriers.

Critical Readings
1. Nedrow, A, Steckler, NA, Hardman, J. Physician Resilience and Burnout: Can you make the switch?
   a. **introduces a conceptual framework for how to understand resiliency
   a. **discusses where the concept of resilience originates from (outside of medicine)
   a. **offers trainee perspective on how to enhance meaning in daily work to combat burnout
Peer Coaching
Total Hours: 2

Course Directors
Alice Tang, MD
Assistant Professor, Hospital Medicine

Aram Kim, MD
Assistant Professor, Hospital Medicine

Kimberly Bloom-Feshbach, MD
Assistant Professor, Hospital Medicine

Objectives
• Set clinical teaching goals and incorporate feedback from peer teaching coach to help achieve goals.
• Provide high quality feedback to a peer, prioritizing feedback on peer’s teaching goals.
• Self-reflect upon one’s clinical teaching skills while in varying roles within the program (prior to meeting with partner for feedback, while observing and providing feedback to partner, etc)
• Develop new scaffolded learning of teaching skills through observing peer during clinical teaching.

Description
Feedback is essential for improving performance through deliberate practice. However, attending physicians have few sources of unbiased feedback about their clinical teaching. This peer teaching coach program is designed to improve clinical teaching skills through the use of in-person and video-based peer observation of teaching. Participants will choose a partner to observe and be observed by while teaching on service during rounds. Each observation will be followed by reflection, feedback, and goal-setting using a standardized feedback tool. Peer teaching coaches will serve as a resource for troubleshooting teaching challenges and brainstorming solutions.

Critical Readings
1. Atul Gawande’s article on coaching in medicine: https://www.newyorker.com/magazine/2011/10/03/personal-best
Medical Writing

Total Hours: 2

Course Directors
Matthew McCarthy, MD
Assistant Professor, Hospital Medicine

Dhruv Khullar, MD
Assistant Professor, Hospital Medicine and Healthcare Policy and Research

Objectives
By the end of the session, participants should be able to:
- Describe the basic elements of a compelling op-ed, column, and academic perspective piece.
- Critically evaluate pieces of writing for both lay and academic audiences, and distinguish key elements of both
- Consider ideas and framing that might be useful for their own writing

Description
This course offers a framework for identifying and producing high-quality writing for both lay and academic audiences. The curriculum will focus on 1) identifying the key elements of op-eds and perspectives, 2) packaging and pitching ideas, 3) critically appraising works of writing, and 4) brainstorming ideas for possible articles.

Critical Readings