

Profile of an Incoming Medical Student Class: Comparison of Traditional Students with Students Enrolled in a Novel Population Health and Advocacy Program

Kristina Monteiro PhD, Karl Dietrich MD MPH, Jeffrey Borkan MD PhD, Luba Dumenco MD, Allan R. Tunkel MD PhD, Richard Dollase EdD, Paul George MD MHPE
The Warren Alpert Medical School of Brown University

Background

- Medical education in the US must evolve to meet the changing needs of the American healthcare system
 - Need for health system science to complement the basic science and clinical sciences
 - Health systems science includes the knowledge, attitudes, and skills needed to function within the current healthcare environment including (but not limited to) population health and quality improvement
- By the year 2035, there will be an estimated shortage of 33,000 primary care physicians in the US
- The Warren Alpert Medical School of Brown University implemented a novel dual degree MD-ScM program in primary care and population medicine (PC-PM)
- Program goal: train medical students to become physician leaders who focus on population health issues within primary care
 - N=16 students in the pilot year (2015-16)
 - N=24 students in current academic year (2016-17)
- The PC-PM program includes additional training in health systems science areas

Overarching Goal

Use baseline assessments to identify characteristics of and group differences between students in the PC-PM program and traditional students

Purpose

- Identify any significant differences between PC-PM and traditional students at baseline
- Track students over their medical career to determine if (1) identified differences become larger, smaller, or remain the same and (2) new differences form

Surveys & Data Analysis

Validated Surveys

We used either entire, or portions of, the following nine validated surveys:

- Medical Students' Attitudes Towards the Underserved
- Cultural Competency Scale
- Medical Professionalism Questionnaire
- Attitudes Toward Interprofessional Healthcare Teams
- Intolerance of Ambiguity
- Jefferson Scale of Physician Empathy
- Patient-Practitioner Orientation Scale
- Confidence in Applying Scientific Evidence
- Confidence in Quality Improvement Methods

Methodology

- Administered surveys to all first year medical students at baseline (orientation)
- Reverse-scaled necessary items and created summary scores (average score per survey)
- Independent t-test analyses were used to identify significant differences between PC-PM student responses and traditional student responses at baseline

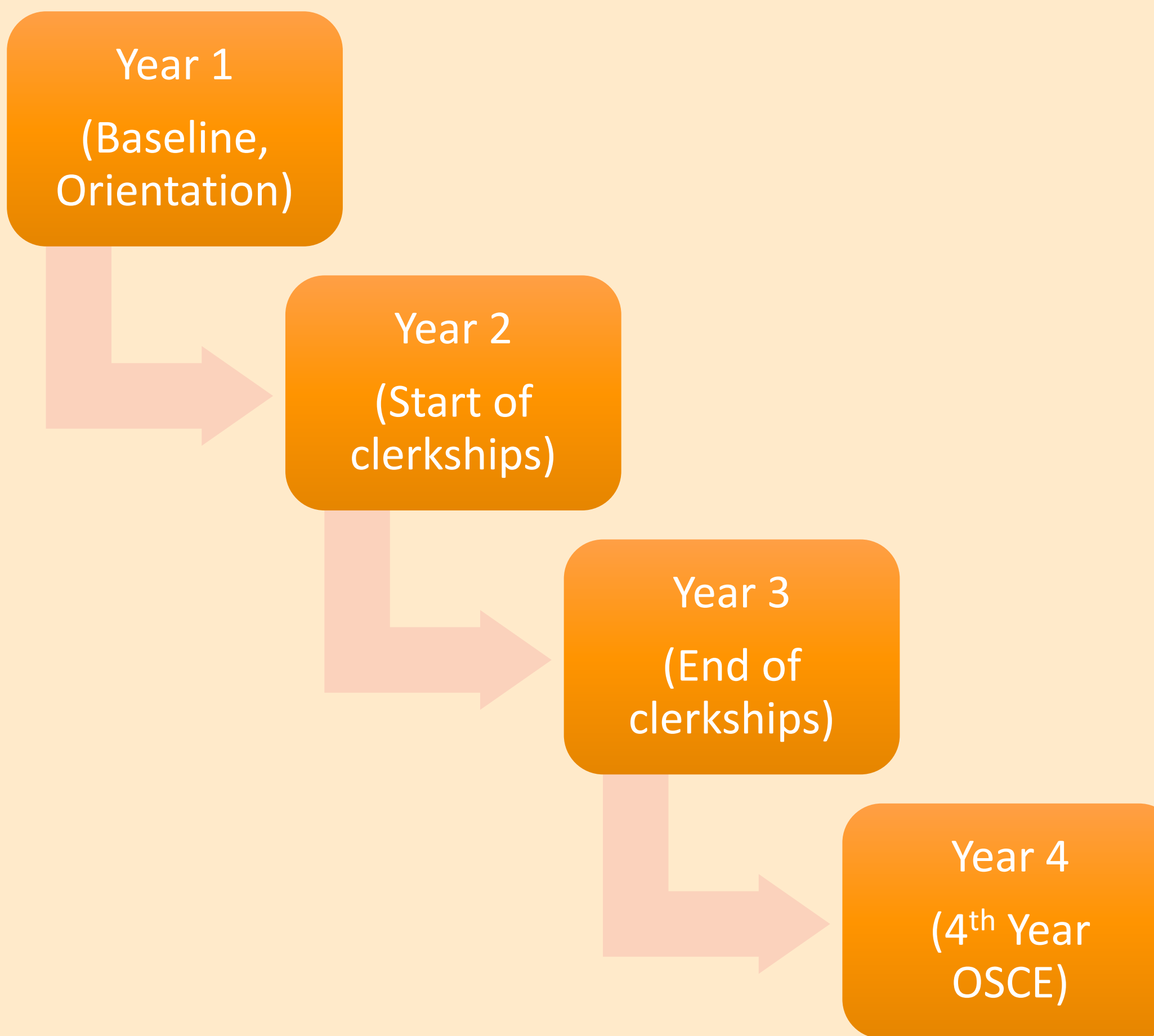
Results

Validated Survey	PC-PM Student Responses (N = 38)		Traditional Student Responses (N=239)		Sig.
	Mean	SD	Mean	SD	
Medical Students' Attitudes Towards Underserved* (Scale: 1-5)	4.18	.29	4.03	.37	.02
Cultural Competency Scale* (Scale: 1-5)	2.43	.41	2.62	.37	.003
Medical Professionalism Questionnaire* (Scale: 1-5)	1.30	.30	1.51	.41	.002
Attitudes Toward Interprofessional Health Care Teams (Scale: 1-5)	1.63	.49	1.82	.57	ns
Intolerance of Ambiguity (Scale: 1-7)	4.70	.43	4.56	.46	ns
Jefferson Scale of Physician Empathy (Scale: 1-7)	5.92	.62	5.80	.65	ns
Patient-Practitioner Orientation Scale (Scale: 1-5)	4.31	.37	4.19	.49	ns
Confidence in Applying Scientific Evidence (Scale: 1-3)	2.47	.78	2.50	.90	ns
Confidence in Quality Improvement Methods (Scale: 1-3)	2.51	.71	2.40	.83	ns

- Assessments marked with an asterisk (*) indicate significant differences in PC-PM and traditional student responses at baseline (start of year 1)

Administration Schedule

- In year 1 of the survey (2015-16), responses were collected on Qualtrics
- In year 2 of the survey (2016-17), responses were collected on OASIS, our records and registration system
 - Response rates on OASIS approach 100%



Conclusions

- Medical students need to be competent in health systems science in order to function in current and future healthcare systems, including population health, leadership, and quality improvement
- Our novel PC-PM program provides extensive training in these novel areas
- These validated assessments can longitudinally evaluate the effectiveness of health systems science curriculum

Next Steps

- Track PC-PM and traditional students over time (improves cross-sectional nature of the present study)
- Use factor analysis to reduce the number of items to use in alumni surveys