Brief Timeline

• June 2014: ACD PSW WG Report
  – 9 Recommendations: MSTP, novel approaches

• 2015-2016: Implementation WG

• Three workshops in 2016: Pilots, GME

• Throughout: Not only MDs – also dentists, veterinarians, RN-PhDs, others
• Within NIH control
  – Fewer younger physicians receive RPGs
  – Fewer applications/awards
  – Timing of research training

• External challenges
  – Shifting business models
  – Dramatic increases in tuition costs
Long Hauls, Long Breaks

Timeline:
- MD Matriculation Mean Age: 24
- K08/K23 Applicant Mean Age: 38
- First NIH Grant Mean Age: 45

Traditional Residency:
- MD:
  - Med: 1-4
  - IM resident: 5
  - Fellow: 6-7
  - Postdoc or KL2: 8-9
  - K08/ K23 scholar: 10

MD/PhD:
- Med: 1-3
- PhD: 4
- Med: 5-6
- IM resident: 7
- Fellow: 8-9
- Postdoc or KL2: 10
- K08/ K23 scholar: 11

- Clinical training
- Research training

NIH
National Institutes of Health
Office of Extramural Research
**Update Since Last December**

- **March 2017**: Clarify Funding Sources for Research Residency
- **June 2017**: Publish Research in Residency FOA
- **July 2017**: Publish K99/R00 FOA for MDs
- **October 2017**: Develop New NIGMS MSTP FOA
- **Consider increased NRSA stipend for MDs in Other Health Professions**
Performance of Physicians Trained Through the Research Pathway in Internal Medicine

Rebecca S. Lipner, PhD, Carola Lelieveld, and Eric S. Holmboe, MD

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<th>Research Pathway (N=1009)</th>
<th>Non-Research Pathway (N=100,022 all)</th>
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<tr>
<td>Board certified</td>
<td>98%</td>
<td>96%</td>
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<td>MOC enrollment*</td>
<td>77%</td>
<td>89%</td>
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<tr>
<td>Academic faculty*</td>
<td>63%</td>
<td>14%</td>
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<tr>
<td>Time patient care*</td>
<td>38%</td>
<td>71%</td>
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<tr>
<td>Time research*</td>
<td>37%</td>
<td>3%</td>
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*Survey subsets

“These findings validate … this alternative ‘short-track’ pathway: to enable academically oriented physician–scientists to pursue their career goals without compromising their medical knowledge and clinical skills.”

Academic Medicine 2012;87:1594-99
Institutional Research In Residency Program

- Hypothesis-based research (at least 1 year)
- Research competencies, career development skills
- National networking (NIH workshop, National meetings)
- Board approval

Individual ‘Transition Scholar’ Phase

- Must meet research residency ‘milestones’
- Planned research project and mentor (2 years support)
- *Transferable* to facilitate retention in research
Other Recent Updates

• Modified MSTP (NIGMS)
  – Dedicated T32
  – RFI June 2017
  – Ability to enroll medical school year 1 or 2

• NIAID K99 / R00 for physician scientists

• LRP expansion per 21st Century Cures
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<th>Recommendation</th>
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| NIH should sustain strong support for the training of MD/PhDs | • NIH supports >900 positions in 47 programs  
• Positions reduced during sequestration were restored  
• MSTP working group and RFI assessing potential MSTP modifications and enhancements  
• MSTP specific training grant funding opportunity planned (2018) |
| NIH should shift support to more individual fellowships | • Funding opportunities issued for individual F30 fellowships at institutions with/without NIH funded MSTP (2016)  
• Pilot programs to effectively support postdoctoral training of physician scientists through fellowships under consideration. |
| NIH should continue to address the gap in RPG award rates | • Continue policy ensuring similar award rates for early stage/new investigators and established investigators  
• Regular review of NIH data to ensure similar award rates of ESI  
• Regular analyses of RPG award rates by degree |
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| NIH should adopt rigorous and effective tools for assessing the strength of the biomedical workforce | • Establish division of biomedical research workforce (2015)  
• Biomedical workforce data dashboard with data from NIH, and AAMC (2017) |
| NIH should establish a new physician-scientist-specific granting mechanism to facilitate the transition from training to independence | • Some IC modified K08, K23 to increase salary contribution and research resources  
• K99/R00 FOA re-issued with modifications to emphasize eligibility of Physician Scientists.  
• NIAID plans to issue K99-ROO specific FOA for Physician Scientists (50% effort requirement)  
• Allow awardees to received funding for effort not devoted to the K from other research funding (federal/non-federal) |
| NIH should expand Loan Repayment Programs and the amount of loans forgiven | • Congressional request HR6 approved, modeled impact of increased loan repayment amounts  
• Division of Loan Repayment website enhanced  
• Complete strategic plan and initiate evaluation |
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<td>NIH should support pilot grant programs to rigorously test existing and novel</td>
<td>• Three workshops of physician scientists, residents, professional societies, leaders of board certification organizations, NIH leadership and NIH representatives</td>
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<td>approaches to improve and/or shorten research training</td>
<td>• Scholarly review on promising programs (Acad Med 2017)</td>
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<td>• FOA for pilot research in residency program (June 2017)</td>
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<td>NIH should intensify its efforts to increase diversity in the physician-scientist</td>
<td>• Request for information on strategies to enhance diversity</td>
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<td>workforce</td>
<td>• Extramural diversity website launched (2016)</td>
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<td>NIH should leverage the existing resources of the Clinical and Translational</td>
<td>• CTSA administrative supplements support dentists on KL2</td>
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<td>Science Awards (CTSA) program to obtain maximum benefit</td>
<td>• Collaborations between CTSA and NIBIB to support biomedical engineers</td>
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<td>• CTSA collaboration with One health alliance to support veterinarians</td>
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