

RESEARCH PATHWAYS DIRECTORS WORKSHOP

Opportunities and Challenges of a PSP Director

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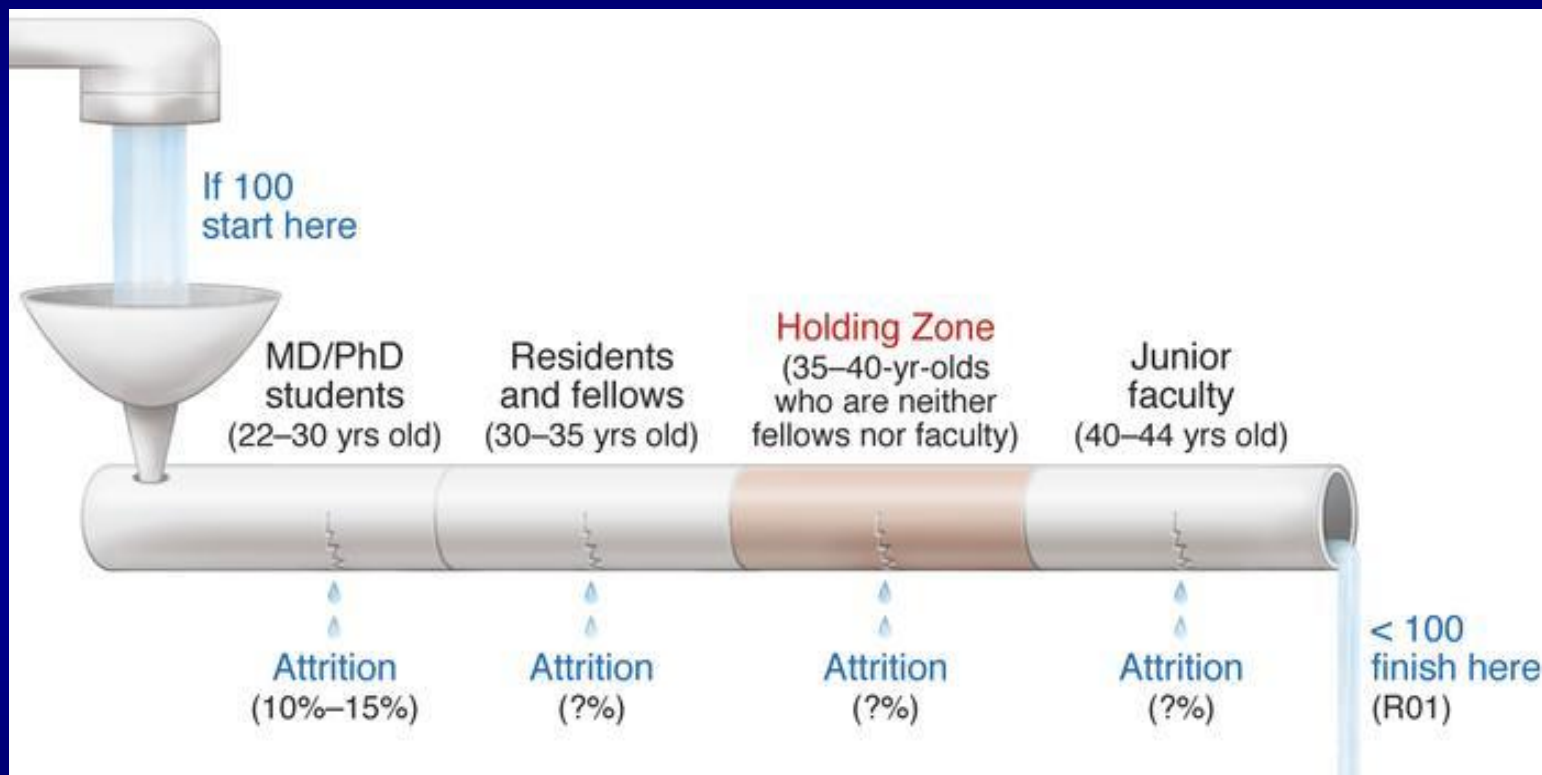
Scope

- **Challenges facing physician-scientist training**
- **Review of a few common sense proposals**
- **As a way to continue the conversation: How the Penn PSP approaches some of these issues.**

Challenges

- **Recruitment and retention: The declining number of physician-scientists**
- **Integration: Lack of exposure to research during clinical training**
- **Time to independence**
- **Funding**
- **Mentoring**

Figure 1 *from*: Rescuing the physician-scientist workforce: the time for action is now



Milewicz, Lorenz, Dermody, Brass, and the National Association of MD-PhD Programs Executive Committee *J Clin Invest* 125:3742, 2015.

Recommendations

- **Integrate medical and research training**
- **Shorten the time to independence**
 - **Shorten training**
 - **Earlier independent funding**
- **Recruit more physician scientists**
- **Increase diversity**
- **Better organize mentoring and oversight**
- **share best practices; collect outcome data**

The Physician-Scientist Program Experience at Penn

The PSP at Penn is really two entities:

- 1. An ABIM Research Pathway**
- 2. A community of physician-scientists**

The Physician-Scientist Program Experience at Penn

- Started in 1994**
- Separate NRMP match in 2010 with 4 positions**
- Increased to 6 positions in 2018**
- Clinical training fully integrated with categorical program**
- Currently 10 residents and 10 fellows**

The Physician-Scientist Program Experience at Penn

- 2-3 years residency**
- 3 years fellowship**
- Continued contact after fellowship**

The Physician-Scientist Program Goals

- Advance the training of physician-scientists (duh)
- Provide a peer group for trainees
- Maintain connection to science
- Inclusion
- Flexibility
- Mentoring
- Tracking

The Physician-Scientist Program Recruitment

- **Screen ~150 apps, interview 40+ applicants.**
- **Criteria:**
 - **evidence of commitment to research (defined broadly)**
 - **evidence of research accomplishment**
 - **PhD is not a requirement**
- **Close interaction with categorical program**

The Physician-Scientist Program Activities

- **Mentoring**
- **Exposure to research during clinical training**
- **Career development**
- **Grant writing workshops**
- **Peer group/social activities**

(more later)

The Physician-Scientist Program Outcomes

- **Graduates 2004-present:**
 - 20/22 are in research related fields
 - 18/22 are Assistant Professors at UPenn, Harvard/MGH, UCSF/Berkeley, Michigan, NYU, UCLA, Wash U, Brown, Duke, Maryland, Pitt
 - 1 Instructor at Penn
 - 1 Clinical trials in Pharma

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- **Graduates prior to 2004:**
 - 15/17 in research:
 - 14 faculty at UPenn, UCSF, UCSD, Univ Washington, Tufts, Vanderbilt, Sloan-Kettering, Univ. Colorado, UNC

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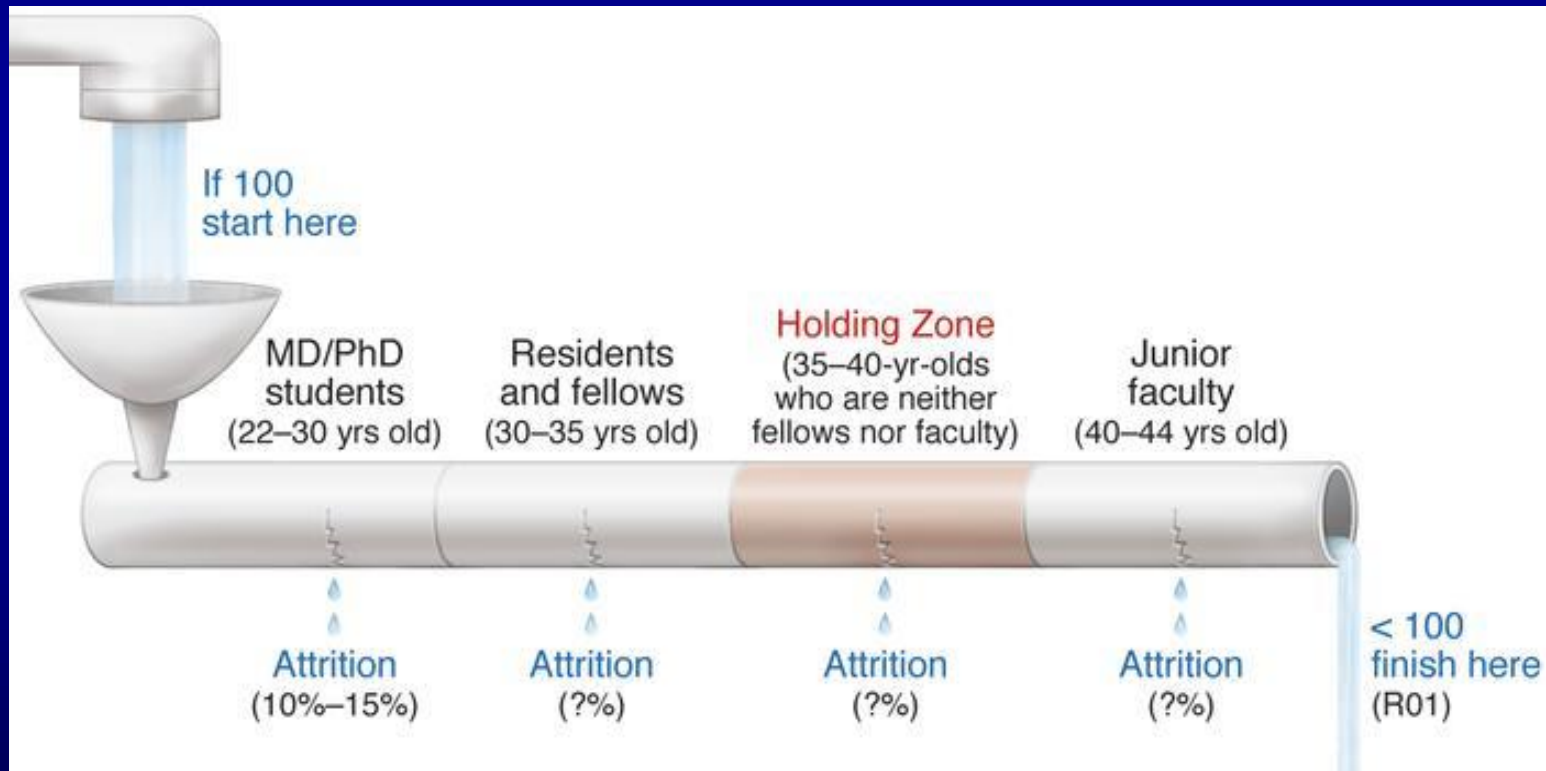
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Recruitment and retention

What the “pipeline” might look like to the trainee



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- Dare we consider foreign medical graduates?

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- Retain current PS

Inclusion

- **All interested in research are included, though there is a cap on # who can short track.**
- **While most of those who match into the research track are MD/PhDs, MDs from the categorical program are welcomed into the PSP system.**
- **Integration of residents and fellows in other training program [including Pediatrics, Pathology, Dermatology, Family Medicine, Psychiatry]**

Flexibility

- **Listen to trainees and adapt to their needs.**
 - **Research resources**
 - **Alternative research interests**
 - **Diverse career paths**

Maintaining connection to science

- **Research in progress:**
 - Monthly informal seminars by faculty
 - Resident initiated and organized
 - Participation of multiple training programs
- **Physician-scientists at resident report**
- **Dinners with visiting physician-scientists**
- **Interaction with MD/PhD Students**

Mentoring

- **Meet one-on-one beginning at orientation**
- **Connect with fellowship program directors and potential scientific mentors**
- **Mentoring committees**
- **Career development workshops**
- **K award workshops (GPS)**
- **Peer to peer mentoring**

The Physician-Scientist Program

- **Recruitment and retention**
- **Maintain connection to science**
- **Inclusivity**
- **Flexibility**
- **Mentoring**

Thanks

- **Skip Brass**
- **Rebecca Baron**
- **Michael Parmacek (Chair of Medicine)**
- **Charles Abrams (Chief Scientific Officer)**
- **Todd Barton (Categorical Program Director)**