2026

MD-PhD: Is it Right for me?

Communications Committee of the MD-PhD Section of the Group on Research, Education, and Training (GREAT) AAMC

- Application Process
- Training
- Careers

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What distinguishes physician scientists from physicians?

Physicians	Physician Scientists
Use biomedical knowledge to help individual patients	**Advance** biomedical knowledge through research

Medical school prepares people as life-long learners to diagnose and treat patients

Graduate school trains people to perform rigorous, hypothesis-driven research

Physician scientists serve to bridge scientific research and clinical patient care

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MD-PhD graduates sit at the intersection of science and medicine

The physician scientist pipeline is so important that the government and institutions are invested in your education – paying for your tuition and benefits

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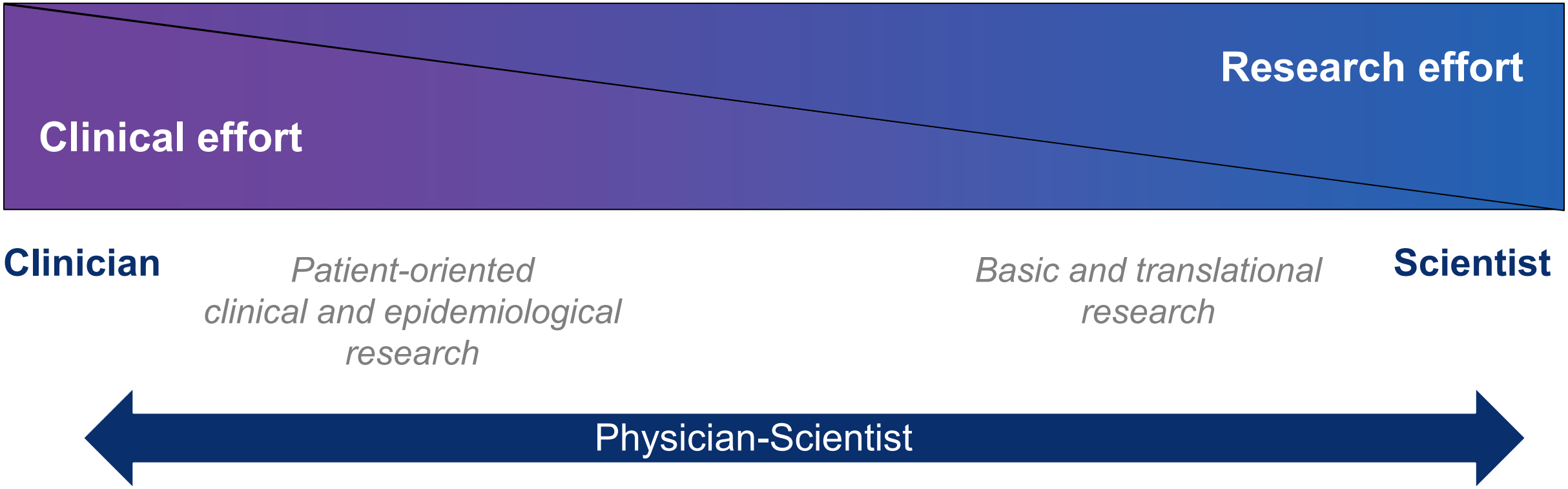
Physician-Scientists: A Spectrum from Clinician to Scientist



Adapted from McKinney, Acad Med, 2017

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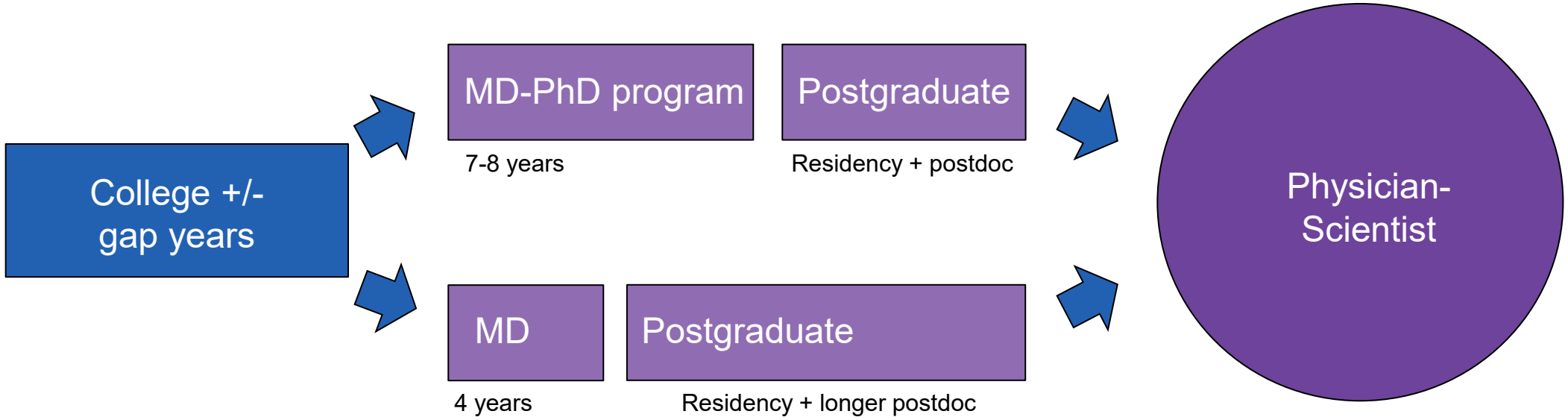
How do we train physician-scientists?



Almost 50% of all NIH Research Project Grants with an MD as principal investigator are MD-PhDs, but they are only 3% of medical school graduates

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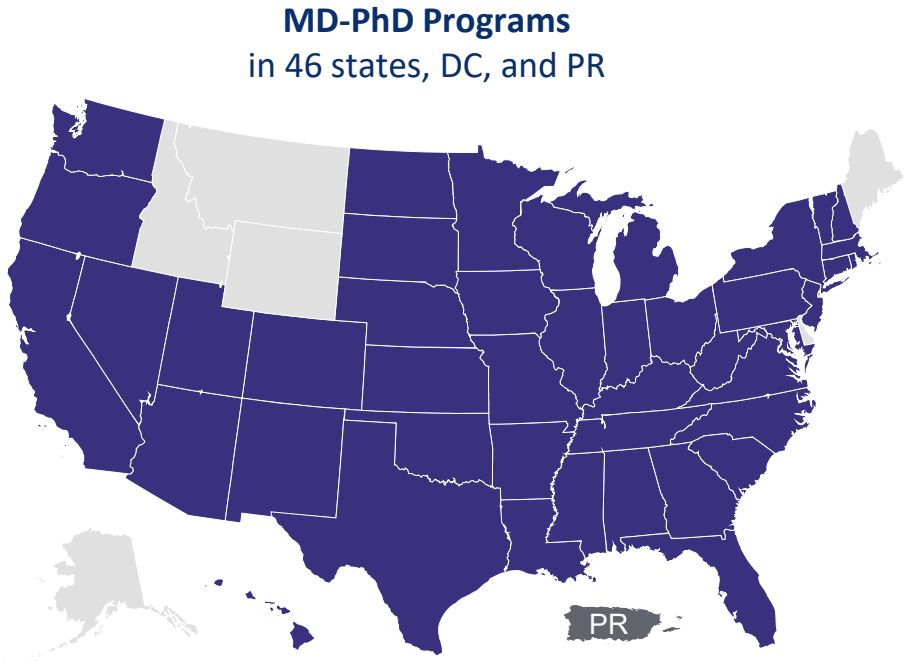
Where is MD-PhD training done?

- There are **~ 100 MD-PhD** programs affiliated with medical schools:
  - MD-PhD training opportunities can be found in nearly every state.
  - ~57 programs (with ~40-190 trainees) are supported by NIGMS training grants known as **Medical Scientist Training Programs** (MSTPs)
    - MSTP T32s are intended to fund ~20% of a program, only pay limited stipend and tuition for a certain number of "spots"
  - Most MD-PhD programs offer **financial support**: stipends, tuition waivers and health insurance



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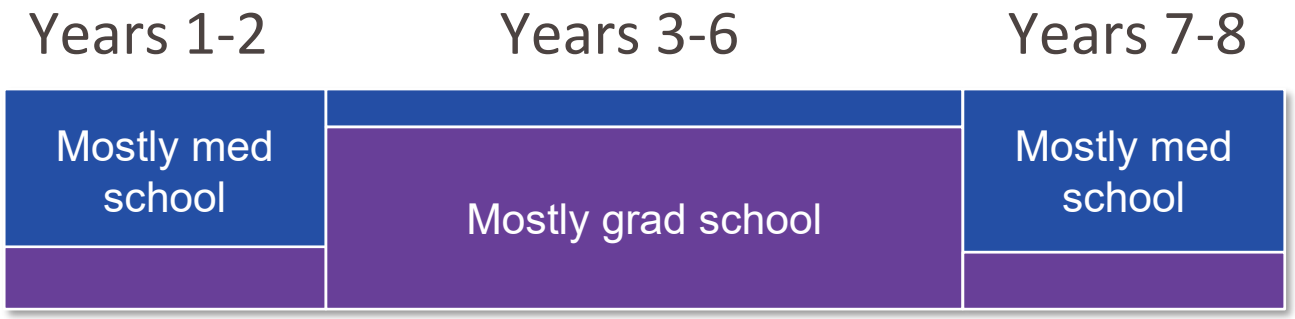
MD-PhD Program Overview

Goal: Prepare trainees for a career that combines research and clinical care, emphasizing research



- Curriculum integrates MD and PhD training
  - complete both in 7 or 8 years
- Many PhD fields are possible
  - Non-traditional PhD training opportunities

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MD-PhD Alumni…..

- Choose a variety of **residency training** specialties
- Do **research** more than 50% of the time
- **Enjoy their careers**; more than 80% would choose their career again

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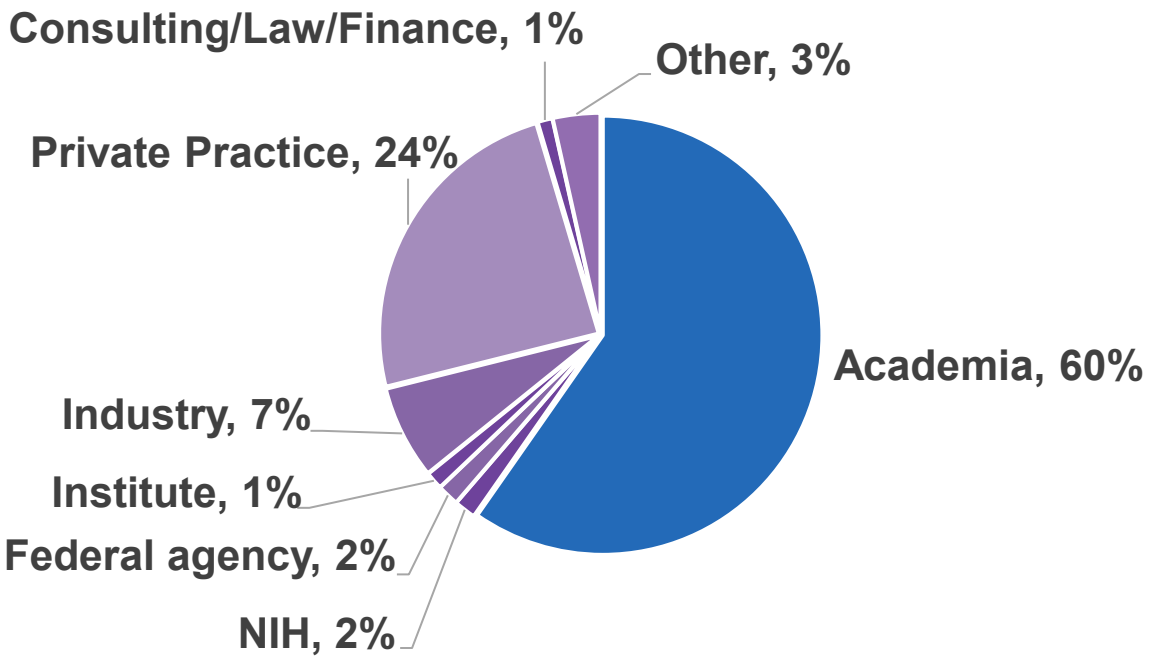
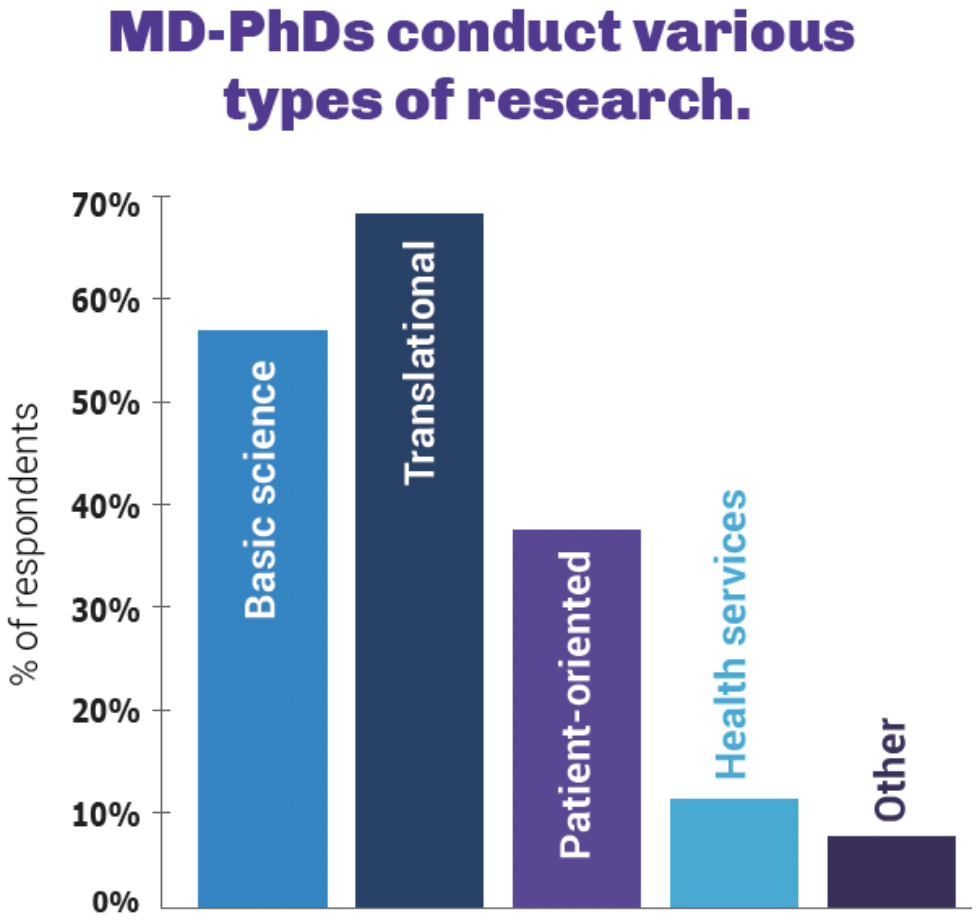
MD-PhD Careers: long term outcomes



Brass and Akabas, 2019, JCI Insight 4(19):e133009
The National MD-PhD Program Outcomes Study



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Preparing for and Applying to MD-PhD Programs

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Elements of a successful MD-PhD application

Mission-Aligned Selection

- Physician scientist career commitment
- Substantive research experience
- Experience in caring for others
- Strong academics
- Integrity, maturity, resilience
- Activities and life experiences

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What constitutes a substantive research experience?

Sustained experience

Familiarity with testing a hypothesis

Experience presenting research
(publications not required)

Types of settings

- Undergraduate research, OR
- Post-baccalaureate research

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To take a gap year or not?

Gap year recommended – to fill a gap	Gap year not recommended
• I'm not sure I want to do full-time research for my career • I have not yet engaged in a substantive research experience • I have been involved in technical aspects without thinking about problems broadly or testing hypotheses • I need more time before committing to an ~8 year program (and other personal reasons).	• I've done a lot of research as an undergraduate and am ready to apply • I have a good understanding and ability to communicate the research I have completed • An advisor recommended it but does not frequently advise MD/PhD applicants • I think I need to get publications

If I decide to take a gap year, what should I do?

RESEARCH

- Full-time as an employed position or part of a program
- Master's or post-baccalaureate program with research and coursework (if needed to boost academics)

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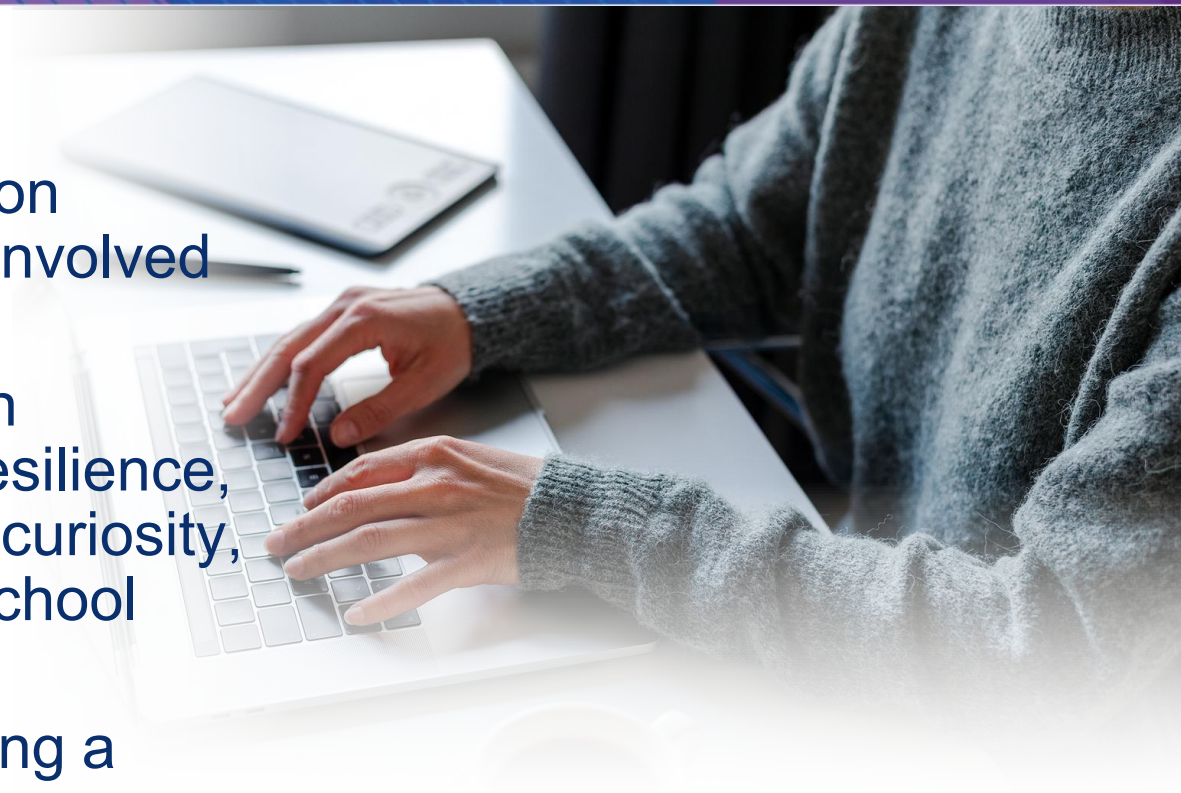
Recommendation Letters



- Ask "Can you write me a strong letter?"
- Meet and discuss your CV, deadlines, submission instructions, career goals, what you have been involved in and accomplished
- Identify letter writers who know you well and can address: teamwork, getting along with others, resilience, dealing with failure, taking initiative, leadership, curiosity, creativity, readiness for graduate and medical school
- Include letters from your significant research experience(s) that speak to your goal of becoming a physician-scientist
  - PI should be main letter writer even if you worked closely with postdoc (can be signed by both)

MD-PhD Applicant Statistics (Class entering 2025)

	Mean	Range
Total applicant pool (n = 2,040)		
MCAT	510.4	473 – 528
GPA	3.71	1.9 – 4.0
Matriculants (n = 702), 34%		
MCAT	516.3	494 – 528
GPA	3.86	2.96 – 4.0

AAMC Table B-10: MCAT® Scores and GPAs for MD-PhD Applicants and Matriculants to U.S. Medical Schools, 2025-2026

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MD-PhD Statistics

- **6,163 MD-PhD trainees nationally**
- **2024-2025 Application cycle (matriculated Summer/Fall 2025):**
  - 2,040 MD-PhD applicants (~52K straight MD)
  - 18 applications submitted/applicant (avg)
  - 702 matriculants: ~34% of MD-PhD applicants entered an MD-PhD Program

*AAMC Table B-7/B-8/B-9/B-12: MD-PhD Matriculant Tables

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The strengths of a representative physician-scientist workforce

Enhanced innovation

Representative teams bring varied perspectives, leading to more innovative solutions.

Cultural competency

A representative workforce is better equipped to address health disparities and provide culturally sensitive care.

Global impact

Representation in biomedicine can lead to research and solutions that have a broader, more inclusive impact.

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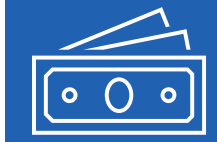
Talk about your experiences and background

Family background

Serving as a caretaker of a family member (e.g. sibling, parent/guardian), first generation to college



Financial background

Low-income family, worked to support family growing up, work-study to pay for college, federal or state financial support

Community setting

Rural area, food scarcity, high poverty or crime rate, lack of access to regular health care

Educational experiences

Limited educational opportunities, limited access to advisors or mentors who were knowledgeable/supportive of higher education requirements, limited access to role models

Other general life circumstances

Loss of a family member, identify as a person with a disability or chronic medical condition

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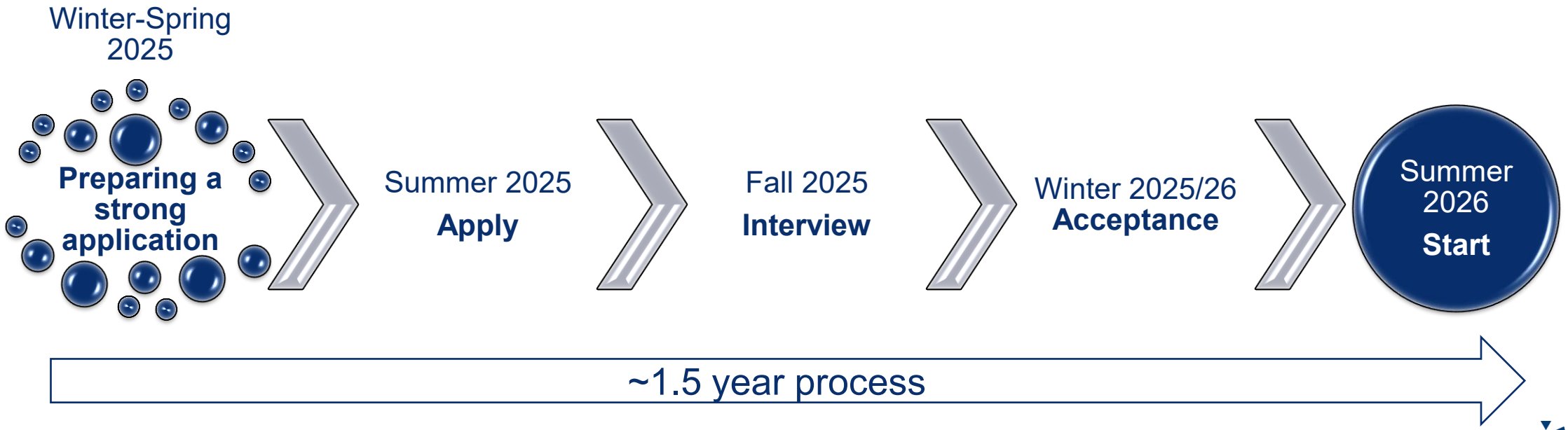
Application Timeline
Candidates Matriculating in the Summer of 2026

Pre-application preparation (2-3 years)

- Courses
- Research
- Clinical exposures
- Activities and life experiences



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What should you look for in a MD-PhD program?

- Environment (research and academic)
- Students, program activities & professional development, community involvement
- Support during transitions through phases of training
- Alumni achievement
- Location
- A sense of inclusion

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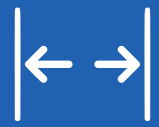
Myths: "Successful MD-PhD applicants…"

…need higher scores than MD applicants

FACT: Review of MD/PhD applicants is holistic, the most important part of the application is physician-scientist potential



…must take at least one gap year after college

FACT: A gap year is not necessary - it can help inform a career path or enrich a research experience for someone who did not have enough time during college

…must have publications

FACT: Publications are not necessary; applicants should demonstrate independence; dissemination of work can be with posters, talks, and publications

…have always known about this career path

FACT: Successful MD/PhD applicants arrive via diverse and meaningful pathways; those who have not had exposure previously should seek out opportunities

…start independent research careers later than MD graduates

FACT: MD/PhDs and MDs receive their first NIH R01 award at the same average age.

…wait to start a family until completing training

FACT: MD/PhD students find ways to incorporate life throughout, and many start families during training

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For more information:

www.aamc.org/mdphd

nih.gov/training

www.physicianscientists.org

Role models

Knowledgeable people who care about you:

- Directors and Mentors (Summer Program and Post-Bac)
- Professors, Lab Heads and Department Chairs
- MD-PhD Students, Graduate Students and Post-Docs
- Career Advising Offices
- PhD and MD-PhD Program Directors

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