

Impact of Early Integrated Clinical Training on Medical Student Performance in Clerkships

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BACKGROUND

Situated learning theory argues that context matters. Inpatient and outpatient settings offer unique potential advantages for pre-clerkship clinical skills training.

Our school has long relied on learning community (LC) mentors to teach clinical skills in the hospital setting. In 2015, we established the Foundations of Clinical Medicine (FCM), an 18-month integrated clinical skills course.

The course begins with a clinical skills ‘boot camp’ in which students learn to perform a full H&P. A new year-long primary-care preceptorship (PCP) and interactive small groups and simulations led by LC mentors were added to our traditional guided bedside teaching in the hospital. The total time devoted to learning clinical skills did not change, as lecture time decreased to accommodate small groups and clinic-based experiences.

SUMMARY OF WORK

We hypothesized that student performance would improve with more interactive classroom teaching and increased outpatient exposure and practice.

We compared students’ preparation for clerkships before and after the implementation of FCM using:

- A survey of required clerkship site directors assessing their impression of students preparation.
- Student performance ratings for the family medicine clerkship.

CLERKSHIP SITE DIRECTOR SURVEY ON STUDENT PREPARATION

	Legacy curriculum		New curriculum		Sig
	Mean	SD	Mean	SD	
Comprehensive history	4.91	1.13	4.85	.77	ns
Focused history	4.14	.92	4.78	.78	.000
Physical exam	4.47	.79	4.52	.80	ns
Clinical reasoning	4.03	1.00	4.46	.83	.004
Oral case presentation	4.43	.96	4.46	.83	ns
Write-ups	4.70	1.00	4.68	.90	ns
Communication skills	4.83	1.17	4.72	.81	ns
Working as a team member	4.94	1.10	5.35	.71	.005
Receiving feedback	4.85	1.23	5.10	.83	.ns

1-6 scale, with 6 being ‘excellent’

STUDENT PERFORMANCE RATINGS IN THE FAMILY MEDICINE CLERKSHIP

	Legacy curriculum		New curriculum		Effect size
	Mean	SD	Mean	SD	
Knowledge in subject area	4.33	.59	4.45	.58	.21**
Data gathering skills	4.63	.53	4.77	.44	.29**
Clinical reporting skills	4.54	.60	4.69	.51	.27**
Integration skills	4.41	.61	4.58	.56	.29*
Management skills	4.35	.65	4.45	.60	.16*
Relationships with pts and families	4.82	.39	4.87	.36	.13*
Patient centered care skills	4.63	.52	4.69	.55	
Communication skills	4.73	.50	4.79	.47	
Professional relationships	4.81	.43	4.86	.39	
Educational attitudes	4.81	.43	4.82	.44	
Dependability and responsibility	4.81	.44	4.87	.43	

** = $p < .001$; * = $p < .05$

DISCUSSION & CONCLUSIONS

Both clerkship directors impressions’ of student preparation and family medicine clerkship performance ratings for individual students improved with initiation of our new curriculum, which emphasized small group learning and added a longitudinal outpatient experience.

Students were felt to have more advanced skills especially relevant to outpatient practice, and broader clinical exposure appeared to improve both knowledge and clinical reasoning skills.

TAKE HOME MESSAGES

An integrated clinical skills course with interactive small groups and simulations, inpatient bedside teaching and a longitudinal outpatient experience may offer unique advantages to medical students preparing for clerkships. These varied clinical settings provide complementary practice opportunities and insights

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