



AAIM Residency Research Pathway Directors Summit March 22 – 23, 2017 Baltimore, MD

Program Overview

Summary

The goal of the Residency Research Pathway Directors Summit was to identify and share curriculum, programmatic outcomes, and operational practices that best promote the future success of graduates from the American Board of Internal Medicine (ABIM) Research Pathway. The Summit provided several plenaries that covered the expanse of the background and future of the physician scientist training and workforce. Workshop-style breakout sessions allowed for highly interactive discussions to identify best practices in six major topic areas.

Upon the conclusion of the Summit, AAIM compiled a summary highlighting best practices identified by Summit participants. This product will be disseminated to internal medicine and biomedical research communities. It is expected to be submitted to the medical education literature in the form of a white paper focused on best practices for physician-scientist training at the residency and fellowship level.

Plenaries

Background, Introductory, and the Mission, Robert A. Salata, MD and Melvin Blanchard, MD
Representing the Alliance for Academic Internal Medicine (AAIM)

The Physician-Scientist Pipeline and the MSTP Perspective, Lawrence (Skip) Brass, MD, PhD
University of Pennsylvania

The Brigham Program: Four Decades of Challenges, and Successes, Rebecca Marlene Baron, MD
Harvard Medical School Brigham and Women's Hospital

Promoting the Physician-Scientist Career, the Clinical Scholars Program at Rockefeller, Barry S. Collier, MD
The Rockefeller University

Sessions- Six Major Topic Areas

Summit participants provided operational details of their programs through a pre-Summit survey. This guided the development of the six major topics for the workshop-style breakout sessions. These topics and related questions, (*Sessions- Detailed*, below)*, focused discussion on specific elements of the pathway design. Co-leaders presented the outcomes during a final plenary discussion of the identified best



operational and curricular practices. Sessions were co-facilitated by Summit organizers and recent pathways graduates as follows:

1- Success Factors and Tracking Success

Winston Tan, MD
M. Caroline Burton, MD

2 - Recruitment

Robert F. Todd, Jr, III, MD, PhD
Christopher Williams, MD

3- Curriculum and Infrastructure

Robert A. Salata
Aaron Proweller, MD, PhD

4- Mentorship

Don C. Rockey, MD
Mark W. Geraci, MD

5- Funding

Mone Zaidi, MD, PhD
John Williams, PhD

6- Continuous Improvement Strategies and Minimizing Attrition

Michael P. Madaio, MD
James D. Marsh, MD

Sessions- Detailed*

Session 1- Success Factors and Tracking Success

Academic medical centers, funding agencies and our country invest heavily in the training of physician scientists. Trainees also invest in their training. To ensure that these investments yield a return in the form of graduates who become successful investigators and have a positive impact in their field, training directors should ensure that recruits bring the ingredients for success to their training programs. Our group would develop a consensus definition of success for the training program and the trainee in the context of a changing healthcare environment. We will also define the prerequisites for success in the research years if the trainee has an MD only; MD and MA or MS; MD, PhD. For those with a promise of success but lack specific research skills, we will discuss best practices for remediation. Finally, we identify best practices for tracking success of the training program and graduates. Here are the specific questions we will discuss:

- **How do we define success from the department, PSTP program and trainee perspectives?**
- **What are the prerequisites of success in the research years for the trainee with MD only; MD and MA or MS; MD, PhD**
- **What are the best approaches for remediating recruits who lack factors necessary for success?**
- **What is the best tracking system that will be both beneficial for the institution and the trainee?**



Session 2- Recruitment

The programmatic goal of Residency Research Pathway training is to create a flexible infrastructure to integrate post-doctoral clinical and research training to meet the career needs of trainees with diverse clinical and research interests. The goal of recruitment is to identify and attract trainees who are best qualified to pursue successful careers in biomedical research as physician-scientists. We will discuss the features which best define desirable candidates for recruitment including evidence of prior research training and commitment, recognizing the importance of gender, ethnic, and geographic diversity. We will also discuss the procedural and operational features of individual training programs which serve to attract highly qualified trainee candidates. Here are the specific questions we will discuss:

- **What are the most desirable phenotypes for Research Pathway recruitment: importance of pre-existing graduate science training (e.g., MSTP) vs other forms of science training/commitment?**
- **What is the value and what is the challenge of dual residency/fellowship recruitment?**
- **What are the challenges of and solutions to achieving gender and ethnic diversity within Pathway programs?**
- **What is the value and challenges of recruiting qualified foreign medical graduates as trainees?**
- **What programmatic features and operational procedures represent the best practices for recruiting highly qualified Pathway applicants for a given training program?**

Session 3- Curriculum & Infrastructure

Participants will discuss the needs and challenges of integrating curricular standards in the research track residency. We ask whether there should be a “common core” necessary for an evolving era of translational research. What are components of such a core and how might the research track leverage institutional curricular strengths for its trainees. What is the plausibility of a centralized infrastructure for coordinating programmatic efforts between an institution’s research pathway and its Graduate program offerings? We aim to generate a perspective on best practices that optimize the educational needs of the research pathway trainee. Here are the specific questions we will discuss:

- **What should constitute “common core” curricula for today’s PSP trainees? (translational >> basic science skills?)**
- **How might curricular design meet unique needs of MD and MD/PhD trainees?**
- **Should PSPs leverage co-existing graduate training programs for formal curricular integration rather than de novo efforts?**
- **Should attainment of an advanced degree (with its inherent curricular requirement) be the norm in PSP programs?**
- **Is a centralized infrastructure plausible amongst majority of PSPs? What are minimal components to achieve efficacy?**



Session 4- Mentorship

Mentorship is perhaps the most important aspect of training physician-scientists. Most successful physician-scientists cite strong mentorship as critical in their career development. Yet, for many years, mentorship has been under-recognized and under-supported. Current financial and other constraints in academic medicine make creation and continuation of strong mentors more challenging than ever. Participants will explore best practices in mentoring for physician-scientists, including in early career phases (residency) and as well as later career phases (fellowship). We will specifically explore the best way to identify and select appropriate mentors for trainees, appropriate mentorship structures for internal medicine programs, and ways to support mentoring in academic medicine. Here are the specific questions we will discuss:

- **What are the best models for mentoring physician scientists and when (during training) are they best implemented?**
- **What is the best approach to identifying successful (and effective) mentors?**
- **What are the best approaches to developing and supporting mentors (e.g., training) to ensure they are effective?**
- **When, in the course of training, is the optimal time to establish the mentorship relationship?**

Session 5- Funding

Participants will explore mechanisms available for funding early physician-scientists, particularly those in the research track during residency, and the tract itself. Discussion points to generate best practices will also include optimal time points for funding applications, value of close interactions between program director and funding agencies, importance of mentorship in improving grant-writing skills and generating pilot data, and managing such funding within unique institutional cultures. Here are the specific questions we will discuss:

- **What is the optimal time to initiate funding applications?**
- **Would it be important to have Program Directors interact with funding agencies to better understand funding mechanisms and align with new RFAs?**
- **What type of mentorship is required to enable better grant writing skills and prioritize the generation of pilot data?**
- **What is the institutional culture regarding funding of physician-scientists and how can we best influence it?**
- **Do issues arise regarding protected (funded) time for Program Directors and what are the best practices to supporting the physician scientist program director?**



Session 6- Continuous Improvement Strategies and Minimizing Attrition

Physician scientist training programs are small and the training is intense. Over the past many years, the outlook for research funding has been dim. In this environment, how do we ensure that training programs are sustained and that trainees are not discouraged and leave the training pipeline. Here are the specific questions we will discuss:

- **What are the best approaches to ensuring that physician scientist training programs are sustained?**
- **How can we best minimize leaks of trainees in the training pipeline? (mitigating burnout, career guidance)**
- **At what point should a training program be considered non-viable and make the decision to close?**
- **What would be the value of creating an assembly of research pathway directors, who met at least once per year to develop and revise approaches to training the next generation of physician scientists?**

Upon the conclusion of the Summit, AAIM compiled a summary highlighting best practices identified by Summit participants in the six sessions. The resulting recommendations will be disseminated to internal medicine and biomedical research communities and updated on the AAIM Website when available. It is expected to be submitted to the medical education literature in the form of a white paper focused on best practices for physician-scientist training at the residency and fellowship level.

Questions? Contact AAIM at academicaffairs@im.org.