

# The Dermatology Milestones: An Initial Analysis of Direct-Observation Data Collected via Mobile App

Daniel O'Connor\* MS4, Arjun Dayal\* MS4,  
Abby S. Van Voorhees MD, Misha A. Rosenbach MD

\* Contributed Equally

# Introduction

- Milestones allow for analysis of resident performance across all years and programs
- **Aim:** Determine longitudinal milestone attainment using data collected from multiple training programs

# Methods

- March - August 2016
- **784** Direct observation evaluations
- **28** Sub-competencies
- **27** Residents
- **2** Programs
- **1** Tool: InstantEval Dermatology

Resident: John Carter

## PC1. Physical Exam

### Level 1

- Performs principal exam but fails to examine associated areas. Errors in morphology.

### Level 1.5

### Level 2

- Accurate targeted exam. Correctly describes morphology.

### Level 2.5

### Level 3

- Identifies difficult/subtle exam findings. May misinterpret or miss a subtle finding.

### Level 3.5

### Level 4

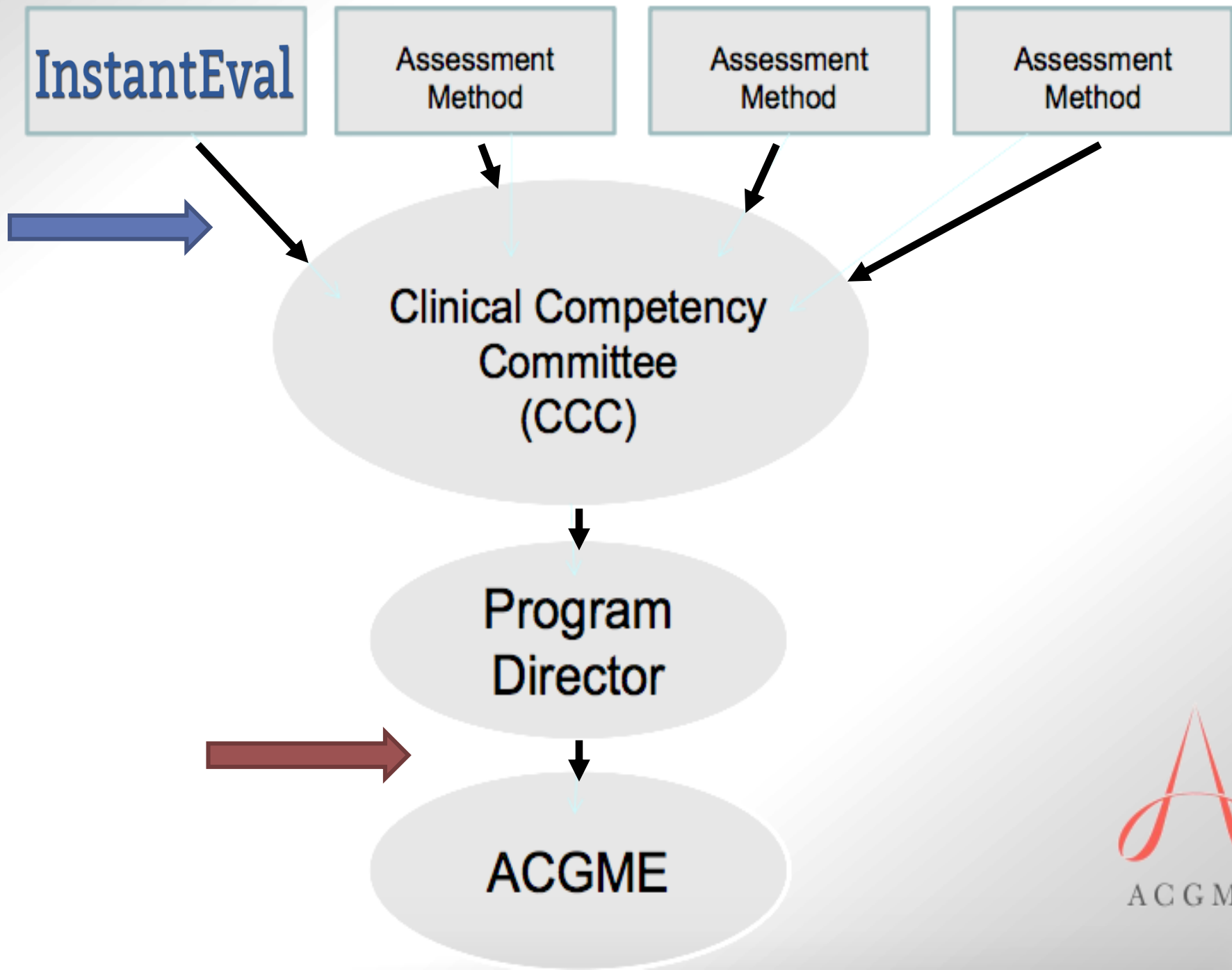
- Identifies subtle clinical patterns and examines all associated areas.

### Level 4.5

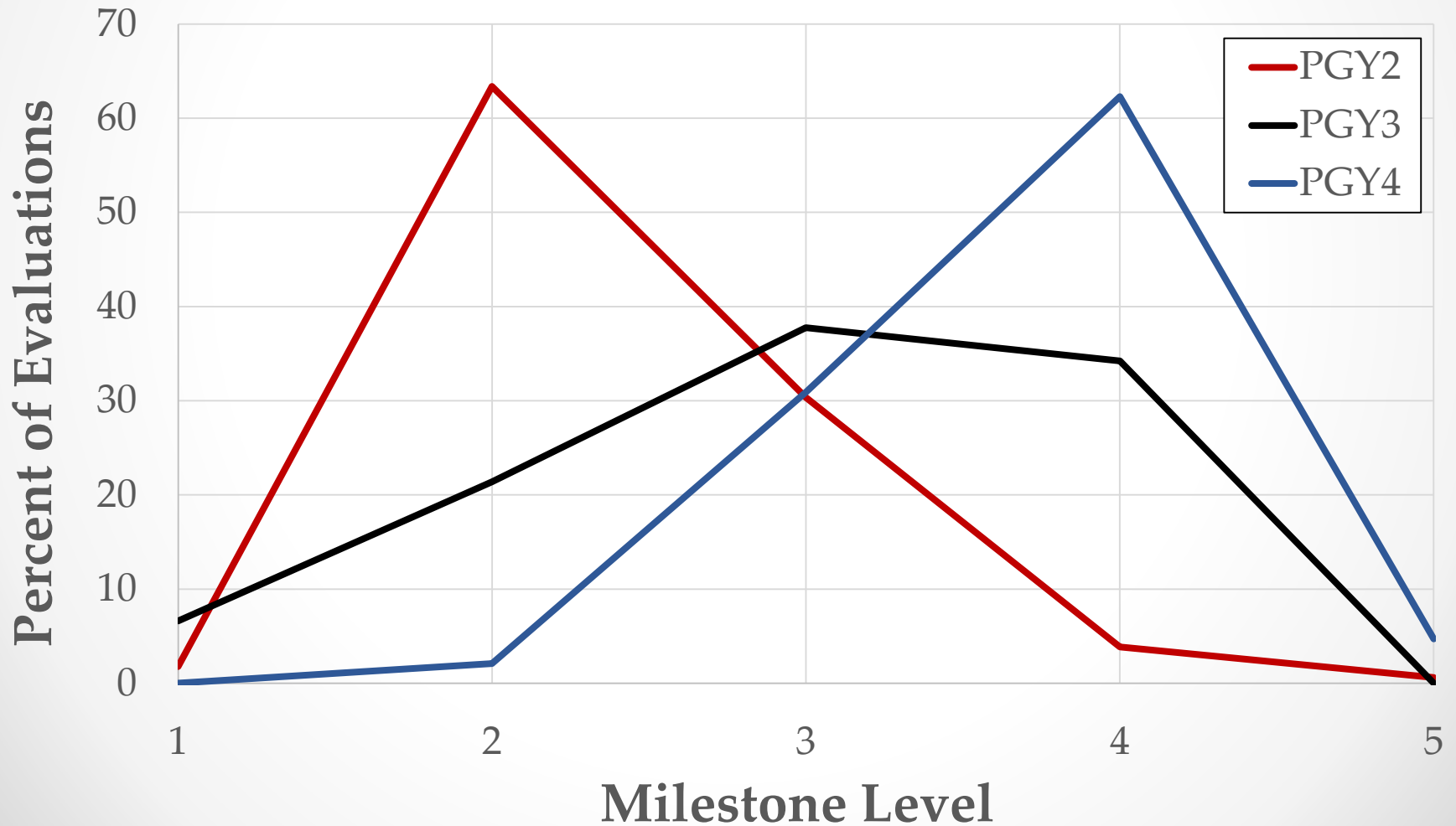
### Level 5

- Role models examination.

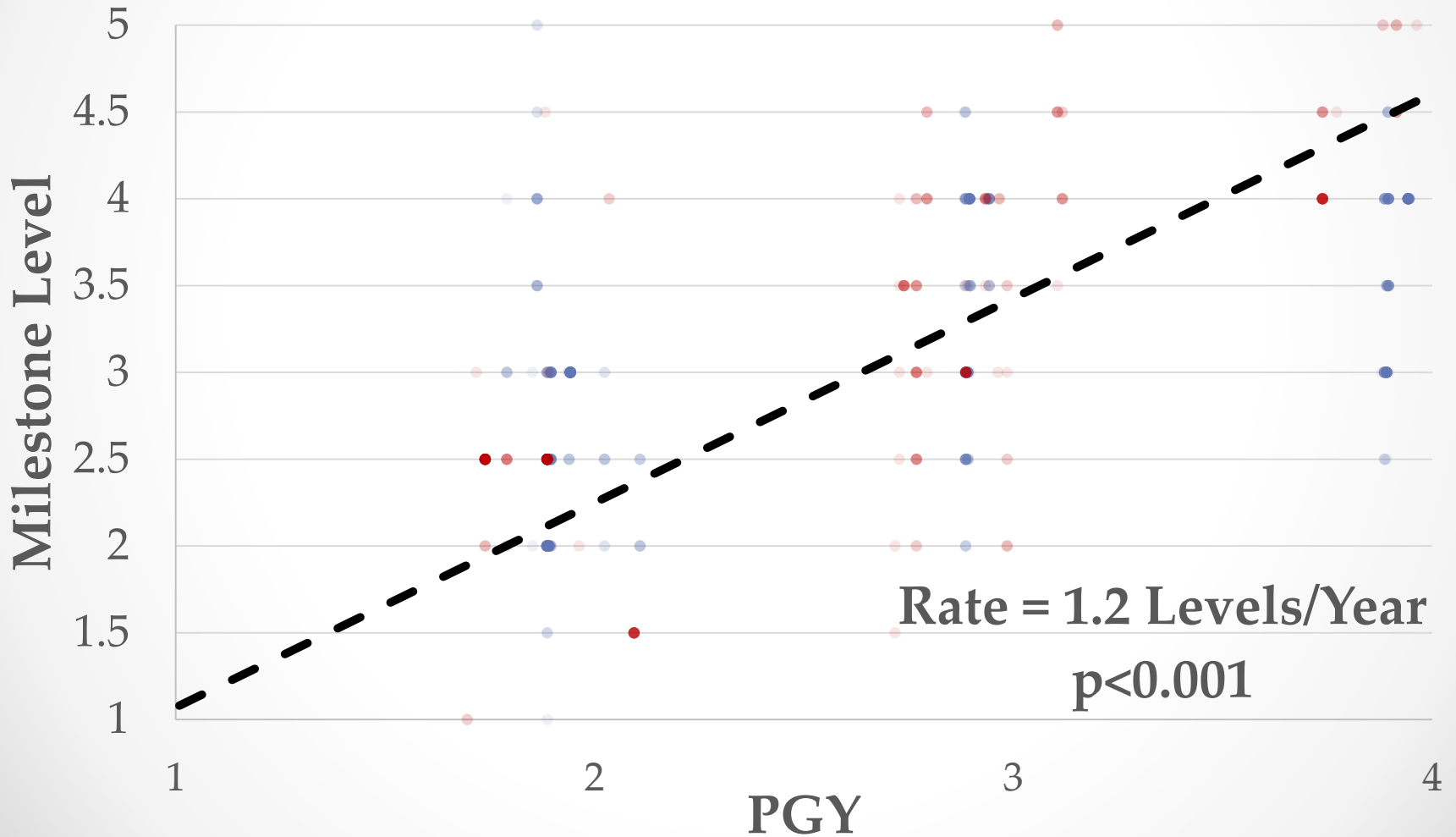
Comments and Plan for Improvement:



# Milestone Achievement by PGY



# Mixed Effects Regression



# Conclusions

- Residents attained higher milestone levels as training progresses
- Substantial level overlap between the years
- Milestone attainment varied minimally between institutions

# Future Directions

- Extend analyses across additional programs and longitudinally
- Evaluate for systematic biases in the assessment process





# Top Sub-Competencies

<b>Sub-competency</b>	<b>Number of Evaluations</b>
PC1: History, Examination, and Presentation	216
PC7: Diagnosis, Management Decisions and Patient Education	90
ICS1: Communication and Rapport with Patients and Families	79
ICS3: Team Member Respect and Care Coordination	73
PC2: Diagnostic Tests	73

- Least evaluated: Systems-based Practice and Practice-Based Learning & Improvement